

**AMENDMENT NUMBER ONE
TO AGREEMENT BETWEEN CITY OF GLENDALE, AZ
AND
MOTOROLA SOLUTIONS, INC.
FOR P1 CAD & RMS, COMMAND CENTRAL JAIL, MAINTENANCE, COMMAND
CENTRAL AWARE SUBSCRIPTION AND VIGILANT LPR CAMERAS
MOTOROLA SOLUTIONS AGREEMENT # AZP19P104A**

This Amendment Number One to the Agreement named above (“First Amendment”) is made and entered into as of this ___ day of _____, 2021 by and between the City of Glendale (“City”), and Motorola Solutions, Inc. (“Motorola”). City and Motorola are sometimes referred to in this First Amendment collectively as the “Parties,” or individually as a “Party.”

RECITALS

- A) City and Motorola entered into that certain Agreement dated September 26, 2019 (“Contract”), for the purpose of providing **P1 CAD & RMS, COMMAND CENTRAL JAIL, MAINTENANCE, COMMAND CENTRAL AWARE SUBSCRIPTION AND VIGILANT LPR CAMERAS**.
- B) Pursuant to Section 3.5 of the Contract that permits the City to make additional purchases of Equipment, Software, and services using the Contract as the underlying agreement, the Customer intend to use its rights under Section 3.5 to purchase additional equipment and software, agreeing that the terms and conditions of the Contract will apply to this new transaction.
- C) Pursuant to Section 17.12 of the Agreement, the Parties mutually agree to amend the Agreement to purchase the scope of work considered in the proposal dated March 26, 2021, which is attached and incorporated into the Amendment.

AGREEMENT

IN CONSIDERATION of the foregoing recitals and representations and the mutual covenants and agreements and conditions in this Amendment, the Parties agree as follows:

1. Citywide Camera Replacement in the amount of **\$2,681,321.21** is hereby purchase by the City as more fully described in the attached proposal incorporated herein as Exhibit A.
2. As part of the new proposed transactions, in Exhibit B incorporated and attached to this Amendment are the End User and End User License Agreements for the AVIGILON Cloud Services and the AVIGILON Control Center Software.
3. All other Terms and Conditions of the above referenced Contract not specifically amended herein shall be incorporated by reference in their entirety and shall remain in full force and effect. If there are any inconsistencies between the provisions of Amendment One, and the provisions of the Contract, the provisions of this Amendment will prevail.

4. Facsimile/Electronic Signature. A signature sent by facsimile or electronically shall have the same legal effect as if the original has been signed in person. This provision will apply to all documents associated with this Agreement.

IN WITNESS THEREOF, the Parties hereto have duly executed this First Amendment as of the date first stated above.

MOTOROLA SOLUTIONS, INC

CITY OF GLENDALE, AZ



Signature

Signature

Carrie Hemmen

Printed Name

Printed Name

03/26/21

Date

Date

EXHIBIT A

PROPOSAL DATED MARCH 26, 2021 - CITYWIDE CAMERA REPLACEMENT



MOTOROLA SOLUTIONS

CITY OF GLENDALE

CITYWIDE CAMERA REPLACEMENT

March 26, 2021



The design, technical, pricing, and other information ("Information") furnished with this submission is proprietary and/or trade secret information of Motorola Solutions, Inc. ("Motorola Solutions") and is submitted with the restriction that it is to be used for evaluation purposes only. To the fullest extent allowed by applicable law, the Information is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the Information without the express written permission of Motorola Solutions.

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March 26, 2021

Rick St. John
City of Glendale City Hall
5850 W Glendale Ave,
Glendale, AZ 85301

Subject: Motorola Offer for Sale Proposal for Glendale Avigilon Project

Mr. St. John,

Motorola Solutions, Inc (“Motorola”) is pleased to present City of Glendale (“Glendale”) the enclosed offer for sale proposal for the purchase of the following:

- Avigilon Cameras, Servers, & VMS for 23 City of Glendale Facilities
- Motorola Project Management
- Avigilon Integration into Glendale’s Real Time Crime Center (RTCC)
- Warranty, On Site Support, & Software Updates as they become available for 1 Yr.

This proposal pricing is pursuant the H-GAC (Houston-Galveston Area Council) Contract number RA05-18. Glendale and Motorola previously entered into a Contract effective September 26, 2019 (the “Contract”). Section 3.5 of the Contract permits Glendale to make additional purchases of Equipment, Software, and services using the Contract as the underlying agreement. This proposal is based on the assumption that the Customer will use its rights under Section 3.5 for the proposed transaction(s) and that the terms and conditions of the Contract apply. To do so, Glendale may accept this offer by returning executed copies of Amendment Number One to memorialize the purchase of products and services as described in Motorola’s proposal. The proposal shall remain valid until April 30, 2021.

Additionally, as part of our proposal and commitments depending on the payment milestones agreed upon, Motorola shall make partial shipments of equipment and will request payment upon shipment of such equipment. In addition, Motorola shall invoice for installations completed on a site-by-site basis or when professional services are completed, when applicable.

We thank you for the opportunity to provide “best in class” solutions. We look forward to continuing our relationship and implementing the project with the City of Glendale. Please direct any questions to Suzy Millard, Sr. Account Manager, at 480-646-7406.

Sincerely,



Carrie Hemmen
Territory VP & Director of Sales T7
MOTOROLA SOLUTIONS, INC.

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SECTION 1

SYSTEM DESCRIPTION

1.1 AVIGILON VIDEO SOLUTION OVERVIEW

Motorola Solutions Inc (“Motorola”) is please to propose a Citywide Camera Replacement solution to the City of Glendale (“COG”). The proposed Avigilon Video Security and Analytics Solution consists of the Avigilon Control Center (ACC) version 7 video management system (VMS), video infrastructure, four hundred thirty-six cameras and software licenses for up to four hundred sixty (460) camera channels across twenty-three (23) unique sites.

The solution will integrate the new Avigilon Control Center VMS and new cameras into COG’s existing CommandCentral Aware system (RTCC) to provide live and recorded video surveillance, including events and alarm notifications.

Avigilon equipment deployed across the twenty-three (23) proposed sites will include:

- Avigilon Control Center (ACC) 7. Avigilon’s latest and most advanced version of ACC™ video management software. Designed to bring the right information to you so that you can take action. ACC 7 provides an easy-to-use, AI-enabled user interface to help ensure critical events do not go unnoticed
- Avigilon’s Next Generation Analytics delivers improved accuracy in both perimeter protection and in crowded, indoor environments:
 - AI Powered Notifications and Events
 - Expanded Object Classification
 - Improved Analytic Event Generation and Appearance Search Results
 - Appearance Search and Unusual Motion and Activity Detection
 - Advanced Pattern-based Analytics
 - Teach-by-example Technology
 - Powerful Forensics
 - Actionable Data
 - Focus of Attention
- Avigilon’s Fourth-generation Network Video Recorders (NVRs) offering our highest capacity, retention and throughput to provide secure, reliable and scalable platforms for high-performance security solutions. Reliable storage with RAID-configured redundancy offers a highly available and resilient system that protects your data. Our PRM and STD models include reliable hard drives with RAID 6 or 60 redundancy. Operating systems on a redundant array of Solid-State Drives designed for greater reliability and speed.
- Avigilon’s HD Video Appliances (HDVAs) designed to help shorten installation time, simplify deployment and reduce the cost and complexity of your security system. All Avigilon HDVAs come pre-loaded with ACC software; the proposed Pro 24-Port and 16-Port models feature advanced functionalities including replaceable power supplies and video drives, larger storage capacities and increased throughput.
- Avigilon’s high-resolution monitoring stations with two- or four-monitor workstations, pre-loaded with ACC Client software, and featuring a maximum resolution of 3840 x 2160 (4K) per monitor(s).
- Avigilon Cameras and Sensors



- H5A Camera Line - presented in dome and bullet form factors, and featuring our next-generation video analytics technology to help focus your attention on potentially critical events, providing a smarter and more powerful video security solution from the moment it is deployed.
- H5SL Camera Line - presented in dome and bullet form factors, delivering a versatile and cost-effective security solution, uses AI Unusual Motion Detection to notify you of unusual events that might otherwise have been missed, offering increased situational awareness and helping you to effectively monitor more cameras.
- H4 Fisheye Camera Line - delivers a complete, high-resolution, 360-degree panoramic view with no blind spots.
- H4 Multisensor Camera Line - combines Avigilon self-learning video analytics with exceptional coverage, featuring three or four individually-adjustable camera sensors that can be positioned to monitor virtually any area. The multisensor only requires one camera channel license, delivering more actionable data with increased ROI.
- H4 IR PTZ Camera - combines a powerful zoom lens with infrared (IR) technology to provide broad coverage and exceptional image quality, even in low-light settings, supports up to 60 frames per second, with ability to see up to 250 meters (820 feet) in complete darkness. An abrasion-resistant front lens and built-in silicone rubber wiper help to ensure clean, undistorted images in challenging weather conditions.
- H5A PTZ Camera - brings wide area coverage and long range detail with up to 36x zoom for superior situational awareness. Provides high-quality, evidentiary images and 360° views for you to monitor critical infrastructure.
- H4 Video Intercom - integrates a 3 MP fisheye camera with a high-performance intercom, featuring echo-canceling and noise reduction technologies, for clear two-way communication. This secured entry system enables operators to quickly and easily identify and talk with a visitor before remotely granting access.
- KBC Networks Point-to-Point Wireless Ethernet Transmission Connectivity to provide for and connect video surveillance solutions at three (3) large and remote sites without network infrastructure.
 - High throughput, Gigabit Wireless Transmission system that operates in the license-free, 5GHz band providing an Ethernet channel up to 1.3Gbps aggregate.
 - ◆ Cemetery
 - ◆ FARC
 - ◆ Municipal Airport
- Warranty & Extended Warranties - Avigilon offers the most comprehensive warranties in the industry. Warranties listed below are provided as part of this proposal. See Avigilon Limited Warranty & Product Policies for complete details, exceptions and exclusions.
 - Avigilon Video Infrastructure - All NVR's are backed by lifetime 24/7 Avigilon telephone technical support.
 - NVR4X series NVR's include manufacturer's five (5) year limited warranty with Next Business Day Dell-on-Site Response.
 - ◆ Manufacturer's Extended Warranty for the NVR4X-series upgrades response time to 4 hour mission critical Dell-on-Site for duration of warranty.
 - Avigilon Video Infrastructure: NVR4 series, HD Appliances and Workstations include manufacturer's three (3) year limited warranty and advance replacement.
 - ◆ Manufacturer's Extended Warranty for the NVR4 series, HD Appliances and Workstations extends warranty for 2 more years, total 5 years
 - Avigilon Monitors include manufacturer's three (3) year limited warranty.
 - Avigilon Cameras and Sensors:

- ◆ H5A, H5SL, H5M Camera Lines: manufacturer's five (5) year limited warranty and advance replacement.
- ◆ H5A PTZ Cameras: manufacturer's five (5) year limited warranty and advance replacement.
- ◆ H4F, H4VI, H4IRPTZ Cameras: manufacturer's three (3) year limited warranty and advance replacement.
- One (1) Year Parts and Labor Warranty to be provided by the installation partner, Climatec LLC of Phoenix, AZ.
- Video Retention - Avigilon's HD Video Infrastructure delivers secure, reliable, and scalable storage for video recorded from connected cameras. Video storage will be provided by the proposed hardware utilizing the Avigilon HD Video Infrastructure line. The video infrastructure units will provide sufficient onboard storage to deliver ~30-days of recorded video each. *Multiple factors may affect actual video quality and retention time. Storage calculations for each site are based upon known information at time of walkthrough, and are subject to and dependent on scene activity and retention policies.

For the complete equipment list to support the proposed system design, please refer to section 2, Equipment List.

1.2 AVIGILON VIDEO SOLUTION PRODUCTS DESCRIPTION

1.2.1 Avigilon Control Center (ACC) Version 7

Avigilon Control Center (ACC) software is an easy-to-use video management software that is designed to optimize the way security professionals manage and interact with high-definition video. It efficiently captures and stores HD video, while intelligently managing bandwidth and storage using our patented High Definition Stream Management (HDSM) technology. Version 7 of the software is an entirely new way to monitor live video through its Focus of Attention interface, enabling operators to see at a glance what is happening across the entire site and more effectively triage and respond to the most important events.

Self-Learning Video Analytics

ACC video management software enables analytics events and alarms to be viewed and searched through an intuitive user interface. Real-time events and forensic capabilities detect and notify scene changes and rules violations.



Focus of Attention Interface

Redefining the experience for monitoring live video, Focus of Attention helps increase operator effectiveness by providing an overview of events occurring across all cameras in the site, including Avigilon analytic events, face watch list matches, Unusual Motion Detection (UMD) events, motion events, and alarms. Operators can quickly triage the most important events by reviewing the associated live and recorded video to determine if a response is required.



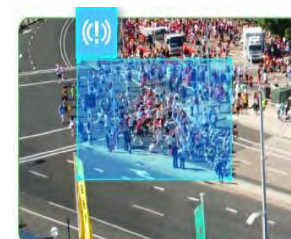
Avigilon Appearance Search Technology

A sophisticated AI search engine that enables investigators to sort through hours of recorded video with ease and quickly locate a person or vehicle of interest across an entire site. Search for a person or vehicle of interest by entering a physical description, or by finding an example in recorded video.



Unusual Motion Detection

Advanced AI technology that brings a new level of automation to video security. Without any predefined rules, UMD technology continuously learns what typical activity in a scene looks like, and then detects and records motion anomalies.



Facial Recognition Technology

ACC™ 7 software incorporates AI-powered facial recognition technology to help organizations accelerate response times by identifying people of interest

Through the new “appearance alerts” capability, people of interest are identified based on a secure, controlled watch list created and maintained by authorized users at the organization. Avigilon cameras licensed for facial recognition will seek to identify potential matches based on the watch list and if a match is found, the user is alerted within the ACC software, helping security personnel quickly determine if further action is necessary.



Preinstalled on Avigilon Recorders and Appliances

ACC software is pre-installed and configured on Avigilon HD Video Appliances, Network Video Recorders (NVRs), NVR Workstations, ACC ES Recorders, ACC ES Analytics Appliances, ACC ES 8-Port Appliances and the H4ES camera line. You can also install the stand-alone ACC software to meet the needs of a wide variety of projects. Our NVRs come pre- installed with the NVR Analytics Kit to enable our patented Avigilon Appearance Search technology.



Additional Product Detail and Spec Sheets can be found in Appendix B – Product Literature

1.2.2 Avigilon Control Center Advanced Features


- 

HDSM™ Technology
Efficiently compresses and preserves image quality while intelligently managing HD image transmission throughout your Avigilon system — sending only the requested portions of captured images to operator workstations.
- 

HDSM SmartCodec™ Technology Support
Automatically optimizes compression levels for regions in a scene, to maximize bandwidth while still maintaining image quality.
- 

Avigilon Appearance Search Technology
Quickly search recorded video to find instances of a person or vehicle across all sites using cameras with Avigilon self-learning analytics. Search for a person by physical description, including clothing color, hair color, gender and age group. Search for a vehicle by physical description, including color and category - car, truck, bus, bicycle, and motorcycle.
- 

Facial Recognition Technology
AI-powered facial recognition algorithms notify operators when a person of interest returns to a facility. Add a person to a face watch list from recorded video or Avigilon Appearance Search results. Appearance alerts display in the Focus of Attention interface.
- 

Intelligent Search
Powerful search tools enable you to quickly search recorded video for motion, the presence of classified objects (people or vehicles), background changes in the scene (thumbnail search), and for events.
- 

Simple Camera and Server Installation
Plug-and-play capabilities for NVRs and cameras that automatically identify themselves on the network, without manual configuration or searching.
- 

License Plate Recognition (LPR) Analytics
Second generation LPR analytics engine with easy configuration and improved accuracy for faster security response. Multiple license watch lists can trigger unique ACC rules when detecting a match.
- 

ACM-ACC Interoperability
The Access Control Manager (ACM) system receives, processes, and acts on ACM™ door events, hardware input events, and access grants, enabling operators to unlock access doors directly from a camera view. Identity Verification enables users to see ACM system credentials dynamically displayed with ACC camera views. Identity Search enables users to visually verify access events, and initiate an Avigilon Appearance Search across the entire site for the same person.
- 

Alarm Escalation
Create complete end-to-end workflows for monitoring, assigning, and acknowledging alarms.
- 

ACC Mobile Software
Push alarm notifications, live and recorded video, audio talkdown, self-learning video analytics overlays, digital output triggers, and PTZ control for Android™ and iOS mobile devices.
- 

Avigilon Blue™ Web Client
Securely stream live and recorded video from firewall-protected ACC sites using a Chrome or Safari web browser. With no client installation required, this solution leverages the Avigilon Blue service to support secure peer-to-peer connections to ACC servers.
- 

Video Archive
Retain and manage large amounts of video for on-demand retrieval and review. Extend your storage beyond NVRs using the Avigilon Video Archive for reliable and scalable storage.
- 

Detailed Management, Monitoring, and Reporting of System Status and Security
Detailed logs of storage, network, and overall system status to help ensure the highest possible system uptime for critical applications.
- 

Point-of-Sale Transaction Engine
Link HD security recorded video (viewed instantly) with transaction data to address compliance requirements and help reduce shrinkage and theft.
- 

Scalable Integration with External Systems
Distributed architecture features .NET-based and REST-based APIs that can easily be integrated with other systems, such as access control and building management.
- 

ONVIF® Profile S, T and G Compliant VMS
Ensures interoperability between IP based ONVIF conformant security devices regardless of manufacturer. Allows video recovery from SD cards installed in Profile G cameras in case of network failure.
- 

Unusual Motion Detection
UMD technology enables fast video search and is designed to reduce hours of work to minutes by narrowing potentially thousands of motion events to a handful. This allows operators to focus their attention on recorded video needing further investigation.
- 

Light and Dark UI Themes
Select between light and dark user interface themes to make the software easier to view in environments with different lighting conditions.

1.3 COMMANDCENTRAL AWARE (RTCC)-AVIGILON INTEGRATION

Motorola Solutions' CommandCentral Aware solution combines disparate systems and data into an accessible interface. This single interface offers command centers a complete operating picture to support field personnel in real time. CommandCentral Aware unifies data from mapping, correlated event monitoring, analytics, and communications. This interface streamlines public safety workflows and viewpoints, enabling users to access and act on critical information.

Glendale can increase the value of current investments by connecting CommandCentral Aware to Avigilon ACC. Users can communicate with confidence, knowing their information is hosted in the highly secure Microsoft Azure cloud.

Designated Entities

The entities participating in the CommandCentral Aware solution are:

Glendale Arizona Police Department

Application Software and System Components

This CommandCentral Aware solution includes the following elements add-on:

Avigilon Video (ACC) Video Analytics and LPR Integration.

1.3.1 Video Management System Component Descriptions

As part of CommandCentral Aware, the Video View module consumes video content from a variety of Video Management Systems (live and recorded, fixed and mobile).

The Video View module can also consume video analytics of automated license plate recognition, facial recognition, and object detection. These capabilities refine video feeds to accurately assess detail that the eye may not see, further enhancing the users experience within CommandCentral Aware. Component configuration within CommandCentral Aware allows for specific use case definition expanding automated intelligence into the application via:

Workflow Configuration – Associate related data from different systems to get a comprehensive view of an incident or threat. Display nearby video sources based on CAD incident, sensor alarms, and provided third-party data alerts.

Real-Time Video Streaming – Patrol the community or view an event in seconds by accessing up to 16 cameras simultaneously from video feeds via VMS. Users can reference the video source, date, time, and location, as well as customize camera groups for quicker access to particular locations.

Camera Field of View – Define FOV and view on the map display. Users can toggle cameras off and on that may or may not be pointed in the direction of the incident.

Video Camera Audit Log – Capture user interactions and record them in a log.

Avigilon Control Center (ACC) & Video Analytics

The Avigilon Control Center (ACC) uses self-learning and next generation analytics to provide effective monitoring and proactive, real-time response for security personnel. ACC

combines an intuitive interface with advanced artificial intelligence (AI) search technology for a full-featured integration with CommandCentral Aware.

This ACC integration includes the following:

- **Advanced Pattern-Based Analytics** – Avigilon advanced video pattern detection technology accurately recognizes the movements of people and vehicles while ignoring motion not relevant to a scene. The system’s self-learning ability reduces false positives and helps make alerts more meaningful.
- **Teach-by-Example Technology** – Avigilon teach-by-example object classifier technology allows users to provide feedback about the accuracy of alarm events generated by Avigilon devices. Rather than decreasing analytics sensitivity to reduce false alarms, the feedback trains devices to improve the accuracy of the analytics used to determine which alarms are real and which are false. This impacts a low false-positive alarm rate. Over time, the system learns the scene and is able to prioritize important events based on user feedback. This increases sensitivity to conditions that are of concern while reducing false alarms to keep the focus on what matters.
- **Avigilon Video Analytics Alerts Integration** – Avigilon ACC allow video analytics to send alerts to CommandCentral Aware. These analytics include object detection, motion detection, path crossed, and directional pattern changes.

The ACC rules engine enables users to selectively apply analytics-based events as alarms and rule triggers. These rules offer immediate notifications for suspicious activities to help CommandCentral Aware users monitor and respond more efficiently.

The Avigilon to CommandCentral Aware connector integrates the results of the rules engine combined with video from the Avigilon VMS. The targeted video feed is displayed in response to user interaction and pre-defined scenarios based on a customizable rule set. Users can configure specific categories of events, such as CAD incidents, LPR alarms, or other alert reporting systems integrated into CommandCentral Aware, in relation to analytics to trigger video feeds. These real-time events and forensic capabilities detect and notify scene changes, missing objects, and rules violations. In addition to the live video and analytics, the connector supplies operator’s video display tools that control pan, tilt, zoom (PTZ) cameras, and playback of recorded video.

The following is a current list of Avigilon Control Center (ACC) video analytics features for object detection and classification for live or forensic events that enhance the common operating picture and situational awareness capabilities of CommandCentral Aware. Added processing power enables the tracking and classification of over 50 objects. Previous analytics classified objects only when they were moving, now objects are additionally classified if they remain stationary.

Avigilon Analytics Rules for ACC	Analytics Rules Description (Objects are Classified as Person, Vehicle, Car, Truck, Bus, Motorcycle or Bicycle)
Objects in Area	The event is triggered when the selected object type moves into a specified region of interest.
Object Loitering	The event is triggered when the selected object type stays within a specified region of interest for an extended amount of time which is configured.
Objects Crossing Beam	The event is triggered when an Object or a specified number of Objects have crossed the directional beam that has been configured over the camera’s field of view. The beam can be unidirectional or bidirectional.

Avigilon Analytics Rules for ACC	Analytics Rules Description (Objects are Classified as Person, Vehicle, Car, Truck, Bus, Motorcycle or Bicycle)
Object Appears of Enters Area	The event is triggered by each object that enters the specified region of interest.
Object Not Present in Area	The event is triggered when no objects are present in the specified region of interest.
Objects Enter Area	The event is triggered when the specified number of objects have entered the specified region of interest.
Objects Leave Area	The event is triggered when the specified number of objects has left a specified region of interest region of interest.
Object Stops In Area	The event is triggered when an object in a specified region of interest stops moving for the specified threshold time.
Direction violated	The event is triggered when an object moves in the prohibited direction of travel.
Camera tampering	The event is triggered due to sudden scene changes.

SECTION 2

EQUIPMENT LIST

Equipment List is included on the pages that follow.



Nomenclature	Description	Project Total Units	COG-Advocacy Center	COG-Cemetery	COG-City Hall	COG-Civic Center	COG-Comm Center Adult Center	COG-Comm Center Ocotillo	COG-Comm Housing Authority	COG-Court house	COG-FARC	COG-Foothills Park Skate Park	COG Foothills PS Bldg	COG Gateway PS Bldg	COG Glendale PS Bldg	COG Heroes Skate Park	COG Library Heroes Park	COG Library Foothills	COG Library Main	COG Library Velma Teague	COG Media Center	COG Muni Airport	COG Ops Campus	COG Saguaro Ranch Historic Site	COG Saguaro Ranch Maint Yard
VIDEO INFRASTRUCTURE	DESCRIPTION																								
HD-NVR4X-PRM-96TB-NA	HD NVR4 PRM 96TB 2U Rack Mnt, Windows Server 2016	2													1								1		
HD-NVR4X-PRM-64TB-NA	HD NVR4 PRM 64TB 2U Rack Mnt, Windows Server 2016	1								1															
HD-NVR4X-STD-24TB-NA	HD NVR4 STD 24TB 2U Rack Mnt, Windows 10 IoT LTSB	3					1										1		1						
HD-NVR4X-STD-48TB-NA	HD NVR4 STD 48TB 2U Rack Mnt, Windows 10 IoT LTSB	8			1	1					1		1	1						1		1		1	
NVR4-VAL-16TB-NA	NVR4 VAL 16TB NA 1U Rack Mnt, Windows 10 IoT	1																			1				
NVR4-VAL-12TB-NA	NVR4 VAL 12TB NA 1U Rack Mnt, Windows 10 IoT	1																1							
VMA-AS3-8P8-NA	HD Video Appliance 8-port 8TB unit, NA. ACC licenses sold separately	2		1												1									
VMA-AS3-16P09-NA	HD Video Appliance Pro 16-Port 9TB unit; NA. ACC licenses sold separately	1							1																
VMA-AS3-16P12-NA	HD Video Appliance Pro 16-Port 12TB unit; NA. ACC licenses sold separately	3	1									1													1
VMA-AS3-24P24-NA	HD Video Appliance Pro 24-port 24TB unit, NA.	1						1																	
VMA-AS3-HDD06	HDVA3 6TB Hard Drive for VMA-AS3-24P18	2						2																	
RM5-WKS-2MN-NA	Remote Monitoring Workstation, 2 monitors, NA	19	1	1	2	1	1	1			1		1	1		1	1	1	1	1	1	1	1	1	1
RM5-WKS-4MN-NA	Remote Monitoring Workstation, 4 monitors, NA	3								2					1										
NETWORK EQUIPMENT, MONITORS & POWER																									
DTK-MRJPOE	Power over Ethernet Surge Protection - RJ45 Connection, CAT5e	25													10							15			
M2324-NA	Monitor, 24", LCD, 2.3 Megapixel, 16:10 Widescreen Aspect Ratio -NA	50	2	2	4	2	2	2	1	4	2	2	2	2	4	2	1	2	2	2	2	2	2	2	2
NVR4X-SFPPLUS-SR	SFP+ 10GBASE-SR Optical Transceiver (single) for NVR4X	6								2					2								2		
POE-INJ-BT-60W-NA	Indoor single port Gigabit PoE++ 60W	1																					1		
POE-INJ2-60W-NA	POE Injector for Multisensors w/IR Rings	101	2	1	4	3	4	1	1	13	6	2	5	6	3	1	2		4	4	3	2	16	13	5
POE-INJ2-95W-NA	Indoor single Port PoE Injector Gigabit, 95W, NA power cord, for use with H4IR PTZ	9																				8	1		
POE-INJ2-PLUS-NA	Indoor single port POE+ injector, for use with H4 PTZ in-ceiling or pendant	8								2													6		
PS-920W-AS3-16/24P	920W Power Supply for HDVA3 16/24-Port (no power cord)	1						1																	
S8P-124W-NA	8 Port Gigabit PoE Switch; 124W -NA	16	1	1		1			1	1	1	1				1			1				6		1

Nomenclature	Description	Project Total Units	COG-Advocacy Center	COG-Cemetery	COG-City Hall	COG-Civic Center	COG-Comm Center Adult Center	COG-Comm Center Ocotillo	COG-Comm Housing Authority	COG-Court house	COG-FARC	COG-Foothills Park Skate Park	COG-Foothills PS Bldg	COG-Gateway PS Bldg	COG-Glendale PS Bldg	COG-Heroes Skate Park	COG-Library Heroes Park	COG-Library Foothills	COG-Library Main	COG-Library Velma Teague	COG-Media Center	COG-Muni Airport	COG-Ops Campus	COG-Saguaro Ranch Historic Site	COG-Saguaro Ranch Maint Yard	
S24P-382W-NA	24 Port Gigabit PoE Switch, 382W -NA	22			4	1	1			2	1		1	1	2		1	1	1	1	1	1	2	1		
LICENSES & ANALYTICS																										
ACC7-ENT	ACC7 Enterprice Camera Channel License	460	8	5	79	20	23	16	9	50	27	3	13	11	36	4	17	18	25	16	9	15	34	17	5	
VMA-AS3-ANK	Analytics Kit for Appearance Search and Face Recognition, HDVA3 16/24-port	4						1	1			1													1	
CAMERAS																										
CAMERAS - ANALYTICS LINE																										
2.0C-H5A-BO1-IR	2.0 MP (1080p) WDR, LightCatcher, 3.3-9mm f/1.3 P-iris lens, Integrated IR, Next-Generation Analytics	5					1	2		2																
2.0C-H5A-D1	2.0 MP (1080p) WDR, LightCatcher, Day/Night, Indoor Dome, 3.3-9mm f/1.3 P-iris lens, Next-Generation Analytics	8			1					5	2															
2.0C-H5A-DC1	2.0 MP (1080p) WDR, LightCatcher, Day/Night, In-Ceiling Dome, 3.3-9mm f/1.3 P-iris lens, Next-Generation Analytics	12			1	2	2		1		1		2					2			1					
2.0C-H5A-DC2	2.0 MP (1080p) WDR, LightCatcher, Day/Night, In-Ceiling Dome, 9-22mm f/1.6 P-iris lens, Next-Generation Analytics	4																4								
2.0C-H5A-DO1-IR	2.0 MP (1080p) WDR, LightCatcher, Day/Night, Outdoor Dome, 3.3-9mm f/1.3 P-iris lens, Integrated IR, Next-Generation Analytics	6																		1		5				
2.0C-H5A-DP1	2.0 MP (1080p) WDR, LightCatcher, Day/Night, Pendant Dome, 3.3-9mm f/1.3 P-iris lens, Next-Generation Analytics.	4								1				1				2								
2.0C-H5A-DP1-IR	2.0 MP (1080p) WDR, LightCatcher, Day/Night, Pendant Dome, 3.3-9mmf/1.3 P-iris lens, Integrated IR, Next-Generation Analytics.	4								2								2								
4.0C-H5A-BO1-IR	4.0 MP WDR; LightCatcher; 3.3-9mm f/1.3 P-iris lens; Integrated IR; Next-Generation Analytics	4																					4			
4.0C-H5A-BO2-IR	4.0 MP WDR, LightCatcher, 9-22mm f/1.6 P-iris lens, Integrated IR, Next-Generation Analytics	3						3																		
4.0C-H5A-DC1	4.0 MP WDR, LightCatcher, Day/Night, In-Ceiling Dome, 3.3-9mm f/1.3 P-iris lens, Next-Generation Analytics	3			2													1								
4.0C-H5A-DP1-IR	4.0 MP WDR, LightCatcher, Day/Night, Pendant Dome, 3.3-9mm f/1.3 P-iris lens, Integrated IR, Next-Generation Analytics	6								6																
5.0C-H5A-BO2-IR	5.0 MP WDR; LightCatcher; 9-	1																					1			

Nomenclature	Description	Project Total Units	COG-Advocacy Center	COG-Cemetery	COG-City Hall	COG-Civic Center	COG-Comm Center Adult Center	COG-Comm Center Ocotillo	COG-Comm Housing Authority	COG-Court house	COG-FARC	COG-Foothills Park Skate Park	COG Foothills PS Bldg	COG Gateway PS Bldg	COG Glendale PS Bldg	COG Heroes Skate Park	COG Library Heroes Park	COG Library Foothills	COG Library Main	COG Library Velma Teague	COG Media Center	COG Muni Airport	COG Ops Campus	COG Saguaro Ranch Historic Site	COG Saguaro Ranch Maint Yard	
	22mm f/1.6 P-iris lens; Integrated IR; Next-Generation Analytics																									
6.0C-H5A-BO1-IR	6.0 MP WDR, LightCatcher, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Next-Generation Analytics	1											1													
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	6		1		1											1	3								
8.0C-H5A-DP1-IR	8.0 MP (4K) WDR; LightCatcher; Day/Night; Pendant Dome; 4.9-8mm f/1.8 P-iris lens; Integrated IR; Next-Generation Analytics.	2				2																				
CAMERAS - SL LINE & MINI DOME																										
2.0C-H4M-D1-IR	2.0 MP, WDR, LightCatcher, Day/Night, Indoor Dome, 2.8mm f/1.2, IR	3	2																		1					
2.0C-H5M-DO1-IR	2.0 MP WDR, LightCatcher, Day/Night, Outdoor Dome, 2.8mm	80			30	3	5		1	8	2		1	1	14			4	11							
2.0C-H5SL-BO1-IR	2.0 MP; WDR; LightCatcher; Day/Night; Indoor/Outdoor Bullet Camera; 3.1-8.4mm f/1.6; Integrated IR	4	1								1				2											
2.0C-H5SL-D1	2.0 MP, WDR, LightCatcher, Day/Night, Indoor Dome, 3-9mm f/1.4	38			3	2	4	1	4	5	6		1	1	3			3	3				2			
2.0C-H5SL-D1-IR	2.0 MP, WDR, LightCatcher, Day/Night, Indoor Dome, 3-9mm f/1.4, Integrated IR	4					1											2			1					
2.0C-H5SL-DO1-IR	2.0 MP, WDR, LightCatcher, Day/Night, Outdoor Dome, 3.1-8.4mm f/1.6, Integrated IR	52	2	3	12	7	2		1			1	1		7	3	1	1			3		5	2		
3.0C-H5SL-BO1-IR	3.0 MP; WDR; LightCatcher; Day/Night; Indoor/Outdoor Bullet Camera; 3.1-8.4mm f/1.6; Integrated IR	1											1													
3.0C-H5SL-BO2-IR	3.0 MP; WDR; LightCatcher; Day/Night; Indoor/Outdoor Bullet Camera; 9.5-31mm f/1.4; Integrated IR	1												1												
3.0C-H5SL-DO1-IR	3.0 MP; WDR; LightCatcher; Day/Night; Outdoor Dome; 3.1-8.4mm f/1.6; Integrated IR	6												1	3								1	1		
5.0C-H5SL-BO1-IR	5.0 MP, WDR, LightCatcher, Day/Night, Indoor/Outdoor Bullet Camera, 3.1-8.4mm f/1.6, Integrated IR	5							1		1		1		2											
5.0C-H5SL-BO2-IR	5.0 MP, WDR, LightCatcher, Day/Night, Indoor/Outdoor Bullet Camera, 9.5-31mm f/1.4, Integrated IR	18			14						1		1										2			
5.0C-H5SL-D1	5.0 MP; WDR; LightCatcher; Day/Night; Indoor Dome; 3.1-8.4mm f/1.6	1									1															
5.0C-H5SL-DO1-IR	5.0 MP, WDR, LightCatcher, Day/Night, Outdoor Dome, 3.1-8.4mm f/1.6, Integrated IR	3																1					2			
CAMERAS - FISHEYE																										

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6.0L-H4F-DO1-IR	6.0 MP, Fisheye Camera, LightCatcher, Day/Night, 1.45mm f/2.2, Integrated IR	6					1	5																		
12.0W-H5A-FE-DO1-IR	12.0 MP, Fisheye Camera, Day/Night, 1.45mm f/2.2, Integrated IR	34			12		3	4		9	4				2											
CAMERAS - MULTISENSOR																										
9C-H4A-3MH-180	3x 3 MP, WDR, LightCatcher, 4mm, Camera Only	22			2			1		3	1		2	1	3				1					8		
9C-H4A-3MH-270	3x 3 MP, WDR, LightCatcher, 2.8mm, Camera Only	18	2	1	1				1	5			3	3					1					1		
12C-H4A-4MH-360	4x 3 MP; WDR; LightCatcher; 2.8mm; Camera Only	6								1													1	4		
15C-H4A-3MH-180	3x 5 MP, WDR, LightCatcher, 4mm, Camera Only	7				1	2			2			1							1						
15C-H4A-3MH-270	3x 5 MP, WDR, LightCatcher, 2.8mm, Camera Only	14				2	2			1	2									3	1				3	
20C-H4A-4MH-360	4x 5 MP; WDR; LightCatcher; 2.8mm; Camera Only	7									1												6			
24C-H4A-3MH-180	3x 8 MP; WDR; LightCatcher; 5.2mm; Camera Only	6			1						1	1									1	2				
24C-H4A-3MH-270	3x 8 MP; WDR; LightCatcher; 4mm; Camera Only	14										1	1			1	2			2			7			
32C-H4A-4MH-360	4x 8 MP; WDR; LightCatcher; 4mm; Camera Onl	6									1										1		2		2	
CAMERAS - PTZ																										
2.0C-H4IRPTZ-DP30-WP	2MP H4 IR PTZ; with Wiper 30X; Self-learning analytics; IK10; IP66; 250m IR	9																				8	1			
8.0C-H5A-PTZ-DP36	H5A; 8MP 36x Pendant PTZ Dome	1																					1			
CAMERAS - Video Intercom																										
3.0C-H4VI-RO1-IR	3.0 MP; H4 Video Intercom; WDR; LightCatcher; Day/Night; 1.83mm f/2.4; Integrated IR; Recessed Mount	1	1																							
MOUNTS & ACCESSORIES																										
ACC-MIC	Omni-directional; low impedance; electret condenser microphone with built-in preamp for producing line level output.	2							2																	
ACC-USB-JOY-PRO	Professional USB Surveillance joystick for full control of Avigilon Control Center	1																					1			
CM-MT-WALL1	Pendant w/Arm Wall Mount Adapter	40	2		1		4			5	4		1	2	2		2			1		8	3	5		
H4-BO-JBOX1	Junction box for the H4A HD Bullet, H4SL HD Bullet, or H4 Thermal cameras.	49	1	1	14	1	1	5	1	2	4		3	1	4		1	3					7			
H4-MT-CRNR1	Corner Mount Adapter	61	2	1	2	3	2	4	1	6	4	2	4	5		2	2		2	4	1	2	10		2	
H4-MT-POLE1	Pole Mount Adapter	46						1			7	1	2	1								4	11	16	3	
H4A-DC-CLER1	Replacement clear transparent cover for H5A/H4A in-ceiling dome camera. Includes dome	16													2				14							

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	bubble and grey camera cover																								
H4A-DD-CLER1	Replacement clear transparent cover for H5A/H4A indoor dome camera. Includes dome bubble and grey camera cover	10								10															
H4A-DO-CLER1	Replacement clear transparent cover for H5A/H4A outdoor dome camera. Includes dome bubble and grey camera cover	2																2							
H4A-DP-CLER1	Replacement clear transparent cover for H5A/H4A pendant dome camera. Includes dome bubble and grey camera cover.	24								16							8								
H4A-MT-WALL1	Wall Mount Bracket for H5A/H4A Pendant Dome	21				2				9			1				4				5				
H4AMH-AD-CEIL1	In-ceiling adapter for Multisensors	2								1								1							
H4AMH-AD-DOME1	Outdoor surface mount adapter for Multisensors	1										1													
H4AMH-AD-IRIL1	IR Ring for Multisensors	89	2	1	4	3	4		1	11	6	2	5	6	3	1	2		3	4	3	2	8	13	5
H4AMH-AD-PEND1	Pendant Mount Adapter, Outdoor for Multisensors	96	4	1	4	3	4	1	1	11	6	2	4	6	3	1	2		3	4	2	2	14	13	5
H4AMH-DC-COVR1-SMOKE	Dome Bubble Cover, Smoke for Multisensors	3								1									2						
H4AMH-DC-CPNL1	Drop ceiling metal panel for use with H4A-MH-AD-CEIL	2								1									1						
H4AMH-DO-COVR1	Dome Bubble Cover, Clear for Multisensors	125	2	1	4	3	4	3	1	24	6	2	5	6	9	1	2		6	7	5	2	14	13	5
H4F-MT-NPTA1	NPT Adapter for H4 Fisheye Cameras	2									2														
H4M-MT-DCIL1	In-ceiling mount for H4M dome cameras	1																			1				
H4SL-DD-CLER1	Replacement clear transparent cover for H4SL outdoor dome camera.	31													20		1	4			6				
H4SL-DI-CLER1	COVER, Repl, Clear, Grey, H4SL Indoor Dome	38					2			10					6			10	6	2	2				
H4SL-MT-DCIL1	In-Ceiling mount for H4SL dome cameras	24				2	4	1	4		4		1		3			2	2		1				
H4SL-MT-NPTA1	NPT Adapter for H5SL Domes	37	2		1		3			6	4			1	2	4		2			1		8	3	
H4VI-AC-RELY1	Safety Relay for H4 Video Intercom	1	1																						
H4VI-MT-SURF1	Surface mount adapter for H4 Video Intercom	1	1																						
H4VI-RO-CVER1	Replacement dome cover for H4VI camera; package of 5	2	2																						
H5M-DO-BZL1	Package of 4 shroud replacement parts for H5M dome	1								1															
H5M-MT-DCIL1	In-ceiling mount adapter for H5M dome cameras	67	1		20	3	5		1	9			1	1	14			4	8						
IRPTZ-MNT-NPTA1	Pendant NPT Adapter	30						1				1	1									9	13	5	
IRPTZ-MNT-WALL1	Pendant Wall Mount Adapter for Multisensors	94	2	1	4	3	4	1	1	11	6	2		6	3	1	2		3	4	2	10	10	13	5
MNT-AD-CORNER	Corner mount adapter for use with MNT-PEND-WALL, H3-BO-	2																				2			

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	JB or HD Bullet Camera																									
Pelco PP450	Parapet Mount	1										1														
CABLE/CONDUIT & ACCESSORIES																										
Cable (per ft)	23-4P UNS SOL CMP C6 Wht Jkt - per ft.	101,000	3,000	500	14,000	6,000	7,000	2,500	2,000	7,000	10,000	500	4,000	3,000	9,000	500	1,000	5,000	6,000	2,000	2,500	3,500	12,000			
Conduit & J-boxes	10 Linear feet Conduit, J-boxes end to end	156		5	10		6								25							10	100			
Patch Cords		42													36							6				
WARRANTY - EXTENDED																										
NVR4X-PRM1-WARR-5Y4HMC	Upgrade 5 Year Next Business Day warranty to 5 Years 4 Hour Mission Critical for NVR4X PRM	3								1					1								1			
NVR4X-STD-WARR-5Y4HMC	Upgrade 5 Year Next Business Day warranty to 5 Years 4 Hour Mission Critical	11			1	1	1				1		1	1			1		1	1		1		1		
NVR4-VAL-WARR-EXTEND-2YR	2 Year Extended Warranty for NVR4-VAL	2																1			1					
RM5-WKS-WARR-EXTEND-2YR	2 Year Extended Warranty for RM5-WKS	22	1	1	2	1	1	1		2	1		1	1	1	1	1	1	1	1	1	1	1	1	1	
VMA-AS3-8P-WARR-EXTEND-2YR	2YR Warranty Extension for HDVA3 8-Port	2		1												1										
VMA-AS3-16P-WARR-EXTEND-2YR	2YR Warranty Extension for HDVA3 16-Port	4	1						1			1													1	
VMA-AS3-24P-WARR-EXTEND-2YR	2 Year Extended Warranty for VMA-AS3-24P, excluding hard drive	1						1																		
POINT-TO-POINT WIRELESS CONNECTIVITY																										
757355	KBC NETWOR WES3-AX-CF 5 GHZ WIRELESS ETHERNET RADIO	2		1							1															
757359	KBC NETWOR WES3HTG-AX-CA 5 GHZ GIGABIT WIRELESS ETHERNET RADIO	2		1							1															
599661	KBC NETWOR KBC-PRE-CONF PRE CONFIGURATION SERVICE	4		2							2															
9785249	KBC NETWOR ESUGS8-B INDUSTRIAL ETHERNET SWITCH, UNMANAGED, (8) 10/100/1000MBPS	2		1							1															
485482	KBC NETWOR DRP240-48 DIN RAIL POWER SUPPLY FOR POE	2		1							1															
752539	KBCNETWOR SDR240-48 POWER SUPPLY FOR KBC POE SWITCHES, 240W	2		1							1															
757253	KBC NETWOR KBC-SPB-4AF-48 COMPACT NEMA 4X ENCLOSURE WITH 48VDC	4		2							2															
483035	WIRELESS ETHERNET SYSTEM KIT C/W (2) RF MOD.(2)PIM,(2) PSU 24VDC	5																				5				
9812972	WIRELESS RADIO CONFIGURATION	10																				10				

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AX-WP2	Outdoor Power Supply/Battery Enclosure	6																				6			
ES-PS-S4	Managed switch, 5 port, Outdoor IP66, -40°C (-40°F) to 50°C (122°C), Gigabit Ethernet, AC power input. 1x SFP uplink and 4 port RJ45.	4																				4			

SECTION 3

STATEMENT OF WORK

Motorola Solutions with our subcontractor, Climatec LLC, will install, configure, program, commission, and test the Avigilon Control Center video management system at each of the proposed locations as detailed in the System Description, Equipment List, and the included Design Documents. COG will assume responsibility for the installation and performance of all other equipment and work necessary for completion of this project that is not provided by Motorola Solutions. The following table describes the general responsibilities involved with installation and configuration.

Implementation services included as part of this proposal are based on work being performed during normal business hours, Monday – Friday or as agreed upon. Should Glendale require services to occur during non-business hours, additional costs may apply and will be handled via the change order process.

Tasks	Motorola	COG
Avigilon VMS Installation and Configuration		
Execute contract and distribute contract documents.	X	X
Assign a Project Manager as a single point of contact.	X	X
Schedule kickoff meeting.	X	
Ensure that project team members attend all meetings relevant to their role on the project.	X	X
Hold regular project status meetings as agreed upon; record and distribute meeting minutes.	X	
Conduct a Detailed Design Review on a site by site basis or as mutually agreed upon.	X	X
Review and update design documents, including System Description, Statement of Work, Project Schedule, and Acceptance Test Plan, based on Design Review agreements.	X	
Provide a Notice to Proceed (NTP) on a site by site basis upon approval of each detailed site design.		X
Procure equipment for each site upon receipt of NTP and in accordance with agreed upon implementation schedule.	X	
Schedule implementation for each site in agreement with the Customer.	X	
Submit project milestone completion documents for each site in accordance Contract agreement.	X	
Upon completion of required tasks, approve project milestone completion documents.		X
Coordinate the activities of all Motorola Solutions subcontractors under this contract.	X	
Administer safe work procedures for installation.	X	
Receive, Store and Deliver Equipment to Site for Installation	X	



Tasks	Motorola	COG
Perform the installation of the items included in project equipment list in accordance with the agreed upon project schedule.	X	
Install and interface cabling to each camera location in accordance with design documents.	X	
Utilize existing cable raceways and conduits for all exiting camera locations.	X	
Install cable conduits as required for new outdoor camera locations.	X	
Provide clear access during cable pulls and equipment installations.		X
Provide rack space, power and backup power in network closet for NVR and POE switch at each location.		X
Provide all required COG switches, backhaul, and network configuration.		X
Perform patching and painting as required after installations/removal of existing cameras.		X
Provide Training in accordance with Training Plan.	X	
Integrate each site ACC to the Glendale CC Aware RTCC system over COG provided network.	X	
Provide final design documentation for each site reflecting final as-built configurations. Existing design documents will be updated in PDF format. BIM/3D CAD excluded.	X	
Ensure sites meet space, grounding, power, and connectivity requirements for the installation of all equipment.		X
Take responsibility for the resolution of environmental and hazardous material issues at each site including, but not limited to, asbestos, structural integrity and other building risks and any associated delays.		X
Obtain and pay for and any required permits to allow installation.		X
Coordinate the activities of all other Customer vendors or contractors.		X
These responsibilities should be considered general in nature, and specific sites or custom requirements may require additional work. Motorola Solutions reserves the right to modify the Terms and/or Pricing shown in this document if additional information is discovered prior to installation.		

Either Party may request changes to the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or a change in system configuration the Parties will agree to an equitable adjustment of the Contract Price and will reflect the adjustment in a Change Order. Neither Party is obligated to perform requested changes unless both Parties execute a written Change Order.



SECTION 4

PROJECT SHCEDULE

The proposed solution consists of 23 City of Glendale facilities. On a site by site basis, upon the approval of a detailed design and receipt of a Notice to Proceed from the City of Glendale, a mutually agreed upon schedule will be developed and finalized. The overall schedule of the 23 sites is expected to be less than fifteen months from Contract execution.



SECTION 5

TRAINING PLAN

5.1 POST-INSTALLATION TRAINING – ON-SITE

On-site training will be provided for each proposed site at the completion of installation and testing. Training will be provided by Climatec and will vary based on user role and VMS permissions assigned to each as determined by COG prior to completion of system installation. Course scope, objectives and outcomes are defined below. COG to provide direction on the level of training to be provided to specific users prior to completion of each system so that Climatec may prepare training content appropriate to the audience.

All Avigilon online courses are available on-demand and are free of charge, enabling users to continue to advance their ACC learning and expertise, as well as provide a training to new users as needed.

Operator I: Target User Access Level: Basic

This course takes approximately 60-90 minutes to complete.

Scope - This course is designed for learners who need to know how to view video and operate the Client software at a basic level. It is designed for learners whose primary responsibility is to monitor a site. For example, the topics covered in the course include viewing live surveillance video and viewing video of alarm events, among other topics.

Structure - This is the first of two courses which introduce you to Avigilon Control Center (ACC) Client software. The course design allows you to complete lessons and activities in any order and at your own pace. As this course is part of a certification course, there is a final assessment which you may take and pass upon completion of all the chapters in the course. This course is largely limited to the basic features of ACC. The topics covered are pertinent to the everyday operator and thus mostly excludes advanced features of the software.

General Outcome - Upon completing the course, you will be able to view video and operate the Client software at a basic level.

Specific Outcomes - Specifically, upon completing this course, you will be able to:

- Perform basic functions in the software
- Use and adjust image panels
- Control and direct a PTZ camera
- Create presets and tours
- Use the digital defog feature
- Replay live video
- Setup a view layout
- Create and use maps
- View video in an event of an alarm
- Automize to quickly access the software
- Quickly show, review, and investigate events with other users
- Interact with display monitors that are not directly connected to a workstation



Operator II: Target User Access Level: Basic Plus

This course takes approximately 60-90 minutes to complete.

Scope - This course is a continuation of ACC Operator I. It is designed for learners who need to know how to find and share videos and images in the ACC Client software. It is designed for learners whose primary responsibility is to monitor a site. For example, the topics covered in the course include finding and reviewing recorded video, and performing different types of video searches, among other topics.

Structure - This is the second of two courses which introduce you to Avigilon Control Center (ACC) Client software. The course design allows you to complete lessons and activities in any order and at your own pace. As this course is part of a certification course, there is a final assessment which you may take and pass upon completion of all the chapters in the course. This course is largely limited to the basic features of ACC. The topics covered are pertinent to the everyday operator and thus mostly excludes advanced features of the software.

General Outcome - Upon completing ACC Operator II, you will be able to find and share videos and images in the Client software.

Specific Outcomes - Specifically, upon completing this course, you will be able to:

- View recorded video
- Access search types for recorded video
- Create a bookmark
- Perform a bookmark search
- Search for events from multiple cameras
- Search through an alarm's history
- Perform a thumbnail search
- Perform a motion search
- Perform a POS transaction search
- Perform an appearance search
- Save a snapshot
- Export videos and images



Administrator: Target User Access Level: Advanced

This course takes approximately 2-2.5 hours to complete.

Scope - This course is intended for learners who already have operative knowledge of Avigilon Control Center (ACC). We recommend that you complete the ACC Operator Course prior to taking this course. This course is intended for learners who need to understand the advanced functionality of ACC and/or need to know how to set up and configure the software.

The topics covered in this course are limited to configuration and administration. Topics related to basic monitoring, operation, or video analytics are excluded. To learn about these subjects, consult the appropriate training such as the ACC Operator Course or the Video Analytics Course.

Course Structure - This course is comprised of several chapters that overview how to configure and administer of the software. The course design requires you to complete the lessons in one chapter before progressing to the next. This course contains a final assessment, which is designed to assess your understanding of the course content.

General Learning Outcome - Upon completing the ACC Administrator Course, you will be able to set up and configure ACC software.

Specific Learning Outcomes - Specifically, upon completing this course, you will be able to:

- Group servers into a site
- Install a virtual matrix and add and remove monitor views
- Connect a camera to a server
- Find and connect a video analytics appliance to the software
- Configure general device settings in the software
- Use the Site View Editor to configure the appearance of the system explorer
- Search for an event and export the event log
- Set up an email notification for when an event occurs
- Access the Site Health feature and analyze the general performance of a site
- Complete a backup and restore
- Schedule backups of recorded video
- Complete the steps to upgrade the server(s) at your site.
- Add, manage, and remove users
- Create and manage groups
- Import a Windows Active Directory group
- Create and manage alarms
- Create and manage rules
- Describe how corporate hierarchies work
- Setup a corporate hierarchy in your site
- Connect child sites to a parent site
- Configure COVID-19 technology



Additional ACC Training Courses – Additional course are available online and free of charge and include:

- ACC Design
- ACC Installation
- ACC Mobile
- ACC Video Analytics
- Avigilon Cloud Service
- ACC/ACM Unification
- Hardware
- System Integration
- Camera Configuration

5.2 ON-LINE AND INSTRUCTOR-LED TRAINING

Motorola offers additional training aimed at providing a comprehensive understanding of the Avigilon Video Management System. Training courses are available online at no charge for as many users as COG would like to engage. In addition, instructor-led training is available in Richardson, TX. There is no cost for instructor-led training, however travel expenses are a customer responsibility.

ACC Video Management System training and certification is 100% online. Instructor -led training is available on-site at a location of COG's choosing for an additional expense.

ACM Access Control Manager training is currently offered in a hybrid model of online modules and instructor-led training at our Richardson, TX location. Instructor -led training is available on-site at a location of COG's choosing for an additional expense. On-line modules must be completed before any instructor-led training may be scheduled.



SECTION 6

ACCEPTANCE TEST PLAN

Acceptance for each site of the proposed solution will occur upon successful completion of a Functional Acceptance Test Plan (FATP), which will test the features and functionality for the installed equipment in order to verify that the solution operates according to its design. Final System Acceptance will occur upon completion of all deliverables and testing for the proposed 23 sites.



SECTION 7

WARRANTY AND MAINTENANCE PLAN

Motorola Solutions will provide warranty services per our standard warranty terms and conditions as outlined within the Communication Systems Agreement within this proposal. In addition to the warranty services, Motorola Solutions will provide during the Warranty Period above-warranty services that are described generally below. A full description and statement of work describing the services that will be provided are available upon request. After the Warranty Period, the services may be purchased under a separate maintenance agreement.

7.1.1 Technical Support Service

Motorola Solutions Technical Support service provides an additional layer of support through centralized, telephone consultation for issues that require a high level of communications network expertise and troubleshooting capabilities. Technical Support is delivered by the System Support Center (SSC). The SSC is staffed with trained, skilled technologists specializing in the diagnosis and swift resolution of network performance issues. These technologists have access to a solutions database as well as in house test labs and development engineers. Technical Support cases are continuously monitored against stringent inbound call management and case management standards to ensure rapid and consistent issue resolution. Technical Support service translates into measurable, customer-specific metrics for assured network performance and system availability.

7.1.2 Dispatch Service

Motorola Solutions' Dispatch Service ensures that trained and qualified technicians are dispatched to diagnose and restore your communications network. Following proven response and restoration processes, the local authorized service center in your area is contacted and a qualified technician is sent to your site. An automated escalation and case management process is followed to ensure that technician site arrival and system restoration comply with contracted response and restore times. Once the issue has been resolved, the System Support Center verifies resolution and with your approval, closes the case. Activity records are also available to provide a comprehensive history of site performance, issues, and resolution.

7.1.3 On-Site Infrastructure Response –Limited 8X5

Motorola Solutions On-Site Infrastructure Response provides local, trained and qualified technicians who arrive at your location to diagnose and restore your system. Following proven response and restore processes, Motorola Solutions Dispatch contacts the local authorized service center in your area and dispatches a qualified technician to your site. An automated escalation and case management process ensures that technician site arrival and system restoration comply with contracted response times. The field technician restores the system by performing first level troubleshooting on site. If the technician is unable to



resolve the issue, the case is escalated to the System Support Center or product engineering teams as needed.

- Warranty & Extended Warranties - Avigilon offers the most comprehensive warranties in the industry. Warranties listed below are provided as part of this proposal.
 - Avigilon Video Infrastructure - All NVR's are backed by lifetime 24/7 Avigilon telephone technical support.
 - NVR4X series NVR's include manufacturer's five (5) year limited warranty with Next Business Day Dell-on-Site Response.
 - ◆ Manufacturer's Extended Warranty for the NVR4X-series upgrades response to 4 hour mission critical Dell-on-Site for duration of warranty.
 - Avigilon Video Infrastructure: NVR4 series, HD Appliances and Workstations include manufacturer's three (3) year limited warranty and advance replacement.
 - ◆ Manufacturer's Extended Warranty for the NVR4 series, HD Appliances and Workstations extends warranty for 2 more years, total 5 years
 - Avigilon Monitors include manufacturer's three (3) year limited warranty.
 - Avigilon Cameras and Sensors:
 - ◆ H5A, H5SL, H5M Camera Lines: manufacturer's five (5) year limited warranty and advance replacement.
 - ◆ H5A PTZ Cameras: manufacturer's five (5) year limited warranty and advance replacement.
 - ◆ H4F, H4VI, H4IRPTZ Cameras: manufacturer's three (3) year limited warranty and advance replacement.
 - One (1) Year Parts and Labor Warranty to be provided by the installation partner, Climatec LLC of Phoenix, AZ.



SECTION 8

PRICING AND PAYMENT TERMS

Description	Price
Equipment Total	\$1,344,459.00
HGAC Discount	\$(134,445.90)
Equipment Total After Discount	\$1,210,013.10
Services Total	\$1,616,987.00
System Total	\$2,827,000.10
Bundling Incentive**	\$(257,000.10)
System Total After Bundling Incentive	\$2,570,000.00
Estimated Tax (on equipment only at 9.2 %)	\$111,321.21
PROJECT TOTAL	\$2,681,321.21
**Bundling incentive valid for contract of all sites as proposed	

8.1 PAYMENT TERMS

System Purchase (excluding Subscribers, if applicable)

1. 50% of each Site Price is due upon shipment of site equipment;
2. 50% of each Site Price is due upon completion of site installation.

Motorola shall make partial shipments of equipment and will request payment upon shipment of such equipment. In addition, Motorola shall invoice for installations completed on a site-by-site basis or when professional services are completed, when applicable.



Site Name	Equipment Total (MSRP)	Equipment Total (HGAC Discount)	Sales Tax (9.2% on Equipment Only)	Services	Bundling Incentive*	Total
Advocacy Center	\$ 30,539.75	\$ 27,485.78	\$ 2,528.69	\$ 31,301.06	\$ (5,344.26)	\$ 55,971.26
Cemetery	\$ 20,290.90	\$ 18,261.81	\$ 1,680.09	\$ 21,218.77	\$ (3,589.14)	\$ 37,571.52
City Hall	\$ 128,799.69	\$ 115,919.72	\$ 10,664.61	\$ 194,445.75	\$ (28,215.04)	\$ 292,815.04
Civic Center	\$ 61,112.51	\$ 55,001.26	\$ 5,060.12	\$ 74,179.96	\$ (11,743.75)	\$ 122,497.59
Community Center - Adult Center	\$ 55,835.05	\$ 50,251.55	\$ 4,623.14	\$ 70,906.72	\$ (11,014.39)	\$ 114,767.02
Community Center - Ocotillo	\$ 39,443.95	\$ 35,499.56	\$ 3,265.96	\$ 49,158.00	\$ (7,696.14)	\$ 80,227.37
Community Housing Authority	\$ 18,838.68	\$ 16,954.81	\$ 1,559.84	\$ 29,909.84	\$ (4,260.42)	\$ 44,164.07
City of Glendale Courthouse	\$ 129,810.00	\$ 116,829.00	\$ 10,748.27	\$ 140,919.38	\$ (23,431.67)	\$ 245,064.97
Foothills Aquatics Center	\$ 82,830.38	\$ 74,547.34	\$ 6,858.36	\$ 116,259.16	\$ (17,346.05)	\$ 180,318.81
Foothills Park Skate Park	\$ 17,686.18	\$ 15,917.56	\$ 1,464.42	\$ 14,365.40	\$ (2,753.00)	\$ 28,994.38
Foothills Public Safety Bldg – PD	\$ 56,042.80	\$ 50,438.52	\$ 4,640.34	\$ 52,059.89	\$ (9,318.04)	\$ 97,820.72
Gateway Public Safety Bldg – PD	\$ 55,791.05	\$ 50,211.95	\$ 4,619.50	\$ 49,207.77	\$ (9,038.16)	\$ 95,001.06
Glendale Public Safety Bldg - PD Main	\$ 93,689.16	\$ 84,320.24	\$ 7,757.46	\$ 116,400.56	\$ (18,247.35)	\$ 190,230.92
Heroes Park X-Court Skate Park	\$ 15,475.13	\$ 13,927.62	\$ 1,281.34	\$ 16,787.09	\$ (2,792.25)	\$ 29,203.80
Library - Heroes Park	\$ 36,014.01	\$ 32,412.61	\$ 2,981.96	\$ 33,537.41	\$ (5,995.46)	\$ 62,936.52
Library – Foothills	\$ 34,078.95	\$ 30,671.06	\$ 2,821.74	\$ 63,631.16	\$ (8,572.93)	\$ 88,551.02
Library – Main	\$ 57,962.75	\$ 52,166.48	\$ 4,799.32	\$ 85,020.57	\$ (12,471.55)	\$ 129,514.81
Library - Velma Teague	\$ 46,190.10	\$ 41,571.09	\$ 3,824.54	\$ 35,113.85	\$ (6,971.36)	\$ 73,538.12
Media Center	\$ 27,954.33	\$ 25,158.90	\$ 2,314.62	\$ 38,529.10	\$ (5,789.82)	\$ 60,212.80
Municipal Airport	\$ 97,425.40	\$ 87,682.86	\$ 8,066.82	\$ 94,415.20	\$ (16,554.37)	\$ 173,610.51
Operations Campus	\$ 141,163.43	\$ 127,047.09	\$ 11,688.33	\$ 227,860.55	\$ (32,264.33)	\$ 334,331.64
Saguaro Ranch Park Historic Site	\$ 72,503.30	\$ 65,252.97	\$ 6,003.27	\$ 42,581.86	\$ (9,803.17)	\$ 104,034.93
Saguaro Ranch Park Maintenance Yard	\$ 24,981.50	\$ 22,483.35	\$ 2,068.47	\$ 19,177.99	\$ (3,787.39)	\$ 39,942.42
TOTAL	\$ 1,344,459.00	\$ 1,210,013.10	\$ 111,321.21	\$ 1,616,987.00	\$ (257,000.10)	\$ 2,681,321.31

*Bundling Incentive is contingent on purchase of all sites as proposed. Full system incentive is shown broken down by site per the City. The incentive of \$257,000.10 is valid with a contract for the full value of \$2,570,000.00 plus applicable sales tax.



SECTION 9

CONTRACTUAL DOCUMENTATION

This proposal pricing is pursuant the H-GAC (Houston-Galveston Area Council) Contract number RA05-18. Glendale and Motorola previously entered into a Contract effective September 26, 2019 (the "Contract"). Section 3.5 of the Contract permits Glendale to make additional purchases of Equipment, Software, and services using the Contract as the underlying agreement. This proposal is based on the assumption that the Customer will use its rights under Section 3.5 for the proposed transaction(s) and that the terms and conditions of the Contract apply. To do so, Glendale may accept this offer by returning executed copies of Amendment Number One to memorialize the purchase of products and services as described in Motorola's proposal. This proposal shall remain valid until April 30, 2021.



SECTION 10

APPENDIX A-DETAILED SITE DESIGNS

Detailed Site Designs are included on the pages that follow.



10.1.1 City of Glendale-Adult Center-Indoor and Patio



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

Design Comments

Design-City of Glendale-Adult Center-Indoor and Patio-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4-VAL-24TB-NA	n/a	22.09 TB	160.95 Mbps	54 days 0 hours	Valid

HDSM 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
Camera 1-NE Emergency Exit (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	5.4	10	4	Quality 6	3.86 Mbps	X		
Camera 2-Multipurpose Room (DP)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	5.07 Mbps	X		
Camera 3-Multipurpose Room (DP)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	5.07 Mbps	X		
Camera 4-Arobics (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 5-Arobics (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 6-W Hallway Inter (DO)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 1	6.60 Mbps	X		
Camera 7-SW Hallway Inter (DO)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 1	6.60 Mbps	X		
Camera 8-Computer Lab (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 9-Lobby (DC)	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	9	Quality 6	4.89 Mbps	X		
Camera 10-Cash (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	8	Quality 6	6.50 Mbps	X		

Camera 11-Office Supervisor/Safe (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 12- Fitness Room 1 (DO)	6.0L-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 1	7.28 Mbps	X		
Camera 13-Fitness Room (DO)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 1	9.33 Mbps	X		
Camera 14-Stage Hall (DC)	2.0C-H5SL-D1-IR	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	2	Quality 6	3.86 Mbps	X		
Camera 15-North Patio (DP/Cmr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					17.50 Mbps			
<input type="checkbox"/> Head 1					2.8	8	6	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	8	6	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	8	6	Quality 6		X		
Camera 16-Entrance/Patio (DP)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	10	Quality 6	6.50 Mbps	X		
Camera 17-Entrance/Bus Drop Off	15C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					41.11 Mbps			
<input type="checkbox"/> Head 1					4.0	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	15	12	Quality 6		X		
Camera 18-South Corridor/Gun Safe (BO)	2.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.4	10	5	Quality 6	4.89 Mbps	X		
Camera 22-Game Room (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		

Camera 21-W Employee Entrance (DO)	2.0C- H5SL- DO1-IR	Storage 1	1	Built-In Lens, 3.1- 8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	6		Quality 6	6.50 Mbps	X		
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Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-NE Emergency Exit (DC)	8	6	21.7	22.1	68.1	86.7	86.8
Camera 2-Multipurpose Room (DP)	10	6	32.2	56.2	53.8	80.5	34.2
Camera 3-Multipurpose Room (DP)	10	6	48.2	84	56	120.4	22.9
Camera 4-Arobics (DC)	8.5	6	18.7	42.9	42.5	63.4	44.8
Camera 5-Arobics (DC)	8.5	6	22.6	51.7	43.8	76.7	37.2
Camera 6-W Hallway Inter (DO)	8.5	6	16.5	33	0	56.1	24.3
Camera 7-SW Hallway Inter (DO)	8.5	6	16.5	33	0	56.1	24.3
Camera 8-Computer Lab (DC)	8.5	6	17.1	39.3	41.8	58.1	48.8
Camera 9-Lobby (DC)	8.5	6	21.1	41.5	50	71.9	46.3
Camera 10-Cash (DC)	8.5	6	6.2	11.6	38.5	20.9	165.8
Camera 11-Office Supervisor/Safe (DC)	8.5	6	6.8	16.6	30.1	23.3	115.8
Camera 12- Fitness Room 1 (DO)	8.5	6	10.9	21.8	0	37	21.5
Camera 13-Fitness Room (DO)	8.5	6	14.8	29.5	0	50.2	27.4
Camera 14-Stage Hall (DC)	8.5	6	36.4	22.7	76	123.8	84.7
Camera 15-North Patio (DP/Cmr)	12						
<input type="checkbox"/> Head 1		12	24.2	44.3	46.7	6561.7	58.5
<input type="checkbox"/> Head 2		12	24.5	44.8	46.7	6561.7	57.8
<input type="checkbox"/> Head 3		12	24.6	45.1	46.7	6561.7	57.5

Camera 16-Entrance/Patio (DP)	8.5	6	12	21.1	49.5	41	91.2
Camera 17-Entrance/Bus Drop Off	12						
□ Head 1		7	17.5	23.2	45.4	41.9	111.9
□ Head 2		6	23.3	30.8	47	46.7	84.3
□ Head 3		6	29.9	38.9	50.1	59.8	66.6
Camera 18-South Corridor/Gun Safe (BO)	12	7	22.9	44.7	45.1	54.8	42.9
Camera 22-Game Room (DC)	8.5	6	19.7	45.2	42.9	66.9	42.5
Camera 21-W Employee Entrance (DO)	8.5	6	7.8	13.9	43.6	26.5	138

Storage 1

Model: NVR4-VAL-24TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-D1	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5SL-D1	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5SL-D1	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5A-DC1	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5SL-D1	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
6.0L-H4F-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5SL-D1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
15C-H4A-3MH-270	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
15C-H4A-3MH-180	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5A-BO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours

2.0C-H5SL-DO1-IR	1	54 days 0 hours	54 days 0 hours			0 days 0 hours
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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.

10.1.2 City of Glendale-Adult Center-Outdoor



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Design Comments

Design-City of Glendale-Adult Center-Outdoor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4-VAL-24TB-NA	n/a	22.09 TB	42.78 Mbps	118 days 9 hours	Valid

HDSM 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
Camera 19- Employee Parking (BO)	8.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	6.6	10	12	Quality 6	12.17 Mbps	X		
Camera 20-NW Corner/Parking (DP/Cmr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					30.61 Mbps			
<input type="checkbox"/> Head 1					2.8	8	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	8	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	8	12	Quality 6		X		

Scene Details

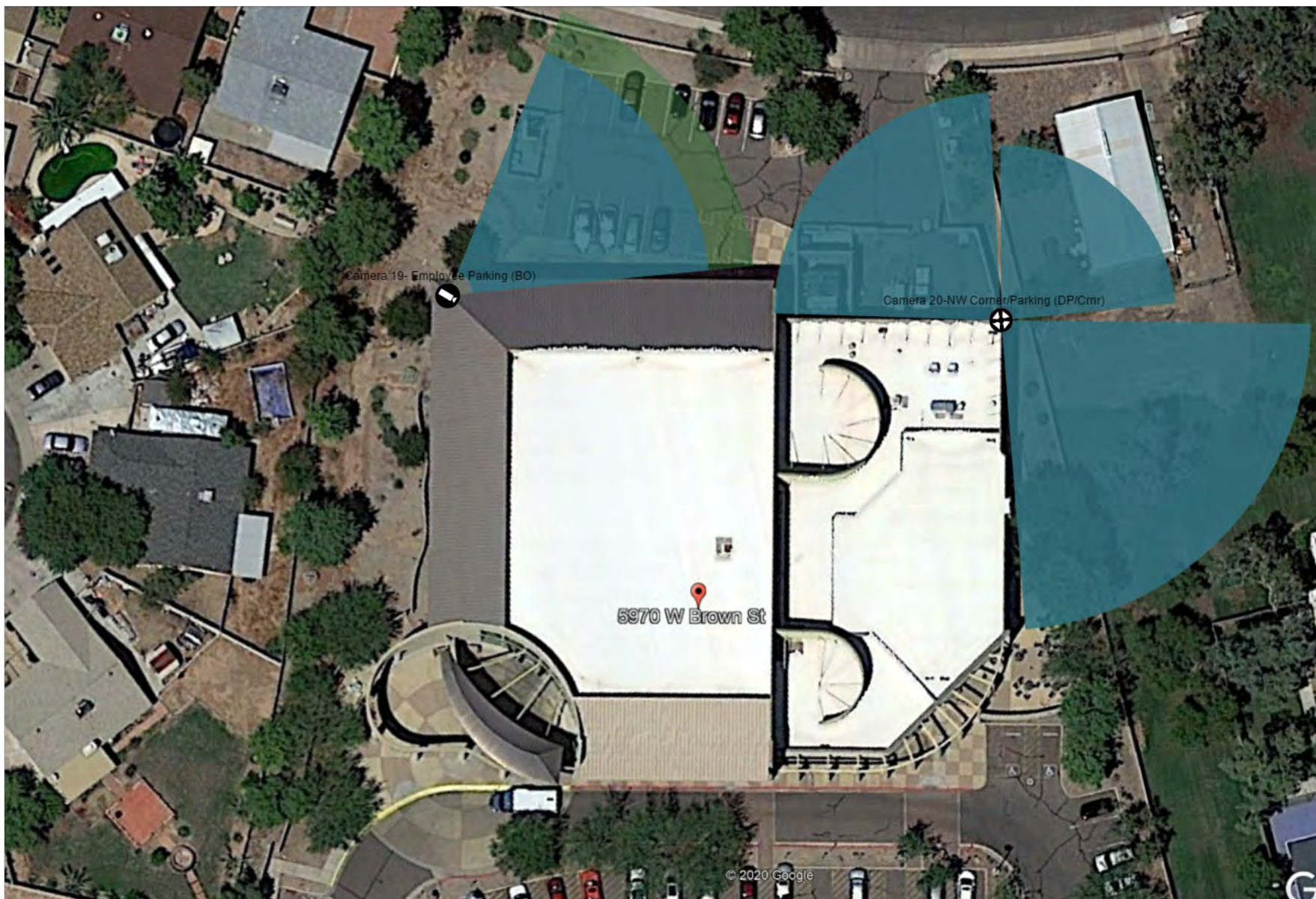
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 19- Employee Parking (BO)	8.5	6	98.9	119.9	68.6	336.1	32
Camera 20-NW Corner/Parking (DP/Cmr)	15						
<input type="checkbox"/> Head 1		14	63.5	116.3	45.8	953.1	22.3
<input type="checkbox"/> Head 2		14	48.8	89.3	45.5	732.1	29
<input type="checkbox"/> Head 3		13	86	157.3	45.4	644.9	16.5

Storage 1

Model: NVR4-VAL-24TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
8.0C-H5A-BO1-IR	1	118 days 9 hours	118 days 9 hours			0 days 0 hours
15C-H4A-3MH-270	1	118 days 9 hours	118 days 9 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.

10.1.3 City of Glendale-Cemetery



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Design Comments

Design-City of Glendale-Cemetery-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-8P8-NA	n/a	7.6 TB	43.17 Mbps	54 days 4 hours	Valid

HDSM 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
Camera 1-Cemetery Maintenance (Cmr)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					27.95 Mbps			
<input type="checkbox"/> Head 1					2.8	12	10	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	10	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	10	Quality 6		X		
Camera 2 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	10	Quality 6	5.07 Mbps	X		
Camera 3 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	10	Quality 6	5.07 Mbps	X		
Camera 4 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	10	Quality 6	5.07 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Cemetery Maintenance (Cmr)	12						
<input type="checkbox"/> Head 1		10	79.8	146	45.2	478.7	14
<input type="checkbox"/> Head 2		10	76.4	139.8	45.2	458.3	14.6
<input type="checkbox"/> Head 3		10	75.9	138.9	45.2	455.2	14.7
Camera 2 (DO)	8.5	6	52.8	92.2	57.9	179.6	20.8
Camera 3 (DO)	8.5	6	46.1	80.4	57.6	156.7	23.9
Camera 4 (DO)	8.5	6	34.8	60.8	56.6	118.5	31.6

Storage 1

Model: VMA-AS3-8P8-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
9C-H4A-3MH-270	1	54 days 4 hours	54 days 4 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	54 days 4 hours	54 days 4 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	54 days 4 hours	54 days 4 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	54 days 4 hours	54 days 4 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.

10.1.4 City of Glendale-City Hall 1st and 2nd Floor



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Design Comments

Design-City of Glendale-City Hall 1st and 2nd Floor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	139.77 Mbps	181 days 7 hours	Valid

HDSM 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
Camera 1 (Lobby) D	2.0C-H5A-D1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	9	Quality 6	4.89 Mbps	X		
Camera 2 (Elev Ent/Ex) Floor 1 D	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	8	Quality 1	9.33 Mbps	X		
Camera 3 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 4 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 5 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 6 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 7 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 8 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 9 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 10 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 11 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 12 (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	8.9	10	8	Quality 6	5.07 Mbps	X		

Camera 13-18-Vault (DO)	2.0C-H5M-DO1-IR	Storage 1	6	Built-In Lens, 2.8mm, f/1.2	2.8	10	2	Quality 6	3.86 Mbps	X		
Camera 19 (DO)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 1	6.60 Mbps	X		
Camera 20-Stairwell (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	3	Quality 6	3.86 Mbps	X		
Camera 21-Stairwell (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	< min	10	3	Quality 6	3.86 Mbps	X		
Camera 22-Stairwell (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	3	Quality 6	3.86 Mbps	X		
Camera 23-Stairwell (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	3	Quality 6	3.86 Mbps	X		
Camera 24-Elev-Floor 2 (D)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	8	Quality 1	9.33 Mbps	X		
Camera 25 (D)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	8	Quality 6	5.07 Mbps	X		
Camera 26 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 27 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 28-Mailshoot (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1 (Lobby) D	8.5	6	15	29.6	47.5	51.1	64.9
Camera 2 (Elev Ent/Ex) Floor 1 D	8.5	6	4.5	8.9	0	15.1	100.2
Camera 3 (DC)	8.5	6	16.7	38.4	41.6	56.7	50
Camera 4 (DC)	8.5	6	18.4	42.2	42.4	62.4	45.5
Camera 5 (DC)	8.5	6	5.7	14.1	26.4	19.3	136
Camera 6 (DC)	8.5	6	4.8	12.3	22.6	16.3	156.2
Camera 7 (DC)	8.5	6	4.8	12.3	22.6	16.3	156.2
Camera 8 (DC)	8.5	6	7.9	18.9	32.6	26.8	101.8
Camera 9 (DC)	8.5	6	8.4	19.9	33.5	28.5	96.5
Camera 10 (DC)	8.5	6	7.3	17.7	31.4	25	108.6
Camera 11 (DC)	8.5	6	9.6	22.6	35.6	32.7	84.9
Camera 12 (DC)	8.5	6	31.9	20.1	75.4	108.6	95.7
Camera 13-18-Vault (DO)	8.5	6	7.1	17.1	30.7	24.1	112.3
Camera 19 (DO)	8.5	6	5.5	11	0	18.8	80.2
Camera 20-Stairwell (DO)	8.5	6	4.1	8.4	29.4	14	228.8
Camera 21-Stairwell (DO)	8.5	6	4.4	8.8	30.8	14.8	219.2
Camera 22-Stairwell (DO)	8.5	6	4.1	8.4	29.4	14	228.8
Camera 23-Stairwell (DO)	8.5	6	5.1	9.9	34.5	17.3	194
Camera 24-Elev-Floor 2 (D)	8.5	6	5.2	10.3	0	17.6	85.9
Camera 25 (D)	8.5	6	20.8	13	73.1	70.7	147.6

Camera 26 (DC)	8.5	6	16	37	41.3	54.5	51.9
Camera 27 (DC)	8.5	6	17.7	40.8	42.2	60.3	47
Camera 28-Mailshoot (DC)	8.5	6	7.3	17.5	31.2	24.7	109.7

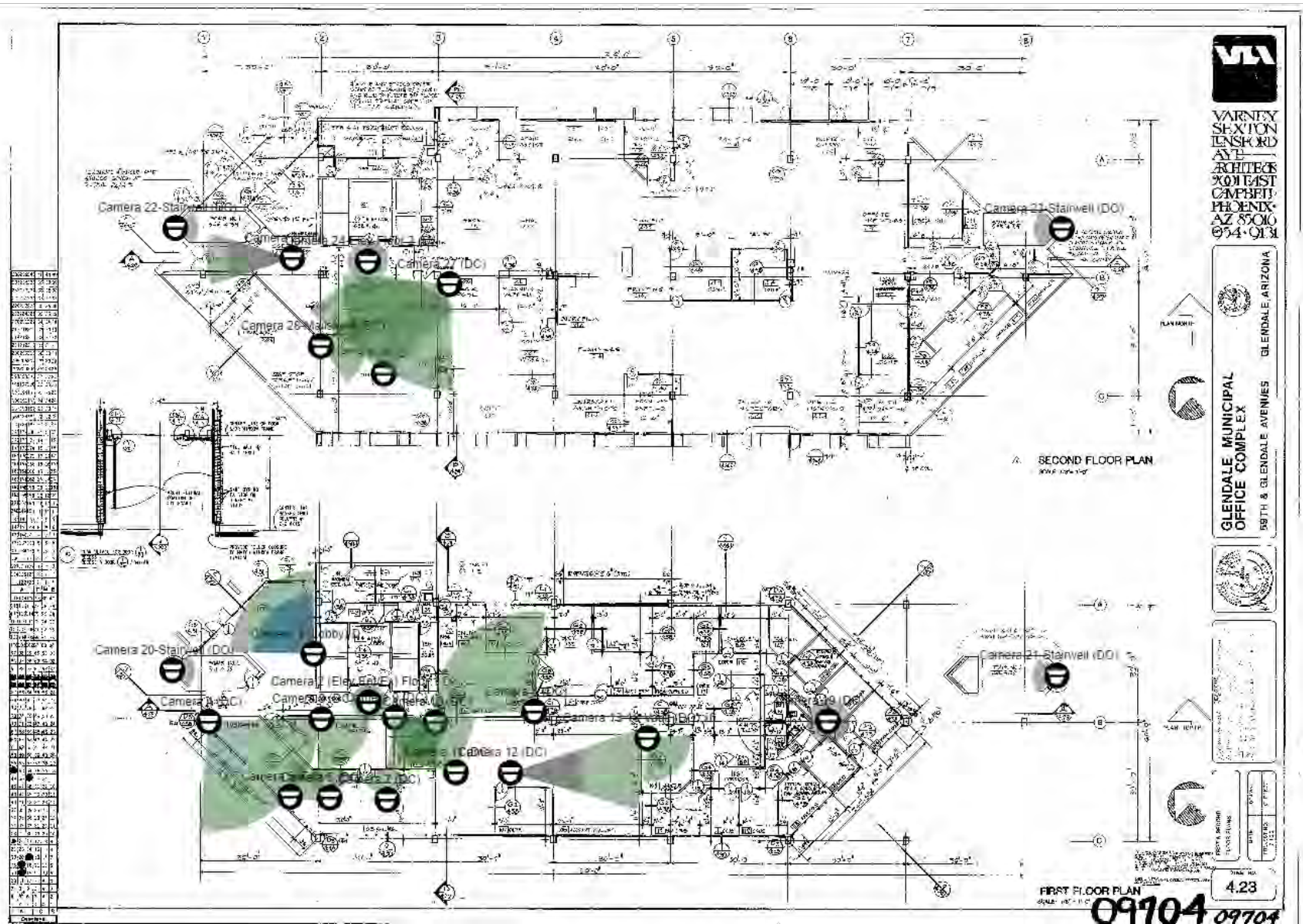
Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5A-D1	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	6	181 days 7 hours	181 days 7 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours

2.0C-H5SL-D1	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	181 days 7 hours	181 days 7 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.

10.1.5 City of Glendale-City Hall 3rd and 4th Floor



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Design Comments

Design-City of Glendale-City Hall 3rd and 4th Floor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	54.70 Mbps	478 days 0 hours	Valid

HDSM 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
Camera 29 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	3	Quality 6	3.86 Mbps	X		
Camera 30 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	3	Quality 6	3.86 Mbps	X		
Camera 31 (D)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 1	9.33 Mbps	X		
Camera 32-Paychecks (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 33-Lobby (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 34 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	3	Quality 6	3.86 Mbps	X		
Camera 35 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.3	10	3	Quality 6	3.86 Mbps	X		
Camera 36 (D)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 1	9.33 Mbps	X		
Camera 37 (D)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	9	Quality 1	6.60 Mbps	X		
Camera 38 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		

Scene Details

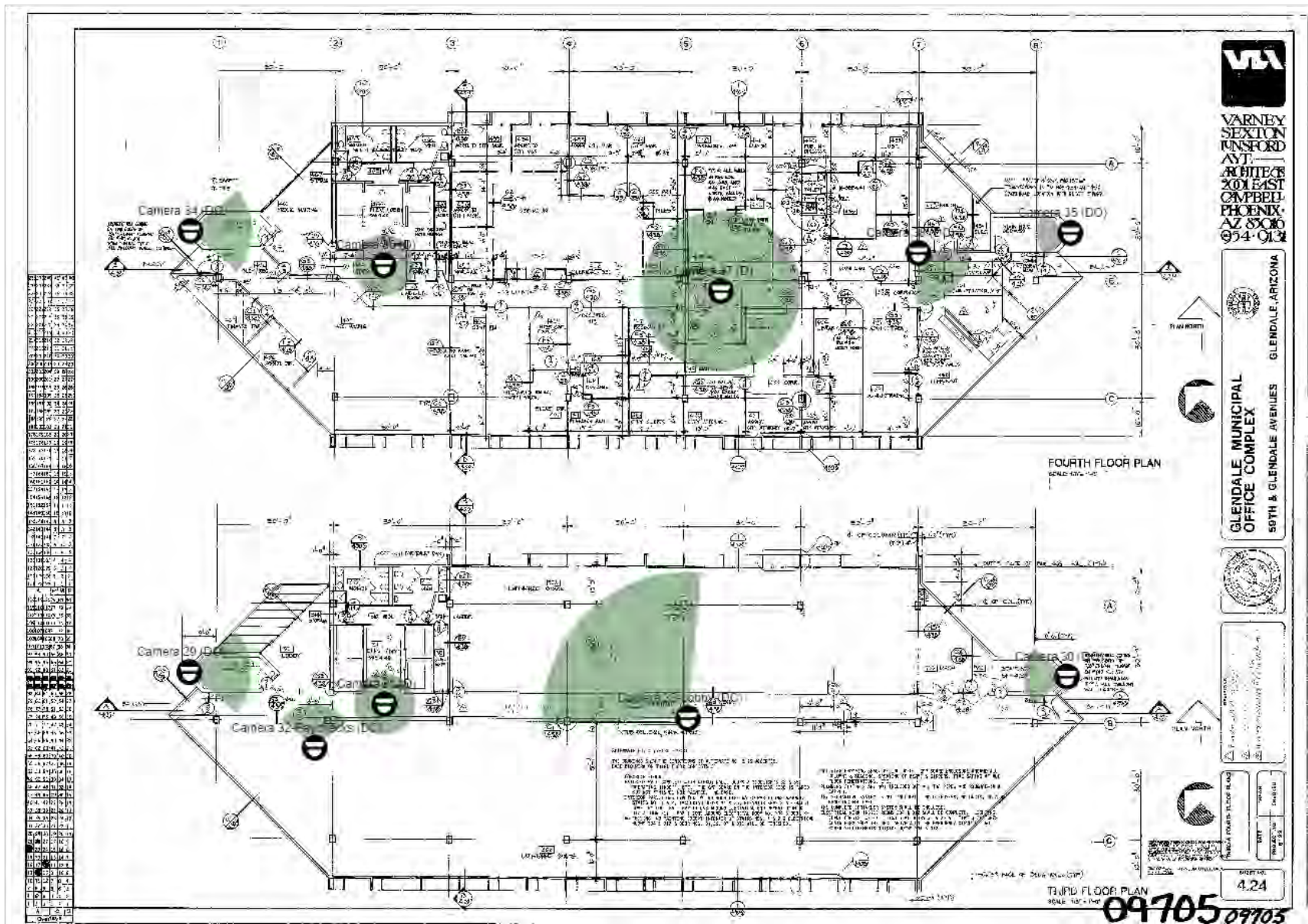
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 29 (DO)	8.5	6	12	21	49.5	40.9	91.4
Camera 30 (DO)	8.5	6	8.5	14.8	45.4	28.8	129.9
Camera 31 (D)	8.5	6	7.9	15.7	0	26.7	54.6
Camera 32-Paychecks (DC)	8.5	6	7	17	30.6	23.9	113.1
Camera 33-Lobby (DC)	8.5	6	24.7	56.6	44.4	84.1	33.9
Camera 34 (DO)	8.5	6	12	21	49.5	40.9	91.4
Camera 35 (DO)	8.5	6	6.5	11.3	41.6	22	169.6
Camera 36 (D)	8.5	6	7.9	15.8	0	26.8	54.4
Camera 37 (D)	8.5	6	20.6	41.1	0	69.9	19.2
Camera 38 (DC)	8.5	6	8.5	20.2	33.8	28.9	95.1

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	478 days 0 hours	478 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	478 days 0 hours	478 days 0 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.

10.1.6 City of Glendale-City Hall Basement



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Design Comments

Design-City of Glendale-City Hall Basement-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	48.53 Mbps	651 days 12 hours	Valid

HDSM 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
Camera 39 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 40 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 41 (DC)	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	30	6	Quality 6	6.39 Mbps	X		
Camera 42 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.4	10	3	Quality 6	3.86 Mbps	X		
Camera 43 (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.4	10	3	Quality 6	3.86 Mbps	X		
Camera 44 (D)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 6	5.74 Mbps	X		
Camera 45 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 46-47-Sub Basement Stairwell (DO)	2.0C-H5SL-DO1-IR	Storage 1	2	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.4	10	3	Quality 6	3.86 Mbps	X		
Camera 48 (D) Sub Basement Elevator	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	3	Quality 6	5.74 Mbps	X		

Scene Details

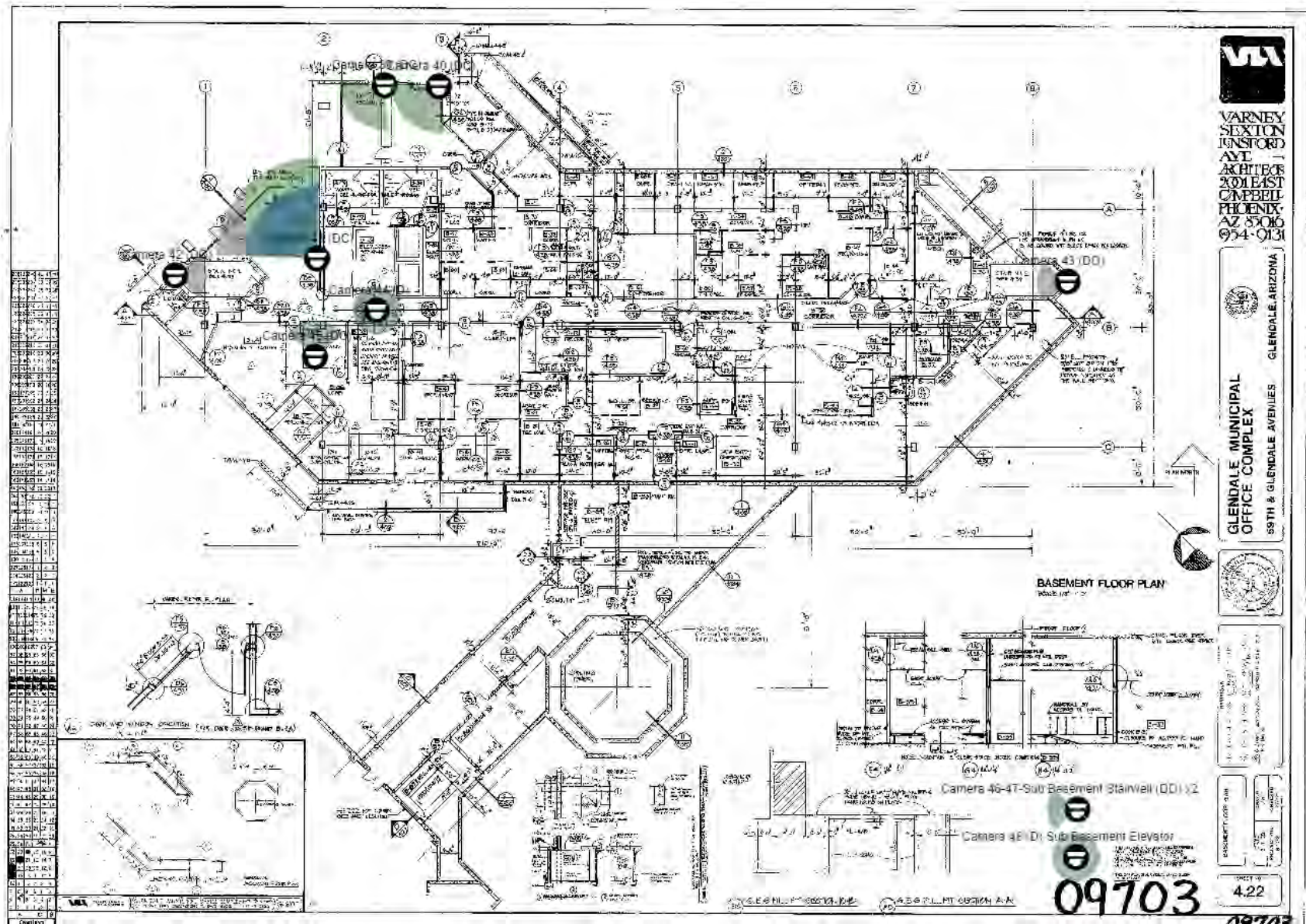
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 39 (DC)	8.5	6	7.2	17.3	31	24.4	110.9
Camera 40 (DC)	8.5	6	7.5	18.1	31.8	25.6	106.2
Camera 41 (DC)	8.5	6	18.3	35.8	49.1	62.1	53.6
Camera 42 (DO)	8.5	6	6.1	10.6	40.6	20.6	181.1
Camera 43 (DO)	8.5	6	5.8	10.2	40	19.9	188
Camera 44 (D)	8.5	6	6.1	12.2	0	20.7	72.1
Camera 45 (DC)	8.5	6	5.7	14.1	26.3	19.2	136.4
Camera 46-47-Sub Basement Stairwell (DO)	8.5	6	5.8	10.2	40	19.9	188
Camera 48 (D) Sub Basement Elevator	8.5	6	6.1	12.2	0	20.7	72.1

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5M-DO1-IR	1	651 days 12 hours	651 days 12 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	651 days 12 hours	651 days 12 hours			0 days 0 hours
2.0C-H5A-DC1	1	651 days 12 hours	651 days 12 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	651 days 12 hours	651 days 12 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	651 days 12 hours	651 days 12 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	651 days 12 hours	651 days 12 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	651 days 12 hours	651 days 12 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	2	651 days 12 hours	651 days 12 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	651 days 12 hours	651 days 12 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.

10.1.7 City of Glendale-City Hall Outdoor Cameras



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Design Comments

Design-City of Glendale-City Hall Outdoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	244.90 Mbps	48 days 19 hours	Valid

HDSM 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
Camera 58 (DP Wall)	24C-H4A-3MH-180	Storage 1	1	Built-In Lens, 5.2mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					5.2	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					5.2	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					5.2	12	12	Quality 6		X		
Camera 59-62 (Elevator Floors 1-4) (DO)	12.0-H4F-DO1-IR	Storage 1	4	Built-In Lens, 1.45mm, Fish Eye	1.45	10	8	Quality 6	5.74 Mbps	X		
Camera 63 (DP/Cmr)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					25.15 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
Camera 64 (DP Wall)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					32.82 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 65 (DP Wall)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					32.82 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		

<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 66-69 (BO)	5.0C-H5SL-BO2-IR	Storage 1	3	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	16.4	10	10	Quality 6	7.43 Mbps	X		
Camera 70-73 (BO)	5.0C-H5SL-BO2-IR	Storage 1	3	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	16.4	10	10	Quality 6	7.43 Mbps	X		
Camera 74-76 (BO)	5.0C-H5SL-BO2-IR	Storage 1	3	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	16.4	10	10	Quality 6	7.43 Mbps	X		
Camera 77-79 (BO)	5.0C-H5SL-BO2-IR	Storage 1	3	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	16.4	10	10	Quality 6	7.43 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 58 (DP Wall)	25						
<input type="checkbox"/> Head 1		6	82.3	110	55.5	108.2	34.9
<input type="checkbox"/> Head 2		6	82.6	110.5	55.6	108.7	34.8
<input type="checkbox"/> Head 3		6	67.7	91.6	52.8	89	41.9
Camera 59-62 (Elevator Floors 1-4) (DO)	8.5	6	16.5	33	0	56.1	24.3
Camera 63 (DP/Cmr)	12						
<input type="checkbox"/> Head 1		11	57.3	104.8	45.7	687.5	19.5
<input type="checkbox"/> Head 2		11	56.1	102.7	45.7	673.6	19.9
<input type="checkbox"/> Head 3		11	46	84.1	45.4	551.5	24.4
Camera 64 (DP Wall)	12						
<input type="checkbox"/> Head 1		11	42.1	53.7	60.1	505.2	38.1
<input type="checkbox"/> Head 2		11	41.8	53.4	60	502.1	38.3
<input type="checkbox"/> Head 3		11	42.2	53.9	60.1	506.7	38
Camera 65 (DP Wall)	12						
<input type="checkbox"/> Head 1		11	42.1	53.7	60.1	505.2	38.1
<input type="checkbox"/> Head 2		11	41.8	53.4	60	502.1	38.3
<input type="checkbox"/> Head 3		11	42.2	53.9	60.1	506.7	38
Camera 66-69 (BO)	8.5	6	328.1	101.7	82.9	1115.5	25.5
Camera 70-73 (BO)	8.5	6	328.1	101.7	82.9	1115.5	25.5
Camera 74-76 (BO)	8.5	6	334	103.5	82.9	1135.5	25

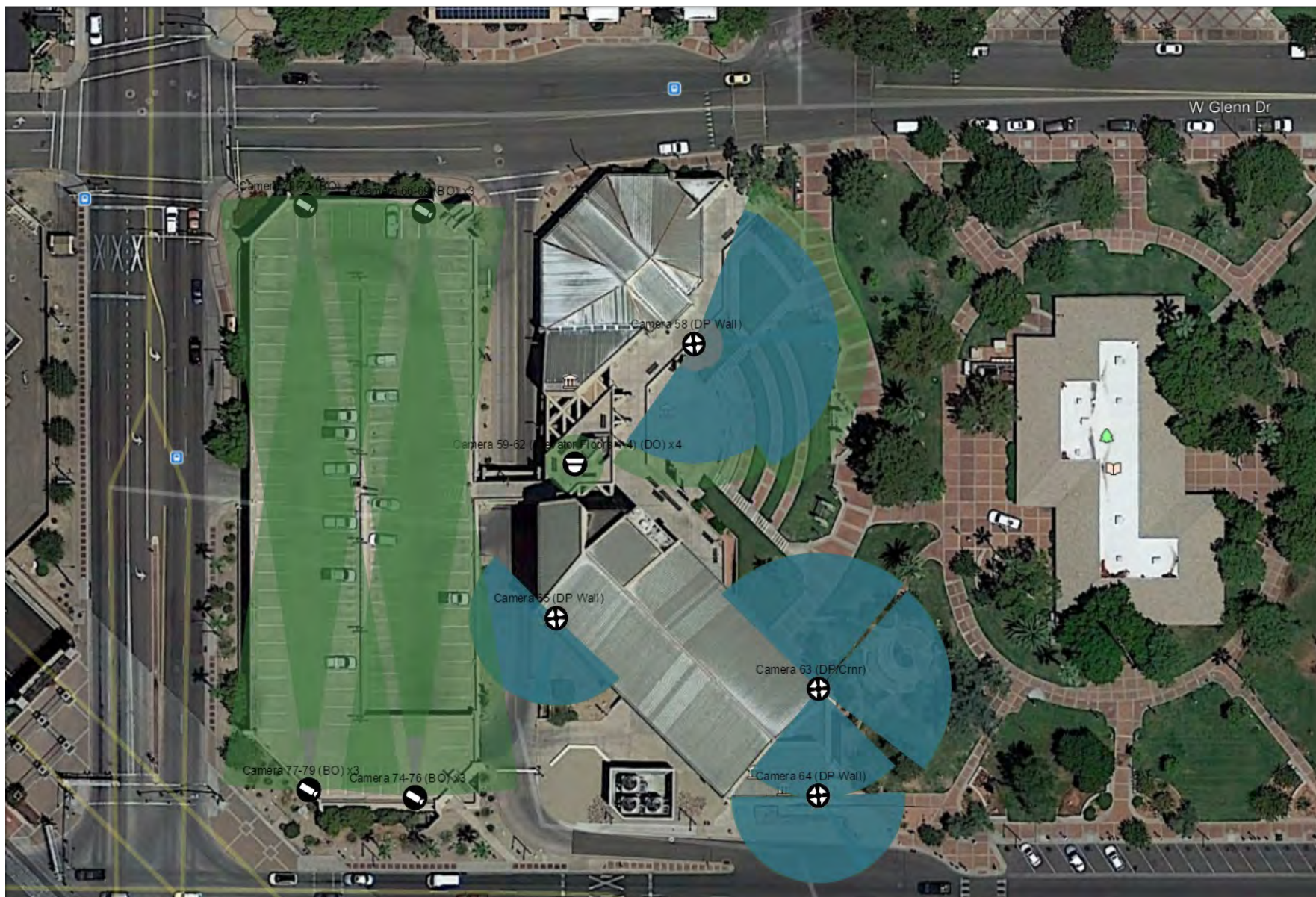
Camera 77-79 (BO)	8.5	6	334.3	103.6	82.9	1136.5	25
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Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
24C-H4A-3MH-180	1	48 days 19 hours	48 days 19 hours			0 days 0 hours
12.0-H4F-DO1-IR	4	48 days 19 hours	48 days 19 hours			0 days 0 hours
9C-H4A-3MH-270	1	48 days 19 hours	48 days 19 hours			0 days 0 hours
9C-H4A-3MH-180	1	48 days 19 hours	48 days 19 hours			0 days 0 hours
9C-H4A-3MH-180	1	48 days 19 hours	48 days 19 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	3	48 days 19 hours	48 days 19 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	3	48 days 19 hours	48 days 19 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	3	48 days 19 hours	48 days 19 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	3	48 days 19 hours	48 days 19 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.

10.1.8 City of Glendale-City Hall-Chambers



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Design Comments

Design-City of Glendale-City Hall-Chambers-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	48.40 Mbps	743 days 7 hours	Valid

HDSM 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
Camera 49 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 50 (DC)	4.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	6	Quality 6	7.90 Mbps	X		
Camera 51 (DC)	4.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	6	Quality 6	7.90 Mbps	X		
Camera 52 (D)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 53 (D)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 54 (DP Wall)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	4	Quality 6	5.80 Mbps	X		
Camera 55-57-Counsole Basement (D)	2.0C-H5M-DO1-IR	Storage 1	3	Built-In Lens, 2.8mm, f/1.2	2.8	10	2	Quality 6	3.86 Mbps	X		

Scene Details

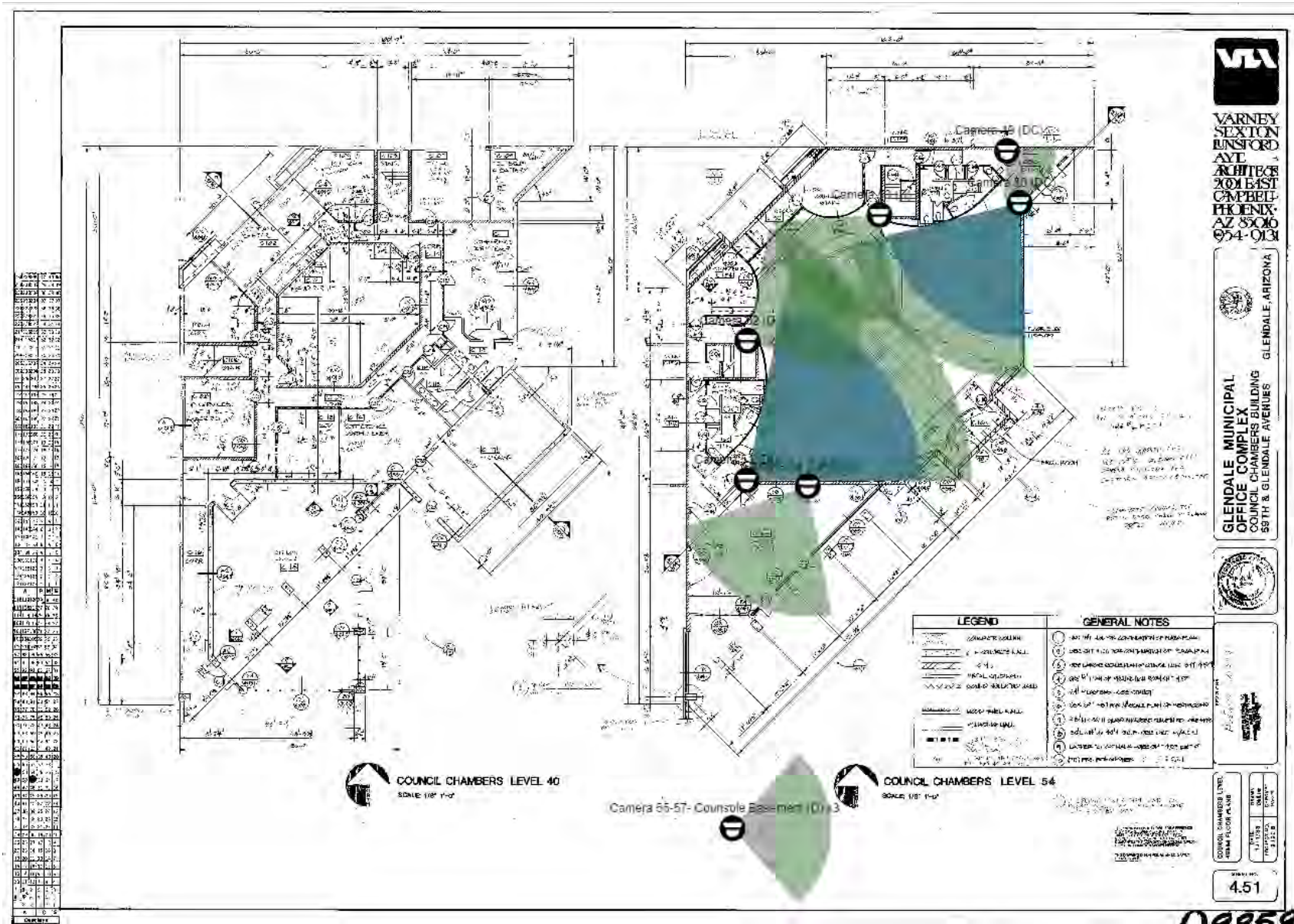
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 49 (DC)	8.5	6	7.9	19	32.7	27	101.2
Camera 50 (DC)	8.5	6	34.4	56.2	48.1	116.8	41
Camera 51 (DC)	8.5	6	44.2	72.4	49	150.4	31.8
Camera 52 (D)	8.5	6	19	43.6	42.7	64.6	44
Camera 53 (D)	8.5	6	17.6	40.5	42.1	59.8	47.4
Camera 54 (DP Wall)	8.5	6	24.9	43.6	55	84.8	44.1
Camera 55-57- Counsole Basement (D)	8.5	6	16.5	38	41.6	56.1	50.5

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5M-DO1-IR	1	743 days 7 hours	743 days 7 hours			0 days 0 hours
4.0C-H5A-DC1	1	743 days 7 hours	743 days 7 hours			0 days 0 hours
4.0C-H5A-DC1	1	743 days 7 hours	743 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	743 days 7 hours	743 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	743 days 7 hours	743 days 7 hours			0 days 0 hours
2.0C-H5SL-D1	1	743 days 7 hours	743 days 7 hours			0 days 0 hours
2.0C-H5M-DO1-IR	3	743 days 7 hours	743 days 7 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.

10.1.9 City of Glendale-Civic Center-Indoor



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Design Comments

Design-City of Glendale-Civic Center-Indoor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-32TB-NA	n/a	30.4 TB	35.21 Mbps	435 days 9 hours	Valid

HDSM 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
Camera 14-Rotunda Entrance (DC)	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	8	Quality 6	4.89 Mbps	X		
Camera 15-W Entrance (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	6.5	10	8	Quality 6	5.07 Mbps	X		
Camera 16-E Entrance (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	6.5	10	8	Quality 6	5.07 Mbps	X		
Camera 17-Service Entrance (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	7	Quality 6	7.56 Mbps	X		
Camera 18-Front Office (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 19-Safe (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 20-N Entrance (DC)	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	8	Quality 6	4.89 Mbps	X		

Scene Details

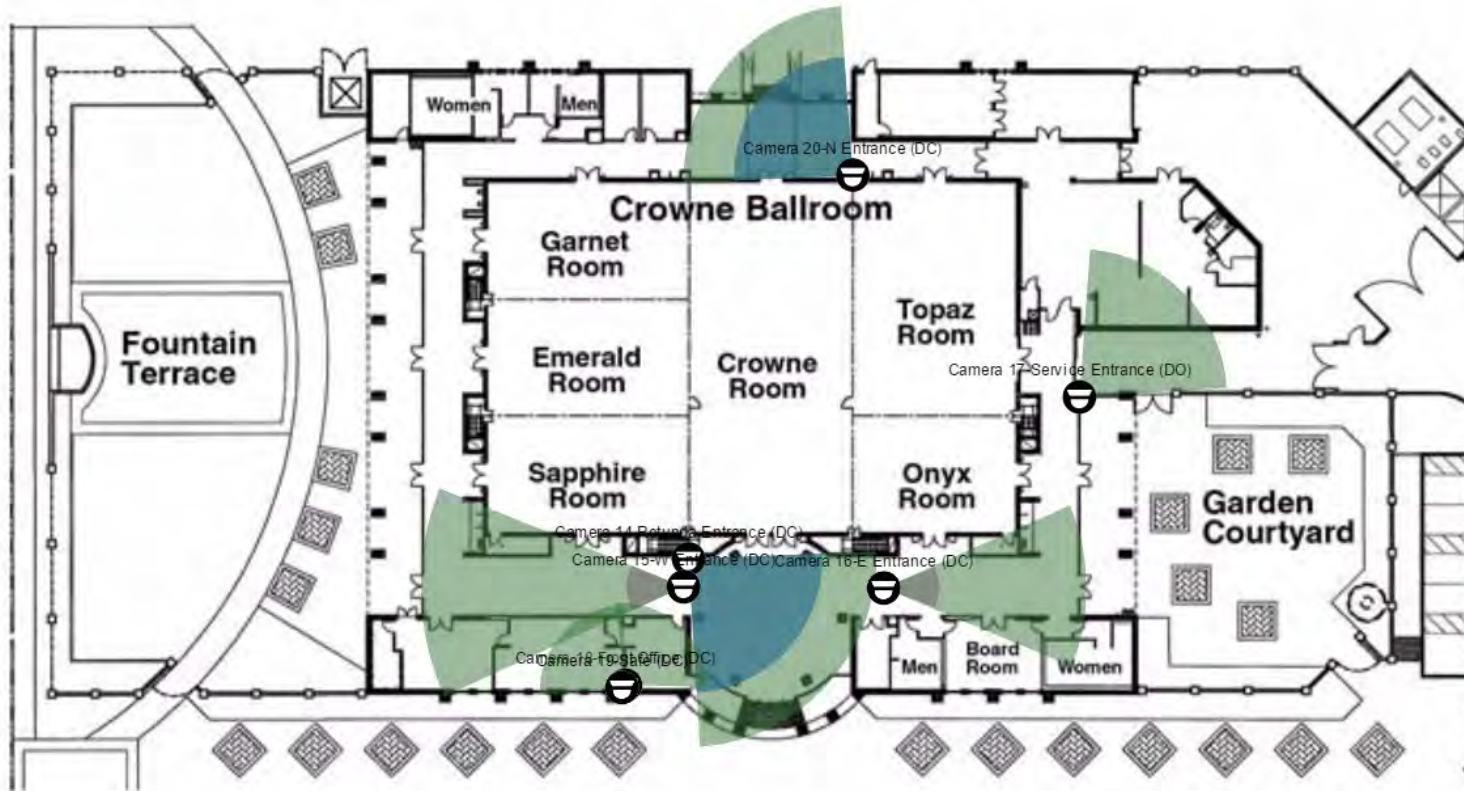
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 14-Rotunda Entrance (DC)	9	6	35.4	69.2	51.9	106.2	27.7
Camera 15-W Entrance (DC)	9	6	63.7	54.7	73.3	191	35.1
Camera 16-E Entrance (DC)	9	6	49.3	42.3	72.6	147.9	45.4
Camera 17-Service Entrance (DO)	8.5	6	29.3	51.2	55.8	99.5	37.5
Camera 18-Front Office (DC)	8.5	6	14.2	32.8	40.2	48.2	58.6
Camera 19-Safe (DC)	8.5	6	14.2	32.8	40.2	48.2	58.6
Camera 20-N Entrance (DC)	9	6	31.8	62.3	51.4	95.5	30.8

Storage 1

Model: NVR4X-STD-32TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5A-DC1	1	435 days 9 hours	435 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	435 days 9 hours	435 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	435 days 9 hours	435 days 9 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	435 days 9 hours	435 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	435 days 9 hours	435 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	435 days 9 hours	435 days 9 hours			0 days 0 hours
2.0C-H5A-DC1	1	435 days 9 hours	435 days 9 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.

10.1.10 City of Glendale-Civic Center-Outdoor



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Design Comments

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-32TB-NA	n/a	30.4 TB	211.78 Mbps	33 days 18 hours	Valid

HDSM 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
Camera 1-Front Entry (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	7.53 Mbps	X		
Camera 2-SE Corner (DP Crnr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					41.11 Mbps			
↳ Head 1					2.8	15	12	Quality 6		X		
↳ Head 2					2.8	15	12	Quality 6		X		
↳ Head 3					2.8	15	12	Quality 6		X		
Camera 3-E Courtyard (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	10	Quality 6	7.53 Mbps	X		
Camera 4- East Parking (BO)	8.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	4.9	10	12	Quality 6	12.17 Mbps	X		
Camera 5-NE Parking/Entrance (DP Crnr)	15C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					41.11 Mbps			
↳ Head 1					4.0	15	12	Quality 6		X		

↳ Head 2					4.0	15	12		Quality 6		X		
↳ Head 3					4.0	15	12		Quality 6		X		
Camera 6-N Entry (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12		Quality 6	7.53 Mbps	X		
Camera 7-NW Courtyard (DP)	8.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	4.9	10	10		Quality 6	12.17 Mbps	X		
Camera 8-SW Courtyard (DP)	8.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	4.9	10	10		Quality 6	12.17 Mbps	X		
Camera 9-W Courtyard Entrance (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	10		Quality 6	6.77 Mbps	X		
Camera 10-NE Corner Annex (DP Crnr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2						41.11 Mbps			
↳ Head 1					2.8	15	12		Quality 6		X		
↳ Head 2					2.8	15	12		Quality 6		X		
↳ Head 3					2.8	15	12		Quality 6		X		
Camera 11-Annex E Entrance (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12		Quality 6	7.53 Mbps	X		

Camera 12-Special Events Entrance (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	7.53 Mbps	X		
Camera 13-W Annex Entrance (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	9	Quality 6	7.53 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Front Entry (DO)	9	6	32.6	57	55.4	97.8	33.7
Camera 2-SE Corner (DP Crnr)	12						
↳ Head 1		10	70	128.1	45	420	20.2
↳ Head 2		10	70	128.1	45	420	20.2
↳ Head 3		10	70	128.1	45	420	20.2
Camera 3-E Courtyard (DO)	8.5	6	53.5	93.3	58	181.9	20.6
Camera 4- East Parking (BO)	12	6	190.5	341	58	381.1	11.3
Camera 5-NE Parking/Entrance (DP Crnr)	9						
↳ Head 1		6	64.6	82.5	58.8	193.8	31.4
↳ Head 2		6	142.4	181.8	60.2	427.3	14.3
↳ Head 3		6	128.4	163.9	60.1	385.2	15.8
Camera 6-N Entry (DO)	9	6	37.6	65.8	56.1	112.9	29.2
Camera 7-NW Courtyard (DP)	9	6	112.2	200.9	58.3	336.7	19.1
Camera 8-SW Courtyard (DP)	9	6	108.9	194.8	58.2	326.6	19.7
Camera 9-W Courtyard Entrance (DC)	9	6	23.9	54.8	43	71.7	35
Camera 10-NE Corner Annex (DP Crnr)	12						
↳ Head 1		10	68.8	125.9	45	412.6	20.6

↳ Head 2		10	69	126.3	45	414	20.5
↳ Head 3		10	70	128.1	45	420	20.2
Camera 11-Annex E Entrance (DO)	9	6	22.8	39.8	53.3	68.3	48.2
Camera 12-Special Events Entrance (DO)	9	6	22.8	39.8	53.3	68.3	48.2
Camera 13-W Annex Entrance (DO)	9	6	54	94.2	57.5	161.9	20.4

Storage 1

Model: NVR4X-STD-32TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
15C-H4A-3MH-270	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
8.0C-H5A-BO1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
15C-H4A-3MH-180	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
8.0C-H5A-DP1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
8.0C-H5A-DP1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
15C-H4A-3MH-270	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	33 days 18 hours	33 days 18 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	33 days 18 hours	33 days 18 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.

10.1.11 City of Glendale-Community Center Ocotillo-Indoor Cameras



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Design Comments

Design-City of Glendale-Community Center Ocotillo-Indoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-24P24-NA	n/a	22.8 TB	56.65 Mbps	194 days 17 hours	Valid

HDSM 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
Camera 6 (DO) (Lobby)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	10	Quality 1	11.99 Mbps	X		
Camera 7 (DC) (E Hall)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	8	Quality 6	3.86 Mbps	X		
Camera 8 (DC) (W Hall)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	8	Quality 6	3.86 Mbps	X		
Camera 9 (DC) (Multipurpose Entry)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.9	10	6	Quality 6	3.86 Mbps	X		
Camera 10 (DC) (Senior Rm)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.9	10	8	Quality 6	5.07 Mbps	X		
Camera 11 (DC) (Multipurpose Entry)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.9	10	6	Quality 6	3.86 Mbps	X		
Camera 12 (DC) (Kitchen)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 13 (DC) (Computer Lab)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 14 (DC) (Dance Rm)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 15 (DC) (Storage Rm)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	2	Quality 6	3.86 Mbps	X		

Camera 16 (DC) (Art Rm)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6		Quality 6	5.07 Mbps	X		
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Scene Details

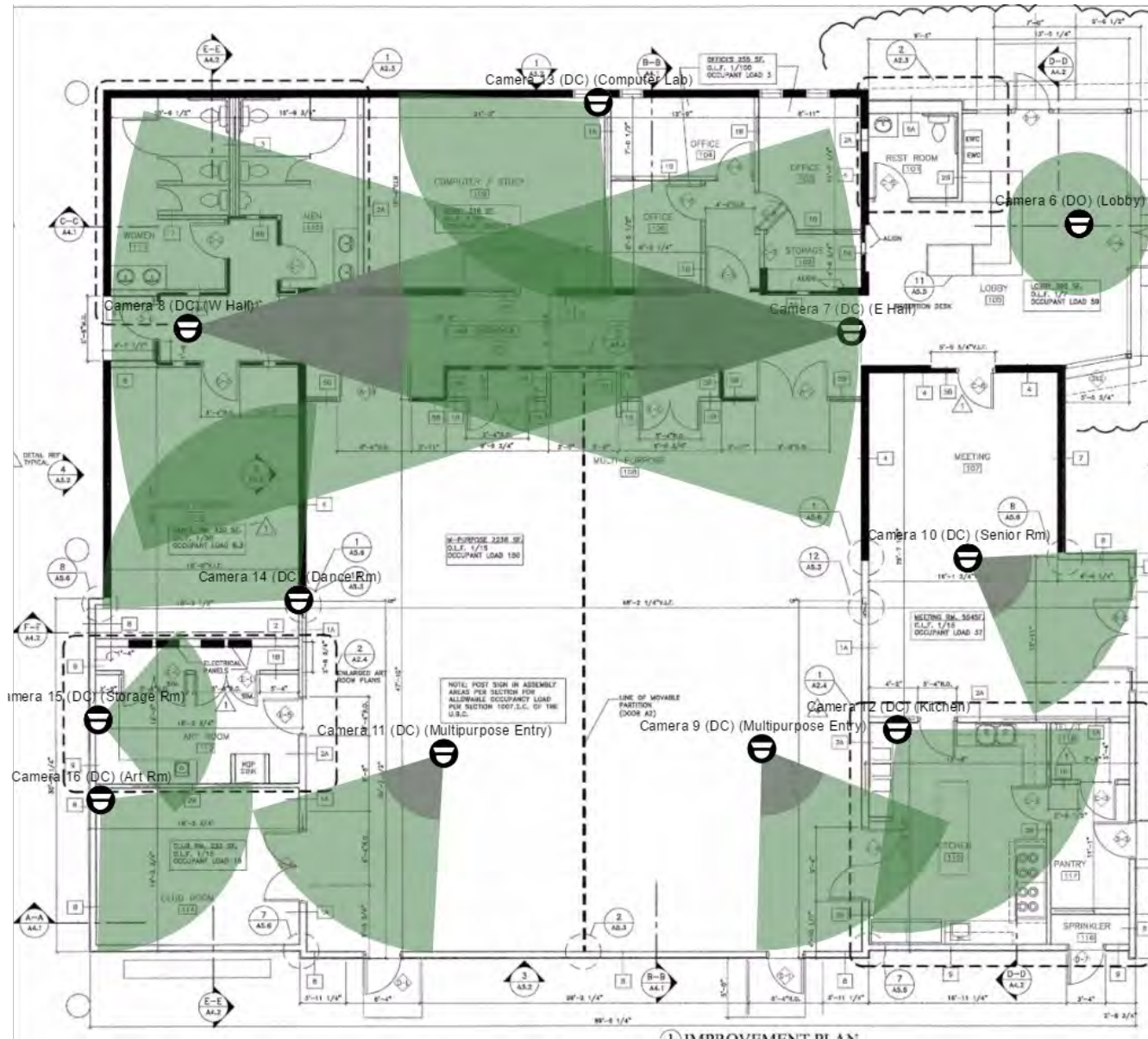
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 6 (DO) (Lobby)	7.5	6	6.2	12.3	0	30.8	67.9
Camera 7 (DC) (E Hall)	7.5	6	60.7	37.7	78.5	303.3	50.9
Camera 8 (DC) (W Hall)	7.5	6	55	34.2	78.4	275.1	56.2
Camera 9 (DC) (Multipurpose Entry)	7.5	6	14.1	19.8	60.8	70.5	96.7
Camera 10 (DC) (Senior Rm)	7.5	6	11.9	16.7	59.7	59.4	115
Camera 11 (DC) (Multipurpose Entry)	7.5	6	14	19.7	60.7	70	97.5
Camera 12 (DC) (Kitchen)	7.5	6	11.5	26.3	42.7	57.3	73
Camera 13 (DC) (Computer Lab)	7.5	6	11.2	25.8	42.6	56.2	74.3
Camera 14 (DC) (Dance Rm)	7.5	6	11.1	25.4	42.5	55.4	75.5
Camera 15 (DC) (Storage Rm)	7.5	6	6.7	15.6	37.5	33.4	123.1
Camera 16 (DC) (Art Rm)	7.5	6	8.5	19.7	40.2	42.7	97.3

Storage 1

Model: VMA-AS3-24P24-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
12.0-H4F-DO1-IR	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5SL-D1	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5SL-D1	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5SL-D1	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5SL-D1	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5SL-D1	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	194 days 17 hours	194 days 17 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	194 days 17 hours	194 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.

10.1.12 City of Glendale-Community Center Ocotillo-Outdoor Cameras



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Design Comments

Design-City of Glendale-Community Center Ocotillo-Outdoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-24P24-NA	n/a	22.8 TB	164.37 Mbps	30 days 15 hours	Valid

HDSM 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
Camera 1 (DP) (NW BB Court)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					45.60 Mbps			
<input type="checkbox"/> Head 1					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	12	Quality 6		X		
Camera 2 (DP) (SW Corner BB Court)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					45.60 Mbps			
<input type="checkbox"/> Head 1					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	10	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	8	Quality 6		X		
Camera 3 (DP) (North Side)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					32.82 Mbps			
<input type="checkbox"/> Head 1					4.0	12	16	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	16	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	16	Quality 6		X		
Camera 4 (DO) (Main Entrance)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	7.53 Mbps	X		
Camera 5 (DP) (SE Corner)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					32.82 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		

<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	8	Quality 6		X		

Scene Details

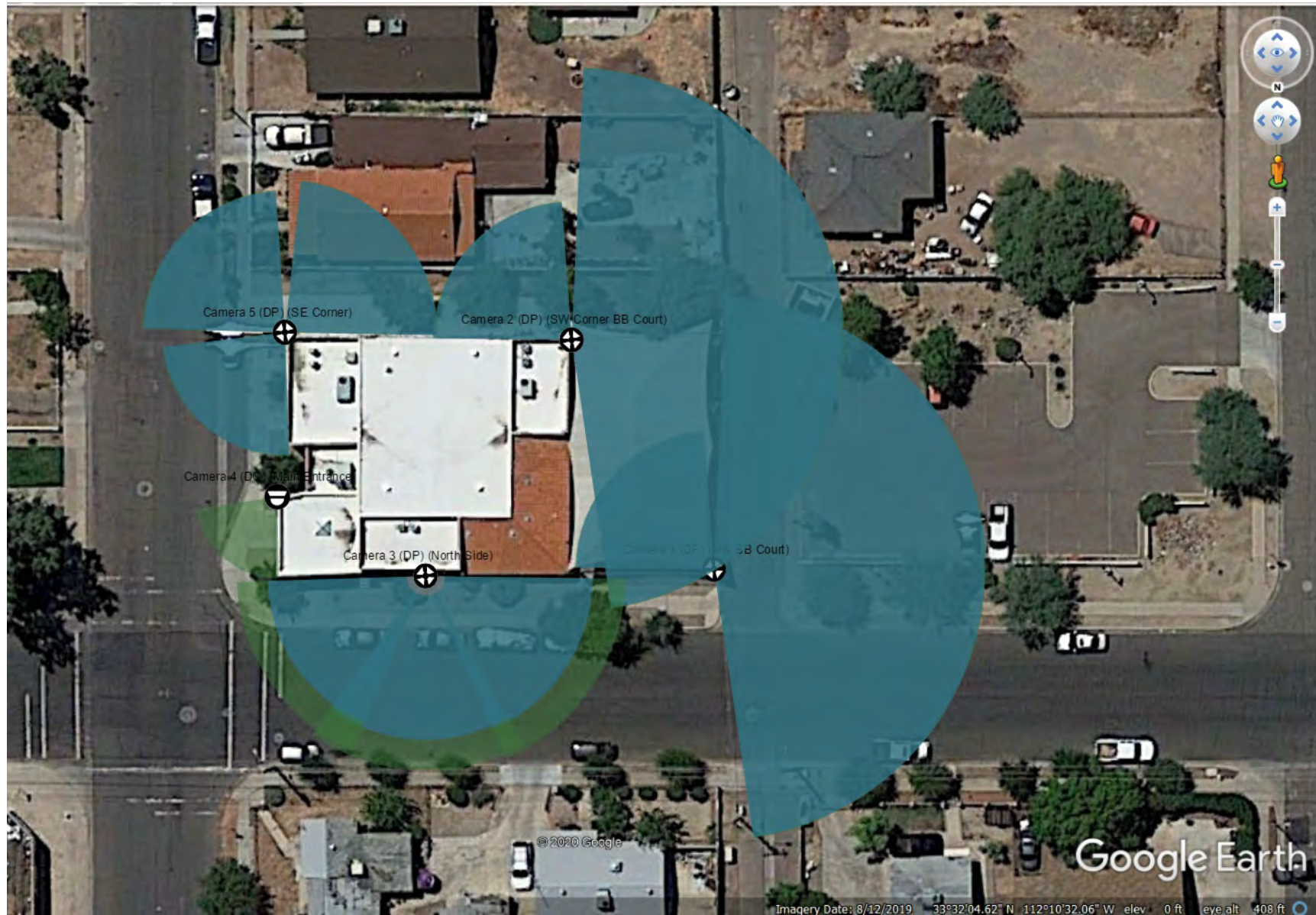
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1 (DP) (NW BB Court)	15						
<input type="checkbox"/> Head 1		15	32.7	59.9	46.7	6561.7	43.3
<input type="checkbox"/> Head 2		15	64.3	117.6	46.7	6561.7	22
<input type="checkbox"/> Head 3		15	63.9	116.9	46.7	6561.7	22.2
Camera 2 (DP) (SW Corner BB Court)	15						
<input type="checkbox"/> Head 1		15	32.7	59.9	46.7	6561.7	43.3
<input type="checkbox"/> Head 2		15	64.3	117.6	46.7	6561.7	22
<input type="checkbox"/> Head 3		15	63.9	116.9	46.7	6561.7	22.2
Camera 3 (DP) (North Side)	14						
<input type="checkbox"/> Head 1		6	53.6	69.1	52.9	93.8	29.6
<input type="checkbox"/> Head 2		6	52.2	67.4	52.7	91.4	30.4
<input type="checkbox"/> Head 3		6	50.7	65.4	52.4	88.6	31.3
Camera 4 (DO) (Main Entrance)	8.5	6	19.6	34.2	53.6	66.7	56.1
Camera 5 (DP) (SE Corner)	14						
<input type="checkbox"/> Head 1		14	29.2	53.4	46.7	6561.7	38.3
<input type="checkbox"/> Head 2		14	33.6	61.5	46.7	6561.7	33.3
<input type="checkbox"/> Head 3		14	36	65.8	46.7	2000	31.1

Storage 1

Model: VMA-AS3-24P24-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
15C-H4A-3MH-270	1	30 days 15 hours	30 days 15 hours			0 days 0 hours
15C-H4A-3MH-270	1	30 days 15 hours	30 days 15 hours			0 days 0 hours
9C-H4A-3MH-180	1	30 days 15 hours	30 days 15 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	30 days 15 hours	30 days 15 hours			0 days 0 hours
9C-H4A-3MH-270	1	30 days 15 hours	30 days 15 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.

10.1.13 City of Glendale-Community Center-Foothills Aquatic-Floor 1



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Design Comments

Design-City of Glendale-Community Center-Foothills Aquatic-Floor 1-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	80.77 Mbps	266 days 23 hours	Valid

HDSM 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
Camera 1-Lobby Entry (D)	2.0C-H5A-D1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	9	Quality 6	4.89 Mbps	X		
Camera 2-Rockwall (D)	5.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	9	Quality 6	8.12 Mbps	X		
Camera 3-W Emergency Exit (DC)	2.0C-H5A-D1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	8.7	10	5	Quality 6	4.10 Mbps	X		
Camera 5-Lobby (D)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	9	Quality 6	5.07 Mbps	X		
Camera 6-Cash (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	8	Quality 6	6.50 Mbps	X		
Camera 7-Cash (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	8	Quality 6	6.50 Mbps	X		
Camera 8-Cafe (D)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	5.07 Mbps	X		
Camera 9-Elevator/Stairs (DO)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	8	Quality 6	5.74 Mbps	X		
Camera 10-BB Courts (DP Wall)	24C-H4A-3MH-180	Storage 1	1	Built-In Lens, 5.2mm, f/1.8					22.84 Mbps			
<input type="checkbox"/> Head 1					5.2	12	7	Quality 6		X		
<input type="checkbox"/> Head 2					5.2	12	7	Quality 6		X		
<input type="checkbox"/> Head 3					5.2	12	7	Quality 6		X		

Camera 11-Locker Hall (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	6	Quality 6	3.86 Mbps	X		
Camera 16-Safe (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	3	Quality 6	4.21 Mbps	X		
Camera 27-Chem Storage (DP)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	3	Quality 6	3.86 Mbps	X		

Scene Details

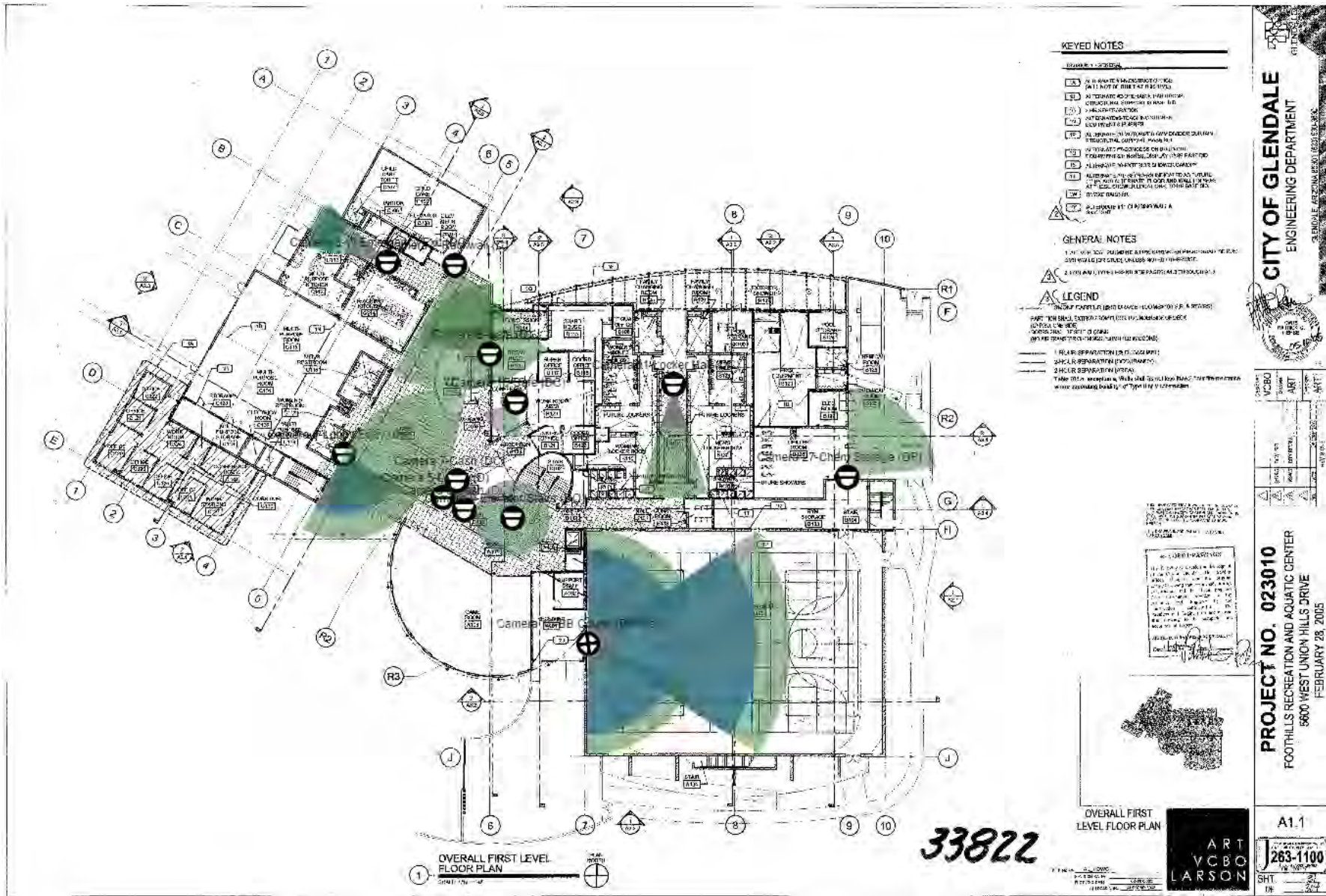
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Lobby Entry (D)	9	6	26.6	52.3	50.3	79.9	36.7
Camera 2-Rockwall (D)	9	6	42.5	68.1	49.1	127.4	38.1
Camera 3-W Emergency Exit (DC)	8	6	35	21.8	76.6	140	88
Camera 5-Lobby (D)	10	6	30.9	70.9	42.8	77.2	27.1
Camera 6-Cash (DC)	7	6	7.6	13.4	53.3	53.4	143.7
Camera 7-Cash (DC)	7	6	6.4	11.2	52	44.7	171.8
Camera 8-Cafe (D)	7	6	23.1	40.3	58.2	161.7	47.6
Camera 9-Elevator/Stairs (DO)	8.5	6	16.5	33	0	56.1	24.3
Camera 10-BB Courts (DP Wall)	18						
□ Head 1		6	41	55.6	52.2	61.4	69
□ Head 2		6	73.5	97	59.2	110.2	39.6
□ Head 3		6	39.7	54	51.7	59.5	71.1
Camera 11-Locker Hall (DC)	8	6	47.1	29.3	77.5	188.5	65.5
Camera 16-Safe (DC)	8	6	11.3	19.7	50.9	45.1	97.3
Camera 27-Chem Storage (DP)	8.5	6	29.3	51.1	55.9	99.6	37.6

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5A-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
5.0C-H5SL-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5A-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5SL-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5SL-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5SL-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
24C-H4A-3MH-180	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5SL-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5SL-D1	1	266 days 23 hours	266 days 23 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	266 days 23 hours	266 days 23 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.

10.1.14 City of Glendale-Community Center-Foothills Aquatic-Floor 2



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Design Comments

Design-City of Glendale-Community Center-Foothills Aquatic-Floor 2-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	27.42 Mbps	675 days 21 hours	Valid

HDSM 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
Camera 4-2nd Floor Stairs/Halls (DP)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	4.21 Mbps	X		
Camera 12-2nd Floor Emergency Exit (D)	2.0C-H5A-D1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.4	10	3	Quality 6	4.16 Mbps	X		
Camera13-Fitness (DP NPTA)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	10	Quality 6	6.99 Mbps	X		
Camera14-Fitness (DP NPTA)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	10	Quality 6	6.99 Mbps	X		
Camera 15-Fitness (DO)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	10	Quality 6	5.07 Mbps	X		

Scene Details

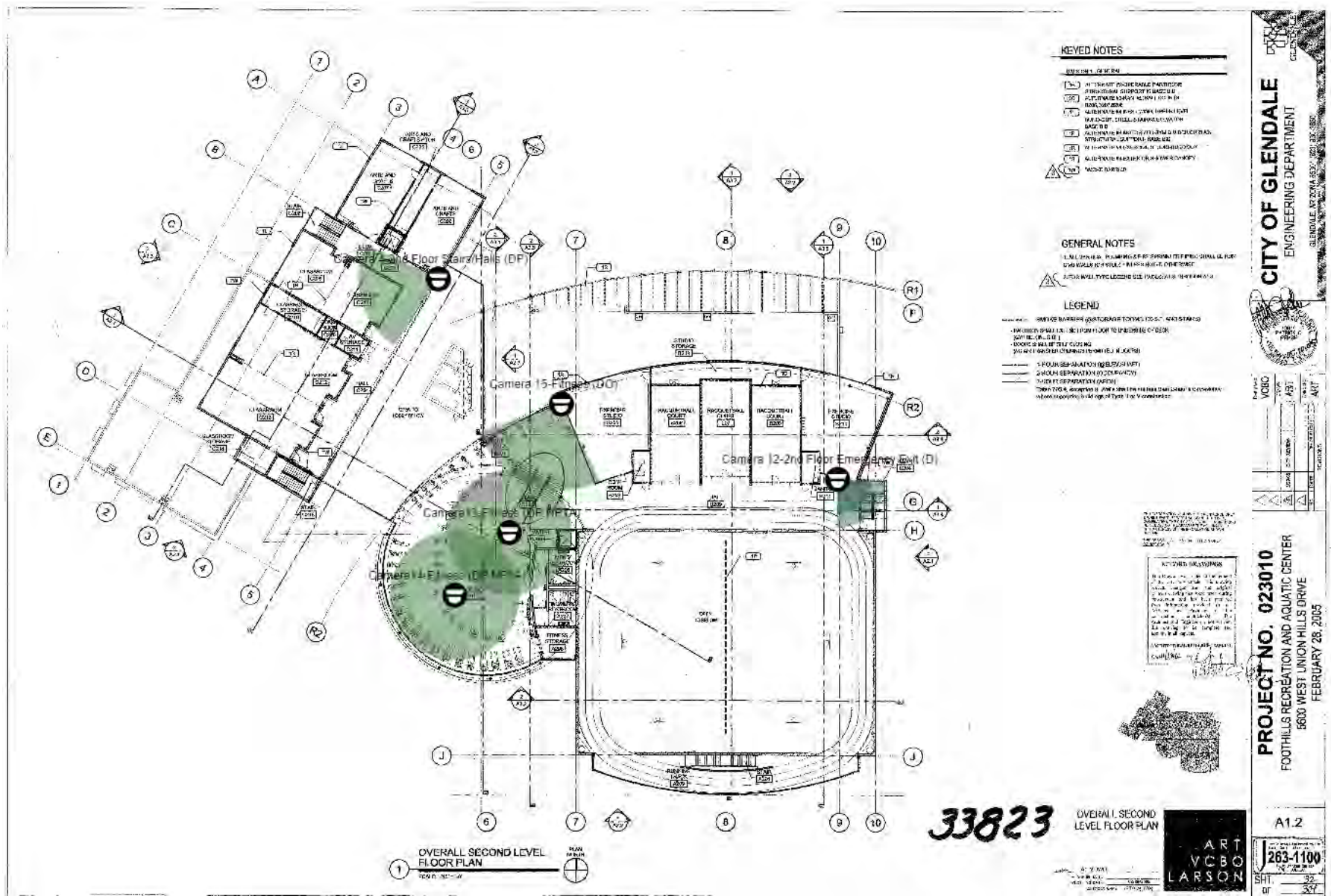
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 4-2nd Floor Stairs/Halls (DP)	8	6	25.8	45.1	56.3	103.3	42.6
Camera 12-2nd Floor Emergency Exit (D)	9	6	14.8	28.9	45.9	44.3	66.3
Camera13-Fitness (DP NPTA)	12	6	26.7	53.4	0	53.4	15.5
Camera14-Fitness (DP NPTA)	12	6	27.8	55.6	0	55.6	14.9
Camera 15-Fitness (DO)	9	6	24.3	55.8	43.1	73	34.4

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-D1	1	675 days 21 hours	675 days 21 hours			0 days 0 hours
2.0C-H5A-D1	1	675 days 21 hours	675 days 21 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	675 days 21 hours	675 days 21 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	675 days 21 hours	675 days 21 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	675 days 21 hours	675 days 21 hours			0 days 0 hours



KEYED NOTES

- SECTION GENERAL**
- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 2. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 3. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 4. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 5. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 6. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 7. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 8. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 9. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
 - 10. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.

GENERAL NOTES

- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
- 2. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.
- 3. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GLENDALE SPECIFICATIONS AND THE NATIONAL BUILDING CODES.

LEGEND

- 1. POOL BARRIERS (ASTM F2085 TYPE 1) - 42\"/>

CITY OF GLENDALE
ENGINEERING DEPARTMENT

PROJECT NO. 023010
FOOTHILLS RECREATION AND AQUATIC CENTER
5800 WEST UNION HILLS DRIVE
FEBRUARY 28, 2005

A12

ART
VCBO
LARSON

263-1100

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.

10.1.15 City of Glendale-Community Center-Foothills Aquatic-Outdoor



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

Design Comments

Design-City of Glendale-Community Center-Foothills Aquatic-Outdoor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	247.98 Mbps	44 days 2 hours	Valid

HDSM 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
Camera 17-Patio (BO)	3.0C-H5SL-BO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	9	Quality 6	10.81 Mbps	✓	Medium (Default)	1
Camera 18-Patio (BO)	2.0C-H5SL-BO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	9	Quality 6	9.91 Mbps	X		
Camera 19-Covered Entry (DO)	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	9	Quality 6	7.10 Mbps	X		
Camera 20-Aquatics (BO Pole)	5.0C-H5SL-BO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	9	Quality 6	12.00 Mbps	X		
Camera 21-Aquatics (DP Pole)	20C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					40.61 Mbps			
<input type="checkbox"/> Head 1					2.8	13	9	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	13	9	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	13	9	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 4					2.8	13	9	Quality 6		✓	Medium (Default)	1

Camera 22-Aquatics (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					25.94 Mbps			
<input type="checkbox"/> Head 1					4.0	12	9	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	9	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	9	Quality 6		✓	Medium (Default)	1
Camera 23-Front Entry (DP Cmr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					46.49 Mbps			
<input type="checkbox"/> Head 1					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	12	Quality 6		X		
Camera 24-Sidewalk (BO)	5.0C-H5SL-BO2-IR	Storage 1	1	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	9.5	10	12	Quality 6	12.00 Mbps	X		
Camera 25-Parking (DP Cmr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					41.11 Mbps			
<input type="checkbox"/> Head 1					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	12	Quality 6		X		
Camera 26-Parking (DP Pole)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 17-Patio (BO)	9	6	60.8	97.4	50.3	182.5	21
Camera 18-Patio (BO)	9	6	23.7	42	53.2	71.2	45.7
Camera 19-Covered Entry (DO)	9	6	24.9	49.9	0	74.8	15.8
Camera 20-Aquatics (BO Pole)	9	6	98.1	157	51.4	294.4	16.5
Camera 21-Aquatics (DP Pole)	8.5						
<input type="checkbox"/> Head 1		6	85.7	156.8	45	291.3	16.5
<input type="checkbox"/> Head 2		6	88	161.1	45.1	299.3	16.1
<input type="checkbox"/> Head 3		6	85.2	155.9	45	289.7	16.6
<input type="checkbox"/> Head 4		6	86.1	157.6	45	292.7	16.4
Camera 22-Aquatics (DP Pole)	9						
<input type="checkbox"/> Head 1		6	78.6	100.4	59.2	235.8	20.4
<input type="checkbox"/> Head 2		6	102.9	131.4	59.7	308.7	15.6
<input type="checkbox"/> Head 3		6	77.4	98.8	59.2	232.1	20.7
Camera 23-Front Entry (DP Cmr)	9						
<input type="checkbox"/> Head 1		8	43.7	80	45.4	393.3	32.4
<input type="checkbox"/> Head 2		8	69.3	126.7	45.9	623.4	20.5
<input type="checkbox"/> Head 3		8	69.7	127.5	45.9	627.3	20.3
Camera 24-Sidewalk (BO)	9	6	80.8	42.4	76.5	242.3	61.1

Camera 25-Parking (DP Cmr)	9						
□ Head 1		8	43.7	80	45.4	393.3	32.4
□ Head 2		8	96.9	177.3	46.1	872.1	14.6
□ Head 3		8	49.6	90.7	45.5	446.2	28.6
Camera 26-Parking (DP Pole)	10						
□ Head 1		6	59.2	119	51.8	148.1	32.3
□ Head 2		6	189.2	379.3	54.5	473.1	10.1
□ Head 3		6	186.3	373.4	54.5	465.7	10.3

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
3.0C-H5SL-BO1-IR	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
2.0C-H5SL-BO1-IR	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
5.0C-H5SL-BO1-IR	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
20C-H4A-4MH-360	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
9C-H4A-3MH-180	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
15C-H4A-3MH-270	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
15C-H4A-3MH-270	1	44 days 2 hours	44 days 2 hours			0 days 0 hours
24C-H4A-3MH-270	1	44 days 2 hours	44 days 2 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.

10.1.16 City of Glendale-Glendale Courthouse



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Design Comments

Design-City of Glendale-Glendale Courthouse_Rev1-1-VE-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-PRM-64TB-NA	n/a	60.8 TB	395.55 Mbps	42 days 9 hours	Valid

HDSM 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
Camera 3	2.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.4	10	7	Quality 6	2.68 Mbps	✓	Medium (Default)	1
Camera 4	2.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.4	10	7	Quality 6	2.68 Mbps	✓	Medium (Default)	1
Camera 5	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					23.13 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		✓	Medium (Default)	1
Camera 6	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					23.13 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		✓	Medium (Default)	1
Camera 7	2.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	12	Quality 6	3.67 Mbps	✓	Medium (Default)	1
Camera 8	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					< 0.01 Mbps			

<input type="checkbox"/> Head 1					2.8	12	1		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	12	1		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	12	1		Quality 6		✓	Medium (Default)	1
Camera 9	2.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	8		Quality 6	3.67 Mbps	✓	Medium (Default)	1
Camera 10	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2						23.13 Mbps			
<input type="checkbox"/> Head 1					2.8	12	10		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	12	12		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	12	10		Quality 6		✓	Medium (Default)	1
Camera 11	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6						15.79 Mbps			
<input type="checkbox"/> Head 1					4.0	12	10		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	10		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	10		Quality 6		✓	Medium (Default)	1
Camera 12	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	8		Quality 6	5.36 Mbps	✓	Medium (Default)	1
Camera 13	2.0C-H5A-DP1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	10		Quality 6	3.08 Mbps	✓	Medium (Default)	1

Camera 14	12C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					17.08 Mbps			
<input type="checkbox"/> Head 1					2.8	10	10	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	10	10	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	10	10	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 4					2.8	10	10	Quality 6		✓	Medium (Default)	1
Camera 15	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	4.38 Mbps	✓	Medium (Default)	1
Camera 16	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	4.38 Mbps	✓	Medium (Default)	1
Camera 17	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					19.69 Mbps			
<input type="checkbox"/> Head 1					2.8	12	10	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	12	10	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	12	10	Quality 6		✓	Medium (Default)	1
Camera 18	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	7	Quality 6	2.89 Mbps	✓	Medium (Default)	1
Camera 19	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	7	Quality 6	2.89 Mbps	✓	Medium (Default)	1
Camera 22	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	2	Quality 6	2.48 Mbps	✓	Medium (Default)	1

Camera 23	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	2	Quality 6	2.48 Mbps	✓	Medium (Default)	1
Camera 30	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	10	Quality 6	5.36 Mbps	✓	Medium (Default)	1
Camera 31	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	10	Quality 6	5.36 Mbps	✓	Medium (Default)	1
Camera 32	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	6	Quality 6	3.86 Mbps	✓	Medium (Default)	1
Camera 33	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	20	6	Quality 6	7.16 Mbps	✓	Medium (Default)	1
Camera 35	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	20	6	Quality 6	7.16 Mbps	✓	Medium (Default)	1
Camera 37	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	20	6	Quality 6	7.16 Mbps	✓	Medium (Default)	1
Camera 39	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	20	6	Quality 6	7.16 Mbps	✓	Medium (Default)	1
Camera 41	12.0-H4F-DO1-IR	Storage 1	1	Built-In Lens, 1.45mm, Fish Eye	1.45	20	6	Quality 6	7.16 Mbps	✓	Medium (Default)	1
Camera 43	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.1	10	6	Quality 6	2.89 Mbps	✓	Medium (Default)	1
Camera 44	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					23.13 Mbps			
□ Head 1					2.8	12	10	Quality 6		✓	Medium (Default)	1
□ Head 2					2.8	12	12	Quality 6		✓	Medium (Default)	1
□ Head 3					2.8	12	10	Quality 6		✓	Medium (Default)	1

Camera 45	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					24.48 Mbps			
<input type="checkbox"/> Head 1					2.8	15	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	15	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	15	16	Quality 6		✓	Medium (Default)	1
Camera 46	4.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.7	10	10	Quality 6	4.96 Mbps	✓	Medium (Default)	1
Camera 47	15C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					24.48 Mbps			
<input type="checkbox"/> Head 1					4.0	15	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	15	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	15	16	Quality 6		✓	Medium (Default)	1
Camera 48	15C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					24.48 Mbps			
<input type="checkbox"/> Head 1					4.0	15	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	15	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	15	16	Quality 6		✓	Medium (Default)	1
Camera 49	4.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.7	10	10	Quality 6	4.96 Mbps	✓	Medium (Default)	1

Camera 50	4.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.7	10	10	Quality 6	4.96 Mbps	✓	Medium (Default)	1
Camera 51	4.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.7	10	10	Quality 6	4.96 Mbps	✓	Medium (Default)	1
Camera 52	4.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.7	10	10	Quality 6	4.96 Mbps	✓	Medium (Default)	1
Camera 53	4.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.7	10	10	Quality 6	4.96 Mbps	✓	Medium (Default)	1
Camera 55	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	4.10 Mbps	✓	Medium (Default)	1
Camera 56	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	4.10 Mbps	✓	Medium (Default)	1
Camera 57	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	4.10 Mbps	✓	Medium (Default)	1
Camera 58	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	4.10 Mbps	✓	Medium (Default)	1
Camera 59	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	4.10 Mbps	✓	Medium (Default)	1
H4 MH Camera 1	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					32.82 Mbps			
□ Head 1					4.0	12	12	Quality 6		X		
□ Head 2					4.0	12	12	Quality 6		X		
□ Head 3					4.0	12	12	Quality 6		X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 3	8.5	6	11.5	22.6	45.1	39.1	85
Camera 4	8.5	6	11.4	22.4	45.1	38.9	85.6
Camera 5	10						
□ Head 1		10	10.5	19.3	46.7	6561.7	106.2
□ Head 2		10	4.2	7.7	46.7	6561.7	265.2
□ Head 3		10	4.1	7.6	46.7	6561.7	271.3
Camera 6	10						
□ Head 1		10	11.9	21.7	46.7	6561.7	94.5
□ Head 2		10	4.2	7.7	46.7	6561.7	265.2
□ Head 3		10	4.1	7.6	46.7	6561.7	271.3
Camera 7	8.5	8	5	9.7	50.9	84.2	197.7
Camera 8	10						
□ Head 1		10	7.1	12.9	46.7	6561.7	158.7
□ Head 2		10	6.8	12.4	46.7	6561.7	164.7
□ Head 3		10	4.9	9	46.7	6561.7	227.2
Camera 9	8.5	8	5	9.8	51	85	195.7
Camera 10	10						
□ Head 1		10	8.7	16	46.7	6561.7	128
□ Head 2		10	8	14.6	46.7	6561.7	140.7
□ Head 3		10	7.1	13	46.7	6561.7	157.9
Camera 11	10						

□ Head 1		6	24.6	31.7	52.2	61.4	64.5
□ Head 2		6	19.6	25.5	49.9	49	80.2
□ Head 3		6	14	18.5	45.4	34.9	110.6
Camera 12	8	6	5.3	10.6	0	21.1	82.6
Camera 13	8.5	6	19.9	39.1	49.6	67.7	49.1
Camera 14	8						
□ Head 1		8	8.1	14.8	46.7	6561.7	138.3
□ Head 2		8	5.7	10.5	46.7	6561.7	195.3
□ Head 3		8	12.5	22.8	46.7	6561.7	89.7
□ Head 4		8	6.1	11.1	46.7	6561.7	184.5
Camera 15	8	6	9.8	17.4	49.1	39	110.6
Camera 16	8	6	17.1	29.8	54.2	68.2	64.5
Camera 17	8.5						
□ Head 1		10	12.4	22.9	53.6	6561.7	89.3
□ Head 2		10	10.5	19.5	54.8	6561.7	105.1
□ Head 3		10	5.1	9.7	63.2	6561.7	211.7
Camera 18	8	6	73.7	45.8	78.4	294.7	41.9
Camera 19	8	6	39.9	24.9	77	159.7	77.1
Camera 22	8	6	5.7	13.7	30.8	22.7	140
Camera 23	8	6	5.1	12.4	28.7	20.3	154.5
Camera 30	8	6	5.3	10.6	0	21.1	82.6
Camera 31	8	6	5.3	10.6	0	21.1	82.6
Camera 32	8	6	9.5	18.9	0	37.8	43.6
Camera 33	8	6	18.2	36.3	0	72.7	21.6

Camera 35	8	6	25.2	50.4	0	100.7	15.3
Camera 37	8	6	22.2	44.5	0	88.9	17.4
Camera 39	8	6	15.4	30.9	0	61.7	25.6
Camera 41	8	6	16.7	33.4	0	66.8	23.6
Camera 43	8	6	10.2	17.9	50.1	40.9	107.5
Camera 44	10						
□ Head 1		10	5.9	10.8	46.7	6561.7	190
□ Head 2		10	10.8	19.8	46.7	6561.7	103.5
□ Head 3		10	10.5	19.3	46.7	6561.7	106.4
Camera 45	10						
□ Head 1		6	4.7	11.3	6.3	11.8	229.4
□ Head 2		6	5	11.7	8	12.5	221.5
□ Head 3		6	5.1	11.9	8.6	12.7	218.7
Camera 46	8.5	6	7.6	7.8	50.5	25.9	295.8
Camera 47	10						
□ Head 1		6	6.1	9.3	28.1	15.2	279.1
□ Head 2		6	6.1	9.3	28.3	15.3	277.8
□ Head 3		6	6.4	9.6	29.3	15.9	269.9
Camera 48	10						
□ Head 1		6	6.1	9.3	28.1	15.2	279.1
□ Head 2		6	6.1	9.3	28.3	15.3	277.8
□ Head 3		6	6.4	9.6	29.3	15.9	269.9
Camera 49	8.5	6	7.6	7.8	50.5	25.9	295.8
Camera 50	8.5	6	7.6	7.8	50.5	25.9	295.8

Camera 51	8.5	6	7.6	7.8	50.5	25.9	295.8
Camera 52	8.5	6	7.6	7.8	50.5	25.9	295.8
Camera 53	8.5	6	7.6	7.8	50.5	25.9	295.8
Camera 55	8	6	8.2	19.2	36.4	32.7	100.1
Camera 56	8	6	8.2	19.2	36.4	32.7	100.1
Camera 57	8	6	6.4	15.3	32.8	25.6	125.6
Camera 58	8	6	9.3	21.7	38.1	37.3	88.3
Camera 59	8	6	12.5	28.9	41.1	50.2	66.4
H4 MH Camera 1	8.5						
□ Head 1		6	10.2	13.5	47.7	34.8	152.3
□ Head 2		6	19.8	25.5	54.2	67.4	80.4
□ Head 3		6	28.9	37	56.5	98.1	55.4

Storage 1

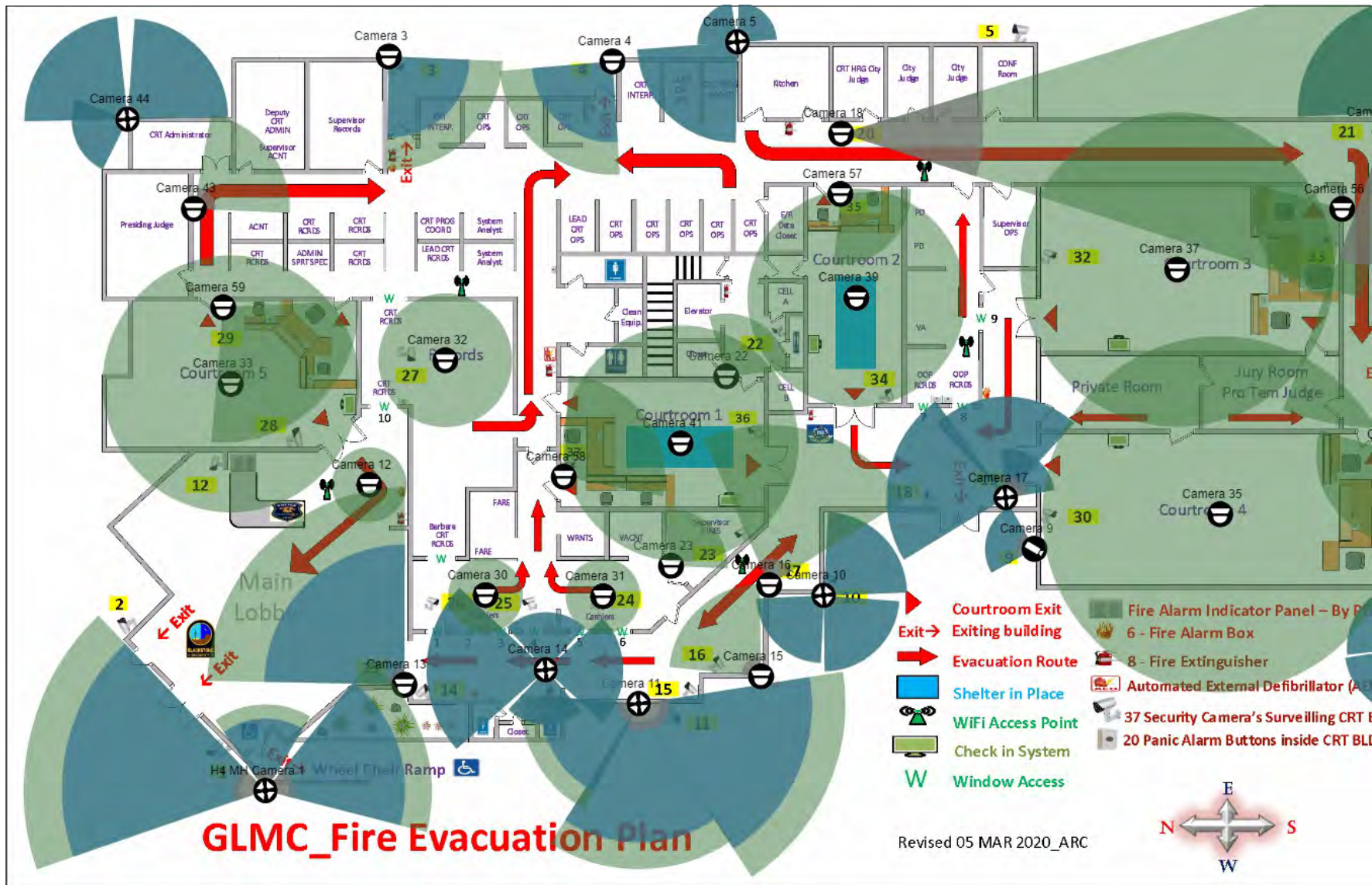
Model: NVR4X-PRM-64TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
9C-H4A-3MH-270	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
9C-H4A-3MH-270	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5A-BO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
9C-H4A-3MH-270	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5A-BO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
9C-H4A-3MH-270	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
9C-H4A-3MH-180	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5A-DP1	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12C-H4A-4MH-360	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
9C-H4A-3MH-270	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours

12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
9C-H4A-3MH-270	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
15C-H4A-3MH-270	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
4.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
15C-H4A-3MH-180	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
15C-H4A-3MH-180	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
4.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
4.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
4.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
4.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
4.0C-H5A-DP1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	42 days 9 hours	42 days 9 hours			0 days 0 hours

9C-H4A-3MH-180	1	42 days 9 hours	42 days 9 hours			0 days 0 hours
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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.

10.1.17 City of Glendale-Glendale Municipal Airport



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Design Comments

Design-City of Glendale-Glendale Municipal Airport-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	189.02 Mbps	30 days 17 hours	Valid

HDSM 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
Camera 1	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	129.0	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 1 N/A	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	4.3	60	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1
Camera 2	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	129.0	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 2 N/A	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	4.3	60	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1
Camera 3	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	129.0	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 3 N/A	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	4.3	60	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1
Camera 4	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	129.0	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 4 N/A	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	4.3	60	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1

Camera 5	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	129.0	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 5 N/A	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	4.3	60	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1
Camera 6	2.0C-H5A-PTZ-DP36	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7, Autofocus	106.7	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 6 N/A	2.0C-H5A-PTZ-DP36	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7, Autofocus	4.3	30	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1
Camera 7	2.0C-H5A-PTZ-DP36	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7, Autofocus	106.7	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 7 N/A	2.0C-H5A-PTZ-DP36	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7, Autofocus	4.3	30	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1
Camera 8	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	129.0	30	20	Quality 6	12.00 Mbps	✓	Medium (Default)	1
Camera 8 N/A	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	4.3	60	1	Quality 6	< 0.01 Mbps	✓	Medium (Default)	1
Camera 9	24C-H4A-3MH-180	Storage 1	1	Built-In Lens, 5.2mm, f/1.8					29.60 Mbps			
□ Head 1					5.2	12	12	Quality 6		✓	Medium (Default)	1
□ Head 2					5.2	12	12	Quality 6		✓	Medium (Default)	1

<input type="checkbox"/> Head 3					5.2	12	12		Quality 6		✓	Medium (Default)	1
Camera 10	24C-H4A-3MH-180	Storage 1	1	Built-In Lens, 5.2mm, f/1.8						29.60 Mbps			
<input type="checkbox"/> Head 1					5.2	12	12		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					5.2	12	12		Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					5.2	12	12		Quality 6		✓	Medium (Default)	1
Camera 11-15 (Future Cameras)	2.0C-H5A-DO1-IR	Storage 1	5	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.8	10	12		Quality 6	6.76 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1	15	6	813.6	32.7	88.7	1355.9	58.8
Camera 1 N/A	15	6	261.9	307.1	68.8	436.4	6.3
Camera 2	15	6	1788.8	71.8	89.1	2981.3	26.7
Camera 2 N/A	15	6	212.1	248.9	68.3	353.5	7.7
Camera 3	15	6	2101.7	84.4	89.1	3502.8	22.8
Camera 3 N/A	15	6	364.3	427.3	69.3	607.2	4.5
Camera 4	20	6	1694.4	68	88.9	2420.5	28.2
Camera 4 N/A	20	6	311	364.8	68.2	444.3	5.3
Camera 5	20	6	3889.8	156.2	89.1	5556.9	12.3
Camera 5 N/A	20	6	457.8	536.9	69	653.9	3.6
Camera 6	16	6	1610.3	64.6	89	2576.4	29.7
Camera 6 N/A	16	6	138	161.9	66.6	220.8	11.9
Camera 7	16	6	1813.8	72.8	89	2902.1	26.4
Camera 7 N/A	16	6	137	160.7	66.6	219.1	11.9
Camera 8	16	6	977.3	39.2	88.8	1563.8	48.9
Camera 8 N/A	15	6	170.9	200.4	67.8	284.8	9.6
Camera 9	16						
□ Head 1		6	196.1	255.9	65.6	313.8	15
□ Head 2		6	196.1	255.8	65.6	313.7	15
□ Head 3		6	196.1	255.8	65.6	313.7	15
Camera 10	16						

<input type="checkbox"/> Head 1		6	196.1	255.9	65.6	313.8	15
<input type="checkbox"/> Head 2		6	196.1	255.8	65.6	313.7	15
<input type="checkbox"/> Head 3		6	196.1	255.8	65.6	313.7	15
Camera 11-15 (Future Cameras)	8.5	6	16.5	16.8	64.9	56.1	114

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H5A-PTZ-DP36	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H5A-PTZ-DP36	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H5A-PTZ-DP36	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H5A-PTZ-DP36	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
24C-H4A-3MH-180	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
24C-H4A-3MH-180	1	30 days 17 hours	30 days 17 hours			0 days 0 hours
2.0C-H5A-DO1-IR	5	30 days 17 hours	30 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.

10.1.18 City of Glendale-Heroes Skate Park



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Design Comments

Design-City of Glendale-Heroes Skate Park-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-8P8-NA	n/a	7.6 TB	46.31 Mbps	32 days 5 hours	Valid

HDSM 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
Camera 1-SE Patio (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	6.21 Mbps	✓	Medium (Default)	1
Camera 2-NW Corner (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					29.60 Mbps			
<input type="checkbox"/> Head 1					4.0	12	15	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	15	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	15	Quality 6		✓	Medium (Default)	1
Camera 3-Entrance Gate (DP Wall)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	5.26 Mbps	✓	Medium (Default)	1
Camera 4-NE Corner (DP Wall)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	< min	10	12	Quality 6	5.26 Mbps	✓	Medium (Default)	1

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-SE Patio (DO)	10	6	39.7	69.3	55	99.3	27.7
Camera 2-NW Corner (DP Cmr)	12						
<input type="checkbox"/> Head 1		6	43.1	87.3	47.8	86.3	44
<input type="checkbox"/> Head 2		6	127.4	255.7	53	254.9	15
<input type="checkbox"/> Head 3		6	126.4	253.5	53	252.7	15.1
Camera 3-Entrance Gate (DP Wall)	9	6	15.7	27.7	50	47	69.4
Camera 4-NE Corner (DP Wall)	9	6	34.9	61	55.7	104.6	31.5

Storage 1

Model: VMA-AS3-8P8-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	32 days 5 hours	32 days 5 hours			0 days 0 hours
24C-H4A-3MH-270	1	32 days 5 hours	32 days 5 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	32 days 5 hours	32 days 5 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	32 days 5 hours	32 days 5 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.

10.1.19 City of Glendale-Housing Authority-Indoor



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Design Comments

Design-City of Glendale-Housing Authority-Indoor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-16P09-NA	n/a	8.55 TB	26.62 Mbps	185 days 5 hours	Valid

HDSM 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
Camera 1-Front Lobby (DC)	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.4	10	8	Quality 6	4.89 Mbps	X		
Camera 2-Interview Room (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.1	10	7	Quality 6	5.07 Mbps	X		
Camera 3-SE Emergency Exit (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	8.9	10	6	Quality 6	3.86 Mbps	X		
Camera 4-Hall/Safe (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	7	Quality 6	3.86 Mbps	X		
Camera 5-SW Emergency Exit (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	7	Quality 6	3.86 Mbps	X		
Camera 6-Interview Room 2 (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.1	10	7	Quality 6	5.07 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Front Lobby (DC)	8	6	9.4	18.4	45.3	37.6	104.3
Camera 2-Interview Room (DC)	8	6	9	15.7	48.6	35.8	122.3
Camera 3-SE Emergency Exit (DC)	8	6	33.4	20.9	76.4	133.5	91.9
Camera 4-Hall/Safe (DC)	8	6	10.4	24.2	39.3	41.8	79.3
Camera 5-SW Emergency Exit (DC)	8	6	35.2	21.9	76.7	140.9	87.6
Camera 6-Interview Room 2 (DC)	8	6	11	19.2	50.8	44	100

Storage 1

Model: VMA-AS3-16P09-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5A-DC1	1	185 days 5 hours	185 days 5 hours			0 days 0 hours
2.0C-H5SL-D1	1	185 days 5 hours	185 days 5 hours			0 days 0 hours
2.0C-H5SL-D1	1	185 days 5 hours	185 days 5 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	185 days 5 hours	185 days 5 hours			0 days 0 hours
2.0C-H5SL-D1	1	185 days 5 hours	185 days 5 hours			0 days 0 hours
2.0C-H5SL-D1	1	185 days 5 hours	185 days 5 hours			0 days 0 hours



INDEX OF DRAWINGS:

- Set 1: FLOOR PLAN
- Set 2: ELECTRICAL
- Set 3: MECHANICAL
- Set 4: PLUMBING
- Set 5: FINISHES
- Set 6: SCHEDULES
- Set 7: GENERAL NOTES

GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC, AS APPLICABLE.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC, AS APPLICABLE.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC, AS APPLICABLE.

DOOR SCHEDULE:

1. ALL INTERIOR DOORS SHALL BE 1 3/4" MIN. THICK.
2. ALL INTERIOR DOORS SHALL BE 1 3/4" MIN. THICK.
3. ALL INTERIOR DOORS SHALL BE 1 3/4" MIN. THICK.

FINISH SCHEDULE:

1. ALL INTERIOR WALLS SHALL BE P-02.
2. ALL INTERIOR WALLS SHALL BE P-02.
3. ALL INTERIOR WALLS SHALL BE P-02.

PROJECT DATA:

OWNER: GLENDALE HOUSING AUTHORITY
 PROJECT: OFFICE ADDITION FOR GLENDALE HOUSING AUTHORITY
 ADDRESS: 1000 N. GLENDALE AVENUE, GLENDALE, AZ 85301

DESIGNER:
 ARCHITECT: Tegrethoff Associates, Inc.
 PROJECT NO.: 33455
 SHEET NO.: A-1

33455

1 FLOOR PLAN
1/20/18

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.

10.1.20 City of Glendale-Housing Authority-Outdoor



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Design Comments

Design-City of Glendale-Housing Authority-Outdoor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-16P09-NA	n/a	8.55 TB	40.85 Mbps	47 days 15 hours	Valid

HDSM 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
Camera 7-Front Entry (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	7.53 Mbps	X		
Camera 8-SW Corner (DP Cmr)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					21.32 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
Camera 9-Parking (BO)	5.0C-H5SL-BO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	12.00 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 7-Front Entry (DO)	6	6	21.2	36.9	60.6	6561.7	52
Camera 8-SW Corner (DP Cmr)	10						
<input type="checkbox"/> Head 1		9	55.2	101	45.6	552.1	20.3
<input type="checkbox"/> Head 2		9	55.2	101	45.6	552.1	20.3
<input type="checkbox"/> Head 3		9	55.2	101	45.6	552.1	20.3
Camera 9-Parking (BO)	9	6	80.5	128.8	51	241.4	20.1

Storage 1

Model: VMA-AS3-16P09-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	47 days 15 hours	47 days 15 hours			0 days 0 hours
9C-H4A-3MH-270	1	47 days 15 hours	47 days 15 hours			0 days 0 hours
5.0C-H5SL-BO1-IR	1	47 days 15 hours	47 days 15 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.

10.1.21 City of Glendale-Library Foothills-Indoor-Cameras



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Design Comments

Design-City of Glendale-Library Foothills-Indoor-Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4-VAL-12TB-NA	n/a	10.92 TB	55.29 Mbps	103 days 3 hours	Valid

HDSM 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
Camera 7 (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	9.0	10	6	Quality 6	3.86 Mbps	X		
Camera 8 (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	3.86 Mbps	X		
Camera 9	2.0C-H5A-DP1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	8	Quality 6	4.10 Mbps	X		
Camera 10	2.0C-H5A-DP1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	8	Quality 6	4.10 Mbps	X		
Camera 11 (DP)	2.0C-H5SL-D1-IR	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.1	10	8	Quality 6	5.07 Mbps	X		
Camera 12 (DP)	2.0C-H5SL-D1-IR	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.1	10	8	Quality 6	5.07 Mbps	X		
Camera 13	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 14 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 15 (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 16	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	3.86 Mbps	X		
Camera 17	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 18	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	8	Quality 6	5.07 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 7 (DC)	8	6	19.8	12.4	74.1	79.2	154.9
Camera 8 (DC)	8	6	13.4	23.4	52.5	53.6	82
Camera 9	9	6	18.5	36.5	47.6	55.5	52.7
Camera 10	8.5	6	15.8	31.2	47.8	53.7	61.6
Camera 11 (DP)	12	6	32	56	50.5	64.1	34.3
Camera 12 (DP)	12	6	29.7	51.9	49.7	59.4	37
Camera 13	12	6	21.1	49.9	34.3	42.2	38.5
Camera 14 (DC)	12	6	11.2	28.9	22	22.4	66.4
Camera 15 (DC)	12	6	2	14.4	0	4	133.4
Camera 16	8	6	18.2	31.8	54.5	72.8	60.4
Camera 17	12	6	16.1	39.2	29.8	32.3	49
Camera 18	10	6	35.2	61.6	54.3	88.1	31.1

Storage 1

Model: NVR4-VAL-12TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-D1	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5SL-D1	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5A-DP1	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5A-DP1	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5SL-D1-IR	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5SL-D1-IR	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	103 days 3 hours	103 days 3 hours			0 days 0 hours
2.0C-H5SL-D1	1	103 days 3 hours	103 days 3 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.

10.1.22 City of Glendale-Library Foothills-Outdoor Cameras



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Design Comments

Design-City of Glendale-Library Foothills-Outdoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4-VAL-12TB-NA	n/a	10.92 TB	60.69 Mbps	49 days 22 hours	Valid

HDSM 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
Camera 1 (DP)	5.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	6	Quality 6	8.12 Mbps	X		
Camera 2	2.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	30	6	Quality 6	6.39 Mbps	X		
Camera 3 (DP)	2.0C-H5A-DP1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	30	6	Quality 6	6.39 Mbps	X		
Camera 4	8.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	8.0	10	12	Quality 6	12.17 Mbps	X		
Camera 5	8.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	4.9	15	12	Quality 6	13.81 Mbps	X		
Camera 6	8.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	4.9	15	12	Quality 6	13.81 Mbps	X		

Scene Details

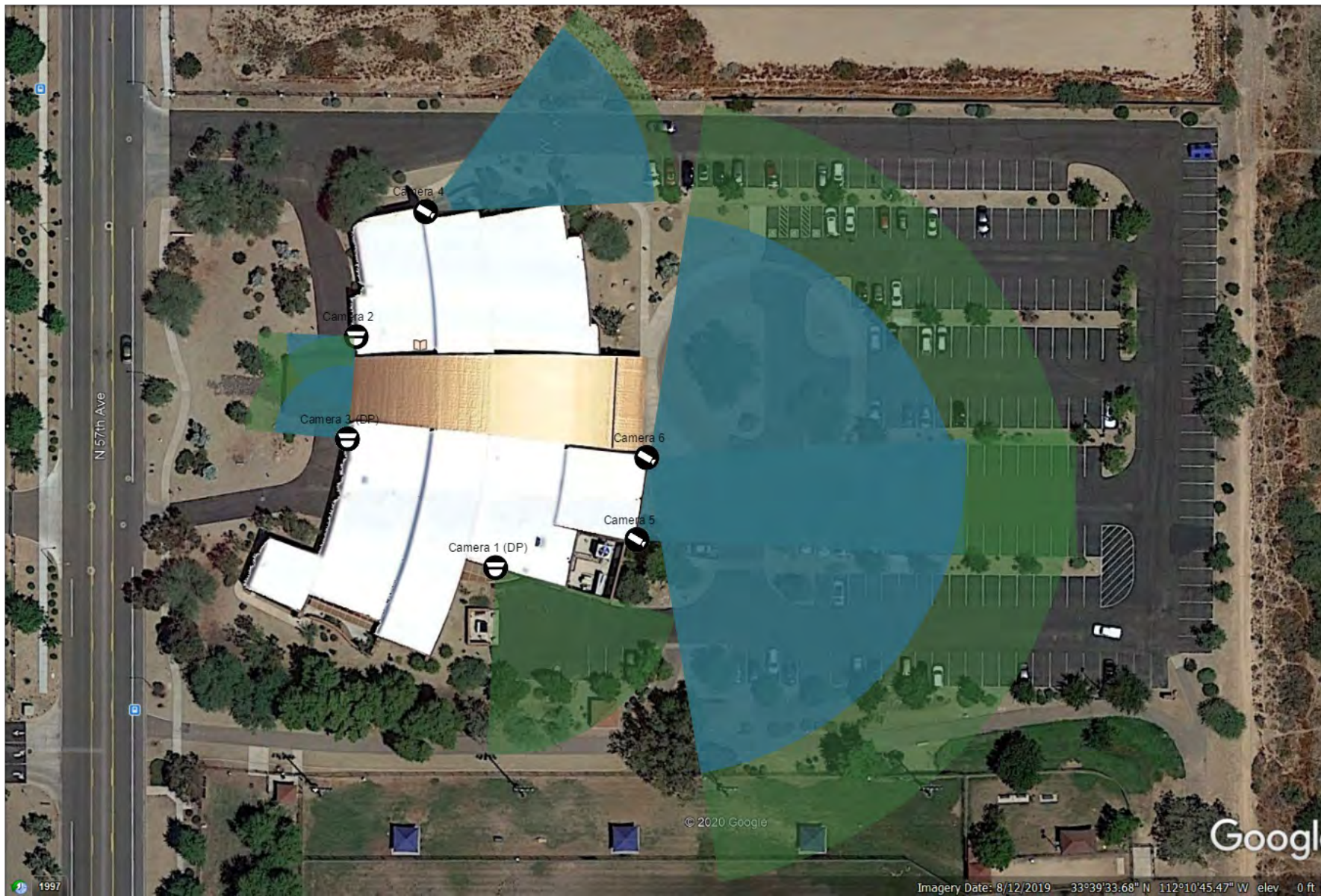
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1 (DP)	12	6	86.2	137.9	49.2	172.3	18.8
Camera 2	12	6	41.5	81.3	48.8	83.1	23.6
Camera 3 (DP)	12	6	43.6	85.4	49.1	87.2	22.5
Camera 4	10	6	135.7	128.7	72.8	339.2	29.8
Camera 5	12	6	194	347.1	58	387.9	11.1
Camera 6	12	6	189.5	339.1	58	379	11.3

Storage 1

Model: NVR4-VAL-12TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
5.0C-H5SL-DO1-IR	1	49 days 22 hours	49 days 22 hours			0 days 0 hours
2.0C-H5A-DP1-IR	1	49 days 22 hours	49 days 22 hours			0 days 0 hours
2.0C-H5A-DP1-IR	1	49 days 22 hours	49 days 22 hours			0 days 0 hours
8.0C-H5A-BO1-IR	1	49 days 22 hours	49 days 22 hours			0 days 0 hours
8.0C-H5A-BO1-IR	1	49 days 22 hours	49 days 22 hours			0 days 0 hours
8.0C-H5A-BO1-IR	1	49 days 22 hours	49 days 22 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.

10.1.23 City of Glendale-Library Heroes Park-Indoor Cameras



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Design Comments

Design-City of Glendale-Library Heroes Park-Indoor Cameras

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4-VAL-24TB-NA	n/a	22.09 TB	120.00 Mbps	90 days 21 hours	Valid

Cameras

NAME	MODEL	NVR	QTY	LENS	FL. (MM)	IPS	DUTY CYCLE	COMPRESSION	BITRATE
Camera 6 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 7 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 8 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 9 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 10 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 11 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 12 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 13 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 14 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 15 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 6 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 7 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 8 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 9 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 10 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 11 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 12 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 13 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 14 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114
Camera 15 (Panasonic WV-S3111L)	15	6	16.5	16.8	46.8	27.5	114

Storage 1

Model: NVR4-VAL-24TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 hours			0 days 0 hours
3rd party camera	1	90 days 21 hours	90 days 21 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.

10.1.24 City of Glendale-Library Heroes Park-Outdoor Cameras



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Design Comments

Design-City of Glendale-Library Heroes Park-Outdoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-24TB-NA	n/a	22.8 TB	125.80 Mbps	44 days 15 hours	Valid

Cameras

NAME	MODEL	NVR	QTY	LENS	FL. (MM)	IPS	DUTY CYCLE	COMPRESSION	BITRATE
Camera 4	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps
Camera 5	3rd party camera	Storage 1	1	N/A		30	9	Quality 6	12.00 Mbps

HDSM 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
Camera 1	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 2	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.9	10	12	Quality 6	6.50 Mbps	X		
Camera 3	8.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	4.9	10	12	Quality 6	12.17 Mbps	X		
Camera 16 (DP) (SW Corner)	15C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					41.11 Mbps			
<input type="checkbox"/> Head 1					4.0	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	15	12	Quality 6		X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1	18						
<input type="checkbox"/> Head 1		15	39.3	79	51.3	235.7	48.6
<input type="checkbox"/> Head 2		15	38.9	78.2	51.3	233.5	49.1
<input type="checkbox"/> Head 3		15	38.9	78.2	51.3	233.4	49.1
Camera 2	20	6	17.3	30.5	28.4	24.7	63
Camera 3	18	6	145.1	260	55.1	217.6	14.8
Camera 4	12	6	14.1	22.2	43	28.3	86.4
Camera 5	12	6	13.9	21.8	42.7	27.8	87.9
Camera 16 (DP) (SW Corner)	18						
<input type="checkbox"/> Head 1		6	41.5	55.1	45.3	62.2	47
<input type="checkbox"/> Head 2		6	41.8	55.4	45.4	62.6	46.8
<input type="checkbox"/> Head 3		6	40.9	54.4	45.1	61.3	47.7

Storage 1

Model: NVR4X-STD-24TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
24C-H4A-3MH-270	1	44 days 15 hours	44 days 15 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	44 days 15 hours	44 days 15 hours			0 days 0 hours
8.0C-H5A-BO1-IR	1	44 days 15 hours	44 days 15 hours			0 days 0 hours
3rd party camera	1	44 days 15 hours	44 days 15 hours			0 days 0 hours
3rd party camera	1	44 days 15 hours	44 days 15 hours			0 days 0 hours
15C-H4A-3MH-180	1	44 days 15 hours	44 days 15 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.

10.1.25 City of Glendale-Library Main-Indoor Cameras



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Design Comments

Design-City of Glendale-Library Main-Indoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-24TB-NA	n/a	22.8 TB	126.74 Mbps	98 days 1 hours	Valid

HDSM 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
Camera 3	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 4	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 5	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 6	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 7	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		
Camera 8	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					18.54 Mbps			
<input type="checkbox"/> Head 1					4.0	12	9	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	9	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	9	Quality 6		X		
Camera 9	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	5.07 Mbps	X		

Camera 10	4.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	10	Quality 6	7.90 Mbps	X		
Camera 11	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.7	10	9	Quality 6	4.89 Mbps	X		
Camera 12	2.0C-H5A-DC2	Storage 1	1	Built-In Lens, 9-22mm, f/1.6, P-Iris, Vari Focal	22.0	10	6	Quality 6	3.58 Mbps	X		
Camera 13	2.0C-H5A-DC2	Storage 1	1	Built-In Lens, 9-22mm, f/1.6, P-Iris, Vari Focal	22.0	10	6	Quality 6	3.58 Mbps	X		
Camera 14	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	6.0	10	9	Quality 6	4.89 Mbps	X		
Camera 15 (DC)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					18.54 Mbps			
<input type="checkbox"/> Head 1					2.8	12	9	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	9	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	9	Quality 6		X		
Camera 16	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 17 (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	4.1	10	6	Quality 6	5.07 Mbps	X		
Camera 18 (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	4.1	10	6	Quality 6	3.86 Mbps	X		
Camera 19	2.0C-H5A-DC2	Storage 1	1	Built-In Lens, 9-22mm, f/1.6, P-Iris, Vari Focal	22.0	10	6	Quality 6	3.58 Mbps	X		
Camera 20	2.0C-H5A-DC2	Storage 1	1	Built-In Lens, 9-22mm, f/1.6, P-Iris, Vari Focal	22.0	10	6	Quality 6	3.58 Mbps	X		

Camera 21 (Elevator 1st Floor)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 22 (Elevator 2nd Floor)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		
Camera 23 (DO) (Library Data Center)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	1	Quality 6	3.86 Mbps	X		
Camera 24 (DO) (Library Data Center)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	1	Quality 6	3.86 Mbps	X		
Camera 25 (DO) (SW Interior Entry 2nd Floor)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	3.86 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 3	8	6	12.9	29.7	41.3	51.5	64.7
Camera 4	8	6	17.2	39.5	43.6	69	48.6
Camera 5	8	6	11	25.5	39.9	44	75.4
Camera 6	8	6	13.1	30.2	41.5	52.4	63.6
Camera 7	8	6	27.8	63.4	46.1	111	30.3
Camera 8	12						
□ Head 1		6	24.7	32.4	47.8	49.4	63.1
□ Head 2		6	27.3	35.6	49	54.6	57.5
□ Head 3		6	21.2	28.1	45.6	42.4	72.9
Camera 9	8	6	22.9	39.9	55.8	91.5	48.2
Camera 10	8	6	36.6	59.9	49.1	146.6	38.4
Camera 11	8	6	16.8	17.1	66.6	67	112.3
Camera 12	8	6	85.2	20.9	84.7	340.6	92
Camera 13	8	6	90.6	22.2	84.8	362.2	86.5
Camera 14	8	6	17.3	16.9	67.6	69.2	113.9
Camera 15 (DC)	10						
□ Head 1		10	26.3	48.1	46.7	6561.7	42.6
□ Head 2		10	21.1	38.7	46.7	6561.7	53
□ Head 3		9	43.2	79	45.4	431.6	25.9
Camera 16	8	6	26.4	60.3	45.8	105.6	31.8
Camera 17 (DC)	8	6	55.9	73.9	66.2	223.6	26

Camera 18 (DC)	8	6	61.2	80.9	66.3	244.8	23.7
Camera 19	8	6	52.3	12.8	83.9	209.3	149.6
Camera 20	8	6	51.3	12.6	83.8	205	152.7
Camera 21 (Elevator 1st Floor)	8	6	8.7	20.3	37.2	34.7	94.7
Camera 22 (Elevator 2nd Floor)	8	6	8.8	20.5	37.4	35.2	93.4
Camera 23 (DO) (Library Data Center)	8	6	7.5	17.6	35.2	29.8	109.3
Camera 24 (DO) (Library Data Center)	8	6	5.1	12.4	28.6	20.2	155.2
Camera 25 (DO) (SW Interior Entry 2nd Floor)	8	6	9.5	22.1	38.3	38.1	86.7

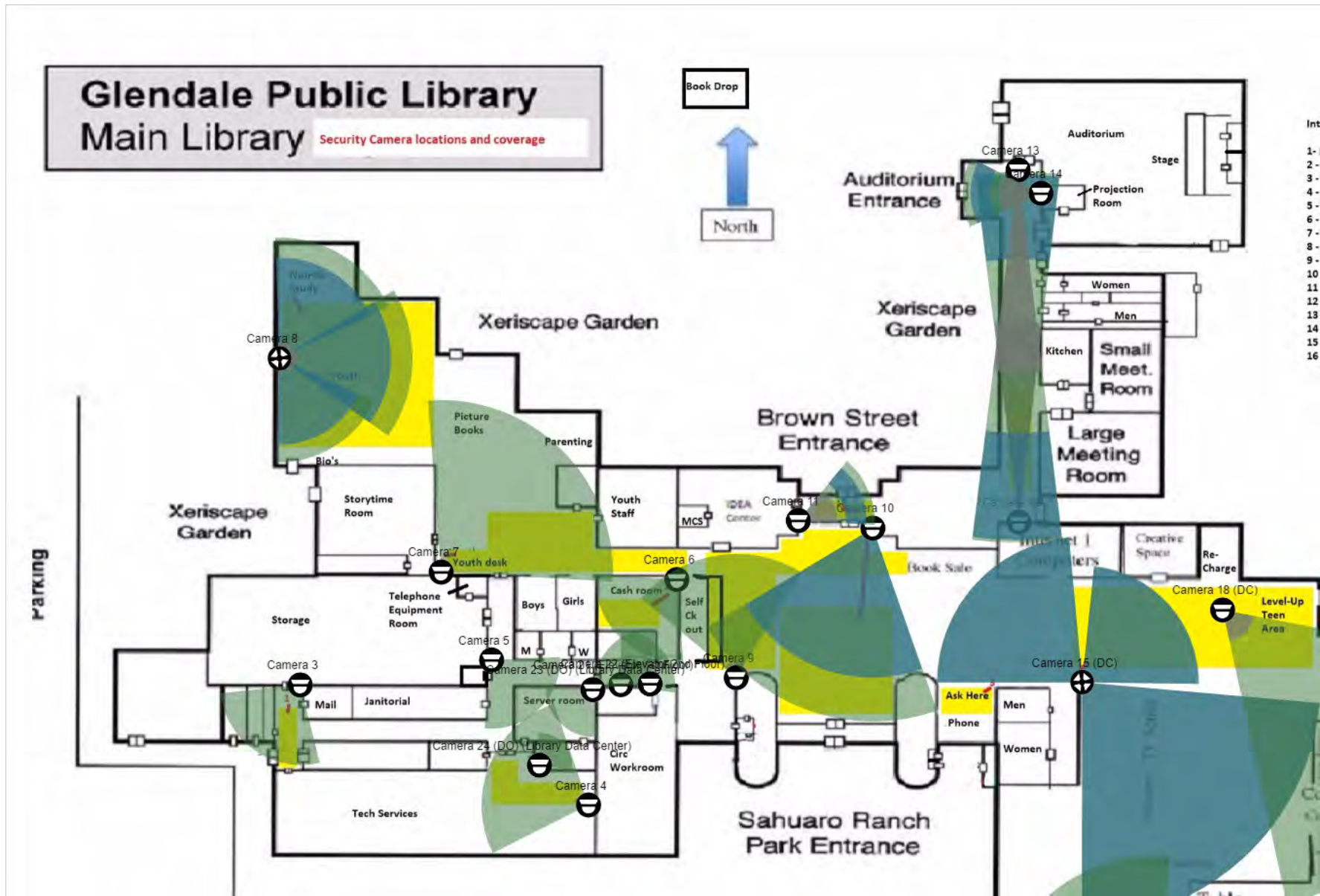
Storage 1

Model: NVR4X-STD-24TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
9C-H4A-3MH-180	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5SL-D1	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
4.0C-H5A-DC1	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5A-DC1	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5A-DC2	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5A-DC2	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5A-DC1	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
9C-H4A-3MH-270	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5SL-D1	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5SL-D1	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5A-DC2	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5A-DC2	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours

2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	98 days 1 hours	98 days 1 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.

10.1.26 City of Glendale-Library Main-Outdoor Cameras



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Design Comments

Design-City of Glendale-Library Main-Outdoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-24TB-NA	n/a	22.8 TB	84.04 Mbps	58 days 14 hours	Valid

HDSM 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
Camera 1	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 2	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		

Scene Details

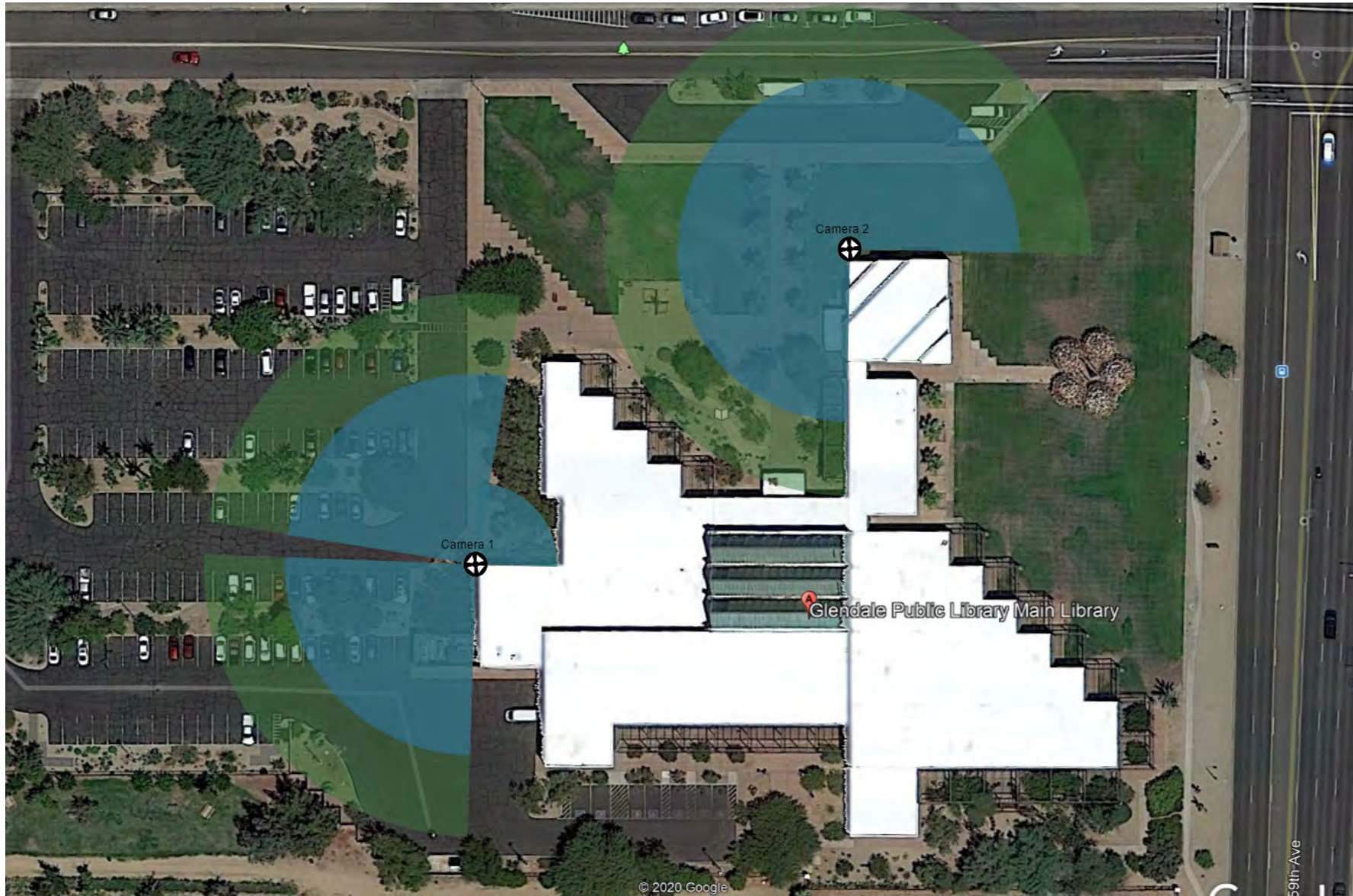
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1	15						
<input type="checkbox"/> Head 1		6	82.3	165.8	49.4	137.1	23.2
<input type="checkbox"/> Head 2		6	81.9	165.2	49.4	136.5	23.3
<input type="checkbox"/> Head 3		11	24.7	50.1	46.5	92.6	76.6
Camera 2	15						
<input type="checkbox"/> Head 1		6	74.4	150.1	48.8	124	25.6
<input type="checkbox"/> Head 2		6	73.8	148.9	48.7	122.9	25.8
<input type="checkbox"/> Head 3		6	73	147.3	48.7	121.6	26.1

Storage 1

Model: NVR4X-STD-24TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
24C-H4A-3MH-270	1	58 days 14 hours	58 days 14 hours			0 days 0 hours
24C-H4A-3MH-270	1	58 days 14 hours	58 days 14 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.

10.1.27 City of Glendale-Media Center-Indoor Cameras



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Design Comments

Design-City of Glendale-Media Center-Indoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4-VAL-16TB-NA	n/a	14.64 TB	21.54 Mbps	437 days 23 hours	Valid

HDSM 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
Camera 4	2.0C-H5A-DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.4	10	8	Quality 6	4.89 Mbps	X		
Camera 5 (DC)	2.0C-H5SL-D1-IR	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.2	10	6	Quality 6	3.86 Mbps	X		
Camera 6	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	6	Quality 6	3.86 Mbps	X		
Camera 7	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	6	Quality 6	3.86 Mbps	X		
Camera 8 (DC) - Third Floor Visitor	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	6	Quality 6	5.07 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 4	12	8	18.5	36.4	45.1	55.6	52.8
Camera 5 (DC)	8	6	5.6	9.8	42.8	22.5	195.3
Camera 6	8	6	10.2	17.8	50	40.6	108
Camera 7	8	6	8.3	14.5	47.9	33.2	132.5
Camera 8 (DC) - Third Floor Visitor	8	6	20.2	46.3	44.5	80.9	41.5

Storage 1

Model: NVR4-VAL-16TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5A-DC1	1	437 days 23 hours	437 days 23 hours			0 days 0 hours
2.0C-H5SL-D1-IR	1	437 days 23 hours	437 days 23 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	437 days 23 hours	437 days 23 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	437 days 23 hours	437 days 23 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	437 days 23 hours	437 days 23 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.

10.1.28 City of Glendale-Media Center-Outdoor Cameras



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Design Comments

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4-VAL-16TB-NA	n/a	14.64 TB	91.35 Mbps	36 days 0 hours	Valid

HDSM 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
Camera 1	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					41.11 Mbps			
↳ Head 1					2.8	15	12	Quality 6		X		
↳ Head 2					2.8	15	12	Quality 6		X		
↳ Head 3					2.8	15	12	Quality 6		X		
Camera 2	24C-H4A-3MH-180	Storage 1	1	Built-In Lens, 5.2mm, f/1.8					42.02 Mbps			
↳ Head 1					5.2	12	12	Quality 6		X		
↳ Head 2					5.2	12	12	Quality 6		X		
↳ Head 3					5.2	12	12	Quality 6		X		
Camera 3 (DP)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	8	Quality 6	8.22 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1	15						
↳ Head 1		15	16.5	30.2	46.7	6561.7	85.9
↳ Head 2		14	69.1	126.4	45.9	1035.9	20.5
↳ Head 3		13	69.7	127.5	45	522.6	20.3
Camera 2	18						
↳ Head 1		0	106.3	140.5	58.9	106.3	27.3
↳ Head 2		0	143.6	188.5	61.4	143.6	20.4
↳ Head 3		0	98.2	130	58.1	98.2	29.5
Camera 3 (DP)	12	6	18.9	33.1	44.4	37.8	58

Storage 1

Model: NVR4-VAL-16TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
15C-H4A-3MH-270	1	36 days 0 hours	36 days 0 hours			0 days 0 hours
24C-H4A-3MH-180	1	36 days 0 hours	36 days 0 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	36 days 0 hours	36 days 0 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.

10.1.29 City of Glendale-Operations



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Design Comments

City of Glendale-Operations Center-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-PRM-96TB-NA	n/a	91.2 TB	720.46 Mbps	29 days 17 hours	Valid

HDSM 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
Camera 1-NE Pole (DP Pole)	32C-H4A-4MH-360	Storage 1	1	Built-In Lens, 4mm, f/1.8					46.19 Mbps			
<input type="checkbox"/> Head 1					4.0	8	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	8	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	8	12	Quality 6		X		
<input type="checkbox"/> Head 4					4.0	8	12	Quality 6		X		
Camera 2-NW Pole (DP Pole)	32C-H4A-4MH-360	Storage 1	1	Built-In Lens, 4mm, f/1.8					46.19 Mbps			
<input type="checkbox"/> Head 1					4.0	8	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	8	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	8	12	Quality 6		X		
<input type="checkbox"/> Head 4					4.0	8	12	Quality 6		X		
Camera 3-Guardshack Exit (BO)	4.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	9.0	20	12	Quality 6	10.83 Mbps	X		
Camera 4-Guardshack Entrance (BO)	4.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	7.1	20	12	Quality 6	10.83 Mbps	X		
Camera 5-SW Bldg G (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		

<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 6-SE Bldg G (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 7-NW Bldg N (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 8-SE Bldg N (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 9-S Entrance (BO)	5.0C-H5A-BO2-IR	Storage 1	1	Built-In Lens, 9-22mm, f/1.6, P-Iris, Vari Focal	9.0	20	12	Quality 6	10.88 Mbps	X		
Camera 10-Fuel PTZ (DP Pole)	8.0C-H5A-PTZ-DP36	Storage 1	1	Built-In Lens, 4.4-88mm, f/2.0-f/3.8	4.4	30	18	Quality 6	20.00 Mbps	X		
Camera 11-SW1 Bldg O (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		

Camera 12-Bldg P SW2 (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 13-SE Bldg S (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 14-Bldg S Front Entry	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	5.07 Mbps	X		
Camera 15-Bldg B Rear Entry (DP Wall)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	5.07 Mbps	X		
Camera 16-Bldg B Front Entry (DP Wall)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	8.4	10	8	Quality 6	5.07 Mbps	X		
Camera 17-Bldg B Rear 1 (DP Wall)	5.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	9.51 Mbps	X		
Camera 18-Bldg B Rear 2 (DP Wall)	5.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	9.51 Mbps	X		
Camera 19-Bldg A Rear Fenceline (BO)	4.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.4	10	4	Quality 6	6.72 Mbps	X		

Camera 20-Bldg A Rear Fenceline 2 (BO)	4.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	5.4	10	4	Quality 6	6.72 Mbps	X		
Camera 21-Bldg B Courtyard (DP Wall)	3.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	6.25 Mbps	X		
Camera 22-Bldg B Front Entry (DP Wall) (1)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	5.07 Mbps	X		
Camera 23-Bldg O Dock1 (DP NPTA)	20C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					43.34 Mbps			
<input type="checkbox"/> Head 1					2.8	13	11	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	13	11	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	13	11	Quality 6		X		
<input type="checkbox"/> Head 4					2.8	13	11	Quality 6		X		
Camera 24-Bldg O Dock2 (DP NPTA)	20C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					43.34 Mbps			
<input type="checkbox"/> Head 1					2.8	13	11	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	13	11	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	13	11	Quality 6		X		
<input type="checkbox"/> Head 4					2.8	13	11	Quality 6		X		
Camera 25-Tiresshop (DP NPTA)	12C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					23.08 Mbps			
<input type="checkbox"/> Head 1					2.8	10	10	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	10	10	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	10	10	Quality 6		X		
<input type="checkbox"/> Head 4					2.8	10	10	Quality 6		X		

Camera 26-Bldg G Maintenance1 (BO)	5.0C-H5SL-BO2-IR	Storage 1	1	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	20.9	10	10	Quality 6	9.56 Mbps	X		
Camera 26-Bldg G Maintenance1 (BO) (1)	5.0C-H5SL-BO2-IR	Storage 1	1	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	20.9	10	10	Quality 6	9.56 Mbps	X		
Camera 27-Bldg G Maintenance 3 (DP NPTA)	20C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					23.33 Mbps			
<input type="checkbox"/> Head 1					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 4					2.8	13	6	Quality 6		X		
Camera 28-Bldg G Entry (D)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.1	10	6	Quality 6	3.86 Mbps	X		
Camera 29-Bldg G Service Checkin (D)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	3.86 Mbps	X		
Camera 30-Bldg G NAPA Room (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	6	Quality 6	3.86 Mbps	X		
Camera 31-Bldg G Maintenance 4 (DP NPTA)	20C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					23.33 Mbps			
<input type="checkbox"/> Head 1					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 4					2.8	13	6	Quality 6		X		

Camera 32-Bldg G Maintenance 5 (DP NPTA)	20C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					23.33 Mbps			
<input type="checkbox"/> Head 1					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	13	6	Quality 6		X		
<input type="checkbox"/> Head 4					2.8	13	6	Quality 6		X		
Camera 33-N Pole PTZ (DP Pole)	2.0C-H4IRPTZ-DP30-WP	Storage 1	1	Built-In Lens, 4.3-129 mm, f/1.6-f/4.7	129.0	30	22	Quality 6	12.00 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-NE Pole (DP Pole)	15						
<input type="checkbox"/> Head 1		6	127	255.2	51.6	211.7	15
<input type="checkbox"/> Head 2		6	127	255.2	51.6	211.7	15
<input type="checkbox"/> Head 3		6	127	255.2	51.6	211.7	15
<input type="checkbox"/> Head 4		6	127	255.2	51.6	211.7	15
Camera 2-NW Pole (DP Pole)	15						
<input type="checkbox"/> Head 1		6	127	255.2	51.6	211.7	15
<input type="checkbox"/> Head 2		6	127	255.2	51.6	211.7	15
<input type="checkbox"/> Head 3		6	127	255.2	51.6	211.7	15
<input type="checkbox"/> Head 4		6	127	255.2	51.6	211.7	15
Camera 3-Guardshack Exit (BO)	7	6	98.4	58.7	76.5	689	39.3
Camera 4-Guardshack Entrance (BO)	7	6	79.4	60.9	72.6	555.8	37.8
Camera 5-SW Bldg G (DP Cmr)	15						
<input type="checkbox"/> Head 1		6	180	361.2	52.8	300	10.6
<input type="checkbox"/> Head 2		6	180	361.2	52.8	300	10.6
<input type="checkbox"/> Head 3		6	180	361.2	52.8	300	10.6
Camera 6-SE Bldg G (DP Cmr)	15						
<input type="checkbox"/> Head 1		6	180	361.2	52.8	300	10.6
<input type="checkbox"/> Head 2		6	180	361.2	52.8	300	10.6
<input type="checkbox"/> Head 3		6	180	361.2	52.8	300	10.6

Camera 7-NW Bldg N (DP Cmr)	15						
□ Head 1		6	180	361.2	52.8	300	10.6
□ Head 2		6	180	361.2	52.8	300	10.6
□ Head 3		6	180	361.2	52.8	300	10.6
Camera 8-SE Bldg N (DP Cmr)	15						
□ Head 1		6	180	361.2	52.8	300	10.6
□ Head 2		6	180	361.2	52.8	300	10.6
□ Head 3		6	180	361.2	52.8	300	10.6
Camera 9-S Entrance (BO)	12	6	197.5	107.2	76.5	394.9	24.2
Camera 10-Fuel PTZ (DP Pole)	8.5	6	123	159.5	67.4	418.1	24.1
Camera 11-SW1 Bldg O (DP Cmr)	15						
□ Head 1		6	177.5	356.1	52.8	295.8	10.8
□ Head 2		6	180	361.2	52.8	300	10.6
□ Head 3		6	180	361.2	52.8	300	10.6
Camera 12-Bldg P SW2 (DP Cmr)	15						
□ Head 1		6	167.9	337.1	52.6	279.9	11.4
□ Head 2		6	165.7	332.5	52.6	276.1	11.5
□ Head 3		6	180	361.2	52.8	300	10.6
Camera 13-SE Bldg S (DP Cmr)	15						
□ Head 1		6	180	361.2	52.8	300	10.6
□ Head 2		6	180	361.2	52.8	300	10.6
□ Head 3		6	180	361.2	52.8	300	10.6
Camera 14-Bldg S Front Entry	8.5	6	33	57.6	56.4	112.2	33.3

Camera 15-Bldg B Rear Entry (DP Wall)	8.5	6	32.3	56.4	56.3	110	34
Camera 16-Bldg B Front Entry (DP Wall)	8.5	6	49.6	30.8	77.1	168.6	62.3
Camera 17-Bldg B Rear 1 (DP Wall)	8.5	6	86	137.6	51.5	292.4	18.8
Camera 18-Bldg B Rear 2 (DP Wall)	8.5	6	80.6	129	51.4	274.1	20.1
Camera 19-Bldg A Rear Fenceline (BO)	8.5	6	75.1	76.6	65.6	255.3	30.1
Camera 20-Bldg A Rear Fenceline 2 (BO)	8.5	6	103.6	105.7	66.1	352.2	21.8
Camera 21-Bldg B Courtyard (DP Wall)	8.5	6	53.5	85.7	50.5	182.1	23.9
Camera 22-Bldg B Front Entry (DP Wall) (1)	8.5	6	31.6	55	56.2	107.3	34.9
Camera 23-Bldg O Dock1 (DP NPTA)	25						
□ Head 1		24	67	122.6	45.8	1675	21.1
□ Head 2		24	67	122.6	45.8	1675	21.1
□ Head 3		24	67	122.6	45.8	1675	21.1
□ Head 4		24	67	122.6	45.8	1675	21.1
Camera 24-Bldg O Dock2 (DP NPTA)	25						
□ Head 1		24	67	122.6	45.8	1675	21.1
□ Head 2		24	67	122.6	45.8	1675	21.1
□ Head 3		24	67	122.6	45.8	1675	21.1
□ Head 4		24	67	122.6	45.8	1675	21.1
Camera 25-Tiresshop (DP NPTA)	18						
□ Head 1		18	32	58.5	46.7	6561.7	35

□ Head 2		18	32	58.5	46.7	6561.7	35
□ Head 3		18	32	58.5	46.7	6561.7	35
□ Head 4		18	32	58.5	46.7	6561.7	35
Camera 26-Bldg G Maintenance1 (BO)	12	6	260.9	63.8	83.4	521.8	40.6
Camera 26-Bldg G Maintenance1 (BO) (1)	12	6	261.1	63.9	83.4	522.3	40.6
Camera 27-Bldg G Maintenance 3 (DP NPTA)	45						
□ Head 1		44	93.9	171.9	46.1	4227.3	15.1
□ Head 2		6	16.5	77.5	0	19	33.5
□ Head 3		44	94.8	173.5	46.1	4266.5	14.9
□ Head 4		6	45.1	109.1	5.9	52.1	23.8
Camera 28-Bldg G Entry (D)	8.5	6	13.1	22.8	50.3	44.4	84.2
Camera 29-Bldg G Service Checkin (D)	8.5	6	16.6	29	52.4	56.4	66.2
Camera 30-Bldg G NAPA Room (DO)	8.5	6	16.6	29	52.4	56.4	66.2
Camera 31-Bldg G Maintenance 4 (DP NPTA)	45						
□ Head 1		44	93.9	171.9	46.1	4227.3	15.1
□ Head 2		6	16.5	77.5	0	19	33.5
□ Head 3		44	94.8	173.5	46.1	4266.5	14.9
□ Head 4		6	45.1	109.1	5.9	52.1	23.8
Camera 32-Bldg G Maintenance 5 (DP NPTA)	45						
□ Head 1		44	93.9	171.9	46.1	4227.3	15.1

<input type="checkbox"/> Head 2		6	16.5	77.5	0	19	33.5
<input type="checkbox"/> Head 3		44	94.8	173.5	46.1	4266.5	14.9
<input type="checkbox"/> Head 4		6	45.1	109.1	5.9	52.1	23.8
Camera 33-N Pole PTZ (DP Pole)	18	6	855.8	34.4	88.5	1283.8	55.9

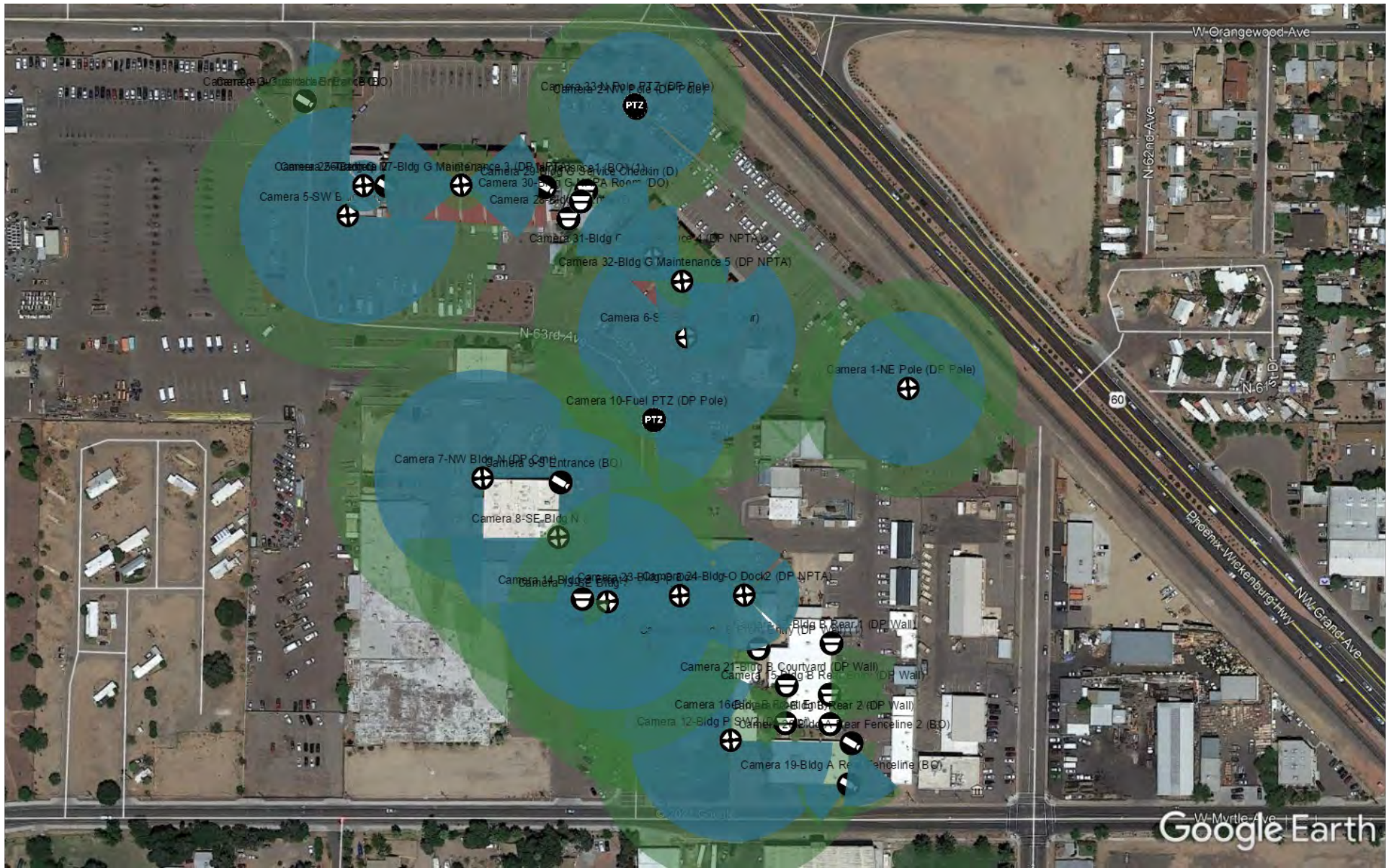
Storage 1

Model: NVR4X-PRM-96TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
32C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
32C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
4.0C-H5A-BO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
4.0C-H5A-BO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
24C-H4A-3MH-270	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
24C-H4A-3MH-270	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
24C-H4A-3MH-270	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
24C-H4A-3MH-270	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
5.0C-H5A-BO2-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
8.0C-H5A-PTZ-DP36	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
24C-H4A-3MH-270	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
24C-H4A-3MH-270	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
24C-H4A-3MH-270	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
5.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
5.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
4.0C-H5A-BO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours

4.0C-H5A-BO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
3.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
20C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
20C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
12C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
20C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H5SL-D1	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H5SL-D1	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
20C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
20C-H4A-4MH-360	1	29 days 17 hours	29 days 17 hours			0 days 0 hours
2.0C-H4IRPTZ-DP30-WP	1	29 days 17 hours	29 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.

10.1.30 City of Glendale-PD Foothills-Indoor Cameras Fire Dept



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Design Comments

Design-City of Glendale-PD Foothills-Indoor Cameras Fire Dept-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-32TB-NA	n/a	30.4 TB	11.58 Mbps	1485 days 22 hours	Valid

HDSM 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
Camera 3-OPTIONAL-FIRE DEPT-Lobby (DC)	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	6.6	10	6	Quality 6	5.07 Mbps	X		
Camera 4-OPTIONAL-FIRE DEPT-Lobby Entrance (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.4	10	6	Quality 6	6.50 Mbps	X		

Scene Details

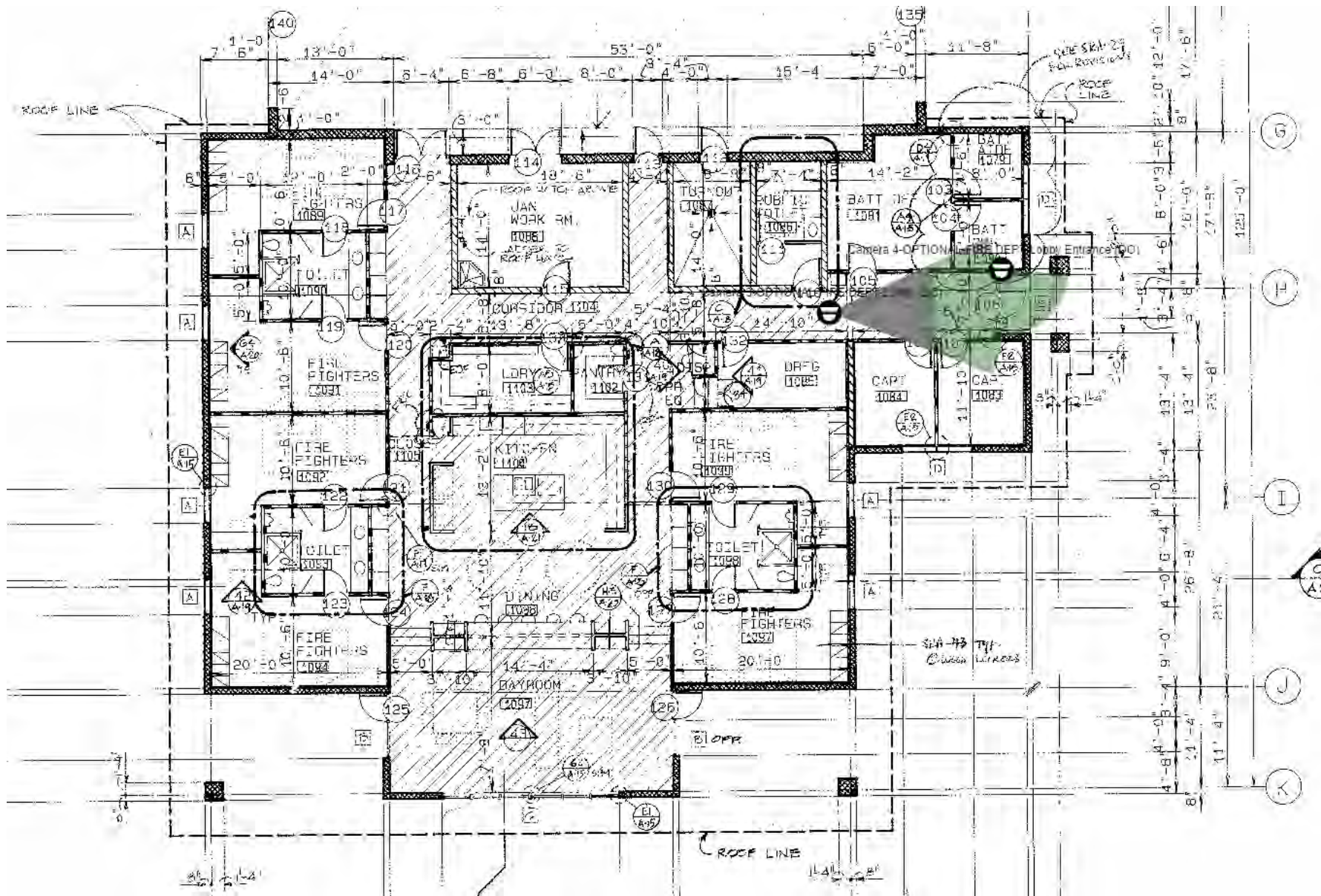
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 3-OPTIONAL-FIRE DEPT-Lobby (DC)	8.5	6	18	15.3	68.4	61.1	125.5
Camera 4-OPTIONAL-FIRE DEPT-Lobby Entrance (DO)	8.5	6	5.7	9.9	39.5	19.3	193.9

Storage 1

Model: NVR4X-STD-32TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-D1	1	1485 days 22 hours	1485 days 22 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	1485 days 22 hours	1485 days 22 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.

10.1.31 City of Glendale-PD Foothills-Indoor Cameras



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Design Comments

Design-City of Glendale-PD Foothills-Indoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-32TB-NA	n/a	30.4 TB	9.91 Mbps	3878 days 17 hours	Valid

HDSM 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
Camera 6- Lobby (DC)	2.0C-H5A- DC1	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	6	Quality 6	4.89 Mbps	X		
Camera 7- Evidence (DC)	2.0C-H5M- DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	5	24	Quality 6	2.53 Mbps	✓	Medium (Default)	1
Camera 8- Storage (DC)	2.0C-H5M- DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	1	Quality 6	2.50 Mbps	✓	Medium (Default)	1

Scene Details

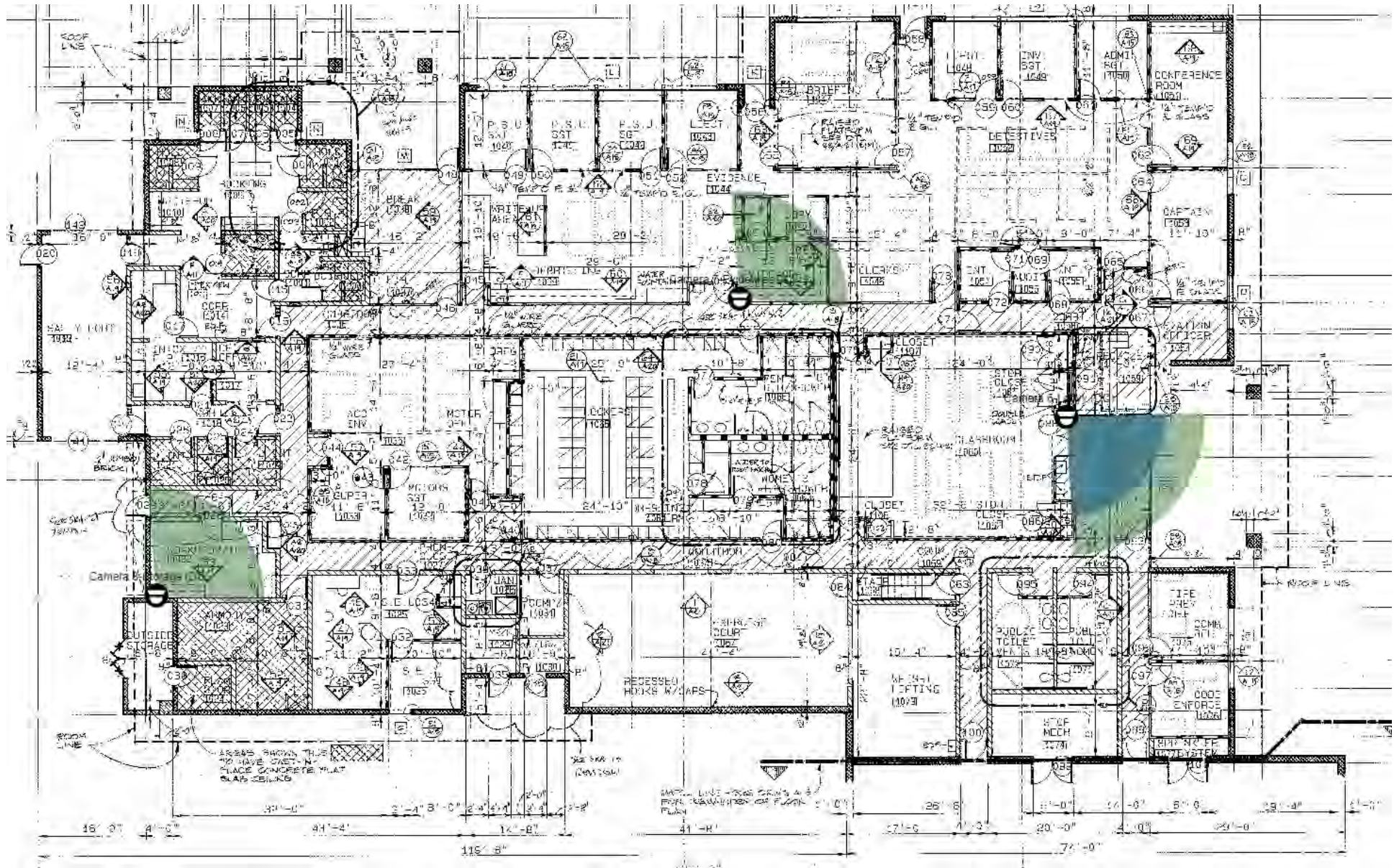
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 6-Lobby (DC)	8.5	6	14.6	28.7	47.5	49.8	67
Camera 7-Evidence (DC)	8.5	6	10.4	24.3	36.6	35.2	79.2
Camera 8-Storage (DC)	8.5	6	10.4	24.3	36.6	35.2	79.2

Storage 1

Model: NVR4X-STD-32TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5A-DC1	1	3878 days 17 hours	3878 days 17 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	90 days 0 hours	90 days 0 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	90 days 0 hours	90 days 0 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.

10.1.32 City of Glendale-PD Foothills-Outdoor Cameras



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Design Comments

Design-City of Glendale-PD Foothills-Outdoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-32TB-NA	n/a	30.4 TB	164.30 Mbps	45 days 11 hours	Valid

HDSM 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
Camera 1-Personal Parking South/Wash (BO)	6.0C-H5A-BO1-IR	Storage 1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	4.9	10	12	Quality 6	9.95 Mbps	X		
Camera 2-SW Parking (DP/Cmr)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					32.82 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
Camera 3-W Parking (DO)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					32.82 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		
Camera 4-SE Parking (DP/Cmr)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					32.82 Mbps			
<input type="checkbox"/> Head 1					2.8	12	10	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	10	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	10	Quality 6		X		
Camera 5-Front Gate (BO/Pole)	5.0C-H5SL-BO2-IR	Storage 1	1	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	21.9	10	10	Quality 6	12.00 Mbps	X		

Camera 9-Visitor Parking (BO)	5.0C-H5SL-BO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	12.00 Mbps	X		
OPTIONAL-FIRE DEPT-Camera 1- SE Parking (DP/Cmr)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					15.95 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
OPTIONAL-FIRE DEPT-Camera 2- SE Parking (DP)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					15.95 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	12	Quality 6		X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Personal Parking South/Wash (BO)	10	6	116.7	154.9	61.8	291.7	19.8
Camera 2-SW Parking (DP/Cmr)	12						
<input type="checkbox"/> Head 1		10	88.6	162	45.4	531.3	12.6
<input type="checkbox"/> Head 2		10	88.9	162.6	45.4	533.2	12.6
<input type="checkbox"/> Head 3		10	88.7	162.3	45.4	532.2	12.6
Camera 3-W Parking (DO)	9						
<input type="checkbox"/> Head 1		6	82.4	105.2	59.3	247.1	19.5
<input type="checkbox"/> Head 2		6	80.7	103	59.3	242	19.9
<input type="checkbox"/> Head 3		6	82.2	104.9	59.3	246.6	19.5
Camera 4-SE Parking (DP/Cmr)	12						
<input type="checkbox"/> Head 1		10	77.9	142.6	45.2	467.5	14.4
<input type="checkbox"/> Head 2		10	81.6	149.4	45.3	489.9	13.7
<input type="checkbox"/> Head 3		12	32.6	59.6	46.7	6561.7	34.4
Camera 5-Front Gate (BO/Pole)	20	6	196.2	46.1	80.9	280.3	56.3
Camera 9-Visitor Parking (BO)	9	6	111.1	177.8	51.6	333.3	14.6
OPTIONAL-FIRE DEPT-Camera 1- SE Parking (DP/Cmr)	12						
<input type="checkbox"/> Head 1		10	99.3	181.6	45.5	595.5	11.3
<input type="checkbox"/> Head 2		10	99.4	181.8	45.5	596.3	11.3
<input type="checkbox"/> Head 3		10	94	172	45.5	563.8	11.9

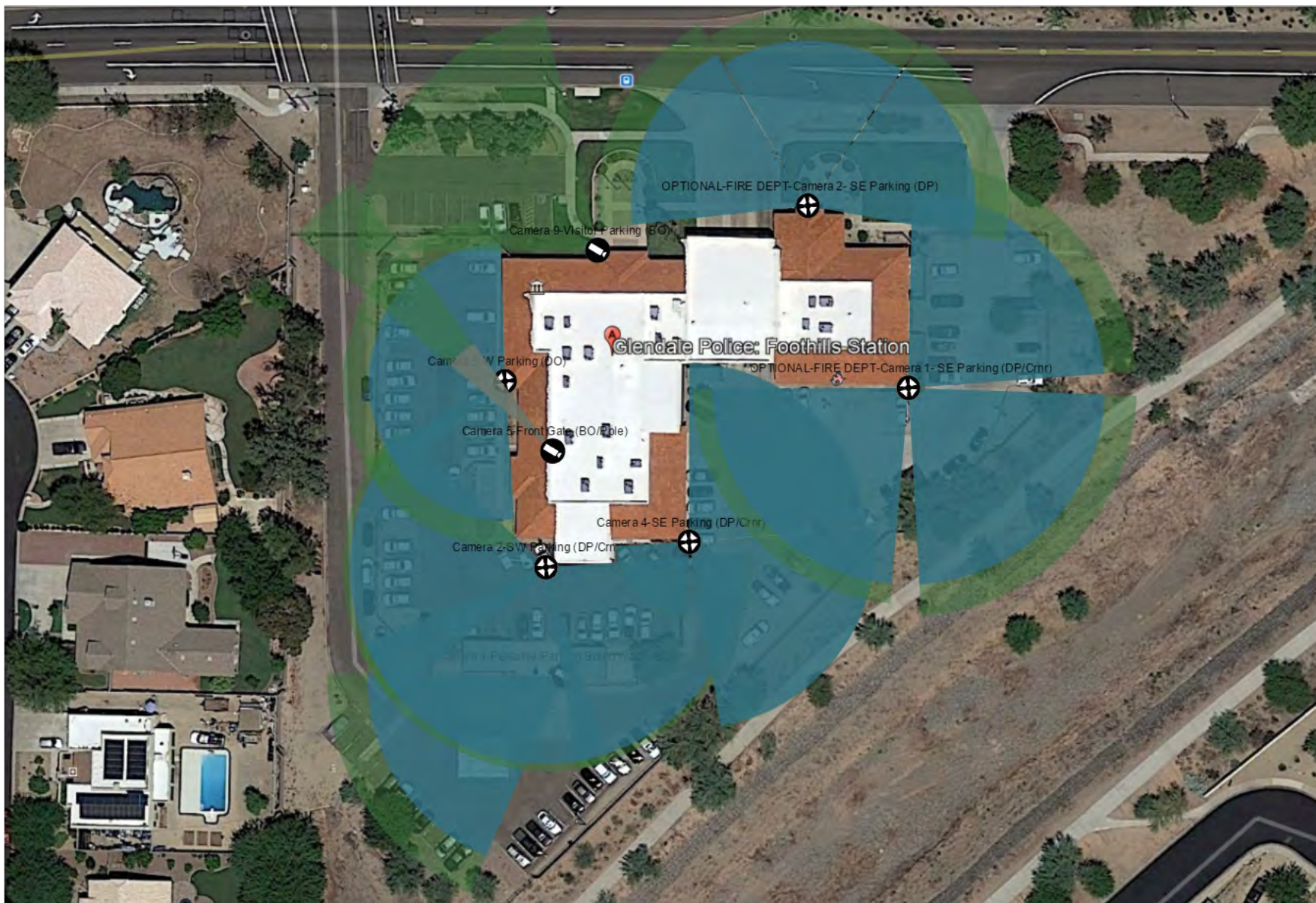
OPTIONAL-FIRE DEPT-Camera 2- SE Parking (DP)	12						
<input type="checkbox"/> Head 1		6	105.2	134.4	58.1	210.4	15.2
<input type="checkbox"/> Head 2		6	97.4	124.5	57.9	194.7	16.5
<input type="checkbox"/> Head 3		6	99.3	126.9	58	198.6	16.1

Storage 1

Model: NVR4X-STD-32TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
6.0C-H5A-BO1-IR	1	45 days 11 hours	45 days 11 hours			0 days 0 hours
9C-H4A-3MH-270	1	45 days 11 hours	45 days 11 hours			0 days 0 hours
9C-H4A-3MH-180	1	45 days 11 hours	45 days 11 hours			0 days 0 hours
9C-H4A-3MH-270	1	45 days 11 hours	45 days 11 hours			0 days 0 hours
5.0C-H5SL-BO2-IR	1	45 days 11 hours	45 days 11 hours			0 days 0 hours
5.0C-H5SL-BO1-IR	1	45 days 11 hours	45 days 11 hours			0 days 0 hours
9C-H4A-3MH-270	1	45 days 11 hours	45 days 11 hours			0 days 0 hours
9C-H4A-3MH-180	1	45 days 11 hours	45 days 11 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.

10.1.33 City of Glendale-PD Main-Indoor Cameras



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Design Comments

Design-City of Glendale-PD Main-Indoor Cameras_02-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Glendale PD Main	NVR4X-STD-48TB-NA	n/a	45.6 TB	76.86 Mbps	86 days 9 hours	Valid

HDSM 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
Camera 7 (DC) (Weapons)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 8 (DC) (Weapons)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 9 (DC) (Weapons)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 10 (D) (Drug Counter)	2.0C-H5SL-D1	Glendale PD Main	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	24	Quality 6	5.07 Mbps	X		
Camera 11 (DC) (Drug Entrance)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 12 (DC) (Drug Room)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 13 (DC) (Drug Room)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 14 (DC) (Drug Room)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		

Camera 15 (DC) (Drug Sort)	2.0C- H5M- DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 18 (DO) (Evidence Exterior Entry)	2.0C- H5SL- DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1- 8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	24	Quality 6	4.21 Mbps	X		
Camera 19 (DC) (Property Lobby)	2.0C- H5M- DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 20 (DC) (Property Window)	2.0C- H5M- DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	5.07 Mbps	X		
Camera 21 (DO) (Loading Dock)	12.0-H4F- DO1-IR	Glendale PD Main	1	Built-In Lens, 1.45mm, Fish Eye	1.45	10	24	Quality 1	11.77 Mbps	X		
Camera 24 (DC) (Office Work Area)	2.0C- H5SL-D1	Glendale PD Main	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	24	Quality 6	5.07 Mbps	X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 7 (DC) (Weapons)	8	6	20.6	47.1	44.6	82.4	40.7
Camera 8 (DC) (Weapons)	8	6	18.9	43.3	44.1	75.6	44.4
Camera 9 (DC) (Weapons)	8	6	20.2	46.3	44.5	81	41.4
Camera 10 (D) (Drug Counter)	8	6	22.8	39.9	55.6	91.3	48.1
Camera 11 (DC) (Drug Entrance)	8	6	6.9	16.4	34.1	27.7	117
Camera 12 (DC) (Drug Room)	8.5	6	6.5	15.8	29	21.9	121.8
Camera 13 (DC) (Drug Room)	8.5	6	7.4	17.8	31.5	25.1	108
Camera 14 (DC) (Drug Room)	8.5	6	6.8	16.5	30	23.1	116.3
Camera 15 (DC) (Drug Sort)	8.5	6	16.8	38.6	41.7	57	49.8
Camera 18 (DO) (Evidence Exterior Entry)	8.5	6	10.8	18.9	48.4	36.8	101.6
Camera 19 (DC) (Property Lobby)	8	6	12.7	29.4	41.2	50.9	65.4
Camera 20 (DC) (Property Window)	8	6	5.2	12.6	29	20.6	152.5
Camera 21 (DO) (Loading Dock)	10	6	18	36	0	45	23
Camera 24 (DC) (Office Work Area)	8.5	6	28.1	49.2	55.6	95.7	39

Glendale PD Main

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	86 days 9 hours	86 days 9 hours			0 days 0 hours
2.0C-H5SL-D1	1	86 days 9 hours	86 days 9 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.

10.1.34 City of Glendale-PD Main-Indoor Cameras



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Design Comments

Design-City of Glendale-PD Main-Indoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Glendale PD Main	NVR4X-STD-48TB-NA	n/a	45.6 TB	28.04 Mbps	829 days 18 hours	Valid

HDSM 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
Camera 1 (DP) (Front Entrance Exterior)	2.0C-H5SL-DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.7	10	8	Quality 6	3.21 Mbps	X		
Camera 2 (DC) (Main Lobby)	2.0C-H5A-DC1	Glendale PD Main	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.8	10	8	Quality 6	4.89 Mbps	X		
Camera 3 (DC) (West Entry Interior)	2.0C-H5SL-D1	Glendale PD Main	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	8	Quality 6	5.07 Mbps	X		
Camera 4 (DP) (West Entry Exterior)	2.0C-H5SL-DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.4	10	6	Quality 6	4.73 Mbps	X		
Camera 5 (DC) (Records Request)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		
Camera 6 (DC) (Technology)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	5.07 Mbps	X		

Scene Details

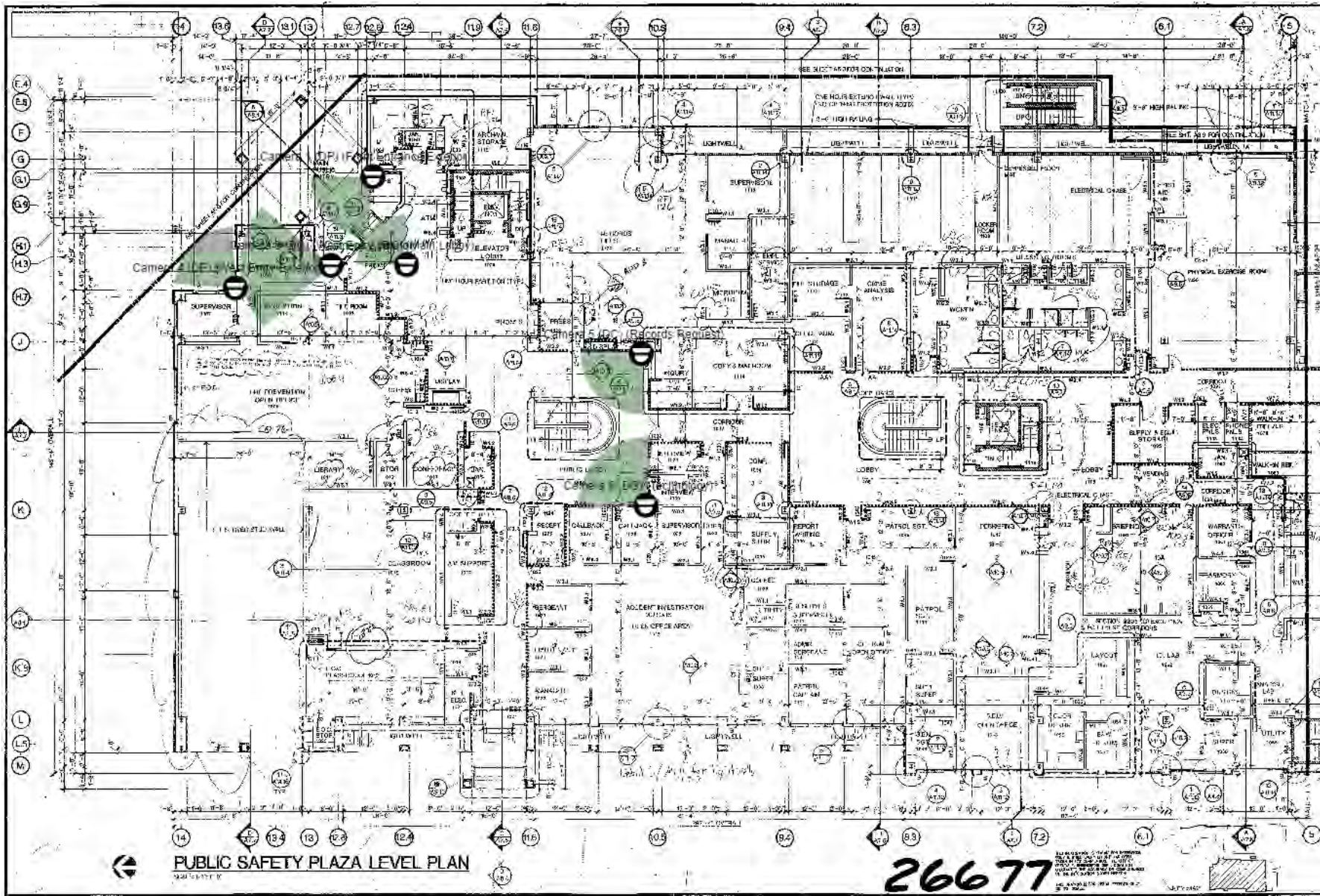
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1 (DP) (Front Entrance Exterior)	12	6	8.3	15.2	29.7	16.7	126.6
Camera 2 (DC) (Main Lobby)	10	6	6.5	12.8	30.1	16.2	150.5
Camera 3 (DC) (West Entry Interior)	8	6	12.4	21.8	51.6	49.6	88
Camera 4 (DP) (West Entry Exterior)	10	6	8.3	14.8	37.4	20.8	129.5
Camera 5 (DC) (Records Request)	8	6	7.1	16.8	34.5	28.4	114.2
Camera 6 (DC) (Technology)	8	6	8	18.8	36.1	32	102.4

Glendale PD Main

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	829 days 18 hours	829 days 18 hours			0 days 0 hours
2.0C-H5A-DC1	1	829 days 18 hours	829 days 18 hours			0 days 0 hours
2.0C-H5SL-D1	1	829 days 18 hours	829 days 18 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	829 days 18 hours	829 days 18 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	829 days 18 hours	829 days 18 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	829 days 18 hours	829 days 18 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.

10.1.35 City of Glendale-PD Main-Officer Parking



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Design Comments

Design-City of Glendale-PD Main-Officer Parking-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Glendale PD Main	NVR4X-STD-48TB-NA	n/a	45.6 TB	30.17 Mbps	575 days 14 hours	Valid

HDSM 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
Camera 32 (DO) (Utility Storage Gate)	2.0C-H5SL-DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	5.6	10	2	Quality 6	3.86 Mbps	X		
Camera 33 (DC) (Rear Detention Access)	2.0C-H5M-DO1-IR	Glendale PD Main	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	3	Quality 6	3.86 Mbps	X		
Camera 34 (BO) (Officer Parking Entry)	5.0C-H5SL-BO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	8	Quality 6	12.00 Mbps	X		
Camera 35 (BO) (Officer Parking Entry)	5.0C-H5SL-BO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	8	Quality 6	10.45 Mbps	X		

Scene Details

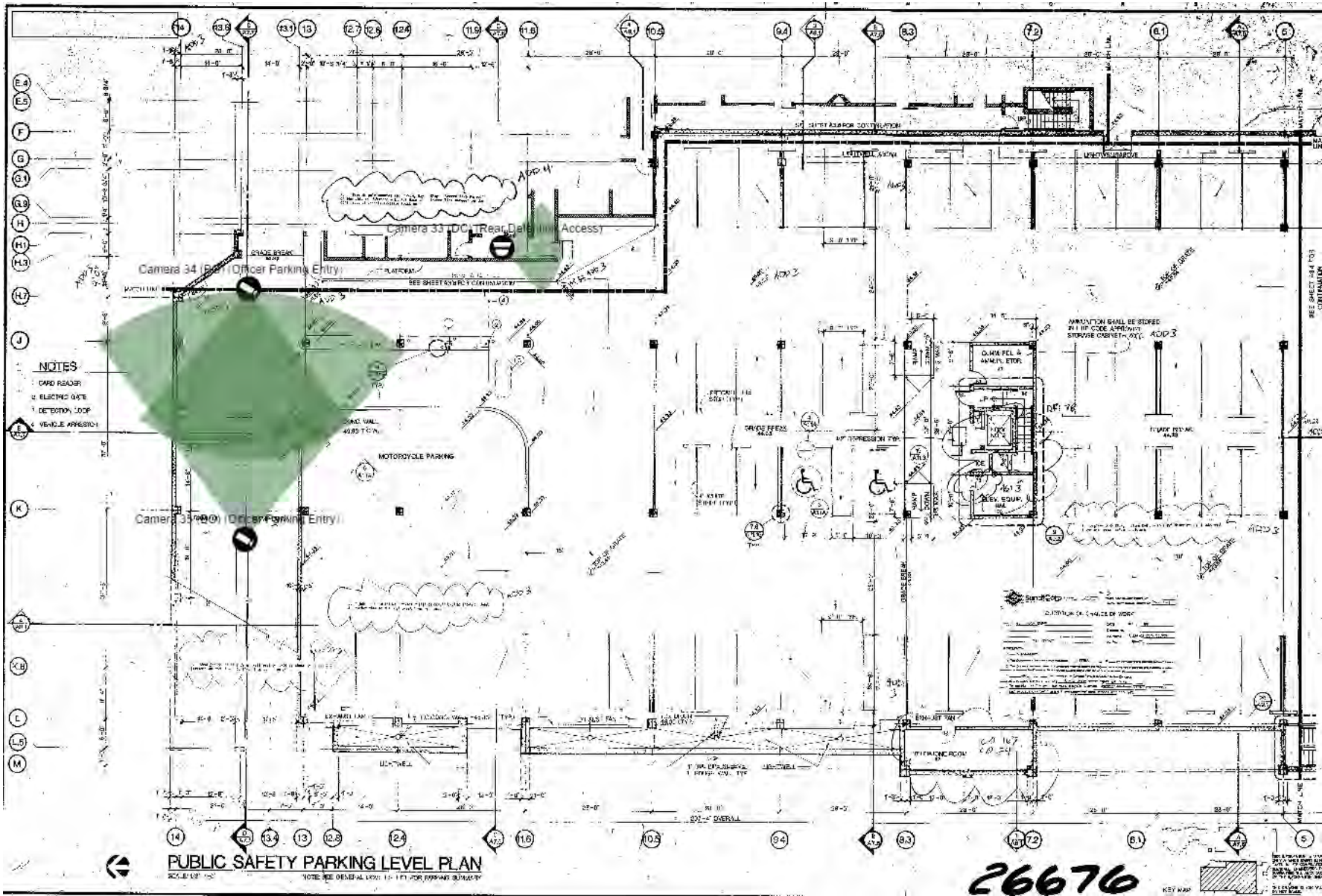
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 32 (DO) (Utility Storage Gate)	12	6	16.5	16.8	54.4	33	114
Camera 33 (DC) (Rear Detention Access)	8	6	8.6	20.1	37.1	34.3	95.7
Camera 34 (BO) (Officer Parking Entry)	14	6	28.9	46.3	39.2	50.6	56
Camera 35 (BO) (Officer Parking Entry)	14	6	42.2	67.6	43.1	73.9	38.4

Glendale PD Main

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	575 days 14 hours	575 days 14 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	575 days 14 hours	575 days 14 hours			0 days 0 hours
5.0C-H5SL-BO1-IR	1	575 days 14 hours	575 days 14 hours			0 days 0 hours
5.0C-H5SL-BO1-IR	1	575 days 14 hours	575 days 14 hours			0 days 0 hours



26676

Reference Image



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10.1.36 City of Glendale-PD Main-Outdoor Cameras



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Design Comments

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Glendale PD Main	NVR4X-STD-48TB-NA	n/a	45.6 TB	104.99 Mbps	69 days 1 hours	Valid

HDSM 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
Camera 23 (DP) (Back Dock)	9C-H4A-3MH-180	Glendale PD Main	1	Built-In Lens, 4mm, f/1.6					21.32 Mbps			
↳ Head 1					4.0	12	24	Quality 6		X		
↳ Head 2					4.0	12	24	Quality 6		X		
↳ Head 3					4.0	12	24	Quality 6		X		
Camera 22 (BO) (Loading Dock Blind Spot)	2.0C-H5SL-BO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	24	Quality 6	3.86 Mbps	X		
Camera 16 (DP) (Bike Storage)	9C-H4A-3MH-180	Glendale PD Main	1	Built-In Lens, 4mm, f/1.6					32.82 Mbps			
↳ Head 1					4.0	12	24	Quality 6		X		
↳ Head 2					4.0	12	24	Quality 6		X		
↳ Head 3					4.0	12	24	Quality 6		X		
Camera 17 (DO) (Bike Storage Rear Entry)	2.0C-H5SL-BO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	24	Quality 6	4.73 Mbps	X		
Camera 25 (DP) (Restricted Parking Entry)	9C-H4A-3MH-180	Glendale PD Main	1	Built-In Lens, 4mm, f/1.6					32.82 Mbps			

↳ Head 1					4.0	12	12	Quality 6		X		
↳ Head 2					4.0	12	12	Quality 6		X		
↳ Head 3					4.0	12	12	Quality 6		X		
Camera 26 (BO) (SWAT Utility)	2.0C- H5SL- BO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.4	10	3	Quality 6	4.73 Mbps	X		
Camera 27 (DO) (N Parking Stairwell)	2.0C- H5SL- DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	6	Quality 6	4.73 Mbps	X		

Scene Details

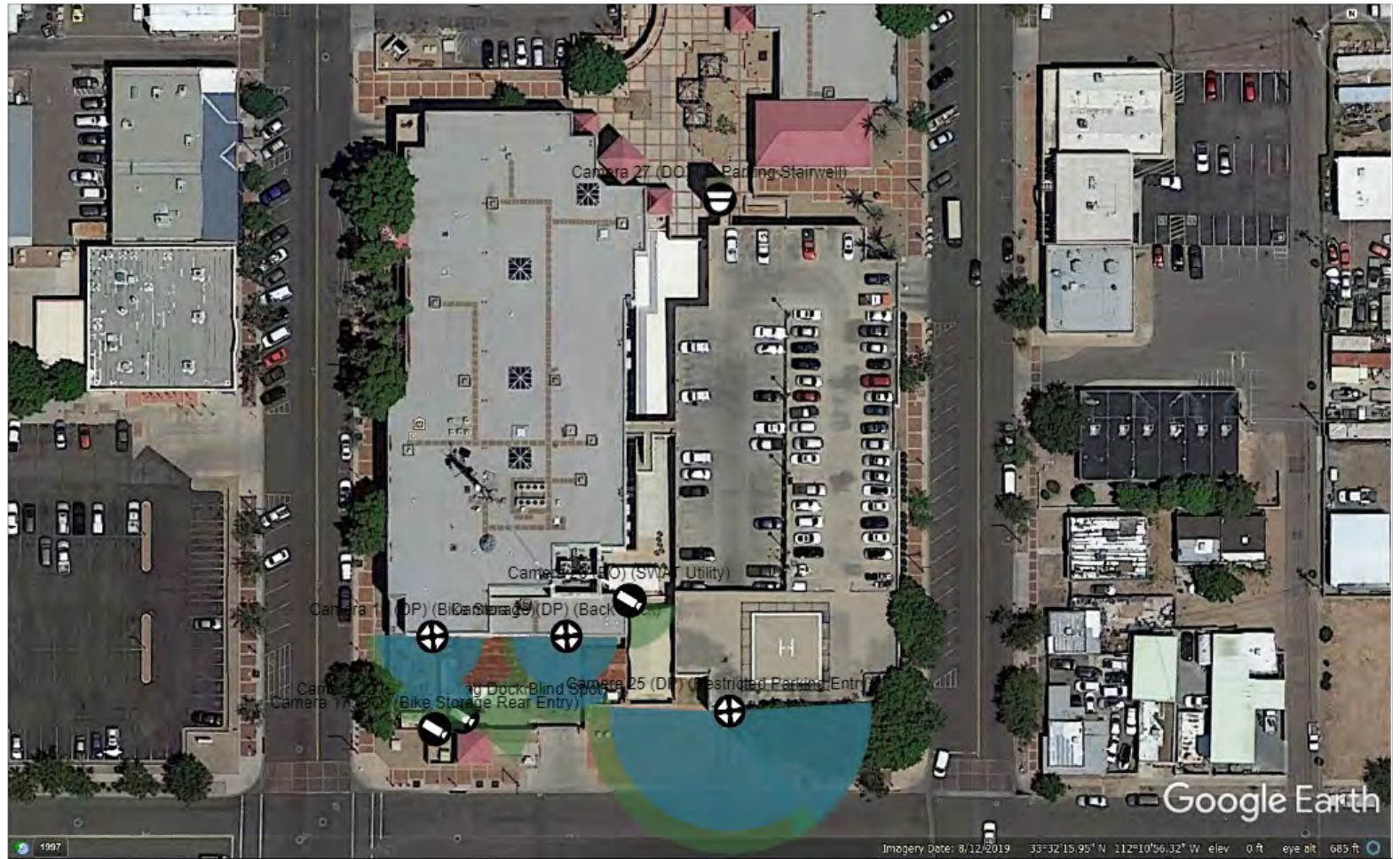
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 23 (DP) (Back Dock)	15						
↳ Head 1		11	24.2	31.3	52	90.9	65.3
↳ Head 2		6	40.7	53.2	49	67.9	38.5
↳ Head 3		6	30.8	40.9	45.1	51.3	50
Camera 22 (BO) (Loading Dock Blind Spot)	7	6	29.2	51.6	58.3	204.5	37.2
Camera 16 (DP) (Bike Storage)	15						
↳ Head 1		11	24.2	31.3	52	90.9	65.3
↳ Head 2		6	40.7	53.2	49	67.9	38.5
↳ Head 3		6	31.3	41.6	45.4	52.2	49.2
Camera 17 (DO) (Bike Storage Rear Entry)	8.5	6	12.3	21.7	49.4	41.8	88.4
Camera 25 (DP) (Restricted Parking Entry)	15						
↳ Head 1		11	67	85.6	58	251.2	23.9
↳ Head 2		6	67.1	86.4	53.8	111.9	23.7
↳ Head 3		6	67.7	87.2	53.8	112.9	23.5
Camera 26 (BO) (SWAT Utility)	15	6	20.3	35.7	39.3	33.9	53.8
Camera 27 (DO) (N Parking Stairwell)	9	6	10	17.7	44.8	30	108.5

Glendale PD Main

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
9C-H4A-3MH-180	1	69 days 1 hours	69 days 1 hours			0 days 0 hours
2.0C-H5SL-BO1-IR	1	69 days 1 hours	69 days 1 hours			0 days 0 hours
9C-H4A-3MH-180	1	69 days 1 hours	69 days 1 hours			0 days 0 hours
2.0C-H5SL-BO1-IR	1	69 days 1 hours	69 days 1 hours			0 days 0 hours
9C-H4A-3MH-180	1	69 days 1 hours	69 days 1 hours			0 days 0 hours
2.0C-H5SL-BO1-IR	1	69 days 1 hours	69 days 1 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	69 days 1 hours	69 days 1 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.

10.1.37 City of Glendale-PD Main-Sally Port



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Design Comments

Design-City of Glendale-PD Main-Sally Port-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Glendale PD Main	NVR4X-STD-48TB-NA	n/a	45.6 TB	21.49 Mbps	1251 days 16 hours	Valid

HDSM 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
Camera 28 (DO) (Bond Out Entry)	2.0C-H5SL-DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	6	Quality 6	4.73 Mbps	X		
Camera 29 (DO) (Jail Detention Parking)	3.0C-H5SL-DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	6	Quality 6	7.63 Mbps	X		
Camera 30 (DO Surface) (Jail Detention Parking)	3.0C-H5SL-DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.2	10	6	Quality 6	4.57 Mbps	X		
Camera 31 (DO Surface) (Jail Detention Parking)	3.0C-H5SL-DO1-IR	Glendale PD Main	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	6	Quality 6	4.57 Mbps	X		

Scene Details

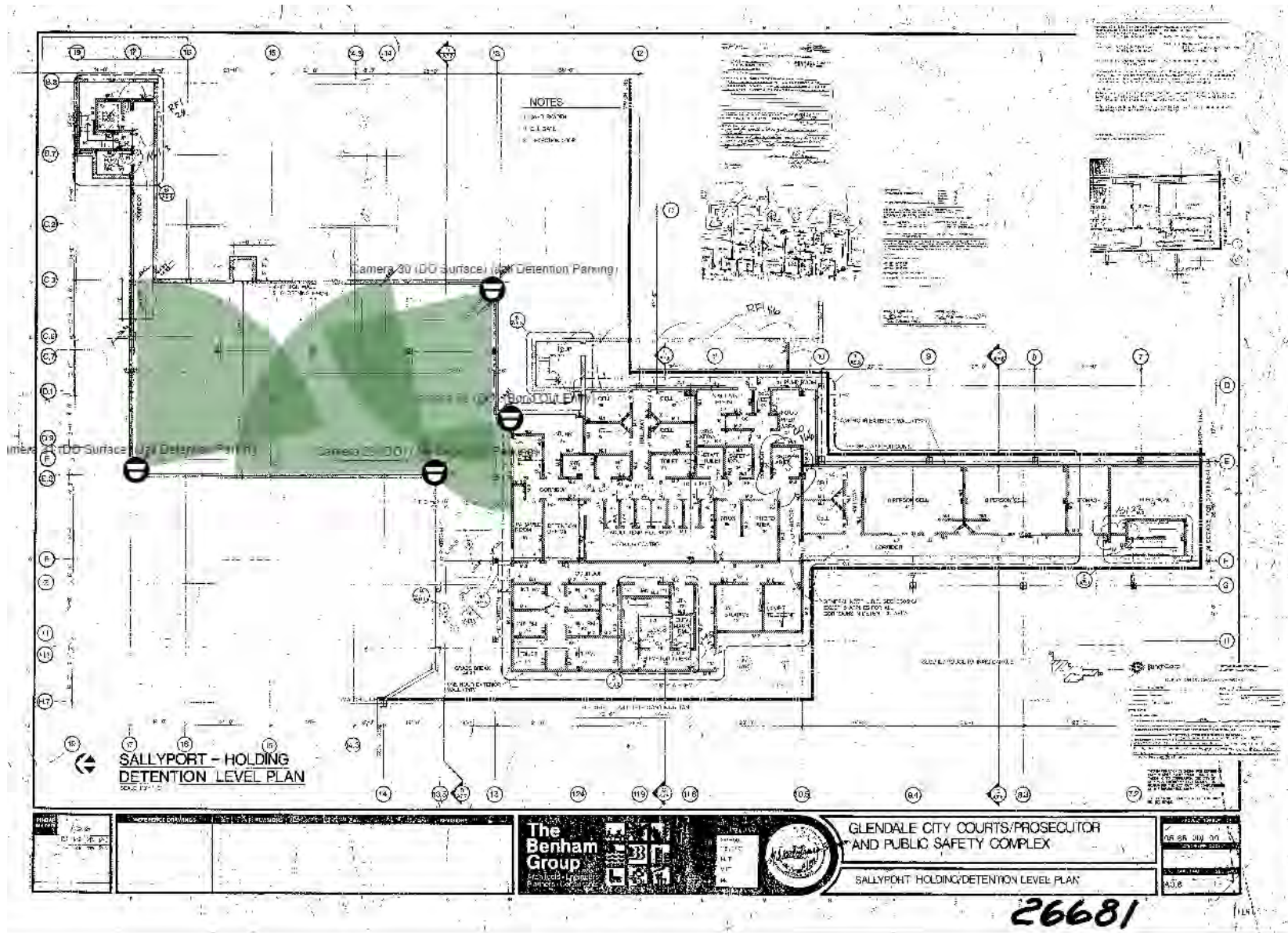
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 28 (DO) (Bond Out Entry)	10	6	17.8	31.1	48.7	44.5	61.8
Camera 29 (DO) (Jail Detention Parking)	12	6	39.5	63.2	45	79	32.4
Camera 30 (DO Surface) (Jail Detention Parking)	12	6	34.2	54.8	43.8	68.4	37.4
Camera 31 (DO Surface) (Jail Detention Parking)	12	6	37.7	60.4	44.6	75.4	33.9

Glendale PD Main

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	1251 days 16 hours	1251 days 16 hours			0 days 0 hours
3.0C-H5SL-DO1-IR	1	1251 days 16 hours	1251 days 16 hours			0 days 0 hours
3.0C-H5SL-DO1-IR	1	1251 days 16 hours	1251 days 16 hours			0 days 0 hours
3.0C-H5SL-DO1-IR	1	1251 days 16 hours	1251 days 16 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.

10.1.38 City of Glendale-Police Department-Gateway-Indoor



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Design Comments

Design-City of Glendale-Police Department-Gateway-Indoor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	165.29 Mbps	63 days 20 hours	Valid

HDSM 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
Camera 10 (D) (Lobby/Hallway)	2.0C- H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	6	Quality 6	5.07 Mbps	X		
Camera 11 (DC)	2.0C-H5M- DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	24	Quality 6	6.50 Mbps	X		
Cameras 12-15 (Future Parking Lot)	20C-H4A- 4MH-360	Storage 1	4	Built-In Lens, 2.8mm, f/1.2					38.43 Mbps			
<input type="checkbox"/> Head 1					2.8	7	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	7	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	7	12	Quality 6		X		
<input type="checkbox"/> Head 4					2.8	7	12	Quality 6		X		

Scene Details

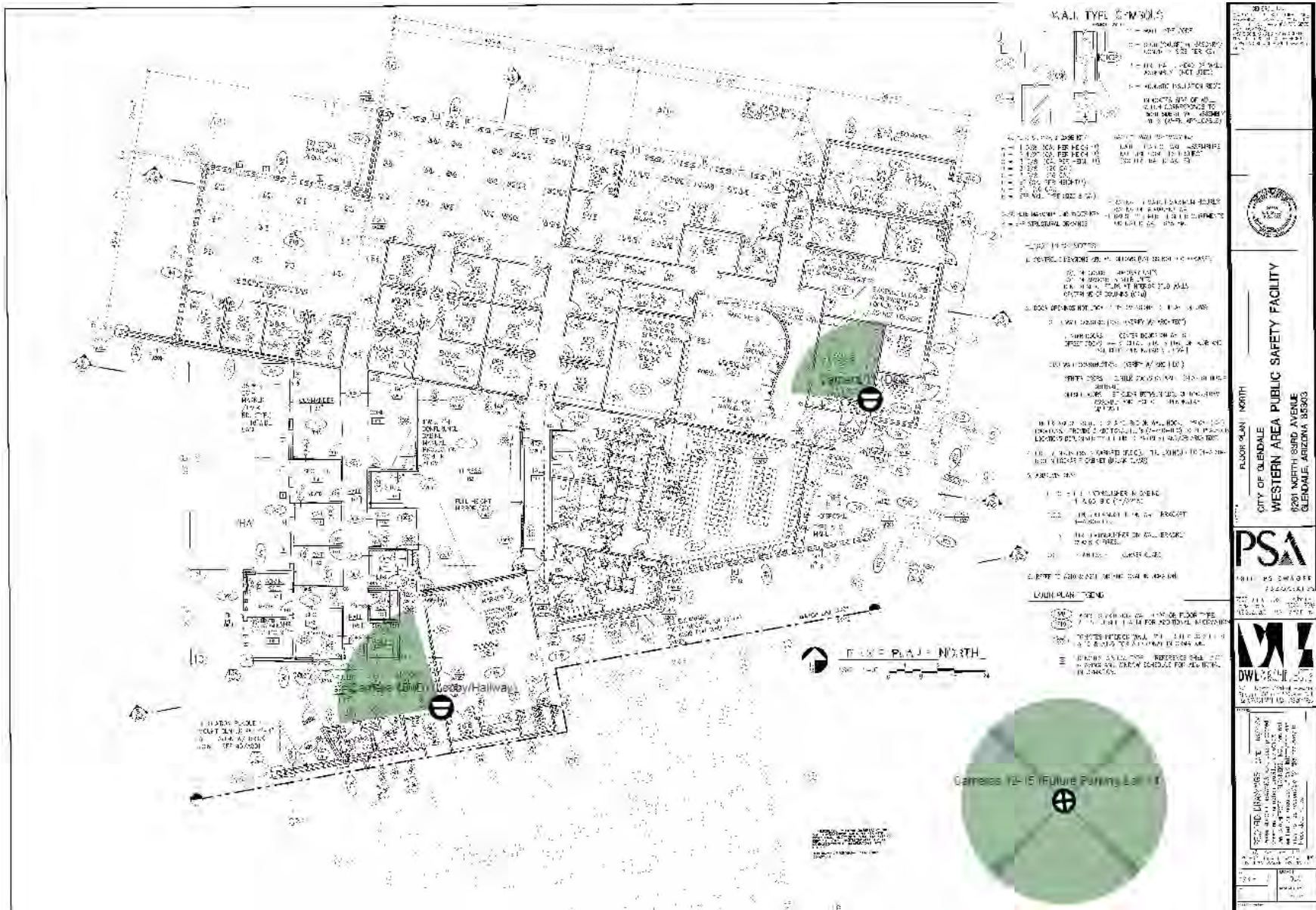
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 10 (D) (Lobby/Hallway)	9	6	18.8	33	51.7	56.3	58.1
Camera 11 (DC)	8.5	6	12.5	29.1	38.9	42.6	66
Cameras 12-15 (Future Parking Lot)	18						
<input type="checkbox"/> Head 1		6	16.5	37.3	10.7	24.7	69.4
<input type="checkbox"/> Head 2		6	16.5	37.3	10.7	24.7	69.4
<input type="checkbox"/> Head 3		6	16.5	37.3	10.7	24.7	69.4
<input type="checkbox"/> Head 4		6	16.5	37.3	10.7	24.8	69.4

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-D1	1	63 days 20 hours	63 days 20 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	63 days 20 hours	63 days 20 hours			0 days 0 hours
20C-H4A-4MH-360	4	63 days 20 hours	63 days 20 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.

10.1.39 City of Glendale-Police Department-Gateway-Outdoor



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Design Comments

Design-City of Glendale-Police Department-Gateway-Outdoor-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Gateway PD NVR	NVR4X-STD-48TB-NA	n/a	45.6 TB	212.89 Mbps	49 days 20 hours	Valid

HDSM 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
Camera 1 (DP) (West Corner Entry)	9C-H4A-3MH-270	Gateway PD NVR	1	Built-In Lens, 2.8mm, f/1.2					32.82 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
Camera 2 (DP) (Exterior Entry)	2.0C-H5A-DP1-IR	Gateway PD NVR	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	8	Quality 6	4.89 Mbps	X		
Camera 3 (DP) (Engine Front Exterior)	9C-H4A-3MH-270	Gateway PD NVR	1	Built-In Lens, 2.8mm, f/1.2					32.82 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
Camera 4 (BO) (South Entry Gate)	3.0C-H5SL-BO2-IR	Gateway PD NVR	1	Built-In Lens, 9.5-31mm, f/1.4, P-Iris, Vari Focal	20.5	10	12	Quality 6	9.64 Mbps	X		
Camera 5 (DP) (NW Corner)	24C-H4A-3MH-270	Gateway PD NVR	1	Built-In Lens, 4mm, f/1.8					42.02 Mbps			
<input type="checkbox"/> Head 1					4.0	12	16	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	12	16	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	12	16	Quality 6		X		

Camera 6 (DP) (Fire Parking)	9C-H4A-3MH-270	Gateway PD NVR	1	Built-In Lens, 2.8mm, f/1.2						32.82 Mbps			
<input type="checkbox"/> Head 1					2.8	12	10	Quality 6			X		
<input type="checkbox"/> Head 2					2.8	12	10	Quality 6			X		
<input type="checkbox"/> Head 3					2.8	12	10	Quality 6			X		
Camera 7 (DP) (Fire Parking)	3.0C-H5SL-DO1-IR	Gateway PD NVR	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	8	Quality 6	9.64 Mbps		X		
Camera 8 (DP) (Engine Rear Exterior Entry)	9C-H4A-3MH-180	Gateway PD NVR	1	Built-In Lens, 4mm, f/1.6						22.20 Mbps			
<input type="checkbox"/> Head 1					4.0	24	8	Quality 6			X		
<input type="checkbox"/> Head 2					4.0	24	8	Quality 6			X		
<input type="checkbox"/> Head 3					4.0	24	8	Quality 6			X		
Camera 9 (DP) (SE Corner)	15C-H4A-3MH-180	Gateway PD NVR	1	Built-In Lens, 4mm, f/1.6						26.06 Mbps			
<input type="checkbox"/> Head 1					4.0	15	12	Quality 6			X		
<input type="checkbox"/> Head 2					4.0	15	12	Quality 6			X		
<input type="checkbox"/> Head 3					4.0	15	12	Quality 6			X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1 (DP) (West Corner Entry)	12						
<input type="checkbox"/> Head 1		11	52.2	95.5	45.6	626.1	21.5
<input type="checkbox"/> Head 2		11	51.3	93.9	45.6	615.8	21.8
<input type="checkbox"/> Head 3		12	18.9	34.5	46.7	6561.7	59.3
Camera 2 (DP) (Exterior Entry)	8.5	6	15.5	30.5	47.9	52.8	63
Camera 3 (DP) (Engine Front Exterior)	12						
<input type="checkbox"/> Head 1		11	51.2	93.8	45.6	614.9	21.8
<input type="checkbox"/> Head 2		11	50.9	93.2	45.6	611	22
<input type="checkbox"/> Head 3		12	28.6	52.3	46.7	6561.7	39.1
Camera 4 (BO) (South Entry Gate)	8.5	6	267.2	66.6	84.1	908.4	30.7
Camera 5 (DP) (NW Corner)	10						
<input type="checkbox"/> Head 1		11	97.8	196	56.3	6561.7	19.6
<input type="checkbox"/> Head 2		11	96.7	193.7	56.3	6561.7	19.8
<input type="checkbox"/> Head 3		11	95.2	190.8	56.3	6561.7	20.1
Camera 6 (DP) (Fire Parking)	12						
<input type="checkbox"/> Head 1		11	51.2	93.8	45.6	614.9	21.8
<input type="checkbox"/> Head 2		11	50.9	93.2	45.6	611	22
<input type="checkbox"/> Head 3		12	48.8	89.3	46.7	6561.7	22.9
Camera 7 (DP) (Fire Parking)	12	6	73.3	117.4	48.6	146.6	17.4
Camera 8 (DP) (Engine Rear Exterior Entry)	12						

<input type="checkbox"/> Head 1		11	109.7	140	60.9	1316.8	14.6
<input type="checkbox"/> Head 2		11	82.6	105.4	60.7	990.9	19.4
<input type="checkbox"/> Head 3		11	29.6	37.8	59.5	355.1	54.2
Camera 9 (DP) (SE Corner)	12						
<input type="checkbox"/> Head 1		6	98.1	125.4	57.9	196.3	20.7
<input type="checkbox"/> Head 2		6	97	124	57.9	193.9	20.9
<input type="checkbox"/> Head 3		6	26.3	34.5	48.6	52.6	75.2

Gateway PD NVR

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
9C-H4A-3MH-270	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
2.0C-H5A-DP1-IR	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
9C-H4A-3MH-270	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
3.0C-H5SL-BO2-IR	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
24C-H4A-3MH-270	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
9C-H4A-3MH-270	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
3.0C-H5SL-DO1-IR	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
9C-H4A-3MH-180	1	49 days 20 hours	49 days 20 hours			0 days 0 hours
15C-H4A-3MH-180	1	49 days 20 hours	49 days 20 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.

10.1.40 City of Glendale-Public Safety-Family Advocacy Center



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Design Comments

Design-City of Glendale-Public Safety-Family Advocacy Center-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-16P12-NA	n/a	11.4 TB	69.85 Mbps	48 days 3 hours	Valid

HDSM 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
Camera 1-Main Entry (H4VI Surface)	3.0C-H4VI-RO1-IR	Storage 1	1	Built-In Lens, 1.83mm, f/2.4, IR Corrected	1.83	10	12	Quality 6	5.49 Mbps	X		
Camera 2-NW Corner (Cmr)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					27.95 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
Camera 3-NE Corner	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					14.14 Mbps			
<input type="checkbox"/> Head 1					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	12	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	12	12	Quality 6		X		
Camera 4-Narrow Hall (DP)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	5.2	10	3	Quality 6	3.49 Mbps	X		
Camera 5-S Water Entry (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	3	Quality 6	3.49 Mbps	X		
Camera 6-Lobby (DC)	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	10	8	Quality 6	6.50 Mbps	X		
Camera 7-Evidence	2.0C-H5M-DO1-IR	Storage 1	1	Built-In Lens, 2.8mm, f/1.2	2.8	1	24	Quality 6	3.72 Mbps	X		

Camera 7-Water Pump	2.0C-H5SL-BO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	5.2	10	12		Quality 6	5.07 Mbps	X		
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Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Main Entry (H4VI Surface)	4.5	6	16.5	378.7	72.8	6561.7	5.4
Camera 2-NW Corner (Cmr)	10						
<input type="checkbox"/> Head 1		9	36.8	67.4	45.1	368.1	30.4
<input type="checkbox"/> Head 2		9	37.6	68.8	45.2	376	29.8
<input type="checkbox"/> Head 3		9	54.8	100.2	45.6	547.7	20.4
Camera 3-NE Corner	10						
<input type="checkbox"/> Head 1		9	54.2	99.1	45.6	541.7	20.7
<input type="checkbox"/> Head 2		9	36.1	66	45.1	360.5	31
<input type="checkbox"/> Head 3		9	36.5	66.8	45.1	364.9	30.7
Camera 4-Narrow Hall (DP)	8.5	6	61.5	62.8	71	209.1	30.6
Camera 5-S Water Entry (DO)	8.5	6	25.7	44.8	55.2	87.4	42.8
Camera 6-Lobby (DC)	8.5	6	14.8	34.1	40.6	50.2	56.3
Camera 7-Evidence	8.5	6	14.8	34.1	40.6	50.2	56.3
Camera 7-Water Pump	8.5	6	16.5	16.8	64.9	56.1	114

Storage 1

Model: VMA-AS3-16P12-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
3.0C-H4VI-RO1-IR	1	48 days 3 hours	48 days 3 hours			0 days 0 hours
9C-H4A-3MH-270	1	48 days 3 hours	48 days 3 hours			0 days 0 hours
9C-H4A-3MH-270	1	48 days 3 hours	48 days 3 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	48 days 3 hours	48 days 3 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	48 days 3 hours	48 days 3 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	48 days 3 hours	48 days 3 hours			0 days 0 hours
2.0C-H5M-DO1-IR	1	48 days 3 hours	48 days 3 hours			0 days 0 hours
2.0C-H5SL-BO1-IR	1	48 days 3 hours	48 days 3 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.

10.1.41 City of Glendale-Saguaro Ranch Park Historic District



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Design Comments

Design-City of Glendale-Saguaro Ranch Park Historic District-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	287.57 Mbps	35 days 4 hours	Valid

Cameras

NAME	MODEL	NVR	QTY	LENS	FL. (MM)	IPS	DUTY CYCLE	COMPRESSION	BITRATE
Camera 11-Hayshed (On Maintenance NVR)	3rd party camera	Storage 1	1	N/A		30	1	Quality 6	< 0.01 Mbps

HDSM 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
Camera 1-SW Lot (DP Pole)	12C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					24.23 Mbps			
<input type="checkbox"/> Head 1					2.8	10	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	10	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	10	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
<input type="checkbox"/> Head 4					2.8	10	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
Camera 2- Mountain View Entry (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			
<input type="checkbox"/> Head 1					4.0	12	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
Camera 3-Guest House (DP Pole)	9C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					19.69 Mbps			
<input type="checkbox"/> Head 1					2.8	12	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	12	13	Quality 6		<input checked="" type="checkbox"/>	Medium (Default)	1

□ Head 3					2.8	12	13	Quality 6		✓	Medium (Default)	1
Camera 4- Pueblo/Bathroom (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			
□ Head 1					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 2					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 3					4.0	12	13	Quality 6		✓	Medium (Default)	1
Camera 5-NW Pueblo (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			
□ Head 1					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 2					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 3					4.0	12	13	Quality 6		✓	Medium (Default)	1
Camera 6-Rear (DP Pole)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	13	Quality 6	4.34 Mbps	✓	Medium (Default)	1
Camera 7-NW Main House (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			
□ Head 1					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 2					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 3					4.0	12	13	Quality 6		✓	Medium (Default)	1

Camera 8-NE Main House (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			
<input type="checkbox"/> Head 1					4.0	12	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	13	Quality 6		✓	Medium (Default)	1
Camera 9-Foreman House (DP Pole)	12C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					24.23 Mbps			
<input type="checkbox"/> Head 1					2.8	10	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					2.8	10	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					2.8	10	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 4					2.8	10	13	Quality 6		✓	Medium (Default)	1
Camera 10-Foreman House NW (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			
<input type="checkbox"/> Head 1					4.0	12	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	13	Quality 6		✓	Medium (Default)	1
Camera 12-Foreman House NE (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			

□ Head 1					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 2					4.0	12	13	Quality 6		✓	Medium (Default)	1
□ Head 3					4.0	12	13	Quality 6		✓	Medium (Default)	1
Camera 13-Foreman Gate (DP Pole)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	5.3	10	9	Quality 6	4.10 Mbps	✓	Medium (Default)	1
Camera 14-Fruit Pack NW (DP Pole)	12C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					24.23 Mbps			
□ Head 1					2.8	10	13	Quality 6		✓	Medium (Default)	1
□ Head 2					2.8	10	13	Quality 6		✓	Medium (Default)	1
□ Head 3					2.8	10	13	Quality 6		✓	Medium (Default)	1
□ Head 4					2.8	10	13	Quality 6		✓	Medium (Default)	1
Camera 15-Fruit Pack NE	3.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	13	Quality 6	5.05 Mbps	✓	Medium (Default)	1
Camera 16-Fruit Pack/Entry (DP Pole)	12C-H4A-4MH-360	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					24.23 Mbps			
□ Head 1					2.8	10	13	Quality 6		✓	Medium (Default)	1
□ Head 2					2.8	10	13	Quality 6		✓	Medium (Default)	1
□ Head 3					2.8	10	13	Quality 6		✓	Medium (Default)	1

<input type="checkbox"/> Head 4					2.8	10	13	Quality 6		✓	Medium (Default)	1
Camera 17-Fruit Park SW (DP Pole)	9C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					19.69 Mbps			
<input type="checkbox"/> Head 1					4.0	12	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	13	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	13	Quality 6		✓	Medium (Default)	1

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-SW Lot (DP Pole)	10						
<input type="checkbox"/> Head 1		9	55	100.6	45.6	550	20.4
<input type="checkbox"/> Head 2		9	55	100.6	45.6	550	20.4
<input type="checkbox"/> Head 3		9	55	100.6	45.6	550	20.4
<input type="checkbox"/> Head 4		9	55	100.6	45.6	550	20.4
Camera 2- Mountain View Entry (DP Pole)	10						
<input type="checkbox"/> Head 1		6	80	102.2	58.6	200	20
<input type="checkbox"/> Head 2		6	80	102.2	58.6	200	20
<input type="checkbox"/> Head 3		6	80	102.2	58.6	200	20
Camera 3-Guest House (DP Pole)	10						
<input type="checkbox"/> Head 1		9	55	100.6	45.6	550	20.4
<input type="checkbox"/> Head 2		9	55	100.6	45.6	550	20.4
<input type="checkbox"/> Head 3		9	55.8	102.2	45.7	558.4	20
Camera 4-Pueblo/Bathroom (DP Pole)	10						
<input type="checkbox"/> Head 1		6	80	102.2	58.6	200	20
<input type="checkbox"/> Head 2		6	80	102.2	58.6	200	20
<input type="checkbox"/> Head 3		6	80	102.2	58.6	200	20
Camera 5-NW Pueblo (DP Pole)	10						
<input type="checkbox"/> Head 1		6	80	102.2	58.6	200	20
<input type="checkbox"/> Head 2		6	80	102.2	58.6	200	20

□ Head 3		6	80	102.2	58.6	200	20
Camera 6-Rear (DP Pole)	10	6	54.8	95.6	56.5	137	20.1
Camera 7-NW Main House (DP Pole)	10						
□ Head 1		6	80	102.2	58.6	200	20
□ Head 2		6	80	102.2	58.6	200	20
□ Head 3		6	80	102.2	58.6	200	20
Camera 8-NE Main House (DP Pole)	10						
□ Head 1		6	80	102.2	58.6	200	20
□ Head 2		6	80	102.2	58.6	200	20
□ Head 3		6	80	102.2	58.6	200	20
Camera 9-Foreman House (DP Pole)	10						
□ Head 1		9	55	100.6	45.6	550	20.4
□ Head 2		9	55	100.6	45.6	550	20.4
□ Head 3		9	55	100.6	45.6	550	20.4
□ Head 4		9	55	100.6	45.6	550	20.4
Camera 10-Foreman House NW (DP Pole)	10						
□ Head 1		6	80	102.2	58.6	200	20
□ Head 2		6	80	102.2	58.6	200	20
□ Head 3		6	80	102.2	58.6	200	20
Camera 11-Hayshed (On Maintenance NVR)	8.5	6	16.5	16.8	59.1	56.1	19

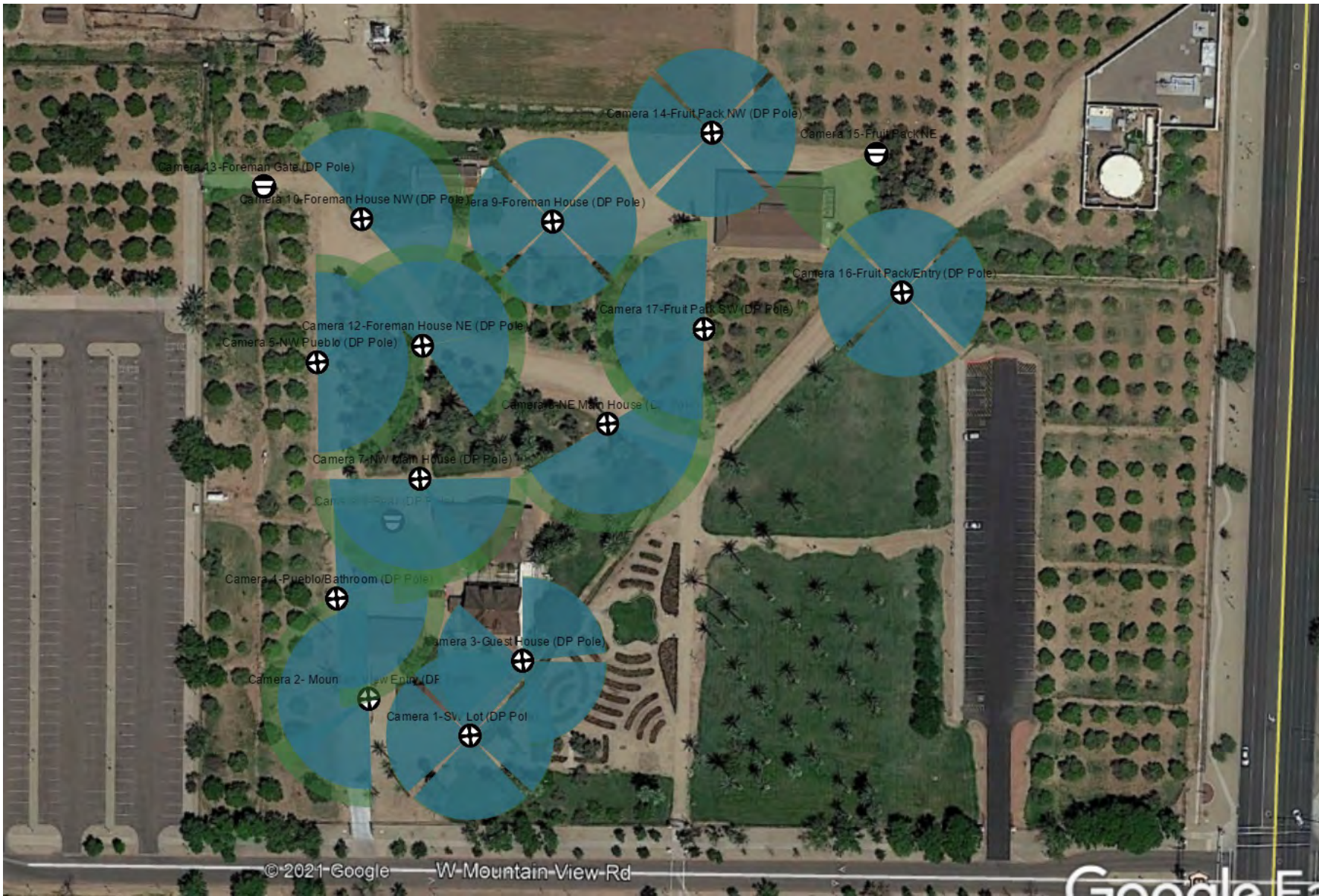
Camera 12-Foreman House NE (DP Pole)	10						
□ Head 1		6	74.6	95.3	58.3	186.5	21.5
□ Head 2		6	80	102.2	58.6	200	20
□ Head 3		6	76	97.2	58.4	190.1	21.1
Camera 13-Foreman Gate (DP Pole)	10	6	47.7	48.6	68.6	119.2	39.5
Camera 14-Fruit Pack NW (DP Pole)	10						
□ Head 1		9	55	100.6	45.6	550	20.4
□ Head 2		9	55	100.6	45.6	550	20.4
□ Head 3		9	55	100.6	45.6	550	20.4
□ Head 4		9	55	100.6	45.6	550	20.4
Camera 15-Fruit Pack NE	10	6	72.2	115.5	50	180.4	17.7
Camera 16-Fruit Pack/Entry (DP Pole)	10						
□ Head 1		9	55	100.6	45.6	550	20.4
□ Head 2		9	55	100.6	45.6	550	20.4
□ Head 3		9	55	100.6	45.6	550	20.4
□ Head 4		9	55	100.6	45.6	550	20.4
Camera 17-Fruit Park SW (DP Pole)	10						
□ Head 1		6	80	102.2	58.6	200	20
□ Head 2		6	80	102.2	58.6	200	20
□ Head 3		6	80	102.2	58.6	200	20

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
12C-H4A-4MH-360	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-270	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
12C-H4A-4MH-360	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
3rd party camera	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
2.0C-H5SL-DO1-IR	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
12C-H4A-4MH-360	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
3.0C-H5SL-DO1-IR	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
12C-H4A-4MH-360	1	35 days 4 hours	35 days 4 hours			0 days 0 hours
9C-H4A-3MH-180	1	35 days 4 hours	35 days 4 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.

10.1.42 City of Glendale-Saguaro Ranch Park Maintenance



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Design Comments

Design-City of Glendale-Saguaro Ranch Park Maintenance-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-16P12-NA	n/a	11.4 TB	102.44 Mbps	29 days 22 hours	Valid

HDSM 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
Camera 1-Front Entry Gate (DP Cmr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					41.11 Mbps			
<input type="checkbox"/> Head 1					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	12	Quality 6		X		
Camera 2-SE Corner (DP Cmr)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					41.11 Mbps			
<input type="checkbox"/> Head 1					2.8	15	10	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	10	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	10	Quality 6		X		
Camera 3-Hayshed (DP Pole)	32C-H4A-4MH-360	Storage 1	1	Built-In Lens, 4mm, f/1.8					20.21 Mbps			
<input type="checkbox"/> Head 1					4.0	8	6	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	8	6	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	8	6	Quality 6		X		
<input type="checkbox"/> Head 4					4.0	8	6	Quality 6		X		

Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Front Entry Gate (DP Cmr)	9						
<input type="checkbox"/> Head 1		7	70	128.1	45	315	20.2
<input type="checkbox"/> Head 2		8	46	84.2	45.4	414	30.8
<input type="checkbox"/> Head 3		8	46	84.2	45.4	414	30.8
Camera 2-SE Corner (DP Cmr)	9						
<input type="checkbox"/> Head 1		7	70	128.1	45	315	20.2
<input type="checkbox"/> Head 2		8	69.2	126.6	45.9	622.9	20.5
<input type="checkbox"/> Head 3		8	70.6	129.1	45.9	635	20.1
Camera 3-Hayshed (DP Pole)	10						
<input type="checkbox"/> Head 1		6	95	190.6	53.3	237.5	20.2
<input type="checkbox"/> Head 2		6	95	190.6	53.3	237.5	20.2
<input type="checkbox"/> Head 3		6	95	190.6	53.3	237.5	20.2
<input type="checkbox"/> Head 4		6	95	190.6	53.3	237.5	20.2

Storage 1

Model: VMA-AS3-16P12-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
15C-H4A-3MH-270	1	29 days 22 hours	29 days 22 hours			0 days 0 hours
15C-H4A-3MH-270	1	29 days 22 hours	29 days 22 hours			0 days 0 hours
32C-H4A-4MH-360	1	29 days 22 hours	29 days 22 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.

10.1.43 City of Glendale-Skate Park-Foothills



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Design Comments

Design-City of Glendale-Skate Park-Foothills-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	VMA-AS3-16P12-NA	n/a	11.4 TB	64.45 Mbps	32 days 3 hours	Valid

HDSM 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
Camera 1-Patio (DO)	2.0C-H5SL-DO1-IR	Storage 1	1	Built-In Lens, 3.1-8.4mm, f/1.6, P-Iris, Vari Focal	3.1	10	12	Quality 6	5.26 Mbps	✓	Medium (Default)	1
Camera 2-SW Corner (DP Cmr)	24C-H4A-3MH-270	Storage 1	1	Built-In Lens, 4mm, f/1.8					29.60 Mbps			
<input type="checkbox"/> Head 1					4.0	12	12	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					4.0	12	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					4.0	12	16	Quality 6		✓	Medium (Default)	1
Camera 3-SE Corner (DP Cmr NPTA)	24C-H4A-3MH-180	Storage 1	1	Built-In Lens, 5.2mm, f/1.8					29.60 Mbps			
<input type="checkbox"/> Head 1					5.2	12	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 2					5.2	12	16	Quality 6		✓	Medium (Default)	1
<input type="checkbox"/> Head 3					5.2	12	12	Quality 6		✓	Medium (Default)	1

Scene Details

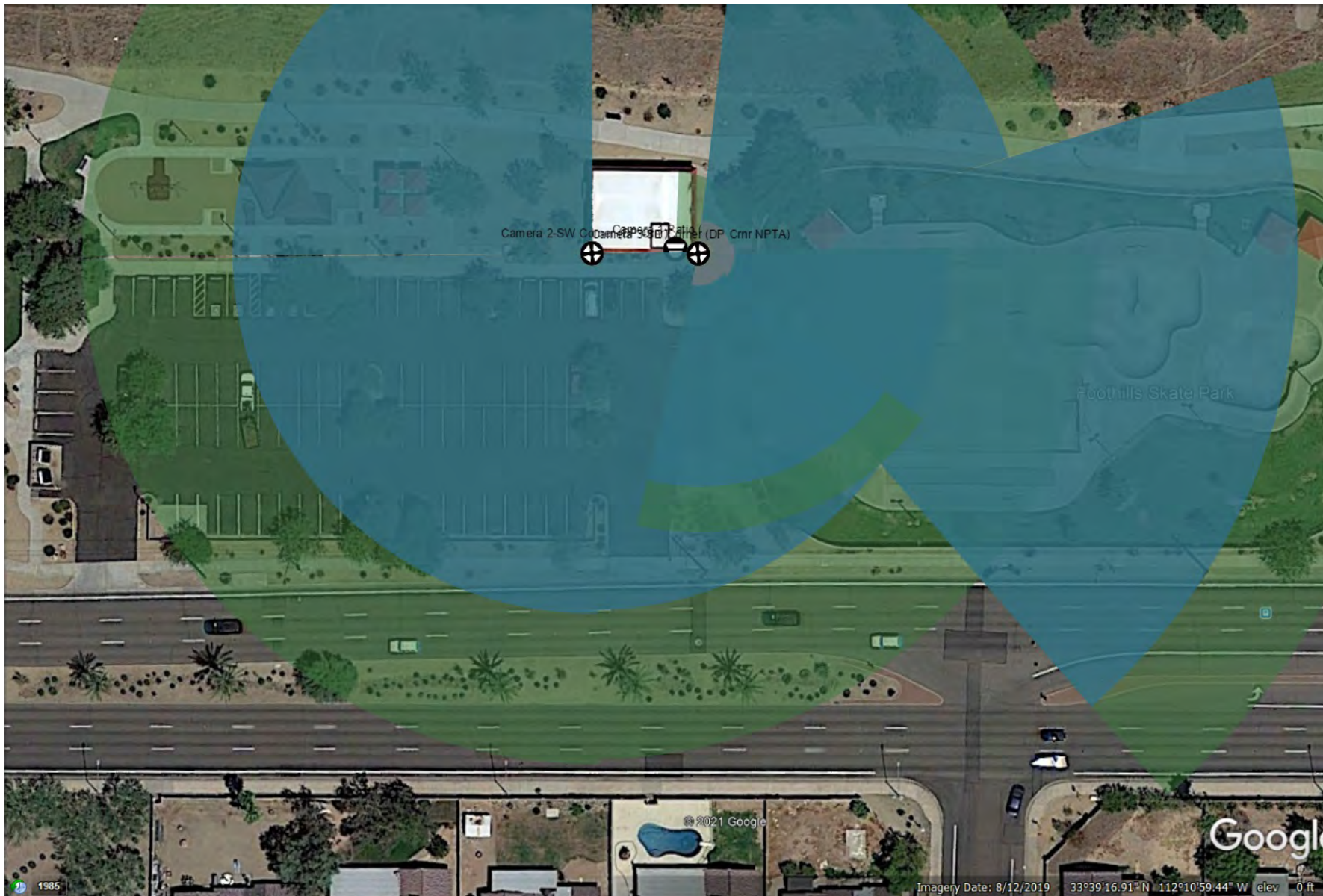
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1-Patio (DO)	8.5	6	28.5	49.7	55.7	96.9	38.6
Camera 2-SW Corner (DP Cmr)	9						
<input type="checkbox"/> Head 1		6	174.3	349.3	54.7	522.8	11
<input type="checkbox"/> Head 2		6	175.9	352.5	54.7	527.6	10.9
<input type="checkbox"/> Head 3		6	175.8	352.3	54.7	527.3	10.9
Camera 3-SE Corner (DP Cmr NPTA)	18						
<input type="checkbox"/> Head 1		6	158.7	207.3	64.2	238	18.5
<input type="checkbox"/> Head 2		6	292.9	381.9	66.2	439.3	10.1
<input type="checkbox"/> Head 3		6	113.7	149	62.5	170.5	25.8

Storage 1

Model: VMA-AS3-16P12-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
2.0C-H5SL-DO1-IR	1	32 days 3 hours	32 days 3 hours			0 days 0 hours
24C-H4A-3MH-270	1	32 days 3 hours	32 days 3 hours			0 days 0 hours
24C-H4A-3MH-180	1	32 days 3 hours	32 days 3 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.

10.1.44 Library Velma Teague-Indoor Cameras



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Design Comments

Design-Library Velma Teague-Indoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	120.00 Mbps	211 days 2 hours	Valid

Cameras

NAME	MODEL	NVR	QTY	LENS	FL. (MM)	IPS	DUTY CYCLE	COMPRESSION	BITRATE
Camera 6 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 7 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 8 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 9 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 10 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 11 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 12 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 13 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 14 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps
Camera 15 (Panasonic WV-S3111L)	3rd party camera	Storage 1	1	N/A		30	8	Quality 6	12.00 Mbps

Scene Details

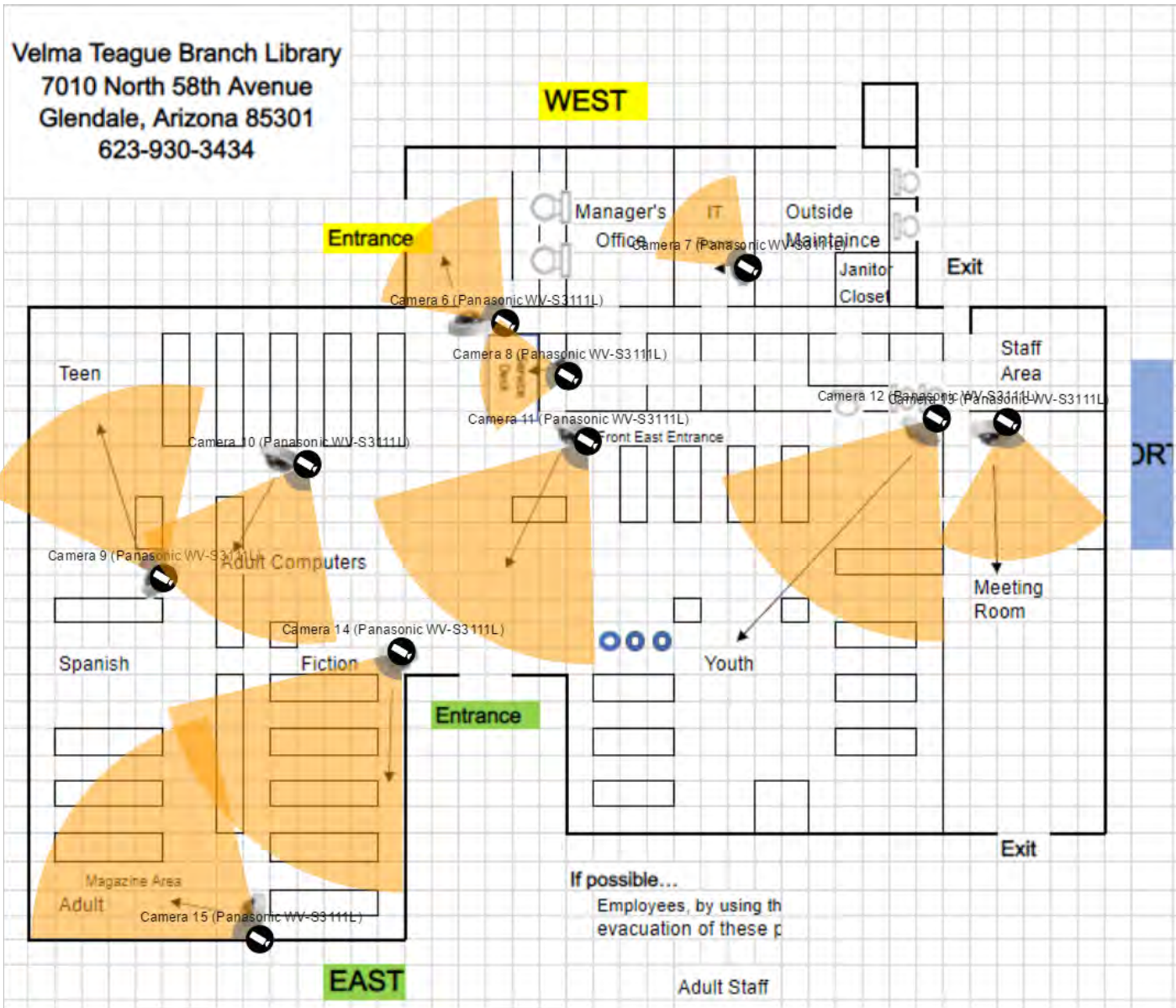
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 6 (Panasonic WV-S3111L)	8.5	6	18.8	29.8	56.2	64	64.4
Camera 7 (Panasonic WV-S3111L)	8.5	6	13.9	22	53.8	47.2	87.3
Camera 8 (Panasonic WV-S3111L)	8.5	6	13.3	21	53.4	45.2	91.2
Camera 9 (Panasonic WV-S3111L)	8.5	6	29	45.9	58.7	98.4	41.9
Camera 10 (Panasonic WV-S3111L)	8.5	6	26.7	42.3	58.3	90.8	45.4
Camera 11 (Panasonic WV-S3111L)	8.5	6	33.2	52.5	59.3	112.8	36.5
Camera 12 (Panasonic WV-S3111L)	8.5	6	33.2	52.5	59.3	112.8	36.5
Camera 13 (Panasonic WV-S3111L)	8.5	6	20.6	32.6	56.8	70.1	58.8
Camera 14 (Panasonic WV-S3111L)	8.5	6	35.9	56.8	59.6	121.9	33.8
Camera 15 (Panasonic WV-S3111L)	8.5	6	34	53.9	59.4	115.7	35.6

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 hours			0 days 0 hours
3rd party camera	1	211 days 2 hours	211 days 2 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.

10.1.45 Library Velma Teague-Outdoor Cameras



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Design Comments

Design-Library Velma Teague-Outdoor Cameras-No PPF

HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
Storage 1	NVR4X-STD-48TB-NA	n/a	45.6 TB	168.03 Mbps	56 days 1 hours	Valid

HDSM 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
Camera 1 (DP) (NW Corner)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					41.11 Mbps			
<input type="checkbox"/> Head 1					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	12	Quality 6		X		
Camera 2 (DP) (NE Corner)	15C-H4A-3MH-180	Storage 1	1	Built-In Lens, 4mm, f/1.6					41.11 Mbps			
<input type="checkbox"/> Head 1					4.0	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					4.0	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					4.0	15	12	Quality 6		X		
Camera 3 (DO) (Front Entry Exterior)	2.0C-H5A-DO1-IR	Storage 1	1	Built-In Lens, 3.3-9mm, f/1.3, P-Iris, Vari Focal	3.3	10	12	Quality 6	4.89 Mbps	X		
Camera 4 (DP) (W Corner)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					34.74 Mbps			
<input type="checkbox"/> Head 1					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	12	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	12	Quality 6		X		
Camera 5	2.0C-H5SL-D1	Storage 1	1	Built-In Lens, 3-9mm, f/1.4, P-Iris, Vari Focal	3.0	10	8	Quality 6	5.07 Mbps	X		
Camera 16 (DP) (Southeast Corner)	15C-H4A-3MH-270	Storage 1	1	Built-In Lens, 2.8mm, f/1.2					41.11 Mbps			

<input type="checkbox"/> Head 1					2.8	15	16	Quality 6		X		
<input type="checkbox"/> Head 2					2.8	15	16	Quality 6		X		
<input type="checkbox"/> Head 3					2.8	15	16	Quality 6		X		

Scene Details

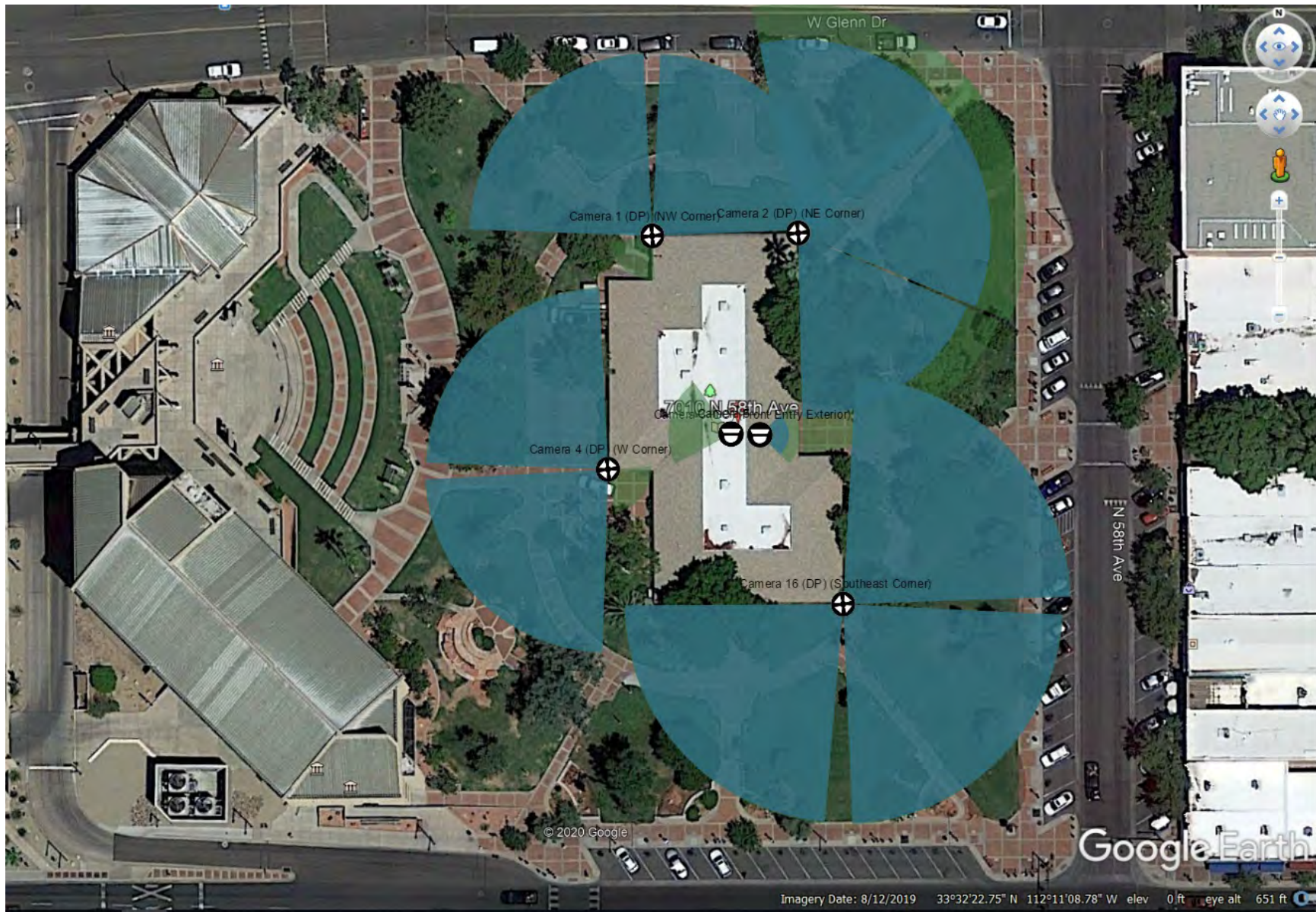
NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
Camera 1 (DP) (NW Corner)	12						
<input type="checkbox"/> Head 1		10	16.5	30.4	39.8	99	85.2
<input type="checkbox"/> Head 2		10	69.8	127.8	45	419	20.3
<input type="checkbox"/> Head 3		10	69.5	127.2	45	417.1	20.4
Camera 2 (DP) (NE Corner)	12						
<input type="checkbox"/> Head 1		6	99.9	127.7	58	199.8	20.3
<input type="checkbox"/> Head 2		6	99.3	126.9	58	198.6	20.4
<input type="checkbox"/> Head 3		6	95.3	121.9	57.8	190.7	21.3
Camera 3 (DO) (Front Entry Exterior)	8.5	6	15.1	29.6	47.7	51.5	64.8
Camera 4 (DP) (W Corner)	12						
<input type="checkbox"/> Head 1		10	16.5	30.4	39.8	99	85.2
<input type="checkbox"/> Head 2		10	69.8	127.8	45	419	20.3
<input type="checkbox"/> Head 3		10	69.5	127.2	45	417.1	20.4
Camera 5	8	6	24.6	42.9	56	98.2	44.7
Camera 16 (DP) (Southeast Corner)	12						
<input type="checkbox"/> Head 1		10	86.7	158.7	45.4	520.5	16.3
<input type="checkbox"/> Head 2		10	83.8	153.4	45.3	502.9	16.9
<input type="checkbox"/> Head 3		10	83.4	152.7	45.3	500.6	17

Storage 1

Model: NVR4X-STD-48TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
15C-H4A-3MH-270	1	56 days 1 hours	56 days 1 hours			0 days 0 hours
15C-H4A-3MH-180	1	56 days 1 hours	56 days 1 hours			0 days 0 hours
2.0C-H5A-DO1-IR	1	56 days 1 hours	56 days 1 hours			0 days 0 hours
15C-H4A-3MH-270	1	56 days 1 hours	56 days 1 hours			0 days 0 hours
2.0C-H5SL-D1	1	56 days 1 hours	56 days 1 hours			0 days 0 hours
15C-H4A-3MH-270	1	56 days 1 hours	56 days 1 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.

SECTION 11

APPENDIX B-PRODUCT LITERATURE

Product Literature is included on the pages that follow.



H5A Camera Line

- 2 MP
- 4 MP
- 5 MP
- 6 MP
- 8 MP

The Avigilon H5A camera line features our embedded Next-Generation Video Analytics for enhanced object detection, tracking and classification, Unusual Activity Detection (UAD), Facial Recognition technology and support for Avigilon Appearance Search™ technology to help ensure critical events do not go unnoticed. These advanced capabilities help provide detailed information on what is happening on your site so you can detect potentially critical security events faster and take responsive action.



Features



NEXT-GENERATION VIDEO ANALYTICS
Detects more objects with expanded object classifications and greater accuracy for faster responses, even in crowded scenes.



FIPS 140-2 CERTIFIED CRYPTOGRAPHY
Enables the camera to be deployed at sites requiring FIPS-compliant cryptography.



H.265 WITH HDSM SMARTCODEC™ TECHNOLOGY
Optimizes compression levels for regions in a scene to help maximize bandwidth savings, helping to keep internet connectivity costs down.



FOCUS OF ATTENTION WITH ACC™ 7
Leverages AI and video analytics technologies to determine what information is important and should be presented to security operators.



TRUE WIDE DYNAMIC RANGE
Available in all resolutions, capture details in scenes with both very bright and dark areas.



LIGHTCATCHER™ TECHNOLOGY
Offers exceptional detail in areas with low lighting.



ONVIF® COMPLIANT
Built on an open platform to allow integration with other security solutions.



MULTIPLE LENS OPTIONS
Choose from various lens types, including long zoom, for flexible coverage options.

Specifications

		2.0 MP	4.0 MP	5.0 MP	6.0 MP	8.0 MP (4K ULTRA HD)	
IMAGE PERFORMANCE	Image Sensor	1/2.8" progressive scan CMOS			1/1.8" progressive scan CMOS		
	Max Resolution (H x V) and Aspect Ratio	(16:9) 1920 x 1080	(16:9) 2560 x 1440 (4:3) 2304 x 1728	(4:3) 2592 x 1944 (16:9) 2560 x 1440	(16:9) 3200 x 1800 (3:2) 3072 x 2048	(16:9) 3840 x 2160	
	Dynamic Range	WDR Off	83 dB	83 dB	83 dB	85 dB	85 dB
		WDR On	126 dB (dual exposure, 30 fps) 132 dB (triple exposure, 20 fps or less)	126 dB	126 dB	120 dB	120 dB
	Max Image Rate	(50 Hz/60 Hz): 25 fps/30 fps					
Bandwidth Management	HDSM SmartCodec technology; Idle scene mode						
3D Noise Reduction Filter	Yes						

		3.3 – 9 mm	4.9 – 8 mm	9 – 22 mm	4.7 – 84.6 mm	
LENS AND IR ILLUMINATION	IR Illumination Max Distance ¹ (high power 850 nm LEDs)	Dome	35 m (115 ft), full tele 15 m (49 ft), full wide	30 m (98 ft), full tele 15 m (49 ft), full wide	N/A	N/A
		Bullet	50 m (164 ft), full tele 30 m (98 ft), full wide	50 m (164 ft), full tele 30 m (98 ft), full wide	90 m (295 ft), full tele 60 m (197 ft), full wide	N/A
	Minimum Illumination	2 MP	0.027 lux in color mode, 0.014 lux in monochrome mode, 0 lux with IR	N/A	0.052 lux in color mode, 0.026 lux in monochrome mode, 0 lux with IR	0.039 lux in color mode, 0.02 lux in monochrome mode
		4 MP	0.03 lux in color mode, 0.015 lux in monochrome mode, 0 lux with IR	N/A	0.058 lux in color mode, 0.029 lux in monochrome mode, 0 lux with IR	N/A
		5 MP	N/A	N/A	0.058 lux in color mode, 0.029 lux in monochrome mode, 0 lux with IR	N/A
		6 MP	N/A	0.055 lux in color mode, 0.028 lux in monochrome mode, 0 lux with IR	N/A	N/A
		8 MP	N/A	0.055 lux in color mode, 0.028 lux in monochrome mode, 0 lux with IR	N/A	N/A
	Horizontal Angle of View Based on Aspect Ratio	2 MP	(16:9) 34° – 99°	N/A	(16:9) 14° – 31°	(16:9) 4.1° – 60°
		4 MP	(16:9)(4:3) 34° – 92°	N/A	(16:9) 14° – 31° (4:3) 10° – 24°	N/A
		5 MP	N/A	N/A	(16:9)(4:3) 14° – 31°	N/A
6 MP		N/A	(16:9) 52° – 92° (3:2) 41° – 73°	N/A	N/A	
8 MP		N/A	(16:9) 52° – 92°	N/A	N/A	
Vertical Angle of View Based on Aspect Ratio	2 MP	(16:9) 18° – 53°	N/A	(16:9) 7.8° – 16.7°	(16:9) 2.3° – 34°	
	4 MP	(16:9) 18° – 50° (4:3) 25° – 68°	N/A	(16:9) 8.2° – 17.4° (4:3) 10° – 24°	N/A	
	5 MP	N/A	N/A	(16:9) 8.1° – 17.4° (4:3) 11° – 23°	N/A	
	6 MP	N/A	(16:9) 29° – 51° (3:2) 27° – 48°	N/A	N/A	
	8 MP	N/A	(16:9) 29° – 51°	N/A	N/A	
Max Aperture	F1.3	F1.8	F1.6	F1.6		
Control	P-Iris, Remote Focus and Zoom					

¹IR illumination power may be reduced at higher operating temperatures.

IMAGE CONTROL	Image Compression Method	H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG
	Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG; HDSM™ 2.0 on 4.0 MP, 5.0 MP, 6.0 MP, and 4K (8.0 MP) cameras
	Motion Detection	Pixel motion: Selectable sensitivity and threshold. Classified object detection
	Camera Tamper Detection	Yes
	Electronic Shutter Control	Automatic, Manual (1/7 to 1/8196 sec)
	Iris Control	Automatic, Open, Closed
	Day/Night Control	Automatic, Manual
	Flicker Control	60 Hz, 50 Hz
	White Balance	Automatic, Manual
	Backlight Compensation	Adjustable
	Privacy Zones	Up to 64 zones

NETWORK	Network	100BASE-TX, RJ45 Connector, CAT5e Cabling
	ONVIF	ONVIF compliance version 1.02, 2.00, Profile S, Profile T, Profile G (www.onvif.org)
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication
	Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP
	Device Management Protocols	SNMP v2c, SNMP v3

PERIPHERALS	USB Port	USB 2.0
	Onboard Storage	Dome
Bullet and Box		SD/SDHC/SDXC slot – class 10/UHS-1 or better recommended

Specifications (Con't)

AUXILIARY I/O	Audio Compression Method	G.711 PCM 8 kHz
	Audio Input/Output	Line level input and output
	External I/O Terminals	Alarm In, Alarm Out
	RS-485 Terminal	Yes, Box camera only

MECHANICAL (DOME)	INDOOR SURFACE MOUNT		INDOOR IN-CEILING MOUNT	OUTDOOR SURFACE MOUNT
	Dimensions (LxWxH)	163 mm x 163 mm x 118 mm; 6.4" x 6.4" x 4.7"	181 mm x 181 mm x 164 mm; 7.1" x 7.1" x 6.5"	163 mm x 163 mm x 121 mm; 6.4" x 6.4" x 4.8"
Weight	0.99 kg (2.18 lbs)	1.64 kg (3.62 lbs)	1.39 kg (3.06 lbs)	
Dome Bubble	Polycarbonate			
Body	Plastic, Aluminum		Aluminum	
Housing	Surface mount, tamper resistant		Recessed mount, tamper resistant	Surface mount, vandal resistant
Finish	Plastic, gray		Plastic, gray; Aluminum, powder coat, black	Powder coat, RAL 9003
Adjustment Range	360° pan, ±180° azimuth, 9° – 95° tilt (30° – 95° with -IR option)			

MECHANICAL (PENDANT DOME)	PENDANT CAMERA ONLY		WITH WALL MOUNT (H4A-MT-WALL1)	WITH NPT MOUNT (H4A-MT-NPTA1)
	Dimensions (LxWxH)	172 mm x 172 mm x 124 mm; 6.8" x 6.8" x 4.9"	275 mm x 172 mm x 152.1 mm; 10.8" x 6.8" x 6.0"	172 mm x 172 mm x 172.3 mm; 6.8" x 6.8" x 6.8"
Weight	1.59 kg (3.51 lbs)	3.04 kg (6.70 lbs)	1.84 kg (4.06 lbs)	
Dome Bubble	Polycarbonate			
Body	Aluminum			
Housing	Pendant mount, vandal resistant			
Finish	Powder coat, RAL 9003			
Adjustment Range	360° pan, ±180° azimuth, 9° – 95° tilt (30° – 95° with -IR option)			

MECHANICAL (BULLET)	Dimensions (LxWxH)	280 mm x 126 mm x 91 mm; 11.04" x 4.97" x 3.58" (including mounting bracket)		
	Weight	Camera	1.71 kg (3.77 lbs)	
		Mounting Bracket	0.21 kg (0.46 lbs)	
	Body	Aluminum		
	Housing	Surface mount, tamper resistant		
	Finish	Powder coat, RAL 9003		
	Adjustment Range	±175° pan, ±90° tilt, ±175° azimuth		

MECHANICAL (BOX)	Dimensions (LxWxH)	168 mm x 76 mm x 67 mm; 6.6" x 3.0" x 2.6"		
	Weight	0.62 kg (1.4 lbs)		
	Body	Aluminum		
	Camera Mount	1/4"-20 UNC (top and bottom)		
	Finish	Powder coat, black		

ELECTRICAL	Power Consumption	Bullet	13 W max		
		Dome	13 W max (11 W with no IR or IR disabled)		
		Box	7 W max		
	Power Source	Bullet	VDC: 12 V ± 10%, 13 W min	VAC: 24 V ± 10%, 15 VA min	PoE: IEEE802.3af Class 3 compliant
		Dome	VDC: 12 V ± 10%, 12 W min	VAC: 24 V ± 10%, 13 VA min	PoE: IEEE802.3af Class 3 compliant
		Box	VDC: 12 V ± 10%, 7 W min	VAC: 24 V ± 10%, 9 VA min	PoE: IEEE802.3af Class 3 compliant
	RTC Backup Battery	3V manganese lithium			

ENVIRONMENTAL	Operating Temperature	Bullet	-40 °C to +60 °C (-40 °F to 140 °F), in enclosed space		
		Dome	-40 °C to +65 °C (-40 °F to 149 °F), with ambient convection		
		Box	-10 °C to +60 °C (-14 °F to 140 °F)		
	IR Illuminator Behavior	Bullet	IR illuminator will turn off if the temperature is 61 °C (141 °F) or higher. The illuminator will operate at 50% power if the temperature is between 55 °C (131 °F) and 61 °C (141 °F). Hysteresis: 5 °C (9 °F).		
		Indoor Dome	IR illuminator will turn off if the temperature is 55 °C (131 °F) or higher. The illuminator will operate at 50% power if the temperature is between 44 °C (111 °F) and 55 °C (131 °F). Hysteresis: 2 °C (3.6 °F).		
		Outdoor Dome	IR illuminator will turn off if the temperature is 57 °C (135 °F) or higher. The illuminator will operate at 50% power if the temperature is between 49 °C (120 °F) and 57 °C (135 °F). Hysteresis: 2 °C (3.6 °F).		
	Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)			
Humidity	0 - 95% non-condensing				

CERTIFICATIONS	Certifications/Directives	UL, cUL, CE, ROHS, Reach (SVHC), RCM, EAC, BIS, KC			
	Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC 62471 (with -IR option)			
	Environmental	Bullet	UL/CSA/IEC 60950-22, IEC 60529 IP66 and IP67 Weather Rating, IEC 62262 IK10 Impact Rating		
		Outdoor Dome	UL/CSA/IEC 60950-22, IEC 60529 IP66 and IP67 Weather Rating, IEC 62262 IK10 Impact Rating		
		Indoor Dome	IEC 62262 IK10 Impact Rating		
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3			
	Electromagnetic Immunity	EN 55035, EN 61000-6-1			

Analytics Specifications

SUPPORTED ANALYTICS EVENTS	
Objects in Area	The event is triggered when the selected object type moves into the region of interest.
Object Loitering	The event is triggered when the selected object type moves into the region of interest and then stays for an extended amount of time.
Objects Crossing Beam	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
Object Appears or Enters Area	The event is triggered by each object that enters the region of interest. This event can be used to count objects.
Object Not Present in Area	The event is triggered when no objects are present in the region of interest.
Objects Enter Area	The event is triggered when the specified number of objects have entered the region of interest.
Objects Leave Area	The event is triggered when the specified number of objects have left the region of interest.
Object Stops in Area	The event is triggered when an object moves into a region of interest and then stops moving for the specified threshold time.
Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.
Tamper Detection	The event is triggered when the scene unexpectedly changes.

SUPPORTED CLASSIFIED OBJECT TYPES	
Object Types in Outdoor Mode	Vehicle, sub-types: Car, Truck, Bicycle, Motorcycle, Bus Person
Object Types in Indoor Mode	Person

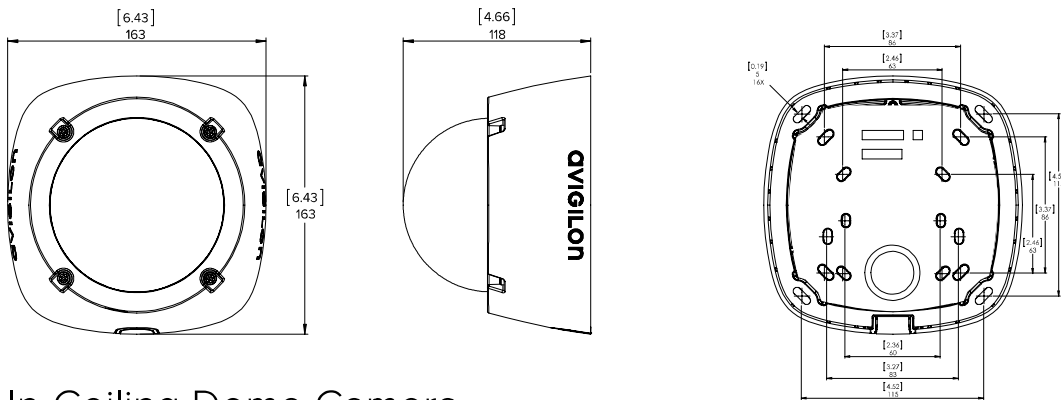
TEACH BY EXAMPLE	
Teach By Example	Yes, when used with Avigilon Control Center™

AVIGILON CONTROL CENTER (ACC) VERSIONS SUPPORTED FEATURES	
ACC Version 6.14.12 or higher	All supported analytic events with two types of classified objects: person or vehicle. Appearance search when paired with appropriate server hardware. H.265 supported.
ACC Version 7.2 or higher	All supported analytic events with people and vehicles and all vehicle sub-types as classified objects. Appearance search when paired with appropriate server hardware. H.265 supported.

Outline Dimensions

Surface Mount Indoor Dome Camera

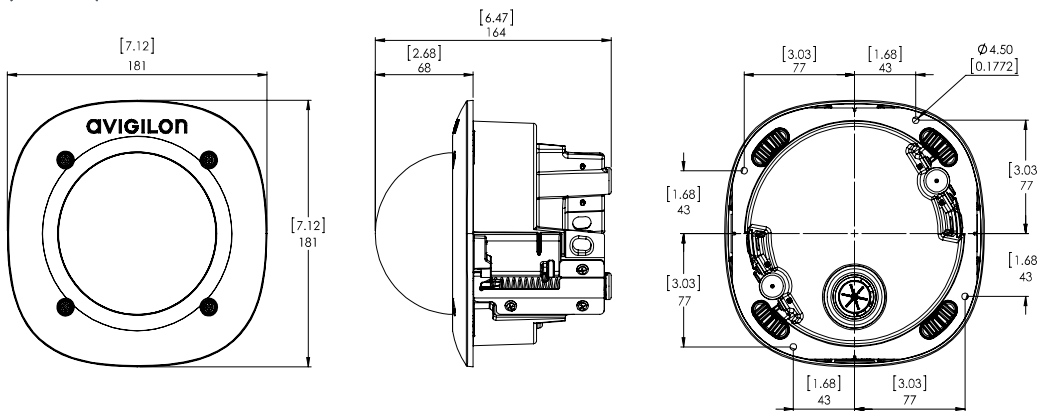
(H5A-D)



[X.X]	INCHES
X	MM

In-Ceiling Dome Camera

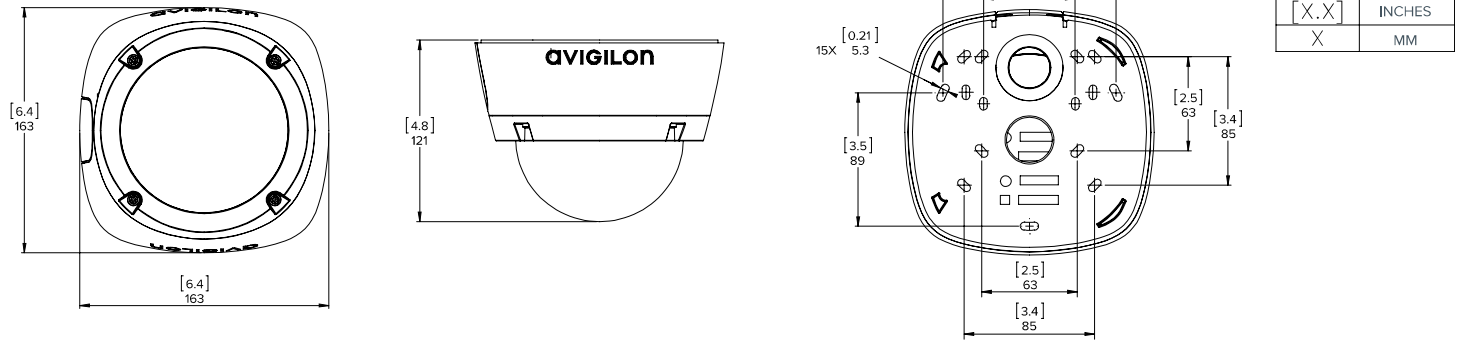
(H5A-DC)



Outline Dimensions (Con't)

Surface Mount Outdoor Dome Camera

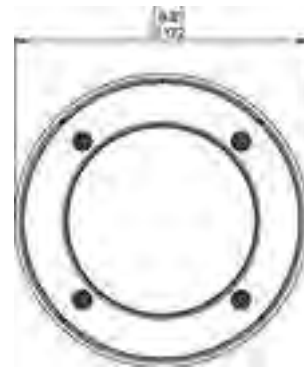
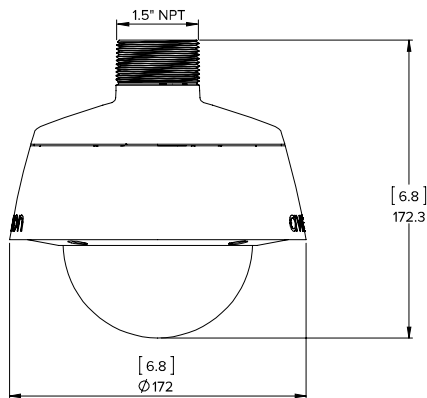
(H5A-DO)



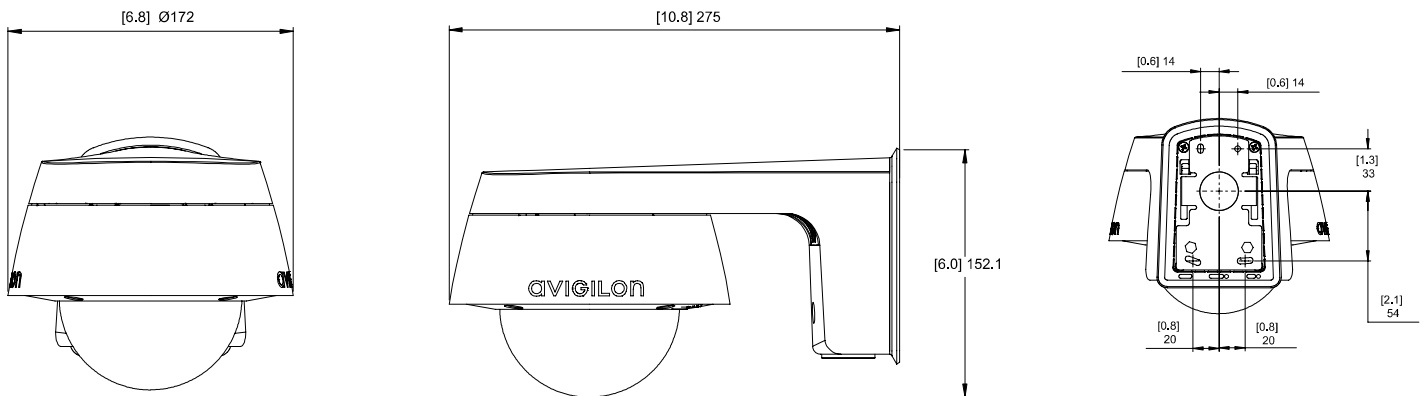
Pendant Dome Camera

(H5A-DP)

WITH NPT MOUNT
(H4A-MT-NPTA1)

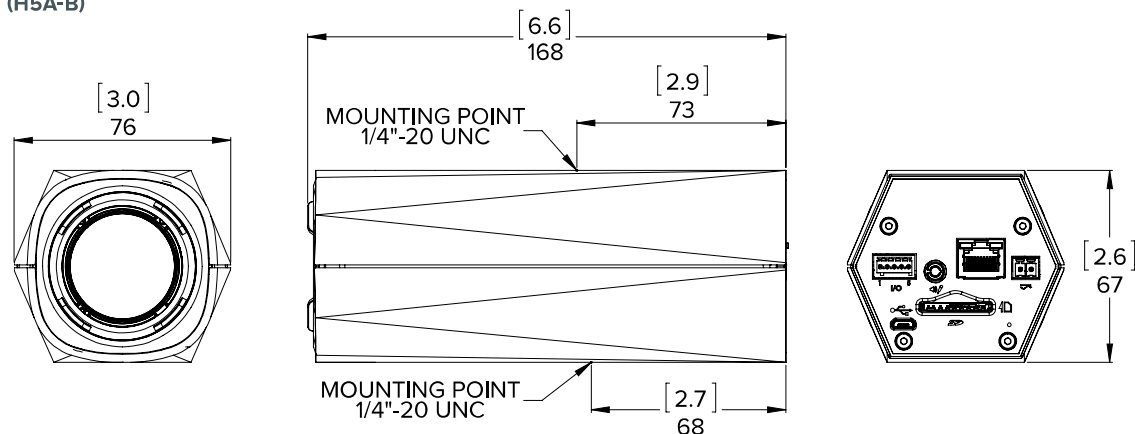


WITH WALL MOUNT
(H4A-MT-WALL1)



Box Camera

(H5A-B)

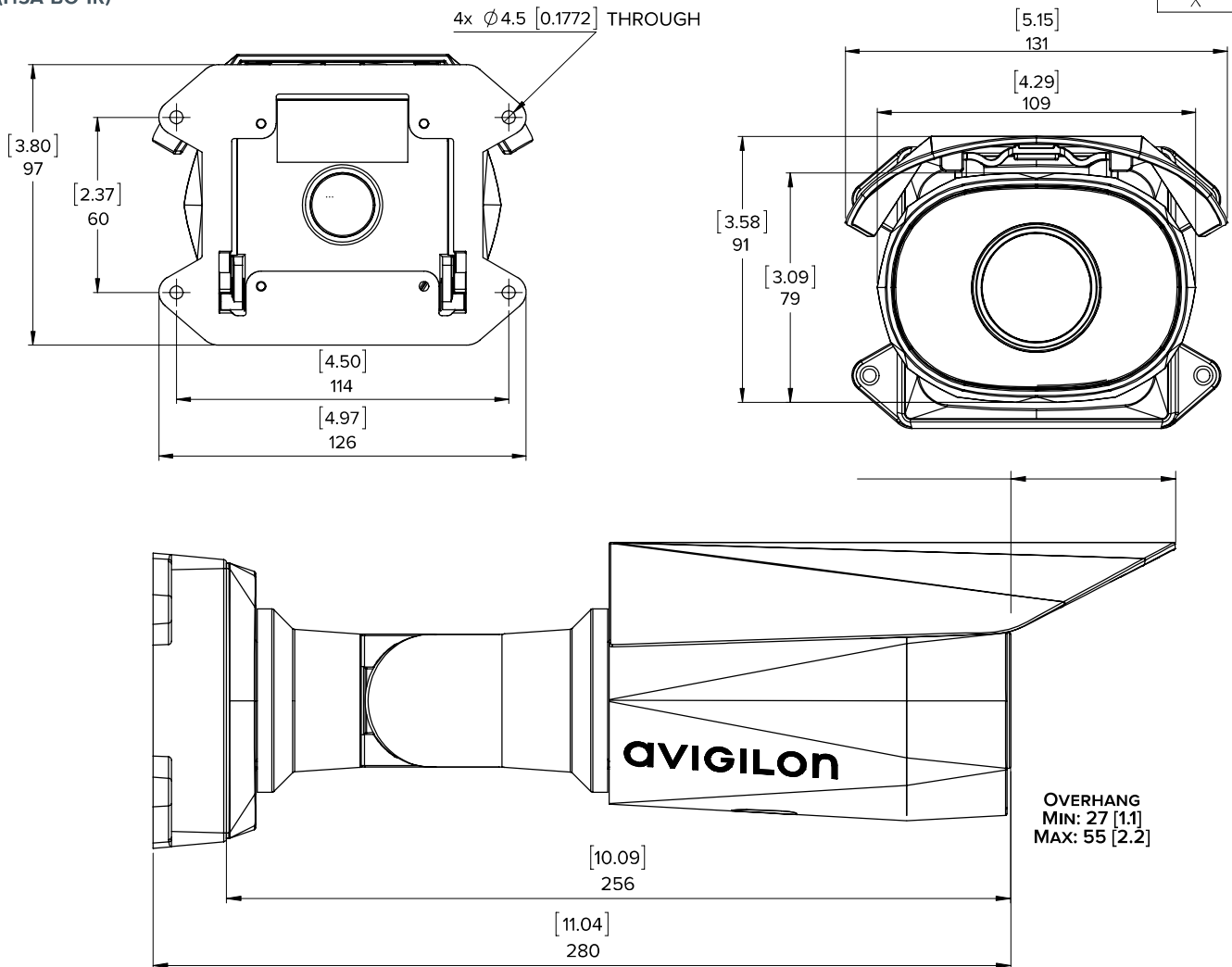


Outline Dimensions (Con't)

Bullet Camera

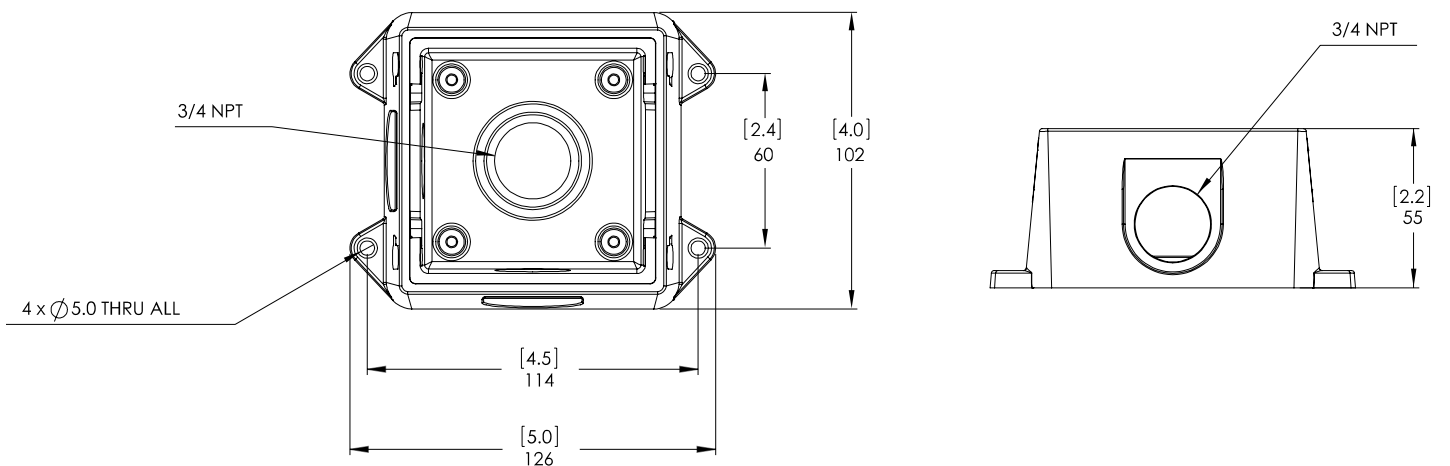
(H5A-BO-IR)

[X.X]	INCHES
X	MM



HD Bullet Camera Junction Box

(H4-BO-JBOX1)



Ordering Information (Outdoor Dome and Bullet)

Surface Mount Outdoor Dome Camera

(H5A-DO)	MP	WDR	LightCatcher Technology	Lens	IR	Analytics	HDSM SmartCodec
2.0C-H5A-DO1	2.0	✓	✓	3.3 - 9 mm		✓	✓
2.0C-H5A-DO1-IR	2.0	✓	✓	3.3 - 9 mm	✓	✓	✓
2.0C-H5A-DO2	2.0	✓	✓	9 - 22 mm		✓	✓
4.0C-H5A-DO1	4.0	✓	✓	3.3 - 9 mm		✓	✓
4.0C-H5A-DO1-IR	4.0	✓	✓	3.3 - 9 mm	✓	✓	✓
4.0C-H5A-DO2	4.0	✓	✓	9 - 22 mm		✓	✓
5.0C-H5A-DO2	5.0	✓	✓	9 - 22 mm		✓	✓
6.0C-H5A-DO1	6.0	✓	✓	4.9 - 8 mm		✓	✓
6.0C-H5A-DO1-IR	6.0	✓	✓	4.9 - 8 mm	✓	✓	✓
8.0C-H5A-DO1	8.0	✓	✓	4.9 - 8 mm		✓	✓
8.0C-H5A-DO1-IR	8.0	✓	✓	4.9 - 8 mm	✓	✓	✓
H4A-DO-SMOK1	Outdoor dome camera cover with smoked bubble						
H4A-DO-CLER1	Outdoor dome camera cover with clear bubble						
H4A-AC-GROM1	Camera sealing grommet, pack of 10						
CM-AC-GROM1	Pipe grommet, pack of 10						
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter						
CM-AC-AVIO1	3.5 mm jack with 1.8 m fly wire						

Pendant Mount Outdoor Dome Camera

(H5A-DP)	MP	WDR	LightCatcher Technology	Lens	IR	Analytics	HDSM SmartCodec
2.0C-H5A-DP1	2.0	✓	✓	3.3 - 9 mm		✓	✓
2.0C-H5A-DP1-IR	2.0	✓	✓	3.3 - 9 mm	✓	✓	✓
2.0C-H5A-DP2	2.0	✓	✓	9 - 22 mm		✓	✓
4.0C-H5A-DP1	4.0	✓	✓	3.3 - 9 mm		✓	✓
4.0C-H5A-DP1-IR	4.0	✓	✓	3.3 - 9 mm	✓	✓	✓
4.0C-H5A-DP2	4.0	✓	✓	9 - 22 mm		✓	✓
5.0C-H5A-DP2	5.0	✓	✓	9 - 22 mm		✓	✓
6.0C-H5A-DP1	6.0	✓	✓	4.9 - 8 mm		✓	✓
6.0C-H5A-DP1-IR	6.0	✓	✓	4.9 - 8 mm	✓	✓	✓
8.0C-H5A-DP1	8.0	✓	✓	4.9 - 8 mm		✓	✓
8.0C-H5A-DP1-IR	8.0	✓	✓	4.9 - 8 mm	✓	✓	✓
H4A-DP-SMOK1	Pendant dome camera cover with smoked bubble						
H4A-DP-CLER1	Pendant dome camera cover with clear bubble						
H4A-MT-WALL1	Indoor/outdoor pendant wall arm mount						
H4A-MT-NPTA1	Indoor/outdoor pendant NPT mount						
H4-MT-POLE1	Aluminum pole mounting bracket for pendant dome cameras						
H4-MT-CRNR1	Aluminum corner mounting bracket for pendant dome cameras						
CM-AC-GROM1	Pipe grommet, pack of 10						
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter						
CM-AC-AVIO1	3.5 mm jack with 1.8 m fly wire						

Outdoor Bullet Camera

(H5A-BO-IR)	MP	WDR	LightCatcher Technology	Lens	IR	Analytics	HDSM SmartCodec
2.0C-H5A-BO1-IR	2.0	✓	✓	3.3 - 9 mm	✓	✓	✓
2.0C-H5A-BO2-IR	2.0	✓	✓	9 - 22 mm	✓	✓	✓
4.0C-H5A-BO1-IR	4.0	✓	✓	3.3 - 9 mm	✓	✓	✓
4.0C-H5A-BO2-IR	4.0	✓	✓	9 - 22 mm	✓	✓	✓
5.0C-H5A-BO2-IR	5.0	✓	✓	9 - 22 mm	✓	✓	✓
6.0C-H5A-BO1-IR	6.0	✓	✓	4.9 - 8 mm	✓	✓	✓
8.0C-H5A-BO1-IR	8.0	✓	✓	4.9 - 8 mm	✓	✓	✓
H4-BO-JBOX1	Junction box for bullet cameras						
H4-MT-POLE1	Aluminum pole mounting bracket for bullet cameras						
H4-MT-CRNR1	Aluminum corner mounting bracket for bullet cameras						
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter						

Ordering Information (Indoor Box and Dome)

Box Camera

(H5A-B)	MP	WDR	LightCatcher Technology	Lens	IR	Analytics	HDSM SmartCodec
2.0C-H5A-B1	2.0	✓	✓	4.7 - 84.6 mm		✓	✓
2.0C-H5A-B2	2.0	✓	✓	3.3 - 9 mm		✓	✓
4.0C-H5A-B2	4.0	✓	✓	3.3 - 9 mm		✓	✓
4.0C-H5A-B3	4.0	✓	✓	9 - 22 mm		✓	✓
6.0C-H5A-B2	6.0	✓	✓	4.9 - 8 mm		✓	✓
8.0C-H5A-B2	8.0	✓	✓	4.9 - 8 mm		✓	✓
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter						
CM-AC-AVIO1	3.5 mm jack with 1.8 m fly wire						

Surface Mount Indoor Dome Camera

(H5A-D)	MP	WDR	LightCatcher Technology	Lens	IR	Analytics	HDSM SmartCodec
2.0C-H5A-D1	2.0	✓	✓	3.3 - 9 mm		✓	✓
2.0C-H5A-D1-IR	2.0	✓	✓	3.3 - 9 mm	✓	✓	✓
2.0C-H5A-D2	2.0	✓	✓	9 - 22 mm		✓	✓
4.0C-H5A-D1	4.0	✓	✓	3.3 - 9 mm		✓	✓
4.0C-H5A-D1-IR	4.0	✓	✓	3.3 - 9 mm	✓	✓	✓
4.0C-H5A-D2	4.0	✓	✓	9 - 22 mm		✓	✓
6.0C-H5A-D1	6.0	✓	✓	4.9 - 8 mm		✓	✓
6.0C-H5A-D1-IR	6.0	✓	✓	4.9 - 8 mm	✓	✓	✓
8.0C-H5A-D1	8.0	✓	✓	4.9 - 8 mm		✓	✓
8.0C-H5A-D1-IR	8.0	✓	✓	4.9 - 8 mm	✓	✓	✓
H4A-DD-SMOK1	Indoor dome camera cover with smoked bubble						
H4A-DD-CLER1	Indoor dome camera cover with clear bubble						
H4A-DD-SMOK1-BL	Black indoor dome camera cover with smoked bubble						
H4A-DD-CLER1-BL	Black indoor dome camera cover with clear bubble						
H4A-DD-SDWL1	Indoor dome camera sidewall knockout plug, pack of 5						
H4A-DD-SDWL1-BL	Black indoor dome camera sidewall knockout plug, pack of 5						
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter						
CM-AC-AVIO1	3.5 mm jack with 1.8 m fly wire						

In-Ceiling Mount Indoor Dome Camera

(H5A-DC)	MP	WDR	LightCatcher Technology	Lens	IR	Analytics	HDSM SmartCodec
2.0C-H5A-DC1	2.0	✓	✓	3.3 - 9 mm		✓	✓
2.0C-H5A-DC1-IR	2.0	✓	✓	3.3 - 9 mm	✓	✓	✓
2.0C-H5A-DC2	2.0	✓	✓	9 - 22 mm		✓	✓
4.0C-H5A-DC1	4.0	✓	✓	3.3 - 9 mm		✓	✓
4.0C-H5A-DC1-IR	4.0	✓	✓	3.3 - 9 mm	✓	✓	✓
4.0C-H5A-DC2	4.0	✓	✓	9 - 22 mm		✓	✓
6.0C-H5A-DC1	6.0	✓	✓	4.9 - 8 mm		✓	✓
6.0C-H5A-DC1-IR	6.0	✓	✓	4.9 - 8 mm	✓	✓	✓
8.0C-H5A-DC1	8.0	✓	✓	4.9 - 8 mm		✓	✓
8.0C-H5A-DC1-IR	8.0	✓	✓	4.9 - 8 mm	✓	✓	✓
H4A-DC-SMOK1	In-ceiling dome camera cover with smoked bubble						
H4A-DC-CLER1	In-ceiling dome camera cover with clear bubble						
H4A-DC-SMOK1-BL	Black in-ceiling dome camera cover with smoked bubble						
H4A-DC-CLER1-BL	Black in-ceiling dome camera cover with clear bubble						
H4-DC-CPNL1	Metal ceiling panel						
H4A-AC-GROM1	Camera sealing grommet, pack of 10						
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter						
CM-AC-AVIO1	3.5 mm jack with 1.8 m fly wire						

Optional Camera Licenses

CAM-FIPS	Camera license to enable FIPS cryptographic mode on any H5A cameras
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4th Generation Network Video Recorders

Fourth generation Avigilon Network Video Recorders provide secure, reliable and scalable platforms for high performance end-to-end security solutions. Our network security recorders are pre-configured for facial recognition and Avigilon Appearance SearchTM technology. All NVRs are preloaded with Avigilon Control Center (ACC) for secure network video recording and management of multi-megapixel IP cameras up to our highest resolution 10K (61 megapixel) H5 Pro camera.



Features



AVIGILON FACIAL RECOGNITION AND APPEARANCE SEARCH NATIVE SUPPORT

Native support for Avigilon facial recognition and Appearance Search technology* which helps enable security operators to locate a specific person or vehicle of interest across an entire site or multiple sites.



INDUSTRY LEADING STORAGE DENSITY AND PERFORMANCE

From 8TB to 288TB of raw storage (6TB – 217TB effective) in a 1U or 2U chassis, NVR4 models meet the most demanding recording requirements.



SUPERIOR REDUNDANCY AND RELIABLE DATA STORAGE

Reliable storage with RAID-configured redundancy offers a highly available and resilient system that protects your data. Our PRM and STD models include reliable hard drives with RAID 6 or 60 redundancy.



SINGLE POINT OF CONTACT FOR END TO END TECHNICAL SUPPORT

All NVRs are backed by a limited-time warranty* with on-site part replacement service and lifetime 24/7 Avigilon telephone technical support.



LOWERS DEPLOYMENT COSTS

Pre-configured with ACCTM software, optimized and provisioned.



SOLID-STATE DRIVE (PRM AND STD)

Operating systems on a redundant array of Solid-State Drives designed for greater reliability and speed.



EASY RECOVERY SOLUTION

Designed with a separate and redundant array of Solid-State Drives for the operating system (PRM and STD), with a built-in recovery partition to simplify the recovery process, if needed.



INCLUDES 1 YEAR FREE CLOUD SERVICES TRIAL

Securely and remotely connect with your ACC sites through the Avigilon Cloud Services platform. The system health dashboard allows you to remotely monitor the active status of all recorders and connected cameras to minimize system downtime and prioritize maintenance of critical components.



WEB ENDPOINT TECHNOLOGY WITH REMOTE NOTIFICATIONS ON MOBILE DEVICES

Optimized for mobile connections out-of-the-box with built-in web endpoint technology. Receive instant notifications to any mobile device with full support for remote alerts.

* Avigilon Appearance Search technology and facial recognition support included for NVR4X-PRM and NVR4X-STD, and is optional for NVR4-VAL (Analytics Kit required).

* 5-year hardware warranty included for NVR4X-PRM and NVR4X-STD. 3-year hardware warranty included for NVR4-VAL (2-year extension is available for NVR4-VAL).

Analytics



Avigilon Appearance Search™

Quickly locates a specific person or vehicle of interest across an entire site using a sophisticated deep learning AI search engine.

ACC Enterprise required



License Plate Recognition (LPR)

Works with ACC software for accurate license plate capture at a range of distances and speeds. Requires an additional license.

ACC7-LPR license per channel required



Face Recognition

Detects matches from managed watchlists to alert operators of people of interest. Requires Appearance Search and an additional license.

ACC7-FACE license required

MODEL	ANALYTICS KIT	MAXIMUM SUPPORTED CAMERAS BY FEATURE ¹			NUMBER OF LPR LANES ²			
		APPEARANCE SEARCH ONLY ³	FACE RECOGNITION + APPEARANCE SEARCH ³	FACE MASK DETECTION + APPEARANCE SEARCH ³	5 FPS (<16 KM/H)	10 FPS (<48 KM/H)	20 FPS (<100 KM/H)	30 FPS (<150KM/H)
NVR4X Premium	Built-In	200	50	200	4	3	2	1
NVR4X Standard	Built-In	200	50	200	3	2	1	–
NVR4 Value	HD-NVR-ANK2-1	50	15	50	2	1	1	–

¹ These performance figures are based on validation testing by Avigilon, using Avigilon Control Center software version 7.6.4. Assumes appliance-wide average per camera rates of classified objects leaving the field of view.
 - H5A cameras – One every second;
 - H4A cameras – One every two seconds.
 Additional licenses may be required. For more information, contact Avigilon Sales.

² Assumes a 3MP camera with 1MP license plate scan area and Frames Per Second (FPS) to recognize license plates up to vehicle speeds in Kilometers Per Hour (KM/H). Results may vary according to camera mounting parameters.

³ Requires H5A or H4A cameras. The Avigilon Appearance Search camera support limit does not affect any NVR throughputs for simultaneous recording, playback and live streaming.

Specifications

Premium

192 TB

217 TB

Premium

64 TB

96 TB

128 TB

157 TB

Standard

16 TB

24 TB

32 TB

48 TB

Value

6 TB

12 TB

16 TB

24 TB

SYSTEM

Avigilon Control Center™ Edition		Core, Standard and Enterprise compatible		Core, Standard and Enterprise compatible		Core, Standard and Enterprise compatible		Core, Standard and Enterprise compatible	
Network Video Streaming Performance ⁵	Network Connection	10 GbE - multiple connections ⁴	1 GbE - multiple connections	10 GbE - multiple connections ⁴	1 GbE - multiple connections	1 GbE - with multiple network connections	1 GbE		
	Recording Rate	Up to 1500 Mbps (max 1250 Mbps per connection)	Up to 700 Mbps (max 600 Mbps per connection)	Up to 1500 Mbps (max 1250 Mbps per connection)	Up to 700 Mbps (max 600 Mbps per connection)	Up to 700 Mbps (max 250 Mbps per connection)	Up to 300 Mbps Up to 300 Mbps (max 300 Mbps per connection)		
	Playback Rate	Up to 600 Mbps (while simultaneously recording video)		Up to 600 Mbps (while simultaneously recording video)		Up to 450 Mbps (while simultaneously recording video)	Up to 128 Mbps (while simultaneously recording video)		
Operating System		Microsoft Windows Server 2016		Microsoft Windows Server 2016		Microsoft Windows 10 IoT Enterprise LTSB or Windows Server 2016		Microsoft Windows 10 IoT Enterprise LTSB	
Hard Disk Drive Configuration	Video Data	RAID 60 — Up to 18 x 3.5", hot-swappable		RAID 6 — Up to 12 x 3.5", hot-swappable		RAID 6 — Up to 8 x 3.5", hot-swappable		RAID 5 — Up to 4 x 3.5", hot-swappable	
	Operating System	2 x M.2 SSD drives, RAID 1		2 x M.2 SSD drives, RAID 1		2 x M.2 SSD drives, RAID 1		Video Data and OS hosted on separated Virtual Disks	
Recording Storage Capacity		Up to 288 TB raw, 217 TB effective (RAID 60)		Up to 180 TB raw, 157 TB effective (RAID 6)		Up to 64 TB raw, 48 TB effective (RAID 6)		Up to 32 TB raw, 24 TB effective (RAID 5)	
Network Interface		2 x 10 GbE SFP+ ports (transceivers not included) 4 x 1 GbE RJ-45 ports (1000Base-T)		2 x 10 GbE SFP+ ports (transceivers not included) 6 x 1 GbE RJ-45 ports (1000Base-T)		4 x 1 GbE RJ-45 ports (1000Base-T) (Optional) 2 x 10 GbE SFP+ ports (transceivers not included)		2 x 1 GbE RJ-45 ports (1000Base-T) (Optional) 2 x 10 GbE SFP+ ports (transceivers not included)	
Memory		2 x 16 GB DDR4		2 x 16 GB DDR4		2 x 8 GB DDR4		8 GB DDR4	
Processor		Intel® Xeon®		Intel® Xeon®		Intel® Xeon®		Intel® Xeon®	
Video Outputs		1 x VGA		1 x VGA		1 x VGA		1 x VGA	
Local Viewing		No		No		No		No	
Out-of-band Management		iDRAC9 Enterprise		iDRAC9 Enterprise		iDRAC9 Express		iDRAC9 Express	

⁴ The 10 GbE network connection requires the HD-NVR4X-SFPPLUS-SR transceiver accessory.

⁵ These performance figures are based on validation testing by Avigilon, using Avigilon Control Center software. For more information, contact Avigilon Sales.

MECHANICAL

Form Factor	2U rack mount chassis	2U rack mount chassis	2U rack mount chassis	1U rack mount chassis
Dimensions (LxWxH)	751.3 mm x 482 mm x 86.8 mm; 29.58" x 18.98" x 3.41"	717.6 mm x 482.0 mm x 86.8 mm; 27.71" x 18.97" x 3.41"	717.6 mm x 482.0 mm x 86.8 mm; 27.71" x 18.97" x 3.41"	594.13 mm x 482.6 mm x 42.8 mm; 23.39" x 19" x 1.69"
Weight	46.3 kg (102 lbs) when fully populated with hard drives	34.5 kg (76 lbs)	34.5 kg (76 lbs)	13.6 kg (29.98 lbs)

ELECTRICAL

Power Input	100 to 240 VAC, 50/60 Hz, auto-switching	100 to 240 VAC, 50/60 Hz, auto-switching	100 to 240 VAC, 50/60 Hz, auto-switching	100 to 240 V AC, 50/60 Hz, auto-switching
Power Supply	Dual redundant, hot-swappable	Dual redundant, hot-swappable	Single — optional power supply available	Single — optional power supply available
Power Consumption	Average: 429 W (1+1) (1463.8 BTU/h), Maximum: 1100 W (2559.1 BTU/h)	Average: 333 W (1+1) (1136.2 BTU/h), Maximum: 750 W (2559.1 BTU/h)	Average: 269 W (917.9 BTU/h), Maximum: 750 W (2559.1 BTU/h)	Average: 197 W (672.2 BTU/h), Maximum: 350 W (1340 BTU/hr)
Power Efficiency	80 PLUS Platinum, ENERGY STAR 2.0	80 PLUS Platinum, ENERGY STAR 2.0	80 PLUS Platinum, ENERGY STAR 2.0	80 PLUS Platinum, ENERGY STAR 2.0

Specifications (Cont'd)

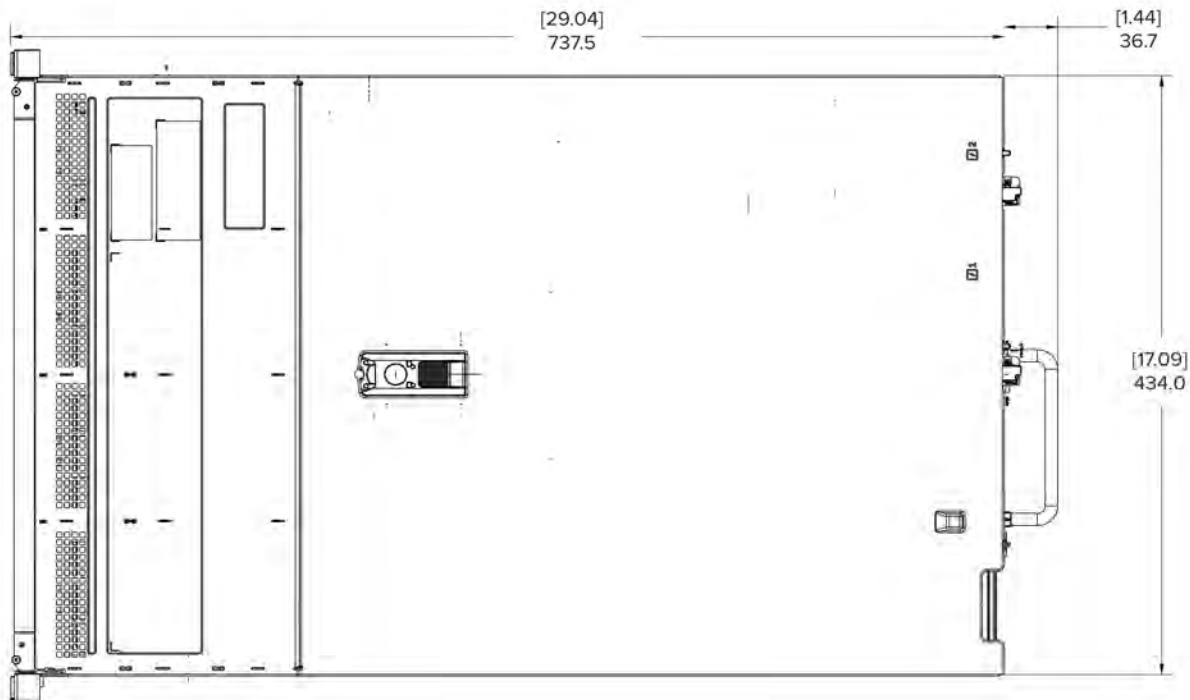
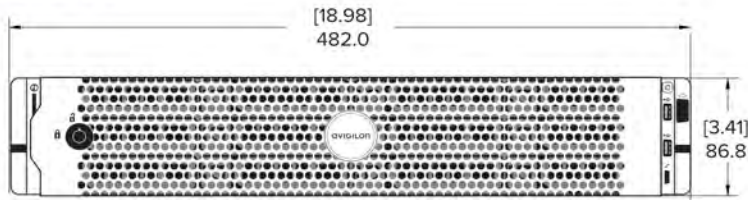
ENVIRONMENTAL		Operating Temperature	10° C to 35° C (50° F to 95° F)
		Storage Temperature	-40° C to 65° C (-40° F to 149° F)
		Operating Humidity	10% to 80% relative humidity with 29°C (84.2°F) maximum dew point
		Storage Humidity	5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times
		Operating Vibration	0.26 Grms at 5 Hz to 350 Hz
		Storage Vibration	1.88 Grms at 10 Hz to 500 Hz for 15 min
		Operating Shock	One pulse on each side of the system of 71 G for up to 2 ms
		Storage Shock	Six consecutively executed shock pulses in the positive and negative x, y, and z axes (one pulse on each side of the system) of 71 G for up to 2 ms
		Operating Altitude	3,048 m (10,000 ft)
		Storage Altitude	12,000 m (39,370 ft)
CERTIFICATIONS		Certifications/Directives	UL, cUL, CE, RCM, BSMI, CCC, EAC, KC, NOM, NRCS, VCCI, RoHS, Reach (SVHC), WEEE, BIS
		Safety	UL/CSA/EN/IEC 62368-1
		Electromagnetic Emissions	CFR Title 47, FCC Part 2, 15 Class A, ICES-003(A), EN 55032 Class A, EN 61000-3-2, EN 61000-3-3
		Electromagnetic Immunity	EN 55024
Warranty	PRM and STD	5-year NBD (Next Business Day) with onsite parts delivery service. 4-hour mission critical warranty upgrade available.	
	VAL	3-year NBD (Next Business Day) with onsite parts delivery service. 2-year warranty extension available.	
SUPPLIED ACCESSORIES		Rack Rail System	Sliding rail system with cable management arm. Supports: <ul style="list-style-type: none"> • Tool-less mounting in 19"-wide EIA-310-E compliant square hole and unthreaded round-hole 4-post racks • Tooled mounting in threaded hole 4-post racks
		Bezel	1, front
Power Cords	PRM	2	
	STD and VAL	1	

Outline Dimensions

NVR4X-PRM

(NVR4X-PRM-192TB/217TB)

[X.X]	INCHES
X	MM

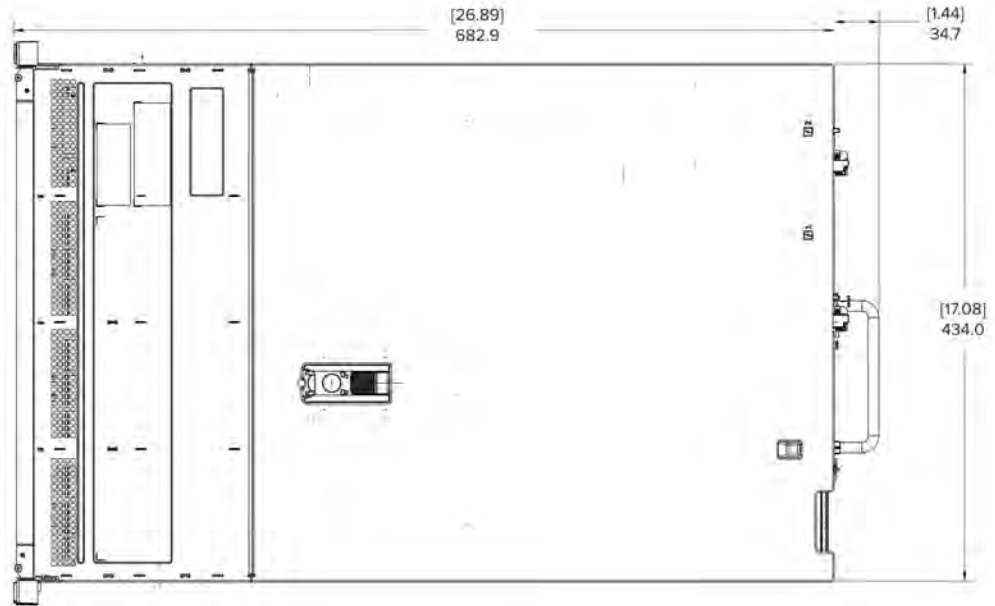
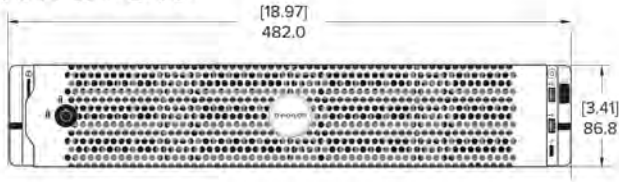


Outline Dimensions

NVR4X-PRM and NVR4X-STD

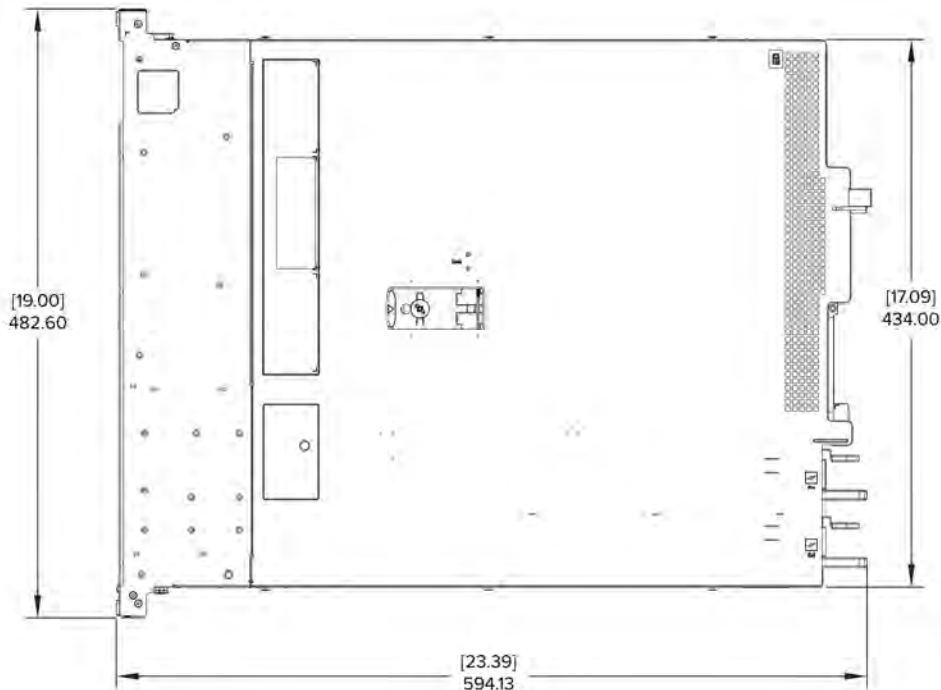
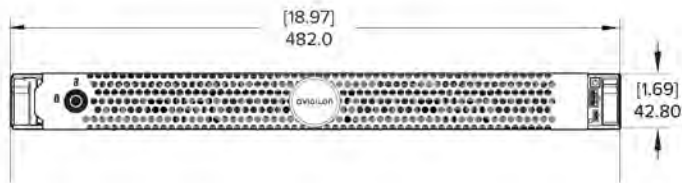
(NVR4X-PRM-64TB/96TB/128TB/157TB)

[X.X]	INCHES
X	MM



NVR4-VAL

[X.X]	INCHES
X	MM



Ordering Information

NVR4X-PRM

NVR4X-PRM-64TB	64 TB (80 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-96TB	96 TB (120 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-128TB	128 TB (160 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-157TB	157 TB (192 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-192TB	192 TB (256 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-217TB	217 TB (288 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center

Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.

NVR4X-STD

NVR4X-STD-16TB-S16	16 TB (24 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-16TB	16 TB (24 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4X-STD-24TB-S16	24 TB (32 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-24TB	24 TB (32 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4X-STD-32TB-S16	32 TB (48 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-32TB	32 TB (48 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4X-STD-48TB-S16	48 TB (64 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-48TB	48 TB (64 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center

Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.

NVR4-VAL

NVR4-VAL-6TB	6 TB (8 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4-VAL-12TB	12 TB (16 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4-VAL-16TB	16 TB (24 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4-VAL-24TB	24 TB (32 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center

Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software and the optional Analytics Kit accessory (HD-NVR-ANK2-1).

Accessories

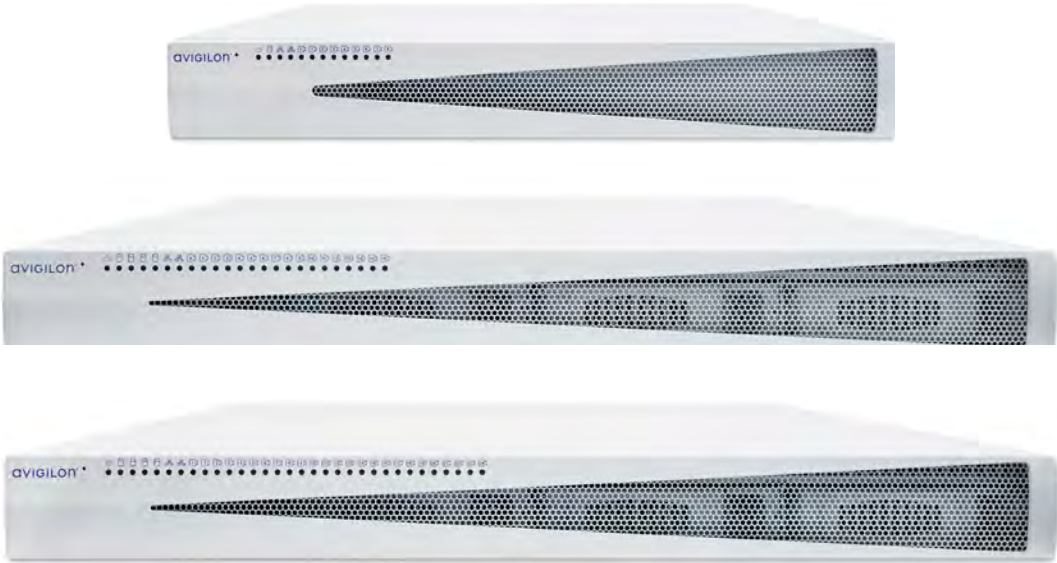
HD-NVR-ANK2-1	Analytics Kit for Avigilon Appearance Search and facial recognition software*
NVR4-VAL-10GBE	Network Card, DP 10G-SFP+ NVR4 VAL
NVR4X-STD-10GBE	Network Card, DP 10G-SFP+ NVR4X STD
NVR4X-PRM-2NDCPU	2nd CPU Kit for NVR4X PRM
HD-NVR4-STD-2NDCPU	2nd CPU Kit for NVR4X STD, and NVR4 STD
NVR4X-1100W-2NDPS-XX	Redundant, hot-swappable power supply for NVR4X PRM 192/217TB
NVR4X-750W-2NDPS-XX	Redundant, hot-swappable power supply for NVR4X STD, and PRM 64/96/128/157TB
NVR4-VAL-2NDPS-XX	Redundant, hot-swappable power supply for NVR4 VAL
NVR4-HDDS-INT-16TB	Spare hard drive, 16TB, internal bay, for NVR4X PRM 192/217TB
NVR4-HDDS-HOT-16TB	Spare hard drive, 16TB, front or rear bay, for NVR4X PRM 128/157/192/217TB
NVR4-HDDS-HOT-12TB	Spare hard drive, 12TB, front or rear bay, for NVR4X PRM 96TB
NVR4-HDDS-HOT-8TB	Spare hard drive, 8TB, front or rear bay, for NVR4X PRM 64TB, NVR4X STD 32/48TB, and NVR4 VAL 16/24TB
NVR4-HDDS-HOT-4TB	Spare hard drive, 4TB, front or rear bay, for NVR4X STD 16/24TB and NVR4 VAL 12TB
NVR4-HDDS-HOT-2TB	Spare hard drive, 2TB, front or rear bay, for NVR4 VAL 6TB
AVA-HED1-NVR4X-PRM2-CONNECT	Avigilon Video Archive, Connectivity kit for NVR4X PRM 192/217TB
AVA-HED1-NVR4X-PRM1-CONNECT	Avigilon Video Archive, Connectivity kit for NVR4X PRM 64/96/128/157TB
AVA-HED1-NVR4X-STD-CONNECT	Avigilon Video Archive, Connectivity kit for NVR4X STD
IDRAC9-ENT-UPG	iDRAC Enterprise upgrade
HD-NVR4-SFPPLUS-DA	SFP+ 10GbE Twinax Direct Attach cable 3m
NVR4X-SFPPLUS-SR	SFP+ 10GBASE-short range transceiver
NVR4X-PRM2-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for NVR4X PRM 192/217TB
NVR4X-PRM1-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for NVR4X PRM 64/96/128/157TB
NVR4X-STD-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for NVR4X STD
NVR4-VAL-WARR-EXTEND-2YR	2-year warranty extension for NVR4 VAL

* Required for NVR4-VAL only.



Video Appliance

The new generation of Avigilon Video Appliances provide an all-in-one security solution with improved performance and higher capacity that help reduce installation time and overall complexity of the surveillance system. The Video Appliance line integrates our ACC™ video management software with a high-powered PoE switch and a client workstation to provide a cost effective recording and video management solution that is capable of supporting multi-megapixel IP cameras, up to our industry-leading 7K (30 megapixel) HD Pro camera line.



Avigilon Video Appliances can be easily added to an existing Avigilon video surveillance system, or as a standalone system for small to medium-scale surveillance deployments.

The compact and powerful 8-port model is an ideal turnkey solution for small video surveillance deployments.

The 16 and 24 port Pro models are suitable for larger installations requiring advanced functionality such as RAID protection, larger storage, increased camera support, and superior overall performance.

KEY FEATURES

- Preloaded and configured with ACC Video Management Software
- High performance of up to 400 Mbps (16 and 24 port) and 200 Mbps (8 port) of total throughput – simultaneous recording, playback, and live streaming
- Up to 24TB of recording capacity with the 1U rack mount appliances and 8TB of recording capacity with the 8-port model
- Front-accessible video storage hard drive streamlines maintenance
- Includes digital alarm inputs and outputs for integration with external systems
- Solid State Drive OS volume ensures high speed operation
- Embedded managed switch with powered PoE outputs provide up to 30 Watts of power per port on all ports
- Includes high-performance RAID 5 technology that protects and enables access to a drive's data in the event of failure, even while the drive is being replaced and rebuilt*
- Protected by a three-year warranty from Avigilon

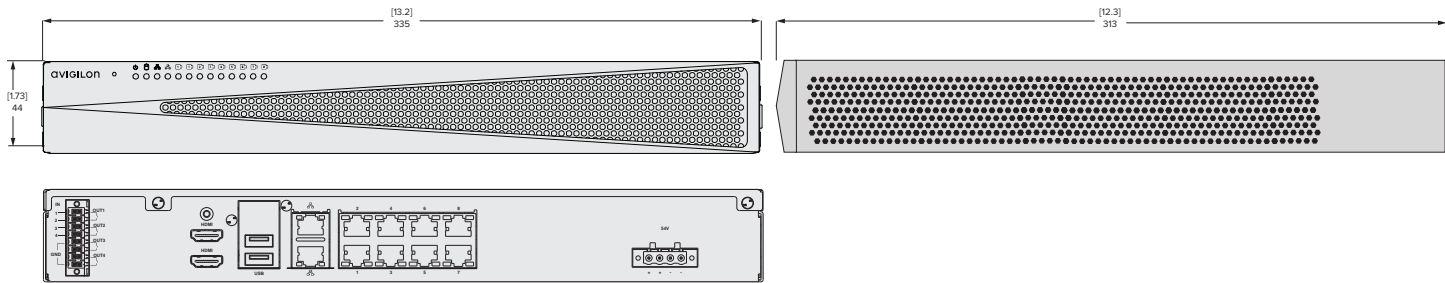
*On Pro models only

Outline Dimensions

Video Appliance — 8 Port

(VMA-AS3-8P)

[X.X]	INCHES
X	MM



Specifications

SYSTEM	Control Center Edition	Core; Standard and Enterprise compatible								
	Recording Rate	Up to 100 Mbps								
	Playback Rate	Up to 100 Mbps								
	Recording Image Rate	Up to 30 images per second per channel								
	Local Viewing	Yes								
	Operating System	Microsoft® Windows 10 IoT Enterprise								
	Hard Disk Drive Configuration	1 × 3.5" SATA								
	Recording Storage Capacity	Up to 8 TB								
	Memory	8 GB DDR4								
	Video Outputs	2 × HDMI ports								
	PoE+ Ports	8 × 10/100 Mbps(IEEE 802.3at)								
	PoE Output	Up to 30W/Port (120W Total)								
	Camera Network Uplink	10/100/1000 Mbps								
	Corporate Network Uplink	10/100/1000 Mbps								
	External I/O Terminals	4 × Digital Inputs (25Vdc max.) and 4 × Relay Outputs (24Vdc/1A max.)								
	Switch Control	Managed Switch with Web-based UI								
USB	2 × USB 3.0									
MECHANICAL	Form Factor	Small form factor								
	Dimensions (LxWxH)	313 mm × 335 mm × 44 mm; 12.30" × 13.2" × 1.73"								
	Weight	3 kg; 6.4 lb								
ELECTRICAL	Power Input	100 to 240 VAC, 50/60 Hz								
	Power Supply	Single non-redundant								
	Power Consumption	80 W min.; 200 W max.								
ENVIRONMENTAL	Operating Temperature	0°C to 40°C (32°F to 104°F)								
	Storage Temperature	-40°C to 65°C (-40°F to 149°F)								
	Humidity	10 - 90% Relative humidity (non-condensing)								
CERTIFICATIONS	Certifications/Directives	UL	cUL	CE	RoHS	WEEE	RCM	NOM	NRCS	
	Safety	UL 62368-1	CSA 62368-1	IEC/EN 62368-1						
	Electromagnetic Emissions	(Class B) FCC Part 15 Subpart B	IC ICES-003	EN 55032	EN 61000-6-3	EN 61000-3-2	EN 61000-3-3			
	Electromagnetic Immunity	EN 55024	EN 61000-6-1							
ORDERING INFORMATION	PRODUCTS									
	VMA-AS3-8P2	HD Video Appliance 8 Port 2 TB.								
	VMA-AS3-8P4	HD Video Appliance 8 Port 4 TB.								
	VMA-AS3-8P8	HD Video Appliance 8 Port 8 TB.								
	ACCESSORIES									
	RMS1U-B-AS3-8P	1U Rack Mountable Shelf for HDVA3 8-port								
	VMA-AS3-HDD02	HDVA3, 2TB Hard Drive Compatible with 8-Port, 16-Port								
	VMA-AS3-HDD04	HDVA3, 4TB Hard Drive Compatible with 8-Port, 16-Port, 24-Port								
	VMA-AS3-HDD08	HDVA3, 8TB Hard Drive Compatible with 8-Port, 24-Port								
	PS-270W-AS3-8P	HDVA3, 8-Port Power Supply - no power cord								
	LICENSES									
	Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search requires ACC Enterprise Edition.									
	ACC7-COR	ACC 7 Core Edition camera license								
	ACC7-STD	ACC 7 Standard Edition camera license								
	ACC7-ENT	ACC 7 Enterprise Edition camera license								

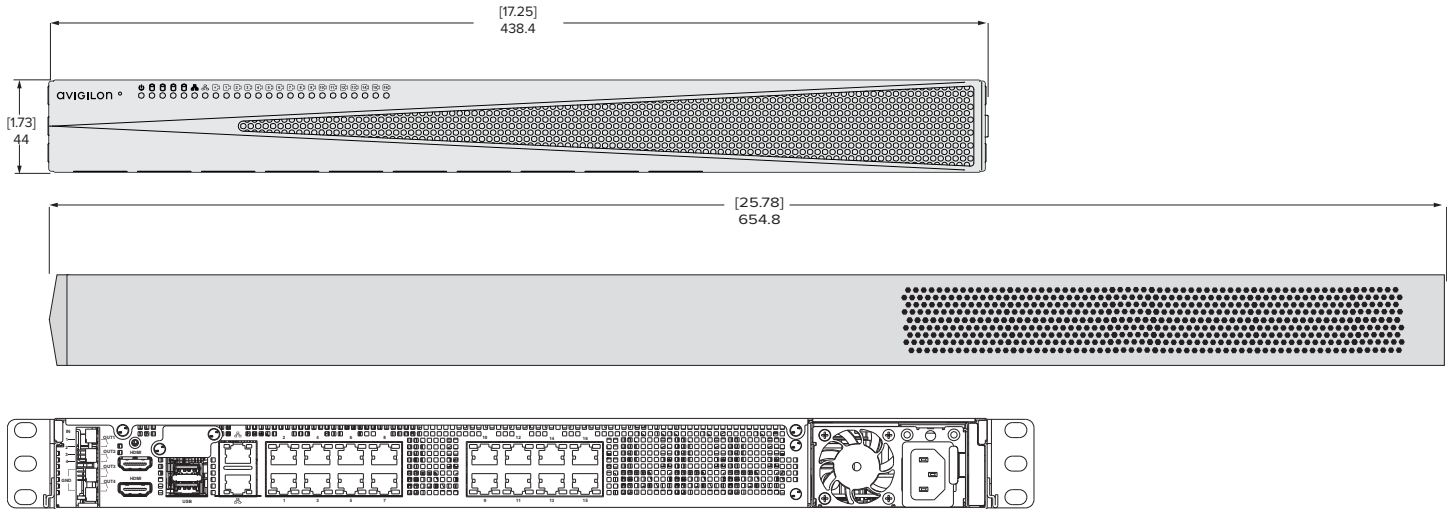
VMA-AS3-xxPxx-NA = VMA-AS3-xxPxx-UK = VMA-AS3-xxPxx-EU = VMA-AS3-xxPxx-AU =

Outline Dimensions

Video Appliance Pro — 16 Port

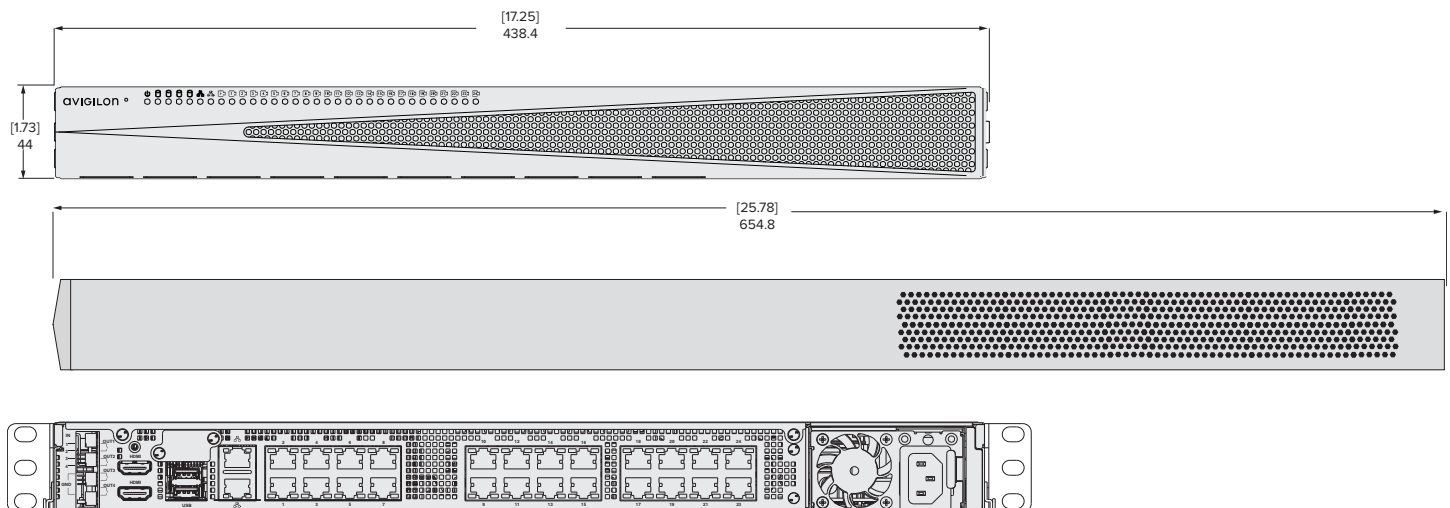
(VMA-AS3-16P)

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X	MM



Video Appliance Pro — 24 Port

(VMA-AS3-24P)



Specifications

SYSTEM

VIDEO APPLIANCE PRO 16-PORT

VIDEO APPLIANCE PRO 24-PORT

Control Center Edition	Core, Standard and Enterprise compatible	Core, Standard and Enterprise compatible
Recording Rate	Up to 300 Mbps	Up to 300 Mbps
Playback Rate	Up to 100 Mbps	Up to 100 Mbps
Recording Image Rate	Up to 30 images per second per channel	Up to 30 images per second per channel
Local Viewing	Yes	Yes
Operating System	Microsoft Windows 10 IoT Enterprise	Microsoft Windows 10 IoT Enterprise
Hard Disk Drive Configuration	RAID 5 — Up to 4 × 3.5" SATA	RAID 5 — Up to 4 × 3.5" SATA
Recording Storage Capacity	Up to 12 TB	Up to 24 TB
Memory	8 GB DDR4	8 GB DDR4
Video Outputs	2 × HDMI ports	2 × HDMI ports
PoE+ Ports	16 × 10/100 Mbps (IEEE 802.3at)	24 × 10/100 Mbps (IEEE 802.3at)
PoE Output	Up to 30W/Port (240W Total)	Up to 30W/Port (360W Total)
Camera Network Uplink	10/100/1000 Mbps	10/100/1000 Mbps
Corporate Network Uplink	10/100/1000 Mbps	10/100/1000 Mbps
External I/O Terminals	4 × Digital Inputs (25Vdc max.) and 4 × Relay Outputs (24Vdc/1A max.)	4 × Digital Inputs (25Vdc max.) and 4 × Relay Outputs (24Vdc/1A max.)
Switch Control	Managed Switch with Web-based UI	Managed Switch with Web-based UI
USB	2 × USB 3.0	2 × USB 3.0

MECHANICAL

Form Factor	1U
Dimensions (LxWxH)	654.8 mm × 438.4 mm × 44 mm; 17.25" × 25.78" × 1.73"
Weight	10 kg; 22 lb

ELECTRICAL

Power Input	100 to 240 VAC, 50/60 Hz
Power Supply	Single non-redundant
Power Consumption	200 W min.; 420 W max.

ENVIRONMENTAL

Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-40°C to 65°C (-40°F to 149°F)
Humidity	10 - 90% Relative humidity (non-condensing)

CERTIFICATIONS

Certifications/Directives	UL	cUL	CE	RoHS	WEEE	RCM	NOM	NRCS
Safety	UL 62368-1	CSA 62368-1	IEC/EN 62368-1					
Electromagnetic Emissions	(Class A) FCC Part 15 Subpart B	IC ICES-003	EN 55032	EN 61000-6-4	EN 61000-3-2	EN 61000-3-3		
Electromagnetic Immunity	EN 55024	EN 61000-6-2						

ORDERING INFORMATION

PRODUCT

VMA-AS3-16P06	HD Video Appliance Pro 16 Port 6TB.
VMA-AS3-16P09	HD Video Appliance Pro 16 Port 9TB.
VMA-AS3-16P12	HD Video Appliance Pro 16 Port 12TB.
VMA-AS3-24P12	HD Video Appliance Pro 24 Port 12TB.
VMA-AS3-24P18	HD Video Appliance Pro 24 Port 18TB.
VMA-AS3-24P24	HD Video Appliance Pro 24 Port 24TB.

ACCESSORIES

VMA-AS3-ANK	Analytics Kit for Appearance Search and Face Recognition, 16/24-port
VMA-AS3-HDD02	HDVA3, 2TB Hard Drive Compatible with 8-Port, 16-Port
VMA-AS3-HDD03	HDVA3, 3TB Hard Drive Compatible with 16-Port
VMA-AS3-HDD04	HDVA3, 4TB Hard Drive Compatible with 8-Port, 16-Port, 24-Port
VMA-AS3-HDD06	HDVA3, 6TB Hard Drive Compatible with 24-Port
VMA-AS3-HDD08	HDVA3, 8TB Hard Drive Compatible with 8-Port, 24-Port
PS-920W-AS3-16/24P	HDVA3, 16/24-Port Power Supply - no power cord
RAILS-B-AS3-16/24P	1U Rack mount rails for HDVA3, 16/24-port

LICENSES

Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search requires ACC Enterprise Edition.	
ACC7-COR	ACC 7 Core Edition camera license
ACC7-STD	ACC 7 Standard Edition camera license
ACC7-ENT	ACC 7 Enterprise Edition camera license

VMA-AS3-xxPxx-NA =  VMA-AS3-xxPxx-UK =  VMA-AS3-xxPxx-EU =  VMA-AS3-xxPxx-AU = 

H5SL Camera Line

1.3 MP

2 MP

3 MP

5 MP



Features



UNUSUAL MOTION DETECTION

Uses AI to notify you of unusual events that might otherwise have been missed, offering increased situational awareness and helping you effectively monitor more cameras.



H.265 WITH HDSM SMARTCODECTM TECHNOLOGY

Optimizes compression levels for regions in a scene to help maximize bandwidth savings, helping to keep internet connectivity costs down.



LIGHTCATCHERTM TECHNOLOGY

Offers exceptional detail in areas with low lighting.



ADAPTIVE INFRARED (IR)

Automatically adjusts IR beam width and exposure settings based on scene conditions to help maximize image quality.



DUAL EXPOSURE WIDE DYNAMIC RANGE

Capture details in scenes with both very bright and dark areas.



RELAY I/O CONNECTIONS

Incorporate and configure input/output actions and alarms for fast event response.



ONVIF[®] COMPLIANT

Built on an open platform to allow integration with other security solutions.



MADE IN NORTH AMERICA AND 5 YEAR WARRANTY

Manufactured in North America* using globally-sourced materials and North American expertise, Avigilon stands behind the quality of its products. Backed by a 5 year warranty.



MULTIPLE LENS OPTIONS

Choose from various lens types, including long zoom, for flexible coverage options.

Specifications

		1.3 MP	2.0 MP	3.0 MP	5.0 MP
IMAGE PERFORMANCE	Image Sensor	1/2.8" progressive scan CMOS			
	Aspect Ratio	5:4	16:9	4:3	4:3
	Active Pixels (H x V)	1280 x 1024	1920 x 1080	2048 x 1536	2592 x 1944
	Imaging Area (H x V)	3.2 mm x 2.56 mm; 0.126" x 0.101"	4.8 mm x 2.7 mm; 0.189" x 0.106"	5.12 mm x 3.84 mm; 0.202" x 0.151"	5.18 mm x 3.89 mm; 0.204" x 0.153"
	Max Image Rate	(50 Hz/60 Hz): 25 fps/30 fps			(50 Hz/60 Hz): 25 fps/24 fps
	Dynamic Range	WDR Off	100 dB		
		WDR On	120 dB (dual exposure)		
	Resolution Scaling	Down to 384 x 216			
	Camera Operating Mode	N/A			Full feature or High framerate mode (UMD disabled in High framerate mode)
	Bandwidth Management	HDSM SmartCodec technology; Idle scene mode			
3D Noise Reduction Filter	Yes				

		3 – 9 mm	3.1 – 8.4 mm	9.5 – 31 mm	
LENS AND IR ILLUMINATION	IR Illumination Max Distance (high power 850 nm LEDs)	Dome	30 m (100 ft), full tele 20 m (65 ft), full wide	30 m (100 ft), full tele 20 m (65 ft), full wide	N/A
		Bullet	N/A	50 m (165 ft), full tele 30 m (100 ft), full wide	70 m (230 ft), full tele 30 m (100 ft), full wide
	Minimum Illumination	1.3 MP	With IR: 0 lux in monochrome mode Without IR: 0.03 lux in color mode; 0.015 lux in monochrome mode	With IR: 0 lux in monochrome mode Without IR: 0.04 lux in color mode; 0.02 lux in monochrome mode	N/A
		2.0 MP			N/A
		3.0 MP	N/A	With IR: 0 lux in monochrome mode Without IR: 0.02 lux in color mode; 0.01 lux in monochrome mode	With IR: 0 lux monochrome mode Without IR: 0.03 lux in color mode; 0.015 lux in monochrome mode
		5.0 MP			With IR: 0 lux in monochrome mode Without IR: 0.015 lux in color mode; 0.007 lux in monochrome mode
	Horizontal Angle of View Based on Aspect Ratio	1.3 MP	(16:9)(4:3) 35° – 90° (5:4) 33° – 85°	(16:9)(4:3) 35° – 90° (5:4) 33° – 85°	N/A
		2.0 MP			N/A
		3.0 MP	N/A	(16:9)(4:3) 35° – 90°	(16:9) 10° – 32°; (5:4) 9.5° – 32°; (4:3) 9.5° – 30°
		5.0 MP			(16:9)(4:3) 9.5° – 30°
Vertical Angle of View Based on Aspect Ratio	1.3 MP	(16:9) 20° – 49° (5:4)(4:3) 26° – 66°	(16:9) 20° – 49° (5:4)(4:3) 26° – 66°	N/A	
	2.0 MP			N/A	
	3.0 MP	N/A	(16:9) 20° – 49°; (4:3) 26° – 66°	(16:9) 6° – 17°; (5:4)(4:3) 7° – 23°	
	5.0 MP			(16:9) 6° – 17°; (4:3) 7° – 23°	
Max Aperture	F1.4		F1.6		
Control	P-Iris, Remote Focus and Zoom				

IMAGE CONTROL	Image Compression Method	H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG
	Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG
	Motion Detection	Pixel and Unusual Motion Detection (UMD)
	Tamper Detection	Yes
	Electronic Shutter Control	Automatic, Manual (1/6 to 1/8000 sec)
	Iris Control	Automatic, Manual
	Day/Night Control	Automatic, Manual
	Flicker Control	50 Hz, 60 Hz
	White Balance	Automatic, Manual
	Backlight Compensation	Adjustable
	Privacy Zones	Up to 64 zones

AUXILIARY I/O	Audio Compression Method	Opus, G.711 PCM 8 kHz
	Audio Input/Output	Line level input and output
	External I/O Terminals	Alarm In, Alarm Out

NETWORK	Network	100BASE-TX
	Cabling Type	CAT5
	Connector	RJ-45
	ONVIF	ONVIF compliance version 1.02, 2.00, Profile S, Profile T, Profile G (www.onvif.org)
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication
	Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP
	Device Management Protocols	SNMP v2c, SNMP v3

PERIPHERALS	USB Port	USB 2.0
	Onboard Storage	microSD/microSDHC/microSDXC slot – minimum class 6; class 10/UHS-1 or better recommended

Specifications (Con't)

MECHANICAL (DOME)

	SURFACE MOUNT	IN-CEILING MOUNT	PENDANT MOUNT	
			NPT ADAPTER	NPT + WALL MOUNT
Dimensions (LxWxH)	147 mm x 147 mm x 119 mm; 5.8" x 5.8" x 4.7"	174 mm x 174 mm x 162 mm; 6.9" x 6.9" x 6.4"	153 mm x 153 mm x 166 mm; 6.0" x 6.0" x 6.5"	269 mm x 153 mm x 214 mm; 10.6" x 6.0" x 8.4"
Max. Ceiling Thickness	N/A	32 mm (1.25")	N/A	N/A
Weight	Indoor Dome — 0.76 kg; 1.68 lbs Outdoor Dome — 0.78 kg; 1.72 lbs	Indoor Dome — 0.75 kg; 1.65 lbs Outdoor Dome — 0.77 kg; 1.69 lbs	Indoor Dome — 0.75 kg; 1.65 lbs Outdoor Dome — 0.77 kg; 1.69 lbs	Indoor Dome — 2.02 kg; 4.45 lbs Outdoor Dome — 2.04 kg; 4.49 lbs
Dome Bubble	Polycarbonate, clear			
Body	Polycarbonate			Polycarbonate/aluminum
Housing	Vandal resistant			
Finish	Cool grey			Close to RAL 9003
Adjustment Range	360° pan, ±180° azimuth, 30° – 95° tilt (recommended), 10° – 95° tilt (maximum)			

MECHANICAL (BULLET)

Dimensions (LxWxH)	285 mm x 131 mm x 97 mm; 11.2" x 5.1" x 3.8" (including mounting bracket)		
Weight	Camera	1.29 kg (2.84 lbs)	
	Mounting Bracket	0.21 kg (0.46 lbs)	
Body	Aluminum		
Housing	Surface mount, tamper resistant, vandal resistant		
Finish	Powder coat, cool grey		
Adjustment Range	±175° pan, ±90° tilt, ±175° azimuth		

ELECTRICAL

Power Consumption	Indoor Dome	5 W max
	Outdoor Dome	8 W max
	Bullet	9 W max
Power Source*	PoE: IEEE802.3af Class 3 compliant	
RTC Backup Battery	3V manganese lithium	

* When powered with some models of PoE++ injectors, the injectors may not power the camera correctly.

ENVIRONMENTAL

Operating Temperature	Indoor Dome	0 °C to +60 °C (32 °F to 140 °F)
	Bullet and Outdoor Dome	-30 °C to +60 °C (-22 °F to 140 °F)
Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)	
Humidity	0 - 95% non-condensing	

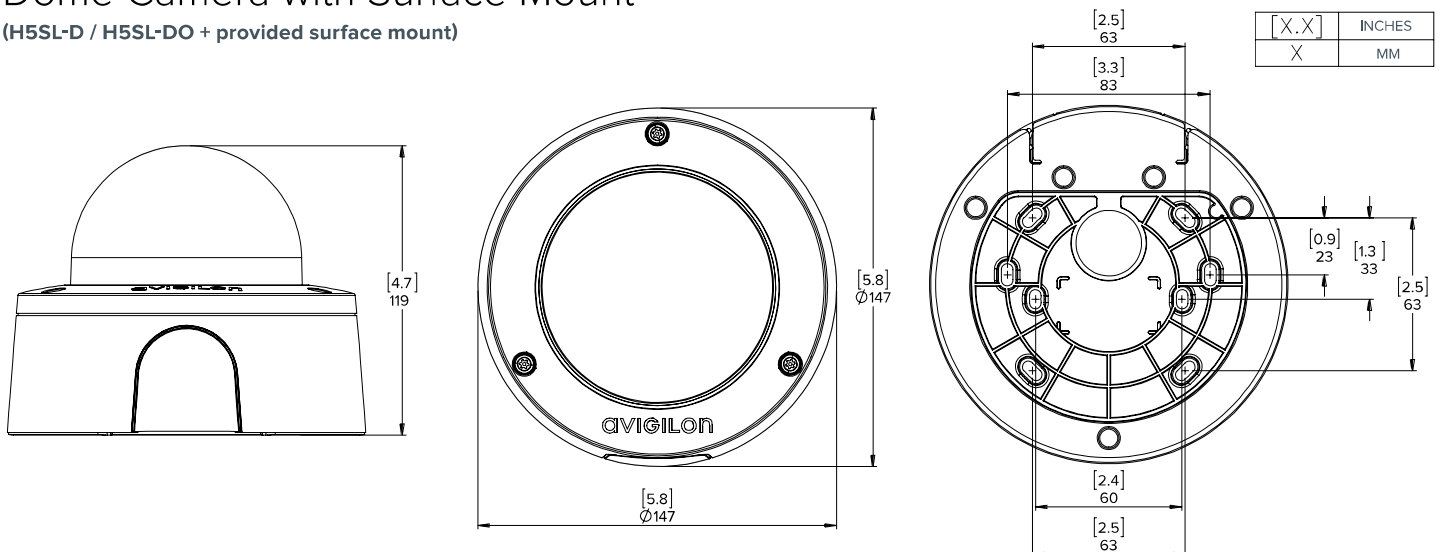
CERTIFICATIONS

Certifications/Directives	UL, cUL, CE, ROHS, RCM, EAC, BIS, KC	
Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC 62471	
Environmental	Bullet	IEC 62262 IK10 Impact Rating, UL/CSA/IEC 60950-22, IEC 60529 IP66 and IP67 Weather Rating
	Outdoor Dome	IEC 62262 IK10 Impact Rating, UL/CSA/IEC 60950-22, IEC 60529 IP66 and IP67 Weather Rating
Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3	
Electromagnetic Immunity	EN 55035, EN 61000-6-1	
Industrial EMC	EN 50130-4, EN 50121-4	

Outline Dimensions

Dome Camera with Surface Mount

(H5SL-D / H5SL-DO + provided surface mount)

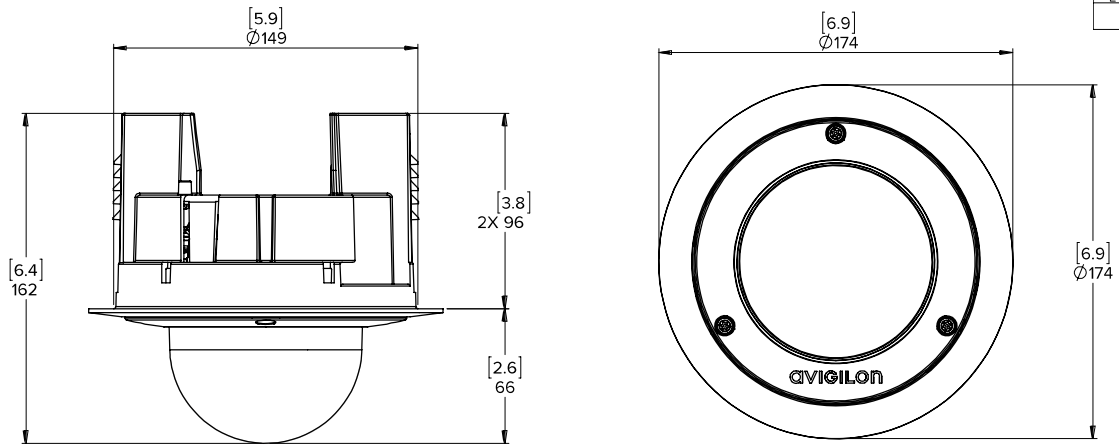


Outline Dimensions (Con't)

Dome Camera with In-Ceiling Mount

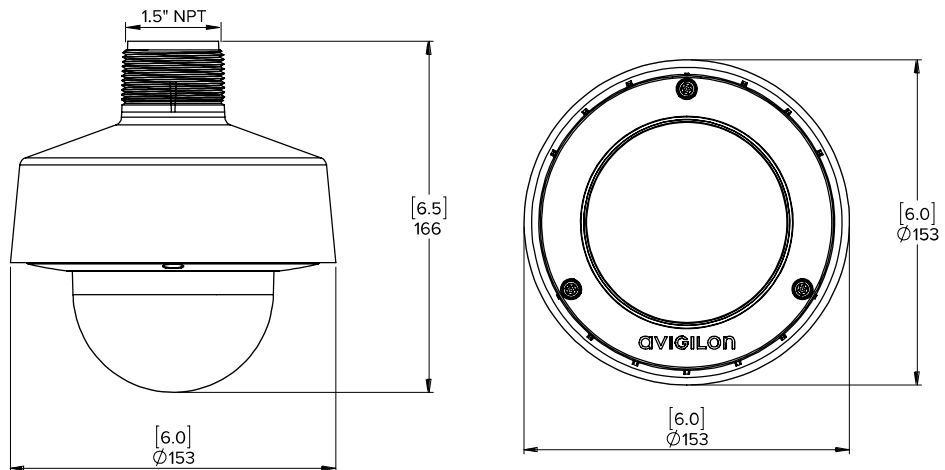
(H5SL-D/H5SL-DO + H4SL-MT-DCIL)

[X.X]	INCHES
X	MM



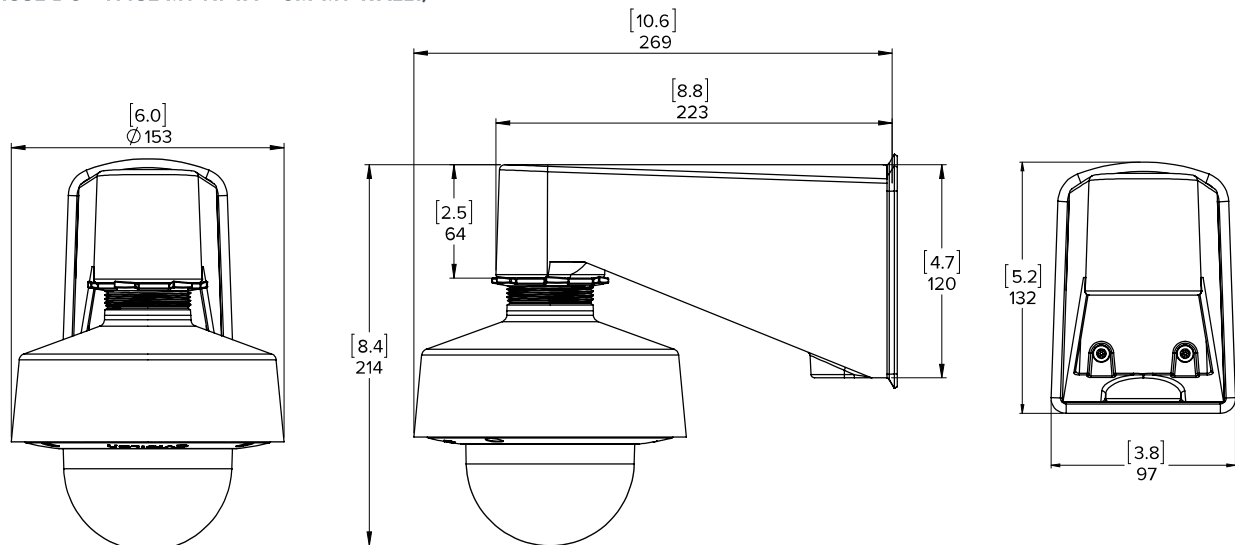
Dome Camera with NPT Adapter

(H5SL-D/H5SL-DO + H4SL-MT-NPTA)



Dome Camera with NPT Adapter and Pendant Wall Mount

(H5SL-D/H5SL-DO + H4SL-MT-NPTA + CM-MT-WALL1)

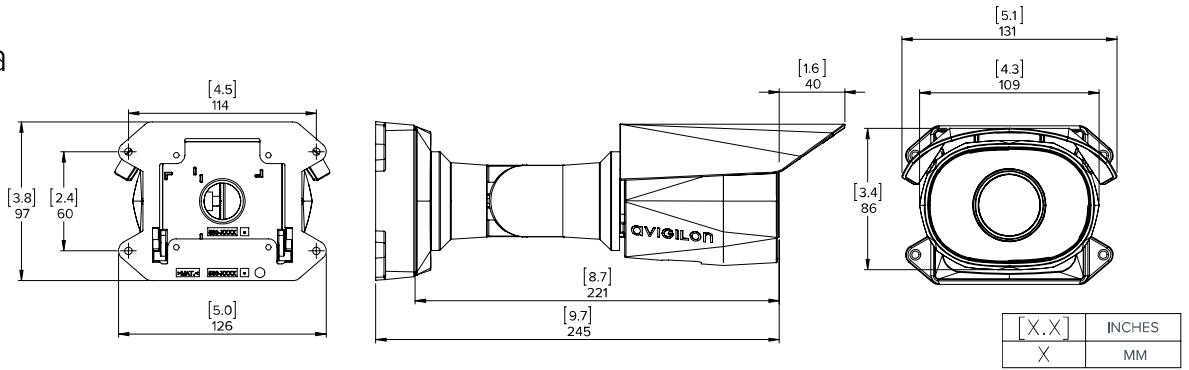


Outline Dimensions (Con't)

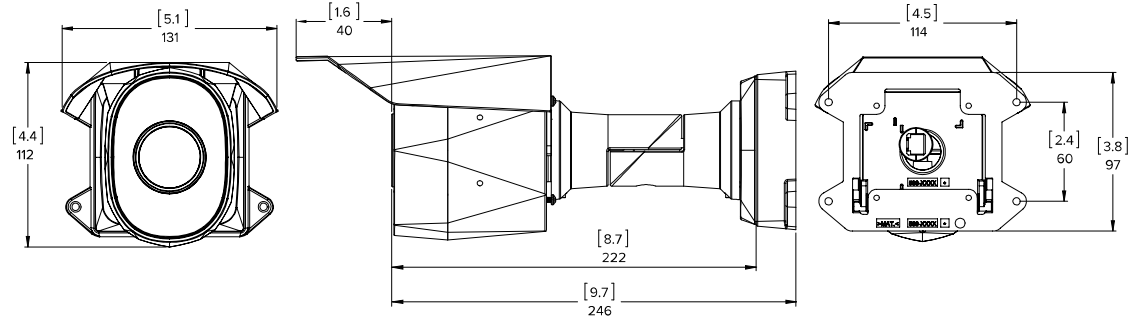
Bullet Camera

(H5SL-BO-IR)

LANDSCAPE
MODE

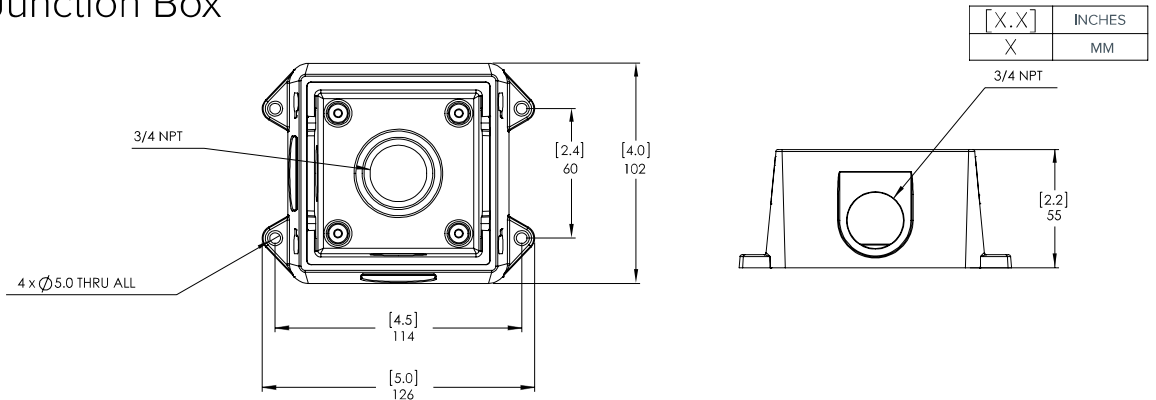


HALLWAY
MODE



Bullet Camera Junction Box

(H4-BO-JBOX1)



Ordering Information (Bullet)

	MP	WDR	LightCatcher Technology	Lens	IR	IP66/IP67	HDSM SmartCodec
1.3C-H5SL-BO1-IR	1.3	✓	✓	3.1 - 8.4 mm	✓	✓	✓
2.0C-H5SL-BO1-IR	2.0	✓	✓	3.1 - 8.4 mm	✓	✓	✓
3.0C-H5SL-BO1-IR	3.0	✓	✓	3.1 - 8.4 mm	✓	✓	✓
3.0C-H5SL-BO2-IR	3.0	✓	✓	9.5 - 31 mm	✓	✓	✓
5.0C-H5SL-BO1-IR	5.0	✓	✓	3.1 - 8.4 mm	✓	✓	✓
5.0C-H5SL-BO2-IR	5.0	✓	✓	9.5 - 31 mm	✓	✓	✓

H4-BO-JBOX1	Junction box for H5SL, H4SL, and H4 HD bullet cameras
H4-MT-POLE1	Aluminum pole mounting bracket
H4-MT-CRNR1	Aluminum corner mounting bracket
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter

Ordering Information (Dome)

The variety of mounting options for the H5SL dome camera provides maximum flexibility. All the available camera modules can be used in any of the mounting options.

MOUNTING SCENARIO

ORDERING INFORMATION

SURFACE MOUNT



Order one of:

- Camera

IN-CEILING MOUNT



Order one of:

- Camera
- H4SL-MT-DCIL1
- Optional, H4-DC-CPNL1 if ceiling panel needed

PENDANT NPT MOUNT



Order one of:

- Camera
- H4SL-MT-NPTA1

PENDANT WALL MOUNT



Order one of:

- Camera
- H4SL-MT-NPTA1
- CM-MT-WALL1
- Optional, H4-MT-POLE1 or H4-MT-CRNR1 if pole or corner mount needed

	MP	WDR	LightCatcher Technology	Lens	IR	IP66/IP67	HDSM SmartCodec
1.3C-H5SL-D1	1.3	✓	✓	3 - 9 mm			✓
1.3C-H5SL-D1-IR	1.3	✓	✓	3 - 9 mm	✓		✓
1.3C-H5SL-DO1-IR	1.3	✓	✓	3.1 - 8.4 mm	✓	✓	✓
2.0C-H5SL-D1	2.0	✓	✓	3 - 9 mm			✓
2.0C-H5SL-D1-IR	2.0	✓	✓	3 - 9 mm	✓		✓
2.0C-H5SL-DO1-IR	2.0	✓	✓	3.1 - 8.4 mm	✓	✓	✓
3.0C-H5SL-D1	3.0	✓	✓	3 - 9 mm			✓
3.0C-H5SL-D1-IR	3.0	✓	✓	3 - 9 mm	✓		✓
3.0C-H5SL-DO1-IR	3.0	✓	✓	3.1 - 8.4 mm	✓	✓	✓
5.0C-H5SL-D1	5.0	✓	✓	3.1 - 8.4 mm			✓
5.0C-H5SL-D1-IR	5.0	✓	✓	3.1 - 8.4 mm	✓		✓
5.0C-H5SL-DO1-IR	5.0	✓	✓	3.1 - 8.4 mm	✓	✓	✓

H4SL-MT-DCIL1	In-ceiling mounting adapter for the H5SL and H4SL dome camera
H4SL-MT-NPTA1	NPT adapter for the H5SL and H4SL dome camera
CM-MT-WALL1	Pendant wall mount
H4-DC-CPNL1	Metal ceiling panel
H4-MT-POLE1	Aluminum pole mounting bracket
H4-MT-CRNR1	Aluminum corner mounting bracket
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wi-Fi adapter
H4SL-DD-SMOK1	Replacement outdoor smoke dome cover
H4SL-DD-CLER1	Replacement outdoor clear dome cover
H4SL-DI-SMOK1	Replacement indoor smoke dome cover
H4SL-DI-CLER1	Replacement indoor clear dome cover
H4SL-DO1-BASE	Replacement outdoor surface mount adapter
H4SL-D1-BASE	Replacement indoor surface mount adapter

H5A Fisheye Camera

8 MP

12 MP

The Avigilon H5A Fisheye Camera is a cost-effective and easy-to-install solution that provides 360° panoramic views of large areas from a single vantage point, bringing superior situational awareness without any blind spots. Proudly made in North America, facilities such as schools, retailers, commercial offices and manufacturing plants can leverage the camera's high-resolution video to monitor processes and optimize operational efficiencies, along with its analytics and AI capabilities to proactively detect critical events and enhance the productivity of security teams.



Features



360° PANORAMIC VIEWS

Provides 360° coverage from a single vantage point to help lower overall video security deployment costs.



NEXT-GENERATION VIDEO ANALYTICS

Detects more people with greater accuracy, even in crowded scenes, to support faster responses.



H.264 AND H.265 WITH HDSM SMARTCODECTM TECHNOLOGY

Optimizes compression levels for regions in a scene to help maximize bandwidth savings and keep internet connectivity costs down.



WATER & IMPACT RATED²

IP66/67 rating for water resistance and IK10 impact rating for vandal resistance.



LOW-PROFILE & EASY-TO-INSTALL DESIGN

Offers unobtrusive monitoring and a paintable front plate¹ that can be customized to fit in with interior aesthetics, backed by an easy installation.



WIDE DYNAMIC RANGE

Captures details in scenes with both very bright and very dark areas to maximize image quality.



FIPS 140-2 COMPLIANT

Brings increased data security with FIPS-compliant cryptography enabled on cameras³.



ADAPTIVE IR TECHNOLOGY²

Provides optimal brightness in scenes with low-light for high-resolution image detail.



ONVIF[®] COMPLIANT

Native ONVIF Profile S, T, and G compliance allows easy integration with existing ONVIF infrastructures.



AUDIO RECORDING CAPABILITIES

Built-in microphone offers an optional audio recording capability for additional evidentiary detail.

Preliminary Specifications - Subject to Change

¹ Available on in-ceiling mount only.

² Available on surface mount only.

³ Optional purchase of FIPS Level 1 camera license or CRYPTR microSD hardware-based encryption and key management for FIPS Level 3 support and certification.

Specifications

		8.0 MP	12.0 MP	
IMAGE PERFORMANCE	Image Sensor	1/1.8" Progressive Scan CMOS	1/2.3" Progressive Scan CMOS	
	Active Pixels (H x V)	2048 × 2048	3008 × 3008	
	Imaging Area (H x V)	4.096 mm × 4.096 mm	4.662 mm × 4.662 mm	
	Max Image Rate	(50 Hz/60 Hz): 25 fps/30 fps		
	Dynamic Range	WDR Off	TBD	TBD
		WDR On	TBD	TBD
	Camera Operating Modes	N/A	Full feature mode or High framerate mode (Analytics are disabled in High framerate mode)	
	Bandwidth Management	HDSM SmartCodec technology; Idle scene mode		
3D Noise Reduction Filter	Yes			
LENS	Lens	1.4 mm	1.6 mm	
	IR Illumination (high power 850 nm LEDs)	20 m (65 ft) max. distance at 0 lux		
	Minimum Illumination	With IR	0 lux	0 lux
		Without IR	0.10 lux in monochrome mode; 0.20 lux in color mode	0.19 lux in monochrome mode; 0.38 lux in color mode
	Field of View	360°		
	Max Aperture	F2.0		
	Control	Fixed iris		
IMAGE CONTROL	Image Compression Method	H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG		
	Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG		
	Motion Detection	Pixel motion and classified object detection		
	Tamper Detection	Yes		
	Electronic Shutter Control	Automatic, Manual (1/6 to 1/8000 sec)		
	Iris Control	Fixed		
	Day/Night Control	Automatic, Manual		
	Flicker Control	60 Hz, 50 Hz		
	White Balance	Automatic, Manual		
	Backlight Compensation	Adjustable		
	Privacy Zones	Up to 64 zones		
NETWORK	Network	100BASE-TX		
	Cabling Type	CAT5e		
	Connector	RJ-45		
	ONVIF	ONVIF compliance Profile S, Profile T, and Profile G (www.onvif.org)		
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication, FIPS 140-2 L1 (with optional camera license), FIPS 140-2 L3 (with optional accessory)		
	Protocol	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP		
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP		
	Device Management Protocols	SNMP v2c, SNMP v3		
PERIPHERALS	Onboard Storage	2 × microSD/microSDHC/microSDXC slot – class 10/UHS-1 or better recommended. Currently one of the two SD card slots is available for onboard storage.		
AUXILIARY I/O	Audio Input/Output	Line level input and output and built-in microphone (can be enabled)		
	Audio Compression Method	Opus, G.711 PCM 8 kHz		
	External I/O Terminals	Alarm In, Alarm Out		
MECHANICAL		SURFACE MOUNT	IN-CEILING MOUNT	
	Dimensions (L×W×H)	145.5 mm × 145.5 mm × 62 mm; 5.72" × 5.72" × 2.44"	200.6 mm × 200.6 mm × 14.2 mm; 7.9" × 7.9" × 0.56"	
	Max. Ceiling Thickness	N/A	1.25"	
	Weight	Camera	0.52 kg; 1.13 lbs	0.595 kg; 1.31 lbs
		Mounting Plate	0.085 kg; 0.18 lbs	N/A
		With NPT Adapter	TBD	N/A
	Dome Bubble	Polycarbonate, clear		
	Body	Aluminum		
	Housing	Surface mount		
	Finish	Cool grey		
ELECTRICAL	Power Consumption	With IR: 26 W; Without IR: 11 W	11 W	
	Power Source	VDC: 12 V ±10%, 26 W min (With IR) PoE+: IEEE 802.3at Class 4 (Without IR) PoE: IEEE 802.3af Class 3	VDC: 12 V ±10%, 11 W min PoE: IEEE 802.3af Class 3	
	Power Connector	2-pin terminal block		
	RTC Backup Battery	3V manganese lithium		

Preliminary Specifications - Subject to Change

ENVIRONMENTAL	Operating Temperature	-40 °C to +60 °C (-40 °F to 140 °F)
	Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)
	Humidity	0-95%, non-condensing

CERTIFICATIONS	SURFACE MOUNT		IN-CEILING MOUNT
	Certifications/Directives	UL, cUL, CE, ROHS, RCM, EAC	
	Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1, IEC 62471	
	Environmental	IK10 Impact Rating, IP66 and IP67 Weather Rating	N/A
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3	
Electromagnetic Immunity	EN 55035, EN 61000-6-1		

SUPPORTED VIDEO ANALYTICS EVENTS IN CEILING MOUNT ORIENTATION	Objects in Area*	The event is triggered when the selected object type moves into the region of interest.
	Object Loitering*	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
	Objects Crossing Beam*	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
	Object Appears or Enters Area*	The event is triggered by each object that enters the region of interest. This event can be used to count objects.
	Object Not Present in Area*	The event is triggered when no objects are present in the region of interest.
	Objects Enter Area*	The event is triggered when the specified number of objects have entered the region of interest.
	Objects Leave Area*	The event is triggered when the specified number of objects have left the region of interest.
	Object Stops in Area*	The event is triggered when an object in a region of interest stops moving for the specified threshold time.
	Direction Violated*	The event is triggered when an object moves in the prohibited direction of travel.
	Tamper Detection*	The event is triggered when the scene unexpectedly changes.

* Analytics are supported when the camera is installed in the ceiling-mounted orientation mode.

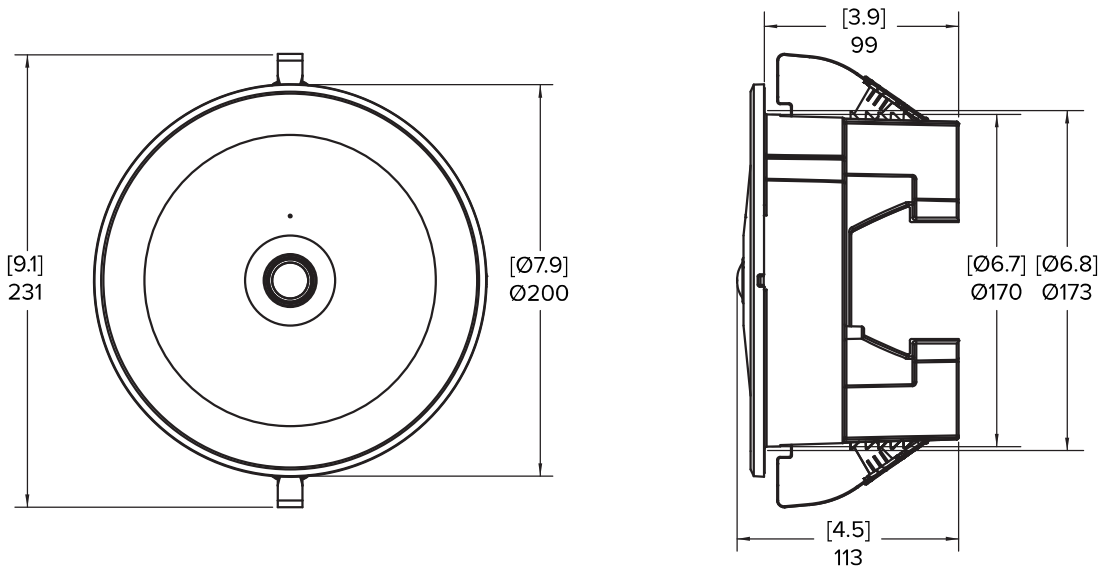
SUPPORTED CLASSIFIED OBJECT TYPES	Object Types in Indoor Mode*	Person
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* Analytics are supported when the camera is installed in the ceiling-mounted orientation mode.

AVIGILON CONTROL CENTER (ACC) VERSIONS SUPPORTED FEATURES	ACC Version 6.14.24 or higher	H.265 supported. Fisheye dewarping is not supported on ACC versions earlier than 6.14.24. Analytics are only supported on ACC 7 systems.
	ACC Version 7.12.4 or higher	All supported analytic events with people as classified objects. H.265 supported. Fisheye dewarping is not supported on ACC versions earlier than 7.12.2.

Outline Dimensions

In-Ceiling Mount Dome Camera (H5A-FE-DC)



Preliminary Specifications - Subject to Change

[X.X]	INCHES
X	MM

Ordering Information

SURFACE MOUNT DOME CAMERAS	MP	WDR	LIGHTCATCHER TECHNOLOGY	ANALYTICS*	LENS	IR	IP66/IP67	HDSM SMARTCODEC
8.0C-H5A-FE-DO1	8.0	✓	✓	✓	Fisheye 1.4 mm		✓	✓
8.0C-H5A-FE-DO1-IR	8.0	✓	✓	✓	Fisheye 1.4 mm	✓	✓	✓
12.0W-H5A-FE-DO1	12.0	✓		✓	Fisheye 1.6 mm		✓	✓
12.0W-H5A-FE-DO1-IR	12.0	✓		✓	Fisheye 1.6 mm	✓	✓	✓

* Analytics are supported when the camera is installed in the ceiling-mounted orientation mode.

SURFACE MOUNT ACCESSORIES DESCRIPTION

H5A-FE-MT-NPTA1	NPT adapter for the H5A Fisheye surface mount camera
CM-MT-WALL1	Pendant wall mount, compatible with H5A-FE-MT-NPTA1
H4-MT-CRNR1	Aluminum corner mounting bracket, compatible with CM-MT-WALL1
H5A-FE-DD-CLER1	Package of 3 dome replacement parts for H5A fisheye surface mount camera

IN-CEILING MOUNT INDOOR DOME CAMERAS	MP	WDR	LIGHTCATCHER TECHNOLOGY	ANALYTICS*	LENS	IR	IP66/IP67	HDSM SMARTCODEC
8.0C-H5A-FE-DC1	8.0	✓	✓	✓	Fisheye 1.4 mm			✓
12.0W-H5A-FE-DC1	12.0	✓		✓	Fisheye 1.6 mm			✓

* Analytics are supported when the camera is installed in the ceiling-mounted orientation mode.

IN-CEILING MOUNT ACCESSORIES DESCRIPTION

H5A-FE-DC-CPNL1	Metal ceiling panel to reinforce the existing ceiling tile in suspended ceiling installations
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OPTIONAL CAMERA LICENSES AND ACCESSORIES

CAM-FIPS	Camera license to enable FIPS Level 1 cryptographic mode on any H5A camera
CAM-FIPS-L3-CRYPTR	CRYPTR microSD hardware-based encryption and key management for FIPS Level 3 support and certification

Remote Monitoring Workstations

5th Generation

2 Monitor

4 Monitor

Avigilon's Remote Monitoring Workstations are purpose-built to accompany Avigilon's Network Video Recorders (NVRs) or to expand and scale existing deployments with a cost-effective high-performance workstation for remote monitoring. Designed to work seamlessly with Avigilon Control Center™ video management software, the Remote Monitoring Workstations enable users to view high definition video streams on multiple monitors or video walls.



Features



4K SUPPORT*

Supports full 4K video streaming for monitoring high resolution cameras.

* ACC™ Client software at 200% DPI scaling.



RECOVERY PARTITION

Supplies an Avigilon recovery partition for restoring default settings in the event of system issues without the need for external hardware or an internet connection.



SMALL FORM FACTOR

Offers the flexibility of a small form factor for ease of installation in all applications.



SOLID STATE DRIVE

Provides the operating system on a solid-state drive to increase boot times and the read/write speeds for video exports.

Specifications

SYSTEM

			RM5-WKS-4MN		RM5-WKS-2MN	
			4K* × 4 DISPLAYS	HD × 4 DISPLAYS	4K* × 2 DISPLAYS	HD × 2 DISPLAYS
Viewing Streams			Up to 144		Up to 72	
Primary Stream Performance (ACC software set to high quality)	15 FPS	2MP	35 Streams	35 Streams	20 Streams	20 Streams
		4MP	25 Streams	25 Streams	14 Streams	14 Streams
		8MP	14 Streams	14 Streams	8 Streams	8 Streams
	30 FPS	2MP	14 Streams	20 Streams	10 Streams	14 Streams
		4MP	14 Streams	16 Streams	8 Streams	9 Streams
		8MP	5 Streams	5 Streams	4 Streams	4 Streams
Supported Monitor Interfaces			Combination of up to 4: mDP, DP, and HDMI (DP and HDMI adapters are supplied)		Combination of up to 2: mDP, DP, and HDMI (DP and HDMI adapters are supplied)	
Operating System			Microsoft Windows 10 IoT Enterprise LTSB			
Processor			Intel® Core™ i5		Intel Core i3	
Memory			16 GB DDR4 RAM		8 GB DDR4 RAM	
Storage			256 GB SSD + 500 GB HDD			
Network Interface			2 Gigabit Ethernet RJ-45 ports (1000Base-T)			
Video Outputs			4 active (4 × mDP)		2 active (4 × mDP)	
Optical Drive			DVD-RW			
* ACC Client software at 200% DPI scaling.						

MECHANICAL

Form Factor	Small form factor
Dimensions (DxWxH)	292 mm × 92.6 mm × 290 mm (11.50" × 3.65" × 11.42")
Weight	5.26 kg (11.57 lbs)

ELECTRICAL

Power Input	100 to 240 V AC, 50/60 Hz, auto-switching
Power Supply	Single non-redundant
Power Consumption	260 W

ENVIRONMENTAL

Operating Temperature	10 °C to 35 °C (50 °F to 95 °F)
Storage Temperature	-40 °C to 65 °C (-40 °F to 149 °F)
Humidity	5% to 95% relative humidity with 33 °C (91 °F) maximum dew point (non-condensing)
Operating Vibration	0.26 Grms at 5 Hz to 350 Hz
Storage Vibration	1.88 Grms at 10 Hz to 500 Hz for 15 minutes
Operating Shock	Shock pulse of 40 G for up to 2.3 ms
Storage Shock	Shock pulse of 71 G for up to 2.0 ms
Operating Altitude	-15.2 m to 3048 m (-50 ft to 10,000 ft)
Storage Altitude	-15.2 m to 12,000 m (-50 ft to 39,370 ft)

SUPPLIED ACCESSORIES

RM5-WKS-4MN:	USB Keyboard, USB Mouse, Power cord, 4 mDP to DP adapters, 4 mDP to HDMI adapters
RM5-WKS-2MN:	USB Keyboard, USB Mouse, Power cord, 2 mDP to DP adapters, 2 mDP to HDMI adapters

CERTIFICATIONS

Certifications/Directives	UL, cUL, CE, RCM, CCC, KC, VCCI, EAC, BSMI, NOM, RoHS, Reach (SVHC)
Safety	EN/IEC 62368-1
Electromagnetic Emissions	CFR Title 47, FCC Part 2, 15 Class B, ICES-003, EN 55032 Class B, EN 61000-3-2 (Class D), EN 61000-3-3
Electromagnetic Immunity	EN 55024
Warranty	Lifetime 24/7 Avigilon technical phone support and a 3 year next business day warranty

ORDERING INFORMATION

RM5-WKS-4MN-XX	Avigilon Control Center remote monitoring workstation for up to 4 monitors*
RM5-WKS-2MN-XX	Avigilon Control Center remote monitoring workstation for up to 2 monitors*
NVR4-WKS-WARR-EXTEND-1YR	1-Year Extended Warranty for NVR4-WKS/RM5-WKS
NVR4-WKS-WARR-EXTEND-2YR	2-Year Extended Warranty for NVR4-WKS/RM5-WKS
WKS-RACK	Rack compatible with NVR4-WKS/RM5-WKS

* Monitor sold separately

RM5-WKS-xMN-NA =



RM5-WKS-xMN-UK =



RM5-WKS-xMN-EU =



RM5-WKS-xMN-AU =



H4 Multisensor Camera Line

The H4 Multisensor camera line combines Avigilon self-learning video analytics with exceptional coverage, featuring 3 or 4 individually configurable camera sensors that can be positioned to monitor virtually any area. With up to 32 MP effective resolution, the H4 Multisensor can provide the image quality needed to cover larger areas with excellent detail. Combining support for H.265 video compression along with Avigilon’s HDSM SmartCodec™ technology, the H4 Multisensor camera has the ability to maintain high-image quality with less bandwidth and storage requirements.



With self-learning video analytics on board, the H4 Multisensor camera can detect and differentiate people and vehicles from regular motion, and notify operators of potentially critical events that may need further investigation. Featuring wide dynamic range, Avigilon LightCatcher™ technology and the option to add content adaptive IR to outdoor models, the H4 Multisensor camera can provide exceptional image quality in challenging lighting conditions.

KEY FEATURES AND BENEFITS

- Self-learning video analytics on all sensors
- Increased range of sensor positioning
- High efficiency video encoding using H.265
- Up to 32 MP total resolution
- Wide Dynamic Range and LightCatcher technology on all resolutions
- IP66 and IK10 rated on outdoor models
- Avigilon’s HDSM SmartCodec technology
- Content Adaptive IR Technology up to 30m (98ft)
- Interchangeable Camera Mounts

	3-Sensor Model			4-Sensor Model		
Total Resolution	9 MP	15 MP	24 MP	12 MP	20 MP	32 MP
Max Coverage	180°–270°			360°		

Specifications

		3.0 MP	5.0 MP	4K (8.0 MP)
IMAGE PERFORMANCE (per image sensor)	Image Sensor	1/2.8" progressive scan CMOS	1/2.8" progressive scan CMOS	1/2.5" progressive scan CMOS
	Active Pixels	2048 (H) × 1536 (V)	2592 × 1944	3840 × 2160
	3 × image sensor, max resolution	6144 (H) × 1536 (V)	7776 × 1944	11520 × 2160
	4 × image sensor, max resolution	8192 (H) × 1536 (V)	10368 × 1944	15360 × 2160
	Aspect ratio	4:3	4:3	16:9
	IR Illumination - Optional (high power 850 nm LEDs)	30m (98 ft) maximum distance at 0 lux when camera is mounted at 4m (13ft) off the ground		
	Minimum Illumination	2.8mm: 0.025 lux (F1.2) in color mode 0.005 lux (F1.2) in mono mode 0 lux with optional IR illuminator		0.2 lux (F1.8) in color mode 0.04 lux (F1.8) in mono mode 0 lux with optional IR illuminator
		4mm: 0.05 lux (F1.6) in color mode 0.010 lux (F1.6) in mono mode 0 lux with optional IR illuminator		
	Dynamic Range	100 dB, true WDR, dual exposure		
	3D Noise Reduction Filter	Yes	Yes	Yes
	Image Rate—Analytics Enabled on All Sensors			
	3x Image Sensor (60 Hz/50 Hz)	24 / 25 fps	15 / 17 fps	12 / 13 fps
	4x Image Sensor (60 Hz/50 Hz)	20 / 20 fps	13 / 13 fps	8 / 8 fps
Image Rate—High Framerate Mode				
3x Image Sensor (60 Hz/50 Hz)	30 / 25 fps	20 / 20 fps	15 / 14 fps	
4x Image Sensor (60 Hz/50 Hz)	20 / 20 fps	15 / 14 fps	10 / 10 fps	
LENS (per image sensor)	Lens and Horizontal Field of View	2.8mm f1.2 – 103° 4mm f1.6 – 72° Remote focus	2.8mm f1.2 – 103° 4mm f1.6 – 72° Remote focus	4mm f1.8 – 101° 5.2mm f1.8 – 70° Remote focus
	IMAGE CONTROL	Image Compression Method: H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG		
		Streaming: Multi-stream H.264, Multi-stream H.265, Motion JPEG		
		Motion Detection: Selectable sensitivity and threshold		
	Electronic Shutter Control: Automatic, Manual (1/8 to 1/8000 sec)			
	Iris Control: Fixed			
	Day/Night Control: Automatic, Manual			
	Flicker Control: 60 Hz, 50 Hz			
	White Balance: Automatic, Manual			
	Backlight Compensation: Adjustable			
	Privacy Zones: Up to 64 zones			
	Audio Compression Method: G.711 PCM 8 kHz			
	Audio Input/Output: Line level input and output			
	External I/O Terminals: Alarm In, Alarm Out			
NETWORK	Network	Gigabit Ethernet, 1000BASE-TX		
	Cabling Type	CAT5E		
	Connector	RJ-45		
	API	ONVIF® compliance Profile S and Profile T (www.onvif.org)		
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication		
	Protocol	IPv4, IPv6, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP		
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP		
	Device Management Protocols	SNMP v2c, SNMP v3		
	PERIPHERALS	USB Port	USB 2.0	
Onboard Storage		MicroSD/microSDHC/microSDXC slot – class 10/UHS-1 or better recommended		

Specifications

	IN-CEILING MOUNT	SURFACE MOUNT	PENDANT MOUNT	
MECHANICAL	Dimension	Ø299 mm × 163 mm (Ø11.77" × 6.42"), below mounting surface: Ø299 mm × 76 mm (Ø11.77" × 2.99")	Ø299 mm × 115 mm (11.77" × 4.53")	With wall arm: 385 mm × 262 mm × 299 mm (15.15" × 10.30" × 11.77") With NPT adapter: Ø299 mm × 248 mm (Ø11.77" × 9.76")
	Weight	5.2 kg (11.5 lbs)	With IR: 7 kg (15.4 lbs) Without IR: 5.8 kg (12.8 lbs)	With wall arm and IR: 8.4 kg (18.5 lbs) With wall arm only: 7.3 kg (16.1 lbs) With NPTA adapter and IR: 7.8 kg (17.2 lbs) With NPTA adapter only: 6.7 kg (14.8 lbs)
	Body	Aluminum, Plastic dome trim	Aluminum	Aluminum
	Finish	Plastic, cool grey	Powder coat, cool grey	Powder coat, cool grey
	Environmental	Not applicable		IK10 Impact Rating and IP66 Weather Rating
	Optional IR Illuminator Ring	Not available		Optional accessory, 30m (98 ft) IR range

PER SENSOR	Tilt	+7° to 96° from horizon
	Pan	+/-120° (depending on position of image sensors)
	Azimuth	+/-180°

ELECTRICAL	Power Consumption	26 W with 24 VDC 37 VA with 24 VAC POE+	With IR: 52 W with 24 VDC 74 VA with 24 VAC POE++ or 60W POE* Without IR: 26 W with 24 VDC 37 VA with 24 VAC POE+	With IR: 52 W with 24 VDC 74 VA with 24 VAC POE++ or 60W POE* Without IR: 26 W with 24 VDC 37 VA with 24 VAC POE+
	External Power	24 VDC ± 10%; 24 VAC rms ± 10%, 50 or 60Hz		
	PoE*	25.5W PoE+, IEEE 802.3at Type 2 PoE Plus	With IR: High Power 51W PoE++* Without IR: 25.5W PoE+, IEEE 802.3at Type 2 PoE Plus	

* High power PoE may not be compatible with all switches or injectors. High power PoE is compatible with Cisco® UPoE, up to 60 W over 4 pairs, or with the high PoE products listed in the Accessories section. Contact Avigilon sales or Avigilon technical support for more information.

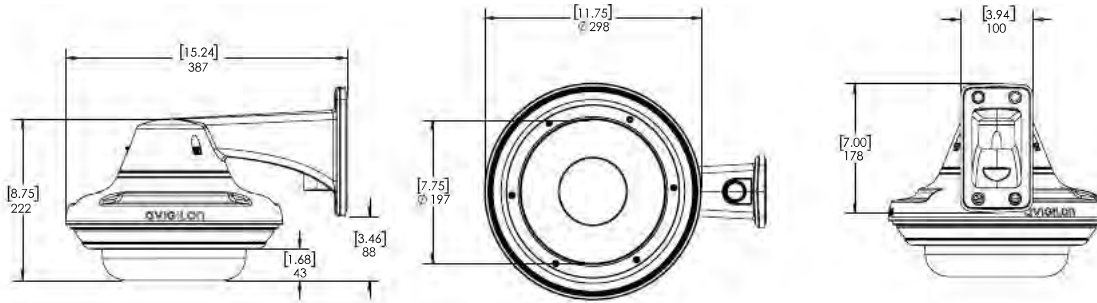
ENVIRONMENTAL	Operating Temperature Range	-10° C (14 °F) to 50 °C (122 °F)	-40 °C (-40 °F) to 60 °C (140 °F)
	Storage Temperature	-10 °C to 70 °C (14 °F to 158 °F)	
	Humidity	0-95% non-condensing	

CERTIFICATIONS	Certifications	UL, cUL, CE, ROHS, WEEE, RCM, EAC, BIS, KC		
	Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1		
	Environmental	UL 2043 Plenum	UL/CSA/IEC 60950-22 IEC 60529 IP66 Rating, IK10 Impact Rating, IEC 60068-2-6 IEC 60068-2-27 Vibration and Shock	
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 50121-4 (when used with CM-AC-FERR1 on aux power)		
	Electromagnetic Immunity	EN 55035, EN 61000-6-1		
	Directives	RoHS, Reach (SVHC), WEEE		

SUPPORTED RULE BASED VIDEO ANALYTIC EVENTS (PER SENSOR)	Objects in Area	The event is triggered when the selected object type moves into the region of interest.
	Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
	Objects Crossing Beam	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
	Object Appears or Enters Area	The event is triggered by each object that enters the region of interest. This event can be used to count objects.
	Object Not Present in Area	The event is triggered when no objects are present in the region of interest.
	Objects Enter Area	The event is triggered when the specified number of objects have entered the region of interest.
	Objects Leave Area	The event is triggered when the specified number of objects have left the region of interest.
	Object Stops in Area	The event is triggered when an object in a region of interest stops moving for the specified threshold time.
	Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.
	Tamper Detection	The event is triggered when the scene unexpectedly changes.

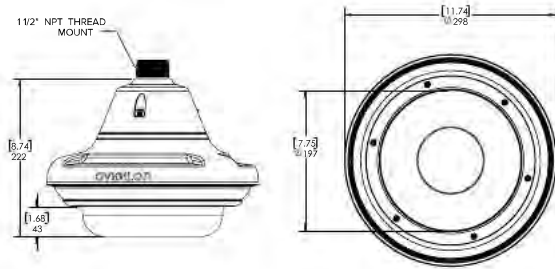
Outline Dimensions

Pendant Wall Mount

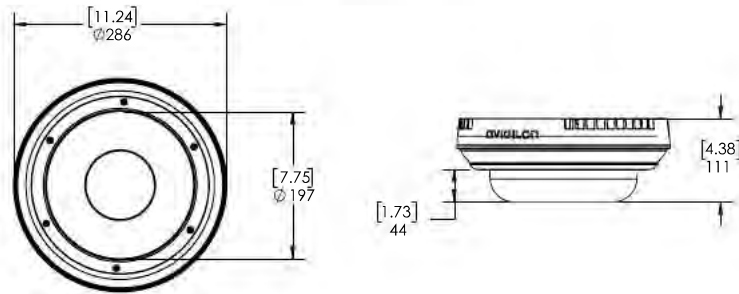


[X.X]	INCHES
X	MM

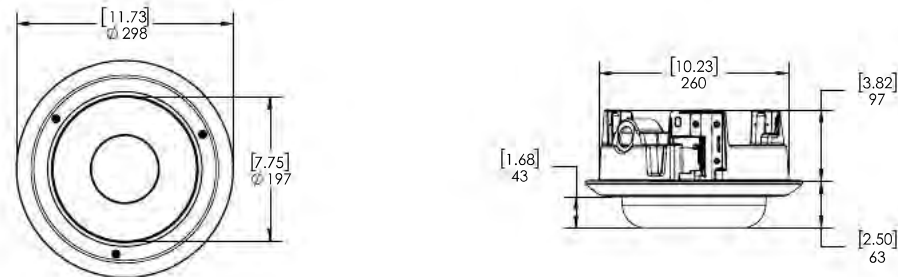
Pendant NPT Mount



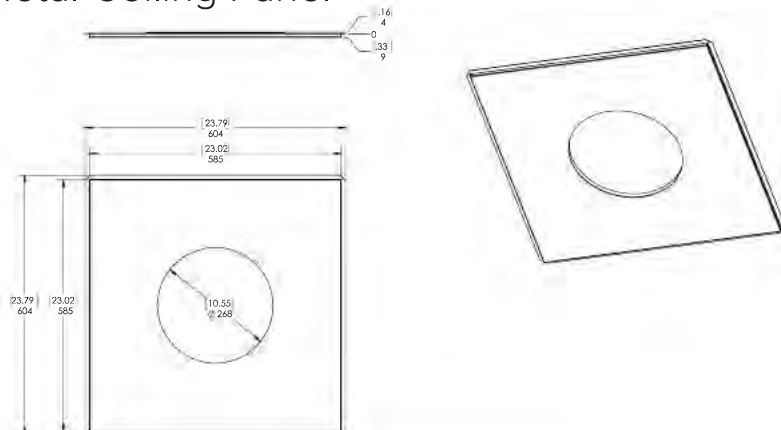
Surface Mount



In-ceiling Mount



Metal Ceiling Panel



Ordering Information

The variety of mounting options for the H4 Multisensor provides maximum flexibility. All the available camera modules can be used in any of the mounting options.

MOUNTING SCENARIO

ORDERING INFORMATION

PENDANT WALL MOUNT



- Order one of:
- Camera module
 - H4AMH-AD-PEND1
 - H4AMH-DO-COVR1 or H4AMH-DO-COVR1-SMOKE
 - IRPTZ-MNT-WALL1
 - Optional, H4AMH-AD-IRIL

PENDANT NPT MOUNT



- Order one of:
- Camera module
 - H4AMH-AD-PEND1
 - H4AMH-DO-COVR1 or H4AMH-DO-COVR1-SMOKE
 - IRPTZ-MNT-NPTA1
 - Optional, H4AMH-AD-IRIL1

SURFACE MOUNT



- Order one of:
- Camera module
 - H4AMH-AD-DOME1
 - H4AMH-DO-COVR1 or H4AMH-DO-COVR1-SMOKE
 - Optional, H4AMH-AD-IRIL1

IN-CEILING MOUNT



- Order one of:
- Camera module
 - H4AMH-AD-CEIL1
 - H4AMH-DC-COVR1 or H4AMH-DC-COVR1-SMOKE
 - Optional, H4AMH-DC-CPNL1 if ceiling panel needed

Camera Modules

With the modular design of the H4 Multisensor, any camera module can be paired with any mounting adapter for maximum versatility and optimal installation. Each camera module must be ordered with a matching mounting adapter and dome cover.

DISPLAY PART NUMBER	DESCRIPTION
9C-H4A-3MH-270	3×3 MP, WDR, LightCatcher, 2.8mm, Camera Only
9C-H4A-3MH-180	3×3 MP, WDR, LightCatcher, 4mm, Camera Only
15C-H4A-3MH-270	3×5 MP, WDR, LightCatcher, 2.8mm, Camera Only
15C-H4A-3MH-180	3×5 MP, WDR, LightCatcher, 4mm, Camera Only
24C-H4A-3MH-270	3×4K (8 MP), WDR, LightCatcher, 4mm, Camera Only
24C-H4A-3MH-180	3×4K (8 MP), WDR, LightCatcher, 5.2mm, Camera Only
12C-H4A-4MH-360	4×3 MP, WDR, LightCatcher, 2.8mm, Camera Only
20C-H4A-4MH-360	4×5 MP, WDR, LightCatcher, 2.8mm, Camera Only
32C-H4A-4MH-360	4×4K (8 MP), WDR, LightCatcher, 4mm, Camera Only

Mounting Adapters and Dome Covers

The H4 Multisensor modular design provides pendant, surface, or in ceiling mounting adapters and a choice of two dome covers compatible with all the H4 Multisensor camera modules.

DISPLAY PART NUMBER	DESCRIPTION
H4AMH-AD-DOME1	Outdoor surface mount adapter, must order either a H4AMH-DO-COVR1 or H4AMH-DO-COVR1-SMOKE.
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.
IRPTZ-MNT-WALL1	Pendant wall arm adapter, for use with H4AMH-AD-PEND1 or H4 IRPTZ.
IRPTZ-MNT-NPTA1	Pendant NPT adapter for use with H4AMH-AD-PEND1 or H4 IRPTZ.
H4-MT-POLE1	Aluminum pole mounting bracket for H4 pendant style cameras or H4 HD bullet cameras.
H4-MT-CRNR1	Aluminum corner mounting bracket for H4 pendant style cameras or H4 HD bullet cameras.
H4AMH-AD-CEIL1	In-ceiling adapter, must order either a H4AMH-DC-COVR1 or H4AMH-DC-COVR1-SMOKE.
H4AMH-DO-COVR1	Dome bubble and cover, for outdoor surface mount or pendant mount, clear.
H4AMH-DO-COVR1-SMOKE	Dome bubble and cover, for outdoor surface mount or pendant mount, smoked. Not recommended for lowlight applications.
H4AMH-DC-COVR1	Dome bubble and cover, for in-ceiling mount, clear.
H4AMH-DC-COVR1-SMOKE	Dome bubble and cover, for in-ceiling mount, smoked. Not recommended for lowlight applications.
H4AMH-DC-CPNL1	Metal ceiling panel.

Optional IR Illuminator

The optional IR Illuminator is available for the H4 Multisensor when mounted in a pendant or surface mount adapter.

DISPLAY PART NUMBER	DESCRIPTION
H4AMH-AD-IRIL1	Optional IR illuminator ring, up to 30m (100ft), for use with H4AMH-DO-COVR1.

Optional Injectors and Switches

DISPLAY PART NUMBER	DESCRIPTION
ES-PS-S4	Managed switch, 5 port, Outdoor IP66, -40°C (-40°F) to 50°C (122°C), Gigabit Ethernet, AC power input, 1x SFP uplink and 4 port RJ45. Maximum PoE power allocation: Up to 4 ports of PoE+ each, or 2 ports of 60W PoE each. In 60W PoE mode, compatible with H4 PTZ, H4 IR PTZ and H4 Multisensor.
ES-PS-MNT-POLE1	Pole mount bracket for ES-PS-S4 switch.
POE-INJ2-60W-NA	Indoor single port Gigabit PoE++ 60W, North American power cord included. May also be used in European Union, Japan, Australia, New Zealand, Mexico, China, South Korea, Russia, Argentina, Saudi Arabia, Kuwait, UAE and Brazil. Temperature range of the PoE injector is -10 °C to +45 °C (14 °F to 113 °F). When used with the H4 IR PTZ, the camera will operate in a reduced temperature range from -10 °C to +50 °C (14 °F to 122 °F).
POE-INJ2-PLUS	Indoor single port POE+ injector. Injector operational temperature range -20°C to +40°C (-4°F to 104°F).

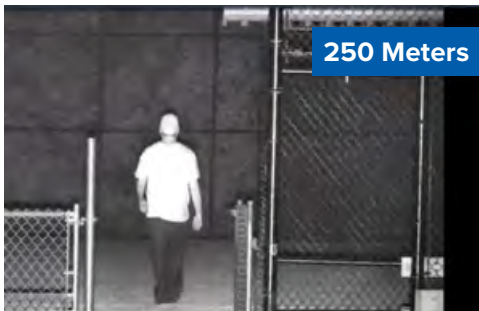
Miscellaneous Accessories

DISPLAY PART NUMBER	DESCRIPTION
CM-AC-FERR1	Ferrite clamp for use with aux power cable when meeting EN 50121-4 requirements. Pack of 5.

H4 IR PTZ Camera with Self-Learning Video Analytics

The Avigilon H4 IR PTZ is a high-resolution outdoor PTZ camera with a 250 meter (820 feet) IR illumination range that automatically adjusts the IR projection angle according to zoom and field of view, ensuring the scene is illuminated accordingly to camera zoom level. Combined with WDR, image stabilization and Avigilon patented LightCatcher™ technology, this camera provides exceptional images in a wide range of applications and environments. An abrasion-resistant front lens and a built in silicone rubber wiper* ensures undistorted clean images even in adverse weather conditions, making it well-suited for a range of weather and outdoor surveillance applications.

* Available on models with part numbers that end in -WP.



The Avigilon H4 IR PTZ camera combines infrared illumination, fast autofocus, and precise Pan-Tilt-Zoom capabilities for operators to easily detect and follow a moving object with a high level of precision and control with a single camera. The new H4 IR PTZ camera line is available in 1 and 2 megapixel (MP) camera resolutions, situated in a pendant mount suitable for challenging outdoor environments. The 1 MP PTZ camera has 45x zoom, while the 2 MP PTZ has a built-in 30x zoom optical glass front lens for high-quality, detailed images from great distances.

With its powerful zoom lens and IR technology, the H4 IR PTZ allows users to see up to 250 meters (820 feet) in complete darkness. The camera's IR projection angle and distance automatically adjust based on camera zoom lens movement, ensuring the scene is well illuminated for high-quality, detailed images.

Avigilon HDSM SmartCodec™ technology H4 platform optimizes the video stream in real time using automatic ROI encoding to save bandwidth and storage requirements while maintaining image quality.

KEY FEATURES

Optimized for long range illumination up to 250 meters (820 feet) zoomed in or out, allowing the operator to see in total darkness
Built in 850nm IR illumination ensures the scene is well illuminated
Smooth, fast precision PTZ movements with tilt reaching 20 degrees above the horizon
Self-learning video analytics at the home position
1 MP and 2 MP camera resolutions up to 60 fps
1 MP zoom to a range of 45x and 2 MP zooms up to 30x
Wide Dynamic Range (WDR), Electronic Image Stabilization (EIS), and LightCatcher technologies provide exceptional image quality
Avigilon's HDSM SmartCodec technology and idle scene mode technology for reduced bandwidth and storage requirements
IK 10 impact rating
Outdoor housing IP66 certified for comprehensive dust and water ingress protection
New H4 IR PTZ mounting adaptors, with wall mount or NPT mount available for order
Compatible with present H4 PTZ corner mount and pole mount accessories

Specifications

		1.0 MP	2.0 MP
IMAGE PERFORMANCE	Image Sensor	WDR 1/2.8" progressive scan CMOS	
	Active Pixels	1280 (H) × 720 (V)	1920 (H) × 1080 (V)
	Imaging Area	4.8 mm (H) × 2.7 mm (V); 0.189" (H) × 0.106" (V)	
	IR Illumination	250 m (820 ft) maximum distance at 0 lux	
	Minimum Illumination	0 lux in IR mode; 0.1 lux (F/1.6) in color mode (no IR); 0.03 lux (F/1.6) in monochrome mode (no IR)	
	Dynamic Range	120+ dB	
	Image Rate	Up to 60 fps	
	(Aspect Ratio) Resolution Scaling	down to (16:9) 384×216 or (5:4) 320×256	
	3D Noise Reduction Filter	Yes, Adjustable Strength	
	LENS	Lens	4.3 to 129 mm, F/1.6 – F/4.7, autofocus
Angle of View		1.5° - 63.7°	2.3° - 63.7°
Optical Zoom		45x	30x
IMAGE CONTROL	Video Compression	H.264 (MPEG-4 Part 10/AVC), Motion JPEG, HDSM SmartCodec technology	
	Streaming	Multi-stream H.264 and Motion JPEG	
	Motion Detection	Selectable sensitivity and threshold	
	Electronic Shutter Control	Automatic, Manual (1/1 to 1/10,000 sec)	
	Iris Control	Automatic, Manual	
	Day/Night Control	Automatic, Manual	
	Flicker Control	50 Hz, 60 Hz	
	White Balance	Automatic, Manual	
	Backlight Compensation	Manual	
	Privacy Zones	Up to 64 zones, 3D privacy mask supported	
	Presets	500 named presets	
	Tours	10 named guard tours	
	Audio Compression Method	G.711 PCM 8 kHz	
	Digital Zoom	Up to 100x when used with ACC™ Client for Windows	
	Electronic Image Stabilization	On/Off	
Digital Defog	Adjustable/Off		
NETWORK	Network	100BASE-TX	
	Cabling Type	CAT5e	
	Connector	RJ-45	
	ONVIF®	ONVIF compliance version 1.02, 2.00, Profile S, Profile T, Profile G (www.onvif.org)	
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication	
	Protocol	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP/UDP, IGMP, ICMP, DHCP, Zeroconf, ARP, LLDP	
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP	
	Device Management Protocols	SNMP v2c, SNMP v3	
PERIPHERALS	Audio Input/Output	Line level input and output	
	Analog Video Output	N/A	
	External I/O Terminals	Four (4) Alarm In; Two (2) Alarm Out	
	Onboard Storage	microSD/microSDHC/microSDXC slot – minimum class 6; class 10/UHS-1 or better recommended	
MECHANICAL	Dimensions (ØxH)	Camera — (Ø) 250 mm × (H) 364 mm; (Ø) 9.84" × (H) 14.33"; Camera with wall mount — (W) 363 mm × (L) 250 mm × (H) 457 mm; (W) 14.29" × (L) 9.84" × (H) 17.99"; Camera with NPT mount — (Ø) 250 mm × (H) 444 mm; (Ø) 9.84" × (H) 17.48"	
	Weight	Camera — 6.66 kg; 14.68 lbs; Camera with wall mount — 7.77 kg; 17.13 lbs; Camera with NPT mount — 7.13 kg; 15.72 lbs	
	Front Window	Optical glass	
	Body	Aluminum	
	Housing	Pendant mount	
	Finish	Powder coat, cool grey	
	Tilt	-20° to 90°, Auto-Flip, 300°/second max	
	Pan	360°, endless, 300°/second	
ELECTRICAL	Power Consumption	75 W max with 24 VDC aux power, 71W max with 95W PoE, 105 VA with 24 V AC RMS aux power	
	Power Source	External Power	24 VDC ± 10%; 24 VAC rms ± 10%, 50 or 60Hz
		PoE*	95W PoE*: POE-INJ2-95W 60W PoE*: POE-INJ2-60W
	Aux Power Connection	Red and Black wires	
	RTC Backup Battery	3V manganese lithium	

* High power PoE may not be compatible with all switches or injectors. High power PoE is compatible with Cisco® UPoE, up to 60 W over 4 pairs, or with the high PoE products listed in the Accessories section. Contact Avigilon sales or Avigilon technical support for more information.

ONVIF is a trademark of Onvif, Inc.

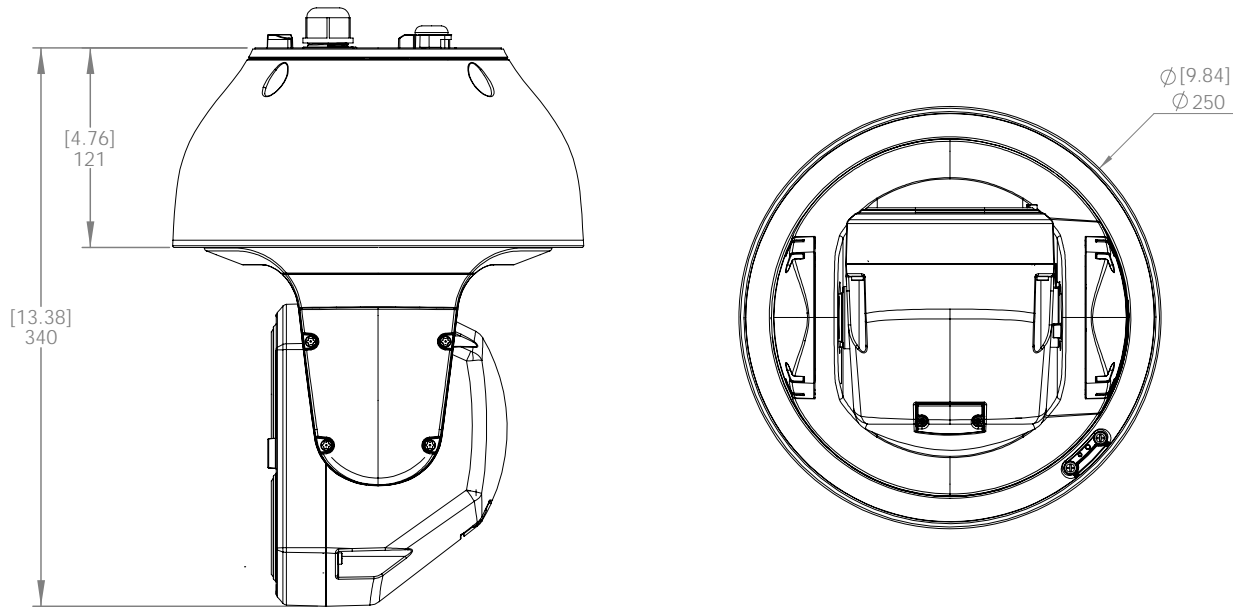
Listed specifications may change without prior notice.

ENVIRONMENTAL	Operating Temperature	-40 °C to +60 °C (-40 °F to 140 °F) with external power or 95 W PoE -10 °C to +50 °C (14 °F to 122 °F) with 60W PoE Wiper is functional at 1 °C to +60 °C (34 °F to 140 °F)
	Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)
	Humidity	0 - 95% non-condensing
CERTIFICATIONS	Certifications/Directives	UL, cUL, CE, ROHS, WEEE, RCM, EAC, BIS
	Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1
	Environmental	IK10 Impact Rating, IEC 60529 IP66 Rating, UL/CSA/IEC 60950-22
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3
	Electromagnetic Immunity	EN 55024, EN 61000-6-1
SUPPORTED VIDEO ANALYTICS EVENTS AT HOME POSITION	Objects in Area	The event is triggered when the selected object type moves into the region of interest
	Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
	Objects Crossing Beam	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
	Object Appears or Enters Area	The event is triggered by each object that enters the region of interest. This event can be used to count objects.
	Object Not Present in Area	The event is triggered when no objects are present in the region of interest.
	Objects Enter Area	The event is triggered when the specified number of objects have entered the region of interest.
	Objects Leave Area	The event is triggered when the specified number of objects have left the region of interest.
	Object Stops in Area	The event is triggered when an object in a region of interest stops moving for the specified threshold time.
	Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.
	Tamper Detection	The event is triggered when the scene unexpectedly changes.

Outline Dimensions

Camera

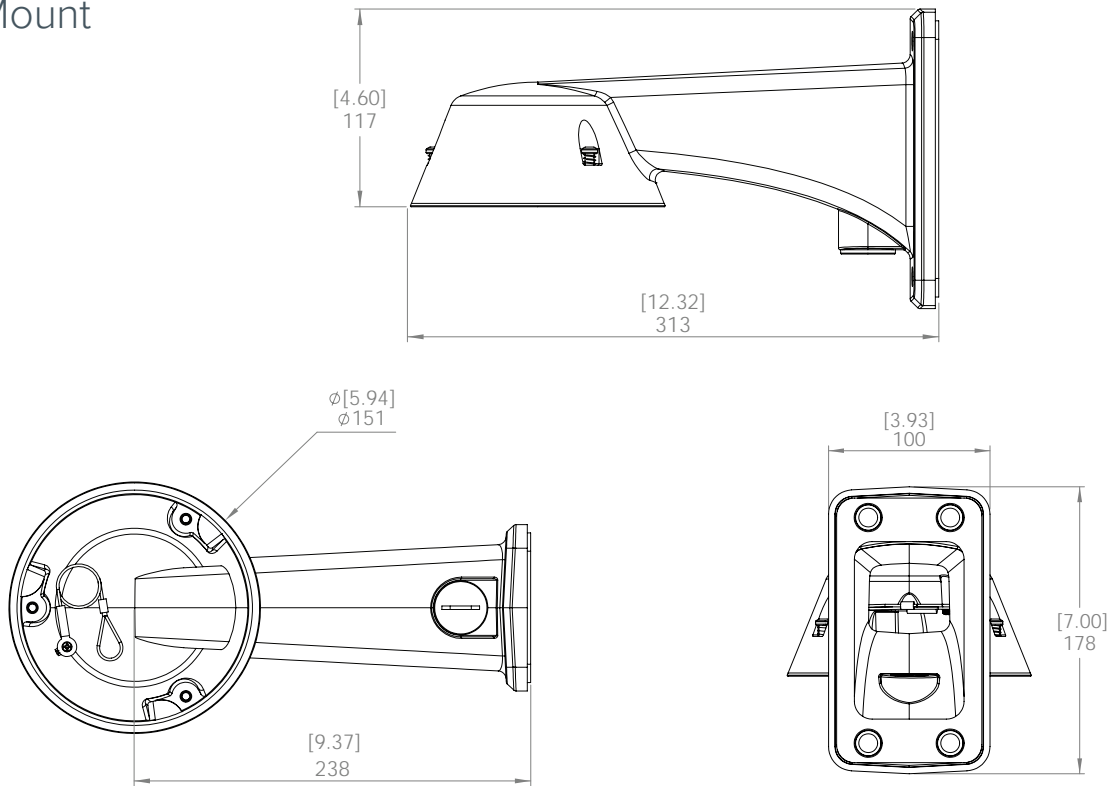
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NPT Mount



Wall Mount



Ordering Information

CAMERAS	DESCRIPTION	MP	ZOOM	IR RANGE	ANALYTICS	WDR	LIGHTCATCHER
1.0C-H4IRPTZ-DP45	1MP H4 IR PTZ, 45X, Self-learning analytics, IK10, IP66, 250m IR	1	45	250m (820feet)	Yes	Yes	Yes
2.0C-H4IRPTZ-DP30	2MP H4 IR PTZ, 30X, Self-learning analytics, IK10, IP66, 250m IR	2	30	250m (820feet)	Yes	Yes	Yes
1.0C-H4IRPTZ-DP45-WP	1MP H4 IR PTZ with Wiper 45X, Self-learning analytics, IK10, IP66, 250m IR	1	45	250m (820feet)	Yes	Yes	Yes
2.0C-H4IRPTZ-DP30-WP	2MP H4 IR PTZ, with Wiper 30X, Self-learning analytics, IK10, IP66, 250m IR	2	30	250m (820feet)	Yes	Yes	Yes

ACCESSORIES

IRPTZ-MNT-WALL1	Mount, Pend wall, IR PTZ
IRPTZ-MNT-NPTA1	Mount, Pend NPT Adapter, IR PTZ
POE-INJ2-95W-NA*	Single Port PoE Injector Gigabit, 95W, NA for use with H4IR PTZ - indoor installation rated. Temperature range of the PoE injector is -10C to +45C.
POE-INJ2-60W**	Single Port PoE Injector Gigabit, 60W, NA for use with H4IR PTZ - indoor installation rated. Temperature range of the PoE injector is -10C to +45C. Note: Use of 60W PoE injector reduces the temperature range of the camera. Please look at footnote
H4-MT-POLE1	Pole Mounting Bracket
H4-MT-CRNR1	Corner Mounting Bracket

* POE 95W injector: This model is provided with North American plug only; other regions may use certified power cord with C13 on one side and the country specific plug on the other side. Countries supported must accept one of the following certifications: UL, cUL, CE, VCCI, CCC, C-Tick.

** POE 60W injector: The camera will operate correctly in reduced temperature range from -10°C to +50°C (14°F to 122°F) with 60W POE. This POE injector model is provided with North American plug only; other regions may use certified power cord with C13 on one side and the country specific plug on the other side. Countries supported must accept one of the following certifications: UL, cUL, CE, VCCI, CCC, C-Tick, KC, EAC.

H5A-PTZ Camera

4 MP

8 MP

The Avigilon H5A Pan-Tilt-Zoom (PTZ) camera brings wide area coverage, high-speed movement and long range detail, empowering security operators with 360° views to monitor large areas with ease, including greater zooming capabilities for evidentiary detail. This powerful camera delivers high-quality, detailed images with up to 36x zoom, which is ideal for critical infrastructure, public safety, sports and leisure, commercial buildings, transportation and large open areas (e.g. parking lots) for superior situational awareness.

As an Avigilon H5 platform camera, the H5A-PTZ camera is embedded with Next-Generation Video Analytics for enhanced object detection and classification, Unusual Activity Detection (UAD), Facial Recognition technology and Avigilon Appearance SearchTM technology support to help ensure critical events do not go unnoticed.



Features



NEXT-GENERATION VIDEO ANALYTICS

Detects more objects with expanded object classifications and greater accuracy for faster responses, even in crowded scenes.



LONG RANGE DETAIL

4 and 8 MP with 36x zooming capabilities sets a new standard for high-performance 36x PTZ cameras with greater evidentiary detail.



H.264 AND H.265 WITH HDSM SMARTCODECTM TECHNOLOGY

Optimizes compression levels for regions in a scene to help maximize bandwidth savings and keep internet connectivity costs down.



WATER, IMPACT AND ENCLOSURE RATED

IP66/7 rating for water resistance, IK10 impact rating for vandal resistance and NEMA 4X enclosure rating for windblown dust, water (e.g. rain, hose-directed water), and corrosion resistance.



LIGHTCATCHERTM TECHNOLOGY

Offers exceptional detail in areas with low lighting.



WIDE DYNAMIC RANGE*

Captures details in scenes with both very bright and very dark areas.



ONVIF[®] COMPLIANT

Native ONVIF Profile S, T, and G compliance allows easy integration with existing ONVIF infrastructures.



FIPS 140-2 COMPLIANT

Enables the camera to be deployed at sites requiring FIPS-compliant cryptography.



EASY TRANSITION FROM H4 PTZ TO H5A-PTZ

Field-replaceable parts allow for an easy transition from H4 PTZ cameras to H5A-PTZ cameras.



WIDE AREA COVERAGE

Provides 360° zoomable views in high-resolution to monitor large areas with ease.

Specifications

		4.0 MP	8.0 MP	
IMAGE PERFORMANCE	Image Sensor	1/2.5" Type "Exmor R" CMOS Sensor		
	Active Pixels (H x V)	2688 (H) x 1512 (V)	3840 (H) x 2160 (V)	
	Imaging Area (H x V)	6.2 mm x 3.5 mm; 0.244" x 0.138"		
	Minimum Illumination	0.3 lux (F/2.0) in color mode; 0.09 lux (F/2.0) in monochrome		
	Image Rate	Up to 30 fps		
	Aspect Ratio (Resolution Scaling)	Down to (16:9) 384x216 or (5:4) 320x256		
	3D Noise Reduction Filter	Yes		
LENS	Lens	4.4 mm to 88 mm, F/2.0 – F/3.8		
	Angle of View	Horizontal	69.7° – 2.2°	
		Vertical	42.8° – 1.3°	
	Zoom	36x (with image stabilization off), 30x (with image stabilization on)		
IMAGE CONTROL	Video Compression	H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG		
	Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG		
	Motion Detection	Pixel motion: Selectable sensitivity and threshold. Classified object detection		
	Electronic Shutter Control	Automatic, Manual (1/1 to 1/10,000 sec)		
	Iris Control	Automatic, Open, Closed		
	Day/Night Control	Automatic, Manual		
	Flicker Control	60 Hz, 50 Hz		
	White Balance	Automatic, Manual		
	Backlight Compensation	On/Off		
	Privacy Zones	3D, up to 64 zones		
	Presets	500 named presets		
	Tours	10 named tours		
	Audio Compression Method	G.711, Opus		
	Digital Zoom	Up to 100x when used with ACC™ Client		
	Electronic Image Stabilization	Yes		
Digital Defog	Adjustable/Off			
NETWORK	Network	100BASE-TX		
	Cabling Type	CAT5e		
	Connector	RJ-45		
	ONVIF	ONVIF compliance version 1.02, 2.00, Profile S, Profile T, Profile G (www.onvif.org)		
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication, FIPS 140-2 L1		
	Protocol	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP		
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP		
	Device Management Protocols	SNMP v2c, SNMP v3		
	PERIPHERALS	Audio Input/Output	Line level input and output	
		External I/O Terminals	2 Alarm In, 2 Alarm Out	
Onboard Storage		2 x microSD/microSDHC/microSDXC slot – minimum class 6; class 10/UHS-1 or better recommended.		
MECHANICAL		IN-CEILING MOUNT	PENDANT MOUNT	
	Dimensions (øxH)	228 mm x 252 mm; 9.0" x 9.9"	242 mm x 347 mm; 9.5" x 13.7"	
	Weight	3.4 kg; 7.5 lbs	3.7 kg; 8.2 lbs	
	Dome Bubble	Polycarbonate		
	Body	Aluminum		
	Housing	Recessed mount	Pendant mount	
	Finish	Powder coat, grey		
	Tilt	-10° to 90°, e-Flip, 300°/second		
	Pan	360°, endless, 300°/second		
ELECTRICAL	Power Consumption	51 W max with 24 VDC aux power, 75 VA with 24 VAC aux power, 51 W max with 60 W PoE+, 25.5 W max with 30 W PoE*		
	Power Source	External Power	24 VDC ±10%; 24 VAC rms ±10%, 50 or 60 Hz	
		PoE*	60 W PoE: IEEE 802.3bt Class 6 PoE+, 60 W Cisco UPoE, Microsemi 60 W or higher midspans 30 W PoE: IEEE 802.3bt, 802.3at Class 4 PoE+	
	Power Connector	Red and Black input wires		
	RTC Backup Battery	3V manganese lithium		

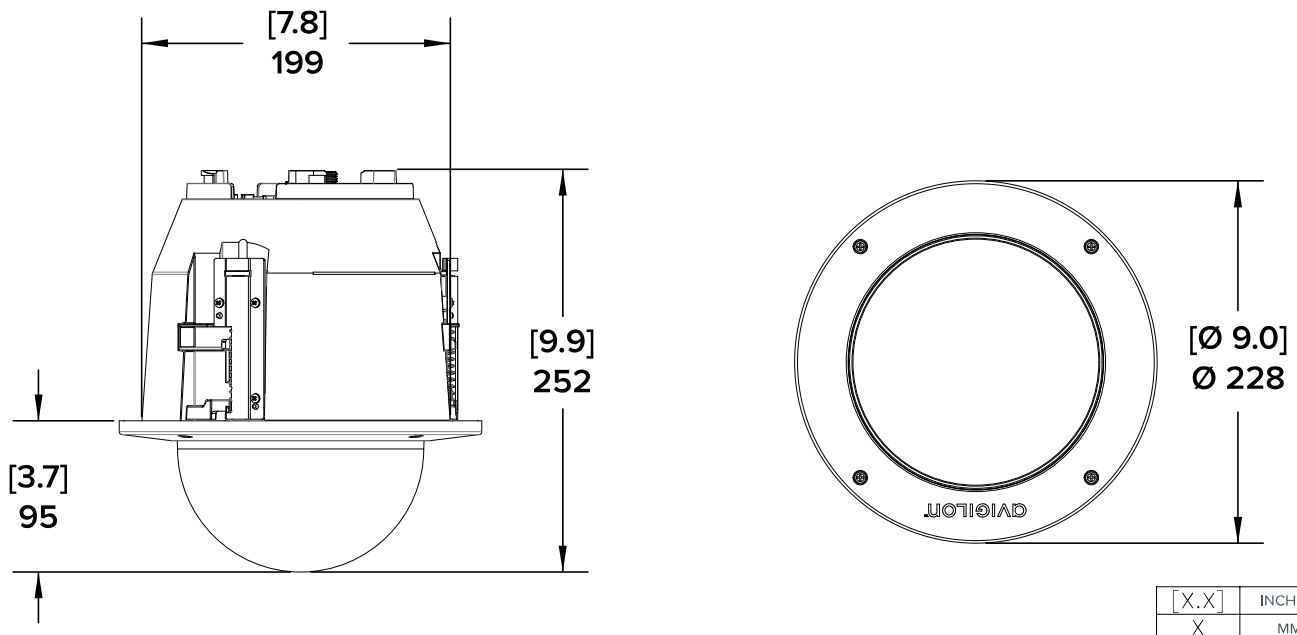
* 60W PoE may not be compatible with switches and injectors not listed here. Contact Avigilon sales or Avigilon technical support for more information.

		IN-CEILING MOUNT	PENDANT MOUNT	
ENVIRONMENTAL	Operating Temperature	-30 °C to +60 °C (-22 °F to 140 °F) with external power or 60 W PoE -10 °C to +60 °C (14 °F to 140 °F) with IEEE 802.3at 30 W PoE+	-40 °C to +60 °C (-40 °F to 140 °F) with external power or 60 W PoE -10 °C to +60 °C (14 °F to 140 °F) with IEEE 802.3at 30 W PoE+	
	Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)		
	Humidity	0-95%, non-condensing		
CERTIFICATIONS	Certifications/Directives	UL, cUL, CE, ROHS, RCM		
	Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1		
	Environmental	In-Ceiling	IEC 62262 IK10 Impact Rating, UL 2043	
		Pendant	IEC 62262 IK10 Impact Rating, UL/CSA/IEC 60950-22, IEC 60529 IP66 and IP67 Weather Rating, NEMA 4X	
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 50121-4		
Electromagnetic Immunity	EN 55035, EN 61000-6-1, EN 50121-4			
SUPPORTED VIDEO ANALYTICS EVENTS AT HOME POSITION	Objects in Area	The event is triggered when the selected object type moves into the region of interest.		
	Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.		
	Objects Crossing Beam	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.		
	Object Appears or Enters Area	The event is triggered by each object that enters the region of interest. This event can be used to count objects.		
	Object Not Present in Area	The event is triggered when no objects are present in the region of interest.		
	Objects Enter Area	The event is triggered when the specified number of objects have entered the region of interest.		
	Objects Leave Area	The event is triggered when the specified number of objects have left the region of interest.		
	Object Stops in Area	The event is triggered when an object in a region of interest stops moving for the specified threshold time.		
	Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.		
	Tamper Detection	The event is triggered when the scene unexpectedly changes.		
	SUPPORTED CLASSIFIED OBJECT TYPES	Object Types in Outdoor Mode	Vehicle, sub-types: Car, Truck, Bicycle, Motorcycle, Bus Person	
Object Types in Indoor Mode		Person		
TEACH BY EXAMPLE	Teach By Example	Yes, when used with Avigilon Control Center™		
AVIGILON CONTROL CENTER (ACC) VERSIONS SUPPORTED FEATURES	ACC Version 6.14.12 or higher	All supported analytic events with two types of classified objects: person or vehicle. Appearance search when paired with appropriate server hardware. H.265 supported.		
	ACC Version 7.2 or higher	All supported analytic events with people and vehicles and all vehicle sub-types as classified objects. Appearance search when paired with appropriate server hardware. H.265 supported.		

Outline Dimensions

In-Ceiling PTZ Dome Camera

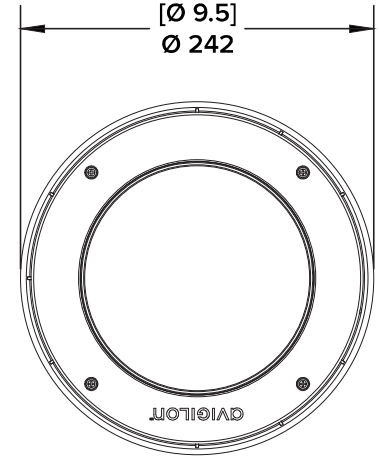
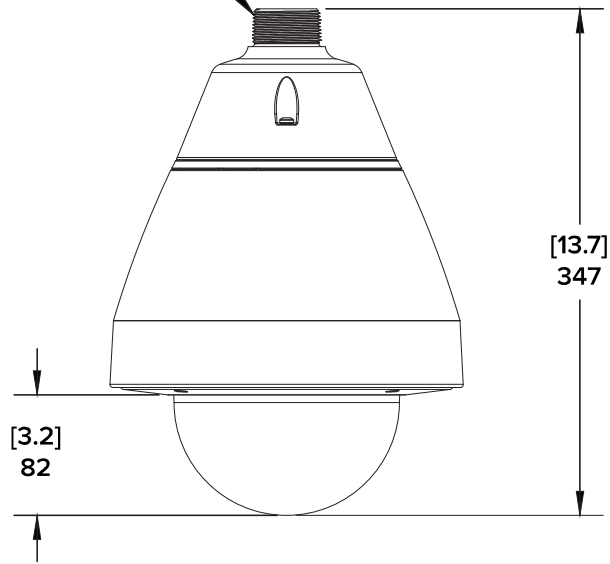
(H5A-PTZ-DC)



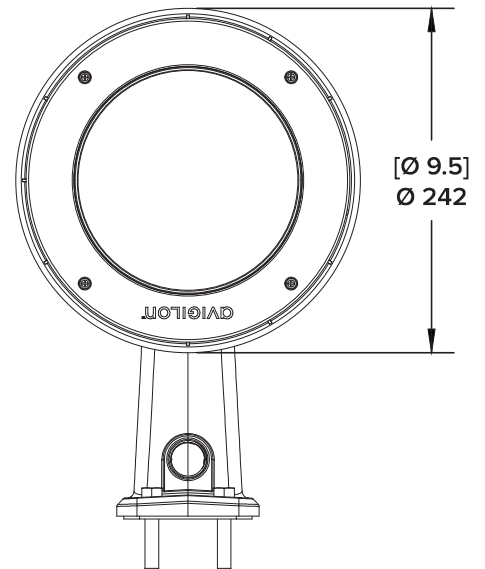
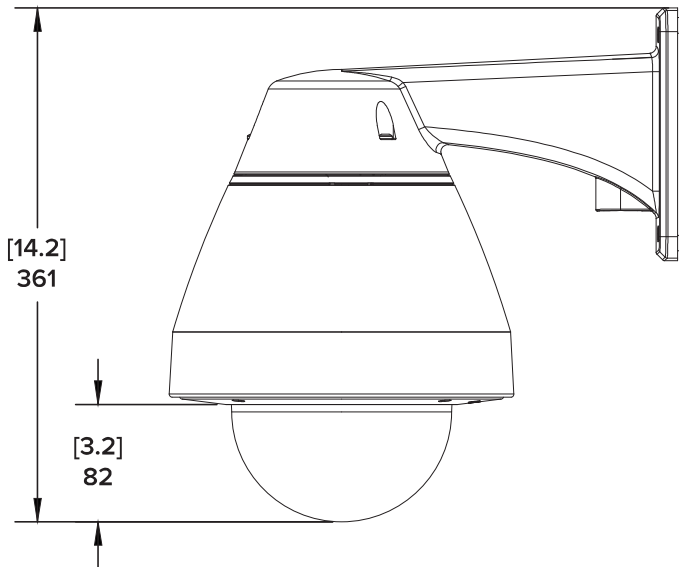
Pendant PTZ Dome Camera

(H5A-PTZ-DP)

1 1/2" NPT Thread Mount



(H5A-PTZ-DP) WITH WALL ARM



Ordering Information

PTZ DOME CAMERAS	MP	WDR	LIGHTCATCHER TECHNOLOGY	ANALYTICS AT HOME POSITION	LENS	ZOOM	IP66/IP67	HDSM SMARTCODEC
4.0C-H5A-PTZ-DP36	4.0	Digital WDR	✓	✓	4.4 – 88 mm	36x*	✓	✓
4.0C-H5A-PTZ-DC36	4.0	Digital WDR	✓	✓	4.4 – 88 mm	36x*		✓
8.0C-H5A-PTZ-DP36	8.0	Digital WDR	✓	✓	4.4 – 88 mm	36x*	✓	✓
8.0C-H5A-PTZ-DC36	8.0	Digital WDR	✓	✓	4.4 – 88 mm	36x*		✓

* 36x zoom is achieved with Image Stabilization off. Image Stabilization set to on will provide 30x zoom.

PTZ CAMERA ACCESSORIES	PENDANT PTZ	IN-CEILING PTZ	DESCRIPTION
IRPTZ-MNT-NPTA1	✓		NPT Pendant Adapter
IRPTZ-MNT-WALL1	✓		Wall Arm Mount
H4-MT-POLE1	✓		Pole Mounting Bracket
H4-MT-CRNR1	✓		Corner Mounting Bracket
PTZMH-DC-CPNL1		✓	Metal Ceiling Panel for In-Ceiling Installation
PTZH5A-CLER1	✓	✓	Clear Bubble Assembly - Replacement
PTZH5A-SMOK1	✓	✓	Smoked Bubble Assembly - Replacement
POE-INJ-BT-60W-NA	✓	✓	Gigabit 802.3bt 60W PoE Injector, single port.
POE-INJ2-PLUS-NA	✓	✓	30W PoE+ Injector. Injector operational temperature range is -20°C (-4°F) to 40°C (104°F). NA/EU/UK/AU options available.
PTZ-ACCS-IC-RETRO		✓	H4 In-Ceiling PTZ audio retrofit kit
H5PTZ-ACCS-CABL1	✓		Cable gland nut kit, pack of 10

H4 Video Intercom



The H4 Video Intercom integrates a 3 MP fisheye camera with a high-performance intercom and features exceptional wide dynamic range, low-light, noise reduction, and echo-cancelling technologies for clear viewing and two-way communication with visitors. Combined with Avigilon Control Center (ACC) video management software, this secured entry system enables operators to quickly and easily identify and communicate with a visitor before remotely granting access. The H4 Video Intercom also supports Avigilon Appearance SearchTM technology, which enables security operators to locate a specific person of interest quickly across all cameras on a site.

The H4 Video Intercom serves as a first line of defense for facilities where securing main entry points is critical. It can help schools verify campus access, provide parking entry to approved guests at hotels, and offer after-hours entry to retail staff. By providing and restricting access, the H4 Video Intercom helps enhance security while also maintaining convenience.

The innovative weather-, vandal-, and tamper-resistant, aluminum housing and adapter easily fit installations on walls and door frames, both indoors and outdoors. Its 3 MP wide-angle camera provides exceptional image quality even under challenging conditions with LightCatcherTM technology, triple exposure, true Wide Dynamic Range (WDR), and adaptive infrared (IR) technologies. The integrated, single-button intercom provides an easy way to communicate with your Avigilon Control CenterTM client for entry control. Digital inputs and outputs can easily interface to any door locks. The camera uses HDSM SmartCodecTM, Idle Scene Mode, and patented High Definition Stream Management (HDSM)TM technologies to reduce bandwidth and storage while maintaining high image quality.

KEY FEATURES

- 3 MP 170 degree wide-angle fisheye lens offers extended field of view to clearly capture individuals of different heights.
- Provides high quality clear bi-directional communication using noise reduction and echo-cancellation.
- Weather-, vandal-, and tamper-resistant, aluminum housing together with physical tamper detection offers reliable strength and durability.
- LightCatcher technology provides exceptional image quality in low light environments.
- Triple exposure Wide Dynamic Range for complex lighting environments.
- Integrated IR LEDs provide uniform illumination in the dark, even at 0 lux.
- Input and outputs for remote control of door locks and other equipment.
- Avigilon Appearance Search technology for fast video search across all cameras.
- Single network connection for video and audio using PoE.
- Easy door grant access via ACCTM, ACC mobile 3 app, and ACMTM integration.
- HDSM SmartCodec technology reduces bandwidth and storage requirements.
- Session Initiation Protocol (SIP) support for peer to peer and PBX voice calls.

Specifications

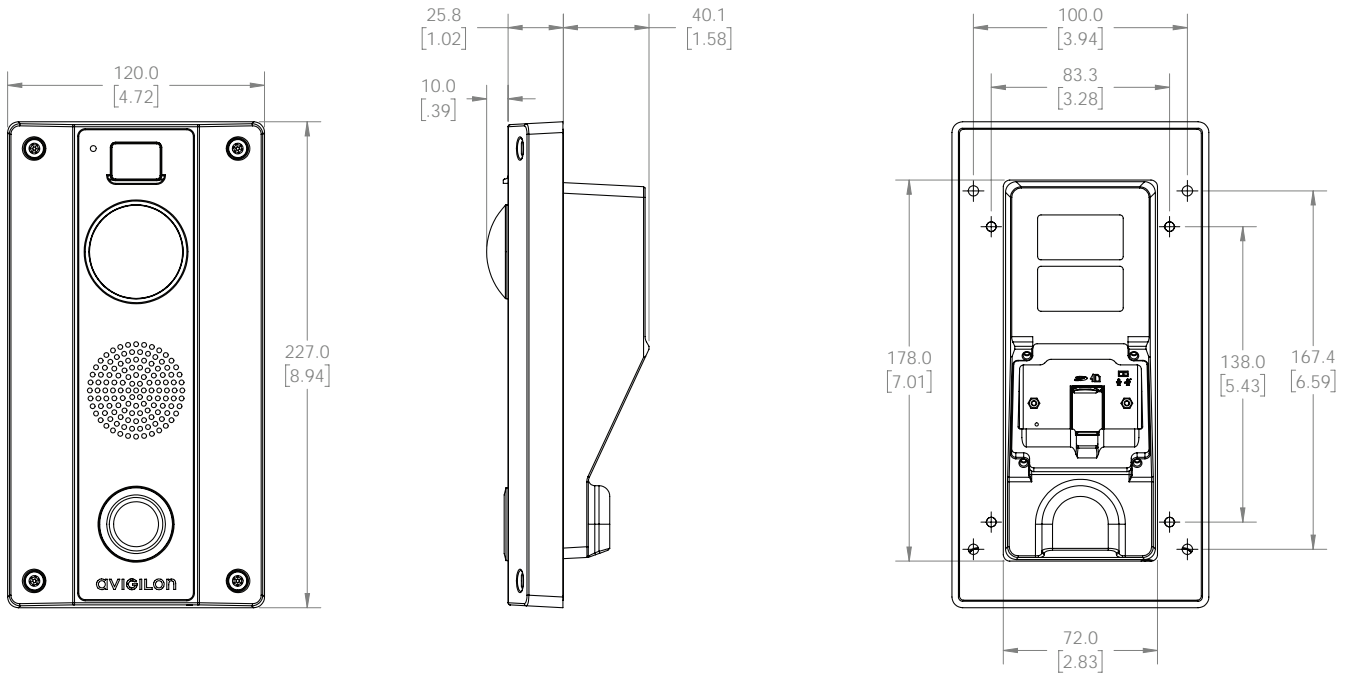
3.0 MP

IMAGE PERFORMANCE	Image Sensor	1/2.8" Progressive Scan CMOS								
	Aspect Ratio	4:3								
	Active Pixels (H x V)	2048 (H) x 1536 (V)								
	Imaging Area (H x V)	3.7 mm x 3.0 mm, 0.145" x 0.118"								
	Imaging Rate	30 fps								
	Minimum Illumination	With IR	0 lux							
		Without IR	0.14 lux (F2.4) in color mode; 0.03 lux (F2.4) in monochrome mode							
	IR Illumination	5 m (15 ft) max. distance at 0 lux								
	Dynamic Range	100 dB								
	Dynamic Range (WDR enabled)	120 dB triple exposure (20 fps or less); 100 dB dual exposure (30 fps)								
	Resolution Scaling	Down to 384 x 216								
	3D Noise Reduction Filter	Yes								
	LENS	Lens	1.83mm, F2.4, IR Corrected							
		Angle of View (H x V)	170° x 120°							
IMAGE CONTROL	Image Compression Method	H.264 (MPEG-4 Part 10/AVC), Motion JPEG								
	Streaming	Multi-stream H.264 and Motion JPEG								
	Bandwidth Management	HDSM SmartCodec technology; Idle scene mode								
	Video Compression	H.264/MJPEG/HDSM SmartCodec technology								
	Motion Detection	Pixel								
	Tamper Detection	Yes								
	Electronic Shutter Control	Automatic, Manual (1/6 to 1/8000 sec)								
	Iris Control	Fixed								
	Day/Night Control	Automatic, Manual								
	Flicker Control	50 Hz, 60 Hz								
	White Balance	Automatic, Manual								
	Backlight Compensation	Adjustable								
	Privacy Zones	Up to 64 zones								
AUDIO CONTROL	Audio Streaming	Two-way, Full Duplex								
	Audio Compression Method	Opus, G.711								
	Audio Output	90 dB at 1m (3.3")								
	Audio Input/Output	Built-in microphone with hardware disable / Built-in speaker								
	Echo Cancellation	Yes								
	Noise Reduction	Yes								
NETWORK	Network	100BASE-TX								
	Cabling Type	CAT5								
	Connector	RJ-45								
	ONVIF®	ONVIF compliant with version 1.02, 2.00, Profile S, Profile G								
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication								
	Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP								
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP								
	Session Initiation Protocol (SIP)	Integration support for Peer to Peer and PBX voice only calls								
	Device Management Protocols	SNMP v2c, SNMP v3								
	PERIPHERALS	External I/O Terminals	Alarm In (1), Alarm Out (2), Tamper Out (1)							
Onboard Storage		microSD/microSDHC/microSDXC slot – minimum class 6; class 10/UHS-1 or better recommended								
Tamper Detection Switch		Yes								
MECHANICAL	Dimensions (LxWxH)	RECESSED MOUNT			SURFACE MOUNT					
		227 mm x 120 mm x 75.9 mm (35.8mm proud of wall) 8.94" x 4.72" x 2.99" (1.41" proud of wall)			227 mm x 120 mm x 99.6 mm 8.94" x 4.72" x 3.92"					
	Weight	1,230 g; 2.71 lb			2,450 g; 5.40 lb					
	Body	Aluminum; Bubble: Polycarbonate								
	Housing	Recessed Mount, Tamper Resistant			Surface Mount, Tamper Resistant					
	Finish	Powder Coat, Silver								
ELECTRICAL	Power Consumption	10W								
	Power Source	PoE: IEEE802.3af Class 3 compliant		VDC: 12V +/- 10%, 10W min						
	RTC Backup Battery	3V manganese lithium								
ENVIRONMENTAL	Operating Temperature	-40 °C to 60 °C (-40 °F to 140 °F)								
	Storage Temperature	-10 °C to 70 °C (14 °F to 158 °F)								
	Humidity	0-95% non-condensing								
CERTIFICATIONS	Certifications/Directives	UL	cUL	CE	ROHS	WEEE	RCM	EAC	KC	
	Safety	UL 62368-1		CSA 62368-1		IEC/EN 62368-1	IEC 62471			
	Environmental	IK10 Impact Rating on enclosure and IK08 on bubble				IP66 Rating				
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B		IC ICES-003 Class B		EN 55032 Class B	EN 61000-6-3	EN 61000-3-2	EN 61000-3-3	
	Electromagnetic Immunity	EN 55024				EN 61000-6-1				

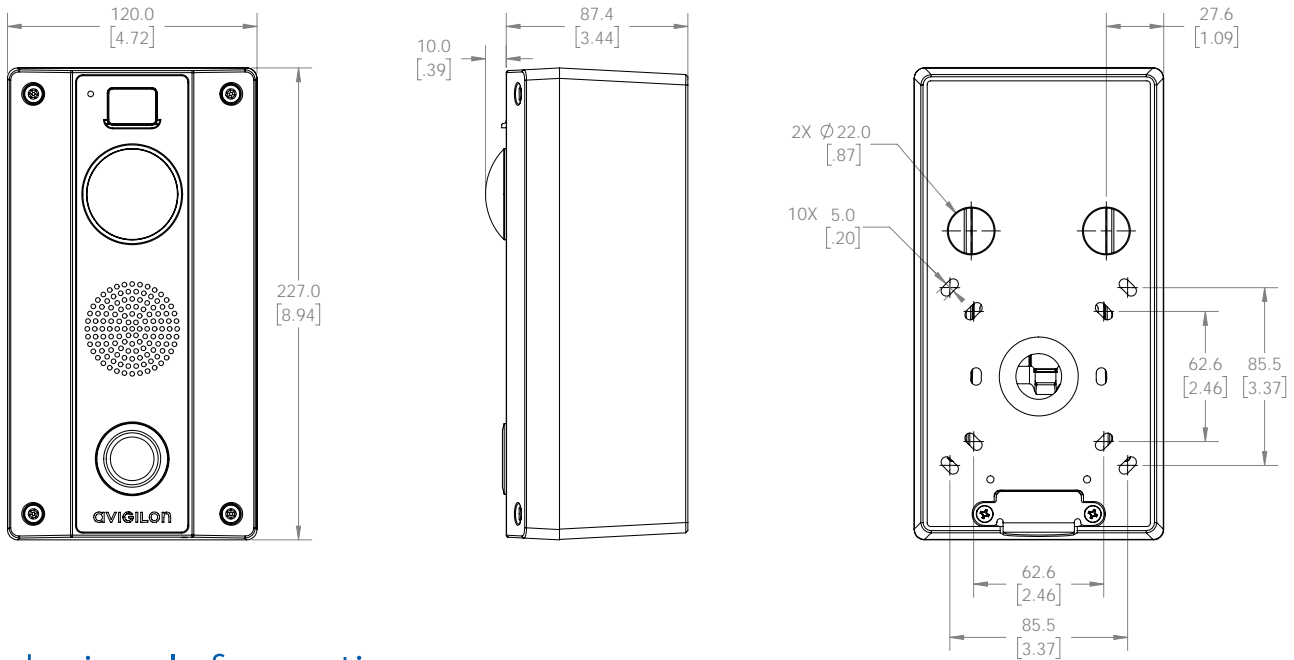
Outline Dimensions

[X.X]	INCHES
X	MM

Recessed Mount



Surface Mount



Ordering Information

	MP	WDR	LightCatcher Technology	IR	HDSM SmartCodec Technology
3.0C-H4VI-RO1-IR	3.0	✓	✓	✓	✓

Accessories Part Numbers

H4VI-AC-RELY1	Safety Relay for H4 Video Intercom
H4VI-MT-SURF1	Surface mount adapter for H4 Video Intercom
H4VI-RO-CVER1	Replacement dome cover for the H4VI camera, package of 5

Avigilon Control Center™ 7 Software

Avigilon Control Center (ACC) software is an easy-to-use video management software that is designed to optimize the way security professionals manage and interact with high-definition video. It efficiently captures and stores HD video, while intelligently managing bandwidth and storage using our patented High Definition Stream Management (HDSM) technology. Version 7 of the software introduces an entirely new way to monitor live video through its Focus of Attention interface, enabling operators to see at a glance what is happening across the entire site and more effectively triage and respond to the most important events.



Focus of Attention Interface

Redefining live video monitoring, Focus of Attention helps increase operator effectiveness by providing an overview of events across all cameras in the site, including Avigilon analytic events, face and license plate watch list matches, Unusual Activity Detection (UAD) events, Unusual Motion Detection (UMD) events, motion events, and alarms. Operators can triage the most important events, reviewing associated video to determine if a response is required.



Facial Recognition Technology

Accelerate response times using AI-powered facial recognition technology to detect people of interest based on secure watch lists managed by authorized users at the organization. Populate watch lists by uploading an image or finding a face from recorded video. Robust controls govern the accessibility and retention of watch list data. Start an Avigilon Appearance Search™ query for watch list entries, or receive alerts for potential watch list matches through the Focus of Attention interface. For added security, create alarms that trigger when any individual on the watch list is detected.



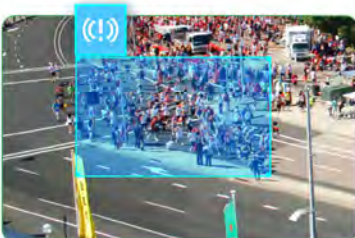
Avigilon Appearance Search Technology

A sophisticated AI search engine that enables investigators to sort through hours of recorded video with ease and quickly locate a person or vehicle of interest across an entire site. Search for a person or vehicle of interest by entering a physical description, by uploading a photo, or by finding an example in recorded video.



Next-Generation Analytics and Self-Learning Video Analytics

ACC™ video management software enables analytic events and alarms to be viewed and searched through an intuitive user interface. Real-time events and forensic capabilities detect and notify operators of scene changes and rules violations.



Unusual Activity and Unusual Motion Detection (UAD & UMD)

Advanced AI technology highlights the unanticipated by automatically flagging unusual activity and motion. Without any configuration, UMD detects atypical movement while UAD is object-aware and detects anomalous behavior (speed and location) of people and vehicles.



Preinstalled on Avigilon Recorders and Appliances

ACC software is pre-installed and configured on Avigilon HD Video Appliances, Network Video Recorders (NVRs), NVR Workstations, ACC ES Recorders, ACC ES Analytics Appliances, ACC ES 8-Port Appliances and the H4ES camera line. You can also install the stand-alone ACC software to meet the needs of a wide variety of projects. Our NVRs come pre-installed with the NVR Analytics Kit to enable our patented Avigilon Appearance Search technology.



Avigilon Control Center Advanced Features

HDSM™ Technology
Intelligently manages HD image communications to optimize network bandwidth and workstation performance for even the highest resolution Avigilon cameras.

HDSM SmartCodec™ Technology Support
Automatically adjusts compression levels for regions in a scene, to optimize bandwidth while still maintaining image quality.

Avigilon Appearance Search Technology
Quickly search recorded video to find instances of a person or vehicle across all sites using cameras with Avigilon self-learning analytics. Search for a person by physical description, including clothing color, hair color, gender and age group. Search for a vehicle by physical description, including color and category - car, truck, bus, bicycle, and motorcycle. Search for a person or vehicle by uploading a photo.

Facial Recognition Technology
AI-powered facial recognition algorithms notify operators when a person of interest returns to a facility. Add a person to a face watch list by uploading a photo or from recorded video. Create watch list alarms, monitor the Focus of Attention interface to detect matches, or start an Appearance Search for a person on a watch list.

Intelligent Search
Powerful search tools enable you to quickly search recorded video for motion, the presence of classified objects (people or vehicles), background changes in the scene (thumbnail search), and for events.

Simple Camera and Server Installation
Plug-and-play capabilities for NVRs and cameras that automatically identify themselves on the network, without manual configuration or searching.

LPR License Plate Recognition (LPR) Analytics
Second generation LPR analytics engine with easy configuration and improved accuracy for faster security response. Multiple license watch lists can trigger unique ACC rules when detecting a match.

ACM-ACC Interoperability
The Access Control Manager (ACM) system receives, processes, and acts on ACM™ door events, hardware input events, and access grants, enabling operators to unlock access doors directly from a camera view. Identity Verification enables users to see ACM system credentials dynamically displayed with ACC camera views. Identity Search enables users to visually verify access events, and initiate an Avigilon Appearance Search across the entire site for the same person.

Avigilon Cloud Services Web Client
Securely stream live and recorded video from firewall-protected ACC sites using a Chrome or Safari web browser. With no client installation required, this solution leverages Avigilon Cloud Services to support secure peer-to-peer connections to ACC servers.

ACC Mobile Software
Push alarm notifications, live and recorded video, two-way audio, self-learning video analytics overlays, digital output triggers, and PTZ control for Android™ and iOS mobile devices. Using Avigilon Cloud Services, log in to connected ACC sites without any complicated firewall configuration.

Video Archive
Retain and manage large amounts of video for on-demand retrieval and review. Extend your storage beyond NVRs using the Avigilon Video Archive for reliable and scalable storage.

Detailed Management, Monitoring, and Reporting of System Status and Security
Detailed logs of storage, network, and overall system status to help ensure the highest possible system uptime for critical applications.

Point-of-Sale Transaction Engine
Link HD security recorded video (viewed instantly) with transaction data to address compliance requirements and help reduce shrinkage and theft.

Scalable Integration with External Systems
Distributed architecture features .NET-based and REST-based APIs that can easily be integrated with other systems, such as access control and building management.

ONVIF® Profile S, T and G Compliant VMS
Ensures interoperability between IP based ONVIF conformant security devices regardless of manufacturer. Allows video and audio recovery from SD cards installed in Profile G cameras in case of network failure.

Unusual Activity Detection
UAD technology enables object-level detection of atypical activity. This edge-based intelligence uses advanced AI technology and is designed to be object-aware, enabling operators to know when a person or vehicle is in an unusual location in the scene or moving at an unusual speed.

Unusual Motion Detection
UMD technology enables fast video search and is designed to reduce hours of work to minutes by narrowing potentially thousands of motion events to a handful. This allows operators to focus their attention on recorded video needing further investigation.

Federal Government Compliance with FIPS 140-2 Certified Encryption

To comply with policies, Federal Government and other customers can enable FIPS 140-2 certified cryptography on ACC software and on supported Avigilon cameras. Required camera cryptography licenses are centrally managed in ACC. Within ACC, optionally turn on licensed FIPS cryptography on Avigilon cameras. ACC inventories the number of FIPS camera licenses being used and determines whether customers have the required number of licenses within a facility.

Specialty Devices

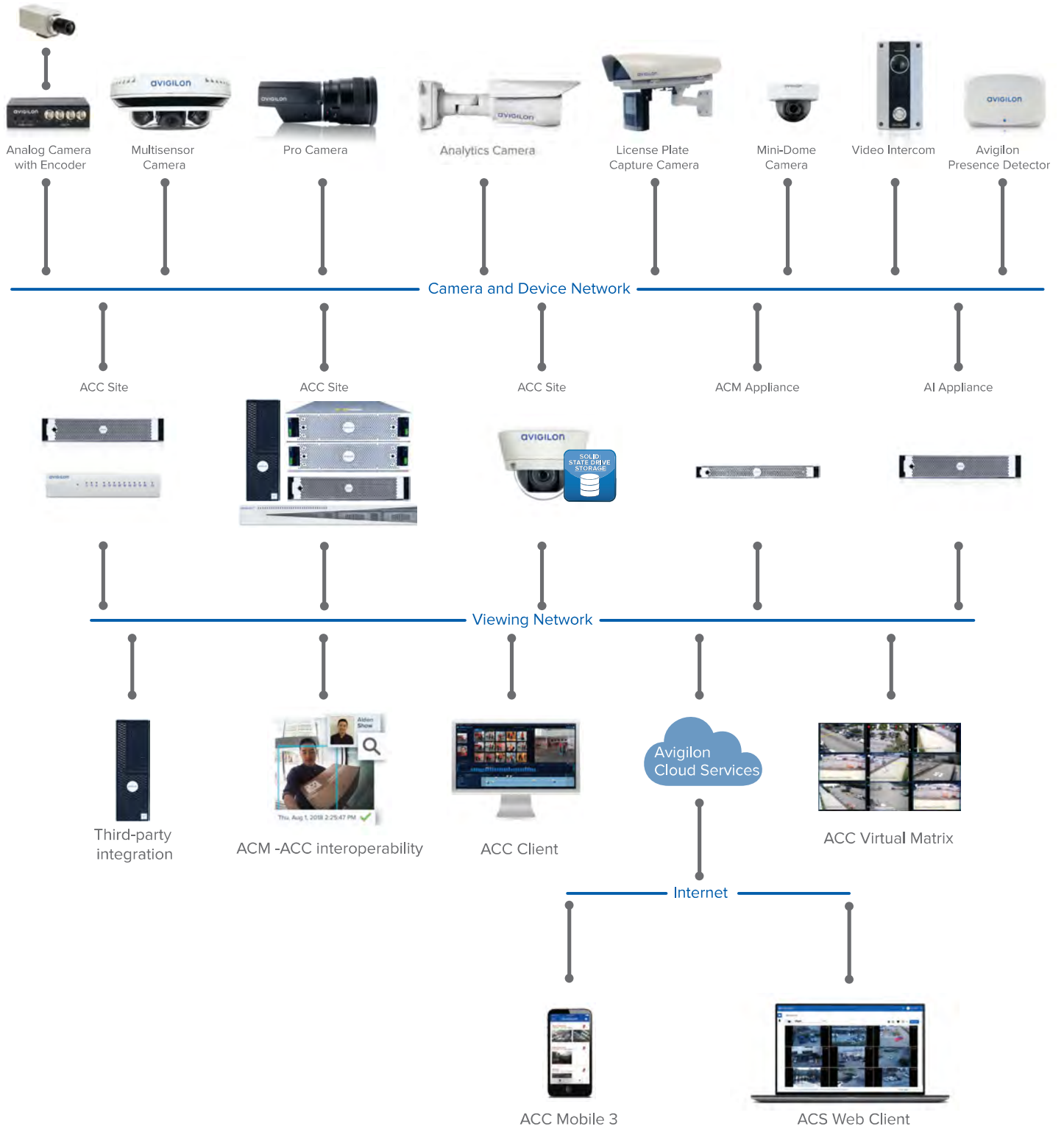


Avigilon Presence Detector Support
The Avigilon Presence Detector™ sensor is a small form factor impulse radar device with self-learning radar analytics that accurately detects the presence of a person even if they have stopped moving or are hidden. It has the ability to detect presence through blankets, cardboard, wood and drywall.



H4 Video Intercom Support
Video Intercom support provides operators with visual and audio verification of visitors. The H4 Video Intercom integration uses wide dynamic range and echo canceling technologies for clear viewing and two-way communication with visitors.

System Architecture



Software Editions

The Avigilon Control Center software is offered in three editions: Core, Standard and Enterprise. The Core edition is an entry-level version of our award-winning software that delivers advanced high definition video security capabilities, ease of use, and superior image quality to smaller implementations. The Standard edition is a cost-effective security solution that meets the vital and focused needs of mid-size operations. The Enterprise edition includes all of the Core and Standard features, plus advanced features to make it a powerful, open platform for large-scale video security needs.

SYSTEM	CORE	STANDARD	ENTERPRISE
Cameras per server	24	75	300+*
Cameras per site	24	75	10 000+*
Servers per site	1	1	100+*
Client licenses per server	2	10	Unlimited
Rule triggers	0	51	Unlimited
HDSM technology support	Yes	Yes	Yes
HDSM SmartCodec technology support	Yes	Yes	Yes
Dual Streaming for ONVIF compliant cameras	Yes	Yes	Yes
H.265, H.264, MPEG4, MJPEG, JPEG2000 video compression	Yes	Yes	Yes

* Actual limits will depend on the hardware environment. Please review Avigilon server and appliance datasheets for applicable limits.

DEVICE SUPPORT	CORE	STANDARD	ENTERPRISE
Automatic device discovery	Yes	Yes	Yes
Third-party IP cameras and encoders	Yes	Yes	Yes
ONVIF compliant cameras and encoders	Yes	Yes	Yes
H5A cameras with Next-Generation Video Analytics	Yes	Yes	Yes
H4A cameras with Self-Learning Video Analytics	Yes	Yes	Yes
H5SL, H5M, H4SL, H4 Multisensor, H4 PTZ, H4 IR PTZ, H4 Fisheye, H4 Mini Dome, H4ES, and H4 Thermal cameras	Yes	Yes	Yes
H4 Thermal Elevated Temperature Detection (ETD) cameras	Yes	Yes	Yes
Avigilon H3, HD and earlier cameras	Yes	Yes	Yes
Fisheye dewarping	Yes	Yes	Yes
Avigilon analog video encoder	Yes	Yes	Yes
Avigilon Presence Detector (APD) sensor	No	Yes	Yes
H4 Video Intercom	No	Yes	Yes
H4 Pro cameras	No	No	Yes
Avigilon AI Appliance	No	No	Yes

CLIENT	CORE	STANDARD	ENTERPRISE
Video Analytics overlays <i>(Next-Generation Video Analytics, Self-Learning Video Analytics, UAD and UMD)</i>	Yes	Yes	Yes
Joystick support	Yes	Yes	Yes
ACC Mobile 3 app / Web Endpoint including mobile alarm notifications	Yes	Yes	Yes
Avigilon Cloud Services Web Client	Yes	Yes	Yes
FIPS 140-2 Encryption	Yes	Yes	Yes
Certificate management between ACC Client and Server	Yes	Yes	Yes
Emergency privilege override	Yes	Yes	Yes
Two-factor authentication	Yes	Yes	Yes
Password strength meter	Yes	Yes	Yes
Light and dark interface themes	Yes	Yes	Yes
Editable Site View	Yes	Yes	Yes
Multi-camera export with optional password protection	Yes	Yes	Yes
Hourly configurable recording schedule	Yes	Yes	Yes
Saved views	No	Yes	Yes
Maps with configurable icons and camera thumbnail previews	No	Yes	Yes
Integrated web page bookmarking and display	No	Yes	Yes
Focus of Attention interface	No	No	Yes
Active Directory integration	No	No	Yes
Intelligent Virtual Matrix	No	No	Yes
Collaborative investigations	No	No	Yes
Multi-camera privacy blurred export from Avigilon Appearance Search results	No	No	Yes

SEARCH	CORE	STANDARD	ENTERPRISE
UAD and UMD timeline filtering wth Skip Play	Yes	Yes	Yes
Intelligent motion search	Yes	Yes	Yes
Thumbnail search	Yes	Yes	Yes
Event search	Yes	Yes	Yes
Point-of-sale (POS) transaction search	No	Yes	Yes
Avigilon Appearance Search technology	No	No	Yes
Alarm search	No	No	Yes
License plate event search	No	No	Yes

ACC INTEROPERABILITY WITH ACM SYSTEMS	CORE	STANDARD	ENTERPRISE
Door and panel input event triggers	No	Yes	Yes
Door access grants	No	Yes	Yes
Shared operator access	No	Yes	Yes
ACM Identity Verification	No	Yes	Yes
ACM Identity Search	No	Yes	Yes

ADD-ON MODULES AND INTEGRATIONS	CORE	STANDARD	ENTERPRISE
POS transaction engine	No	Yes	Yes
Avigilon developed and supported integrations	No	Yes*	Yes
Third party system integrations	No	Yes	Yes
License Plate Recognition with multiple match lists	No	No	Yes
Face Recognition with multiple watch lists	No	No	Yes

*CommScope® iPatch®, RS2 Access It®, DDS Amadeus 5 and DSX only

ADDITIONAL FEATURES	CORE	STANDARD	ENTERPRISE
System and motion event e-mail notifications	Yes	Yes	Yes
Two person authenticated recorded video viewing	Yes	Yes	Yes
Camera replacement	Yes	Yes	Yes
Central station notifications including ANSI/SIA DC-09-2013	No	Yes	Yes
Digital input email trigger	No	Yes	Yes
Manual digital output trigger	No	Yes	Yes
Audio recording and output	No	Yes	Yes
APD™ event trigger	No	Yes	Yes
Next-Generation Video Analytics and Self-Learning Video Analytics event configuration	No	Yes	Yes
Camera standby / privacy mode	No	Yes	Yes
Avigilon AI Appliance analytics configuration	No	No	Yes
Redundant recording	No	No	Yes
Failover connections	No	No	Yes
ACC Client alarm notifications and escalation	No	No	Yes
One-time Video Archive	No	Yes	Yes
Tiered Storage Management with Continuous Archive	No	No	Yes

For the latest list of integrations and add-ons supported by Avigilon Control Center software, visit avigilon.com.

System Requirements

Note:

- Run Windows Update before launching Avigilon Control Center (ACC) software.
- NVR recording throughput and retention times can vary according to the number of cameras, camera resolution, estimated percent of motion, continuous recording settings and predefined retention period.
- For best-in-class performance, choose an **Avigilon Certified Solution**.

ACC Client Software

AVIGILON CERTIFIED SOLUTIONS

	DISPLAY MODEL NUMBER	KEY FEATURES
2 Monitor Professional High Performance Remote Monitoring Workstation	RM5-WKS-2MN	<ul style="list-style-type: none"> • Preloaded with ACC Client software. • Supports high resolution monitors.
4 Monitor Professional High Performance Remote Monitoring Workstation	RM5-WKS-4MN	<ul style="list-style-type: none"> • Includes the adapters and accessories for quick deployment. • Avigilon warranty and support included.

SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows 8.1 (64-bit) or Windows 10 (64-bit) Microsoft .NET 4.6.2	Windows 10 (64-bit) Microsoft .NET 4.6.2
Processor	Intel® dual-core CPU (2.0 GHz) Streaming SIMD Extensions 2 (SSE2)	8th Generation Intel Celeron® CPU or higher
System RAM	4 GB DDR3	8 GB DDR4
Video Card	PCI Express, DirectX 10.0 compliant with 256 MB RAM	NVIDIA® Quadro P620
Network Interface	1 Gbps	1 Gbps
Hard Disk Space	500 GB	500 GB

ACC Server Software

AVIGILON CERTIFIED SOLUTIONS

	DISPLAY MODEL NUMBER	KEY FEATURES
NVR Premium	NVR4X-PRM-64TB / 96TB / 128TB / 157TB / 192TB / 217TB	<ul style="list-style-type: none"> • Optimized for video security applications in a 24/7/365 environment • ACC Server software is preinstalled, configured and enhanced for optimal system compatibility • Certified for the Avigilon video security environment - ACC software, LPR, Web Endpoint, Analytics, HDSM and 1-30MP cameras • High throughputs of up to 1800 Mbps • Documented network architecture for a wide variety of applications • Avigilon warranty and support included • Access to Avigilon System Design Tool (SDT) to calculate storage requirements
NVR Standard	NVR4X-STD-16TB-S16 / 16TB / 24TB-S16 / 24TB / 32TB-S16 / 32TB / 48TB-S16 / 48TB	
NVR Value	NVR4-VAL-6TB / 12TB / 18TB / 24TB	
AI NVR	AINVR-STD-24TB / 32 TB / 48TB AINVR-VAL-6TB / 12TB	

SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows Server 2012 R2, Windows 8.1 (64-bit) or Windows 10 (64-bit), Windows Server 2016, Windows Server 2019	Windows Server 2016 or Windows 10
Processor	x86 64 bit dual-core (1.9 GHz) SSE2	Intel® Xeon® E5 v3 (6 cores, 1.9GHz)
System RAM	4 GB DDR3	16 GB DDR4
Network Interface	1 Gbps	4 x 1 Gbps
Hard Drives	SATA-II 7200 RPM Enterprise Class Hard Drives	SATA-III 7200 RPM Enterprise Class Hard Drives

ACC Server Workstation

AVIGILON CERTIFIED SOLUTIONS

	DISPLAY MODEL NUMBER	KEY FEATURES
HD Video Appliance	VMA-AS3-8P2 / VMA-AS3-8P4 / VMA-AS3-8P8 / VMA-AS3-16P06 VMA-AS3-16P09 / VMA-AS3-16P12 / VMA-AS3-24P12 VMA-AS3-24P18 / VMA-AS3-24P24	<ul style="list-style-type: none"> • Preloaded and configured with ACC software • High-performance recording capacity • Throughputs of up to 400 Mbps • Avigilon warranty and support included • Access to Avigilon System Design Tool (SDT) to calculate storage requirements
ACC ES HD Recorder	VMA-RPO-4P2 / VMA-RPO-4P4	
ACC ES Analytics Appliance	VMA-RPA-4P2 / VMA-RPA-4P4	
ACC ES 8-Port Appliance	VMA-ENVR1-8P4 / VMA-ENVR1-8P8	
NVR4 Workstation	NVR4-WKS-4TB / NVR4-WKS-8TB	

SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows 8.1 (64-bit) or Windows 10 (64-bit)	Windows 10 (64-bit)
Processor	Intel Quad-core CPU (2.0 GHz) SSE2	8th Generation Intel Celeron CPU or higher
System RAM	4 GB DDR3	8 GB DDR4
Network Interface	1 Gbps	1 Gbps
Video Card	PCI Express, DirectX 10.0 compliant with 256 MB RAM	NVIDIA Quadro P620
Hard Drives	SATA-II 7200 RPM Hard Drives	SATA-III 7200 RPM Hard Drives

Avigilon Appearance Search Technology and Face Recognition

Avigilon Appearance Search technology and Face Recognition require the ACC Analytics Service to be installed on the same computer as the ACC Server software and must meet the listed system requirements:

AVIGILON CERTIFIED SOLUTIONS

	DISPLAY MODEL NUMBER	KEY FEATURES
AI NVR	AINVR-STD-24TB / 32 TB / 48TB AINVR-VAL-6TB / 12TB	Security-hardened NVR that provides server-side analytics for connected third-party and non-analytic cameras.
Analytics Kit for Avigilon Appearance Search Software	HD-NVR-ANK2-1	Tested and verified to provide enough processing power to run Avigilon Appearance Search feature.

SOFTWARE SYSTEM REQUIREMENTS	APPEARANCE SEARCH ONLY	APPEARANCE SEARCH AND FACE RECOGNITION
NVIDIA GPU Requirements	<ul style="list-style-type: none"> • 4 GB RAM • NVIDIA Pascal™ or NVIDIA Maxwell™ architecture • CUDA compute capability 5.2 or 6.1 • Windows x86_64 Driver Version 418.39 or above 	<ul style="list-style-type: none"> • 4 GB RAM • NVIDIA Pascal™ architecture or NVIDIA Quadro P1000 video card • CUDA compute capability 6.1 • Windows x86_64 Driver Version 418.39 or above

ACC Mobile 3 Software

ACC Mobile version 3 is available for the listed device platforms and requires the ACC Web Endpoint service. The ACC Web Endpoint service comes pre-installed on the AI NVR, ACC ES HD Recorder, ACC ES Analytics Appliance and ACC ES 8-Port Appliance. For NVR systems and HD Video Appliances, it should be installed on the same server as the ACC Server software.

	ANDROID	IOS
Platforms	Android version 5.0 or later	iPad with iOS 11 or later iPhone with iOS 11 or later iPod touch with iOS 11 or later
Processor	n/a	64-bit (Apple A7 or later)

Some images of the product interface have been simulated for illustrative purposes.

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USB Professional Joystick Keyboard



The innovative USB joystick keyboard allows you to have easy and complete control of all the functionality of the ACC Client for live, playback and alarm management. It is just one of the many ways Avigilon can help provide the very best monitoring and protection.

KEY FEATURES

- USB powered
- Preconfigured with Avigilon Control Center Client software commands
- Can be configured for right-hand or left-hand use

SYSTEM	Operating System	Windows 10
MECHANICAL	Dimensions (LxWxH)	379 mm x 89 mm x 224 mm; 15" x 3.5" x 8.8"
	Weight	1.35 kg (3.0 lbs)
	USB Cable Length	1.5 m (59")
ELECTRICAL	Power Source	USB port
	Power Consumption	350mA max
ENVIRONMENTAL	Operating Temperature	0° C to 45° C (32° F to 113° F)
CERTIFICATIONS		EN55022 Class B
		EN50130-4
		EN61000-6-3
		EN 62368-1
		FCC part 15 Class B
ORDERING INFORMATION	ACC-USB-JOY-PRO	Avigilon USB Professional Joystick Keyboard

Avigilon Self-Learning Video Analytics

Avigilon self-learning analytics extend the effectiveness of your security personnel by providing effective monitoring and enabling proactive, real-time response from your team. Built from the ground up to manage high-definition video, Avigilon offers analytics embedded in Avigilon cameras up to 5K (16 MP) resolution.

Through the use of advanced pattern-based analytics and teach-by-example technology, Avigilon video analytics are designed to increase the productivity of security personnel while making monitoring more affordable and efficient.



Advanced pattern-based analytics

Avigilon advanced video pattern detection technology is able to accurately recognize the movements of people and vehicles while ignoring motion not relevant to a scene. Embedded into cameras up to 5K (16 MP), the system's ability to constantly learn reduces false positives and helps ensure alerts are meaningful, which avoids wasted time and improves efficiencies.

Teach-by-example technology

Our teach-by-example object classifier technology enables users to provide feedback about the accuracy of alarm events generated by Avigilon devices. Rather than decreasing analytics sensitivity to reduce false alarms, the feedback trains the device, increasing the accuracy of the analytics used to determine which alarms are real and which are false to further improve a low false-positive alarm rate.

Over time, the system learns the scene and is able to prioritize important events based on user feedback. This increases sensitivity to conditions that are of concern while reducing false alarms to keep the focus on what matters.

KEY FEATURES

- Pattern-based object classification and tracking technology.
- Continuously self-learning analytics with no manual calibration required.
- Efficient installation and setup.
- Operator input teach-by-example technology.
- Embedded in cameras for resolutions 1-16 MP.
- Analytics appliances for any IP cameras or analog system.
- Real time analytic rule-based alarm notifications.
- Fully integrated with Avigilon Control Center™ software for an end-to-end analytics solution.
- Powerful forensic video analytics accelerates forensic search times using a fully unified ACC™ client.
- Cost effective. No additional servers required.
- No additional licensing required for analytics and rules-based events.

Key Features and Benefits

Ease of installation and ongoing accuracy

Point-and-shoot system setup. Self-learning video analytics works out of the box with no manual calibration required.

Self-learning analytics lower false alarm rates

Analytics continuously adjust to increase detection and confidence levels.

Broad variety of devices

Avigilon devices embedded with self-learning video analytics include appliances and cameras with resolutions from 1 MP to 5K (16 MP).

Pattern-based object classification and tracking technology

Object classification and tracking using pattern-based analytics algorithms are tuned to recognize people and vehicles, while ignoring nuisance motion.

Operator input teach-by-example technology

Teach-by-example technology enables users to provide feedback to the system about accuracy, which further enhances the pattern-based analytics database.

Integrated with Avigilon Control Center (ACC)

Fully integrated with ACC client and ACC mobile so that users can respond in real time even from mobile devices. Analytic alarm notifications can be automatically sent to any authorized client based on configured rules.

Analytics appliances for IP cameras or analog system

Add self-learning video analytics to IP or analog surveillance camera with Avigilon analytics appliances.

Idle scene mode

Idle scene mode reduces bandwidth and storage, and is triggered by analytics specific objects rather than motion detection.

Powerful forensics

Forensic search capabilities of analytics events accelerate search times using a fully unified ACC client.

Cost effective

No additional servers required.

No licensing required

Fully embedded edge analytics with no additional rules-based licensing on cameras.

The Avigilon Video Management Solution

Avigilon Control Center (ACC) video management software provides the ability for analytics events and alarms to be viewed and searched through an intuitive user interface. Real-time events and forensic capabilities detect and notify scene changes, missing objects and rules violations — all through an easy-to-use interface. Avigilon Control Center software gives you full control over playback of events, enabling you to quickly retrieve evidence to speed up response times and investigations.

RULES AND ALARMS

The Avigilon Control Center rules engine enables you to selectively apply analytics-based events as alarms and rule triggers, providing local or mobile users with immediate notifications for suspicious activities.

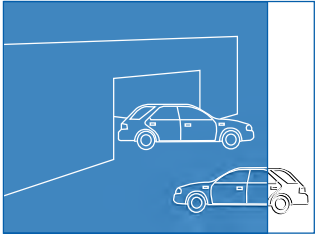
INTELLIGENT SEARCH OF CLASSIFIED OBJECTS

Avigilon Control Center software uses powerful analytics technology to intelligently search for specified events of classified objects to help you find the video you need quickly.

Avigilon Analytics Rules

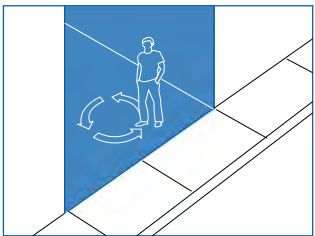
The following is a complete list of Avigilon self-learning video analytics features for object detection and classification for live or forensic events. The following images are for illustration purposes only.

OBJECTS IN AREA



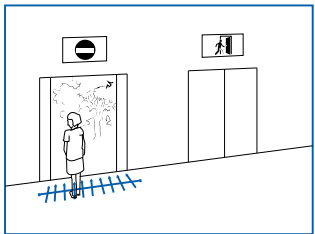
The event is triggered when the selected number of objects are present in the region of interest. The object can appear from within the region of interest or enter from outside the region of interest.

OBJECT LOITERING



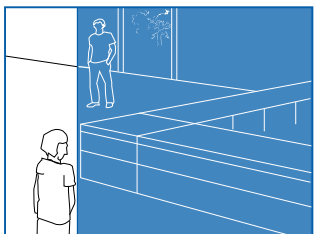
The event is triggered for each object that stays within the region of interest for an extended amount of time.

OBJECTS CROSSING BEAM



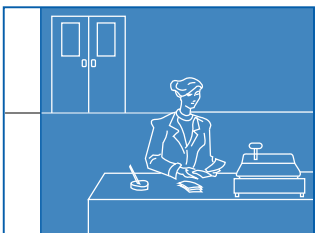
The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view in the selected time period. The beam can be unidirectional or bidirectional.

OBJECT APPEARS OR ENTERS AREA



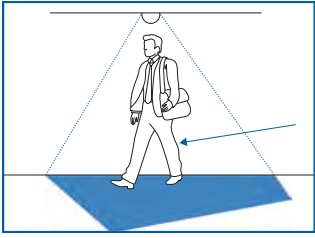
The event is triggered by each object present in the region of interest. The object can appear from within the region of interest or enter from outside the region of interest.

OBJECT NOT PRESENT IN AREA



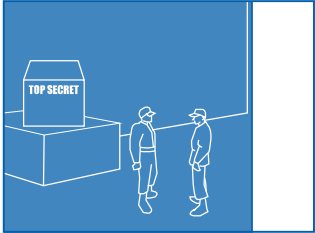
The event is triggered when no objects are present in the region of interest.

OBJECTS ENTER AREA



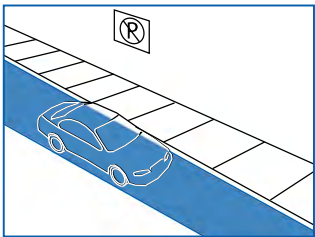
The event is triggered when the specified number of objects have entered the region of interest from outside of the region.

OBJECTS LEAVE AREA



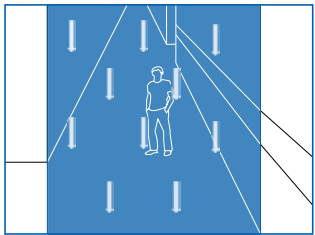
The event is triggered when the specified number of objects have left the region of interest.

OBJECT STOPS IN AREA



The event is triggered for each object in a region of interest that stops moving for the specified threshold time.

DIRECTION VIOLATED



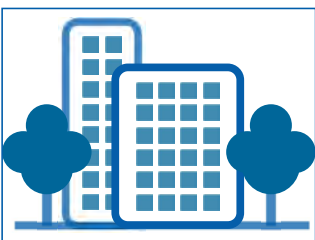
The event is triggered for each object that moves in the prohibited direction of travel.

CAMERA TAMPERING



The event is triggered when the scene unexpectedly changes.

IDLE SCENE MODE



Analytic capable cameras will stream at a different image rate and reduced quality while no events are detected in the scene.

ANALYTICS SOFTWARE REQUIREMENTS & CAPABILITIES

Setup with Avigilon Control Center software	ACC version 6.x; or ACC version 5.4 and later
Setup with Avigilon Rialto™ Devices for Third-Party Cameras	Avigilon View
Real-Time Alerts and Events Configuration	Set up in ACC client
Real-Time Alerts and Events Notification	ACC client, other multiple notifications possible based on rules engine configuration
Forensic Search Capabilities	Set up in ACC client
Display of Video ACC Client for Forensic Searches	ACC client

SUPPORTED VIDEO ANALYTICS DEVICES

Avigilon H3A Series	1-3MP; bullet, dome and camera form factors
Avigilon HD Pro Series	4K (8 MP), 4.5K (12 MP) and 5K (16 MP)
Avigilon H4 Series	1-5 MP and 4K (8 MP); bullet, dome and camera form factors
ACC ES Analytics Appliance	Supports up to 4 direct camera connection channels, or up to 4 x Avigilon H.264 Analog Video Encoders
Avigilon Rialto Series	<ul style="list-style-type: none"> Rialto I4, A4 and R-Series Avigilon View software is required Supported resolutions: <ul style="list-style-type: none"> D1 720 and 1080p (1920 x 1080) resolutions at 30fps using RTSP H.264 video streaming Analog 3rd party camera connection supports D1 resolution at 30fps

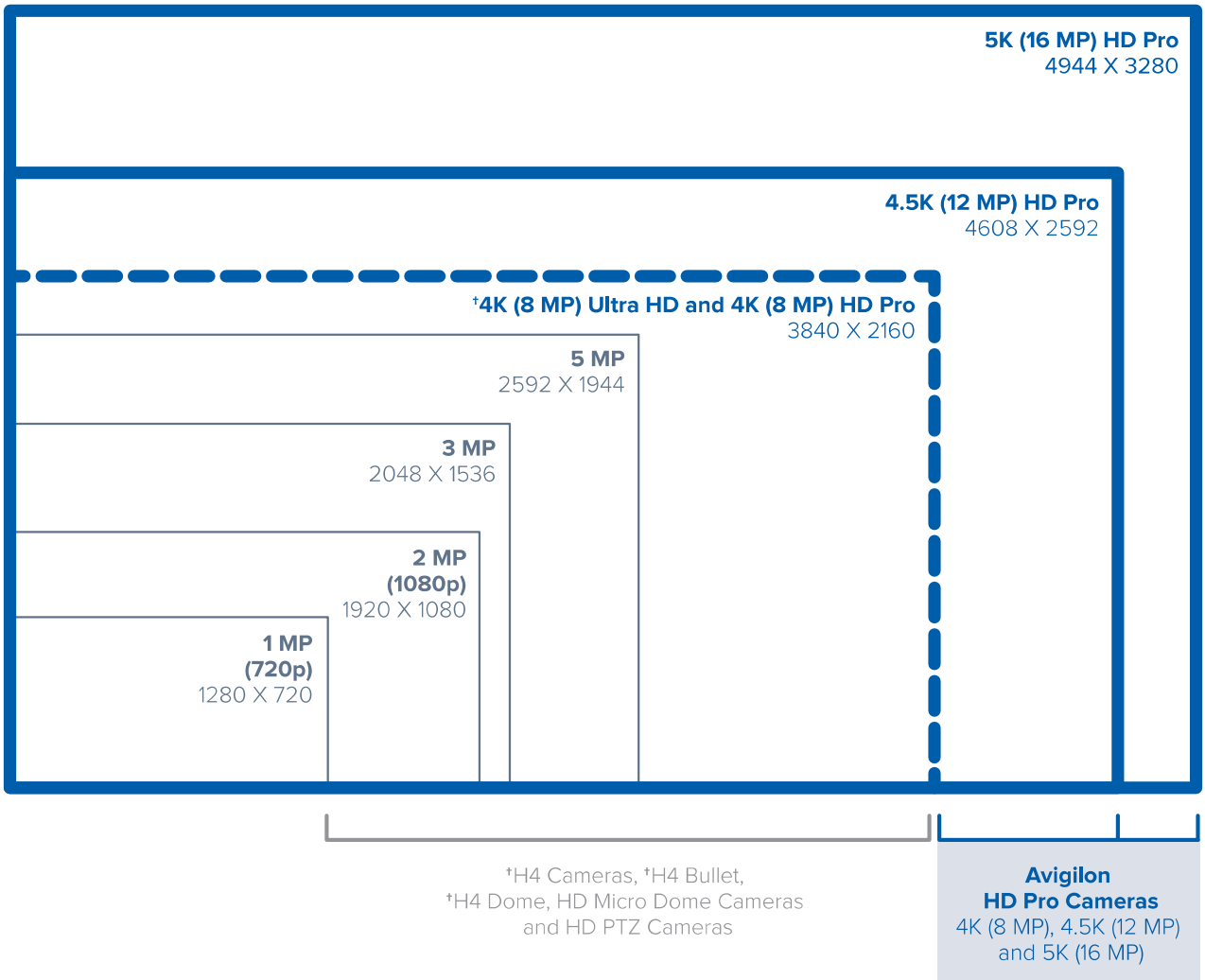


EXHIBIT B

**END USER AND END USER LICENSE AGREEMENTS FOR THE AVIGILON CLOUD
SERVICES AND THE AVIGILON CONTROL CENTER SOFTWARE**

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Effective December 15, 2020

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16. Indemnity by You. You will defend, indemnify and save harmless each of the Avigilon Parties from and against all actions, proceedings, demands, claims, liabilities, losses, damages, judgments, costs and expenses including, without limiting the generality of the foregoing, legal fees and disbursements actually incurred, together with all applicable taxes, which any such indemnified person under this Section 16 may be liable to pay or may incur by reason of, or directly or indirectly arising out of, any breach of this Agreement by You or any of Your directors, officers, employees, agents, or contractors, or on Your instructions.
17. Entire Agreement. This Agreement constitutes the entire agreement between the parties, and supersedes any previous agreements between the parties, with respect to the subject matter of this Agreement. Any terms of any purchase order or other instrument issued by either party in connection with this Agreement that is in addition to or inconsistent with the terms of this Agreement shall have no force or effect unless signed by both parties.
18. Amendment. Any amendment to this Agreement shall be put in writing and signed by both parties prior to being in effect. Notwithstanding the foregoing:
 - a. Avigilon reserves the right to unilaterally amend this Agreement at any time without advance notice to You where the amendments involve (i) correcting typographical errors; (ii) correcting inconsistent, incorrect, or ambiguous wording for the purpose of clarifying the intended purposes and intent of the applicable wording (but without altering its nature or scope); or (iii) updating this Agreement to better address or comply with the provisions of applicable laws.

- b. This Agreement may be superseded by a subsequent End User License Agreement that You agree to in connection with Avigilon's providing to You any future component, release, upgrade or other modification or addition to the Software.
19. Jurisdiction. This Agreement and performance under this Agreement will be governed by the laws of the State of Arizona applicable therein without reference to principles of conflicts of laws, and the courts in Maricopa County, AZ and the courts of appeal therefrom will have exclusive jurisdiction to hear any proceedings relating to this Agreement. You hereby irrevocably attorn to the jurisdiction of those courts. You expressly exclude the application of the United Nations convention on Contracts for the International Sale of Goods (the Vienna Convention, 1980).
20. Incorporation of 'Open Source' and other Third Party Software. Portions of the Software may be subject to certain third party license agreements governing the use, copying, modification, redistribution and warranty of those portions of the Software, including what is commonly known as 'open source' software, for example portions of the Software use libraries from the FFmpeg project under the LGPLv2.1. No warranty is provided by Avigilon for any such open source software. By using the Software You agree to be bound to the terms of any such third party licenses. If provided for in the applicable third party license, You may have a right to receive source code for such software for use and distribution in any program that You create, so long as You in turn agree to be bound to the terms of the applicable third party license and Your programs are distributed under the terms of that license. If applicable, a copy of such source code may be obtained free of charge by contacting Your Avigilon representative.
21. Collection of Data. By Your acceptance of the terms of this Agreement, You agree that Avigilon may:
- a. collect, from time to time, information about the computer(s) on which You have installed or will be using the Software. This information represents a configuration of Your computer(s) but includes no personal information, information about other software or data on Your computer, or information about the specific make or model of Your computer(s). A hash of this information may be disclosed to a third party vendor, Flexera Software LLC ("Flexera"), to assist with management and enforcement of Your hardware and software keys. Avigilon may also disclose to Flexera Your business name, the business name from whom You purchased the Software, the name of the site on which the Software is installed, and the other hardware and software keys installed at that site (if any). The information will be used solely to associate Your computer(s) with the hardware and software keys and to identify Your computer(s). The Flexera Privacy Policy can be found at:
<https://www.flexerasoftware.com/legal/privacy-policy.html>.
 - b. collect, or use a third party to collect (on Avigilon's behalf), from time to time, Your system configuration and system usage data. This information will be used only to further develop and improve the Software and Avigilon's associated products and services. Avigilon shall not utilize or disclose this data in a form that personally identifies You.
- Any personal information collected by Avigilon is subject to the Avigilon's Privacy Statement, available at avigilon.com/privacy, as may be amended from time to time.
22. Demonstration and Evaluation Copies. A demonstration or evaluation copy of the Software is covered by this Agreement, provided that the licenses contained in this Agreement expire at the end of the demonstration or evaluation period.

23. Enurement. All covenants, representations, warranties and agreements of the parties contained in this Agreement will be binding upon and will enure to the benefit of the parties and their respective successors and assigns.
24. Severability. If any provision of this Agreement is held to be invalid, illegal or unenforceable, it shall be severed and the remaining provisions shall continue in full force and effect.
25. Non-Waiver. The waiver or failure of Avigilon to exercise in any respect any right provided in this Agreement will not be deemed a waiver of any further right under this Agreement.
26. Compliance with Licenses. You agree that upon request from Avigilon or its authorized representative, You will, within thirty (30) days of such request, fully document and certify that Your use of any and all Software at the time of the request is in conformity with Your valid license(s) from Avigilon. You agree to use Your best efforts and to take all reasonable steps to safeguard the Software to ensure that no unauthorized person shall have access thereto and that no unauthorized copy or distribution, in any form, of the Software shall be made.
27. Additional Restrictions. The Software may be subject to additional restrictions and conditions on use as specified in the Documentation, which additional restrictions and conditions are hereby incorporated into and made a part of this Agreement.
28. Tools and Utilities. Software distributed via an Avigilon-authorized World Wide Web or FTP site (or similar Avigilon-authorized distribution means) as a tool or utility may be copied and installed without limitation provided that the Software is not distributed or sold and the Software is only used for the intended purpose of the tool or utility and in conjunction with Avigilon products. All other terms and conditions of this Agreement continue to apply.
29. Avigilon Cloud Services. Your use of the Software, or certain features or functionality of the Software, may involve or otherwise require Your use of the Avigilon Cloud Services, a web-based portal/platform developed and maintained by Avigilon to, amongst other things, facilitate the operation of certain features and functionality of the Software. To the extent You access and use the Avigilon Cloud Services in connection with Your use of the Software, the additional terms and conditions set forth in the Avigilon Cloud Services End-User Agreement will apply.

**AVIGILON CLOUD SERVICES
END-USER AGREEMENT**

Last Modified: 10 November 2020

This Cloud Services Agreement (this "**Agreement**") is a binding contract between you ("**Subscriber**," "**you**," or "**your**") and Avigilon Corporation ("**Provider**," "**we**," or "**us**"). This Agreement governs your access to and use of the Cloud Services.

BY CLICKING ON THE "I ACCEPT" BUTTON BELOW OR BY ACCESSING OR USING THE CLOUD SERVICES YOU (A) ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTAND THIS AGREEMENT; (B) REPRESENT AND WARRANT THAT YOU HAVE THE POWER TO ENTER INTO THIS AGREEMENT AND, IF ENTERING INTO THIS AGREEMENT FOR AN ORGANIZATION, THAT YOU HAVE THE POWER TO BIND THAT ORGANIZATION; (C) ACCEPT THAT THIS AGREEMENT TAKES IMMEDIATE EFFECT (the "**Effective Date**"); AND (D) AGREE TO BE LEGALLY BOUND BY ITS TERMS.

IF YOU DO NOT ACCEPT THESE TERMS, YOU MAY NOT ACCESS OR USE THE CLOUD SERVICES.

1. Definitions.

(a) "**Authorized User**" means you and your employees, consultants, contractors, and agents (i) who are authorized by you to access and use the Cloud Services under the rights granted to you pursuant to this Agreement and (ii) for whom access to the Cloud Services has been purchased hereunder.

(b) "**Cloud Services**" means the cloud-based security and surveillance platform developed by or licensed to us and provided under this Agreement that are detailed on our website available at www.avigilon.com/products/cloud/avigilon-cloud-services.

(c) "**Cloud Services Privacy Policy**" means the privacy policy applicable to the Cloud Services, available at <https://www.avigilon.com/products/acc/avigilon-cloud-services/>. The Cloud Services Privacy Policy supplements, is in addition to and should be read in conjunction with, the Avigilon Corporate Privacy Statement, which can be accessed at www.avigilon.com/privacy (the "**Avigilon Privacy Statement**").

(d) "**Documentation**" means end user documentation relating to the Cloud Services available at www.avigilon.com/products/cloud/avigilon-cloud-services/#downloads. Documentation may include the Cloud Services Privacy Policy, one or more Order Forms, and the Microsoft AUP.

(e) "**Microsoft AUP**" means, at any point in time, Microsoft Corporation's then current Acceptable Use Policy (or similar or successor policy) applicable to Microsoft Azure, as currently included in the Online Service Terms applicable to Microsoft Azure, which are currently available at: <https://www.microsoft.com/en-ca/Licensing/product-licensing/products.aspx>.

(f) "**Microsoft Azure**" means the cloud computing and services platform created and hosted by Microsoft Corporation which we use as a means of providing the Cloud Service (or portions thereof) to you.

(g) "**Order Form**" means an order form, or similar documentation, pursuant to which you subscribe to the Cloud Service through either us or one of our authorized resellers.

(h) "**Provider IP**" means the Cloud Services, the Documentation, downloadable software required to use the Cloud Services, and all intellectual property provided to you or any other Authorized User in connection with the foregoing. For the avoidance of doubt, Provider IP includes Aggregated

Statistics and any information, data, or other content derived from our monitoring of your access to or use of the Cloud Services, but does not include Subscriber Data.

(i) **"Subscriber Data"** means, other than Aggregated Statistics (defined below), (i) any data or content, including but not limited to audio and video files and data, that you or your Authorized Users generate, collect, record, transmit, or store in connection with their use of the Cloud Service; (ii) any system or Cloud Services setup, configuration, usage or performance data, including but not limited to the names and contact information for you and your Authorized Users, that you or your Authorized Users generate, collect, record, transmit, or store in connection with use of the Cloud Services; and (iii) any data, content, or other information that you or your Authorized Users provide to us for customer or technical support purposes.

(j) **"Third-Party Products"** means any products, content, services, information, websites, or other materials that are owned by third parties and are incorporated into or accessible through the Cloud Services.

2. Access and Use.

(a) Provision of Access. Subject to your compliance with the terms and conditions of this Agreement and payment of fees as set out in an applicable Order Form, we hereby grant you a revocable, non-exclusive, non-transferable, non-sublicensable, limited right to: (i) access and use the Cloud Services; (ii) access and use the Documentation; (iii) download and use software provided as part of the Cloud Services, including, subject to Section 3(e), Third Party Products consisting of downloadable software, during the Term solely for your use by Authorized Users for internal business operations.

(b) Use Restrictions. You shall not, and shall not permit any Authorized Users to, use the Cloud Services, any software component of the Cloud Services, or Documentation for any purposes beyond the scope of the access granted in this Agreement. Each of you and your Authorized Users acknowledge and agree that you and they shall, in accessing and using the Cloud Services (including its use of any Subscriber Data), comply with this Agreement, the Microsoft AUP, the Documentation, and all applicable laws. Each of you and your Authorized Users acknowledge and understand that applicable laws may include restrictions or prohibitions regarding the recording of audio, video, or any other content containing information that may be used to identify an individual, or requirements to provide notice of, or obtain consent to, the capture or recording of a person's personal information, including, but not limited to, their image, voice, or facial geometry.

(c) General Usage Restrictions. Each of you and your Authorized Users acknowledge and agree that you and they shall not: (i) modify, create derivative works from, reverse engineer, or reverse assemble, translate, decompile, or reverse compile the Cloud Services, or attempt to obtain or perceive its source code; (ii) disclose any password or access protocols in respect of the Cloud Services to any person (except as between you and your Authorized Users) or otherwise allow any person other than your Authorized Users to gain access to the Cloud Services; (iii) copy, sublicense, reproduce, rent, sell, lease, distribute, pledge, assign, or otherwise transfer, or encumber rights to the Cloud Services, or any part thereof, or use them for the benefit of any third party or include any Cloud Services in any other product offering; or (iv) use the Cloud Services in violation of the rights of any third party, including third party intellectual property rights. In addition, you and your Authorized Users shall not use the Cloud Services to: (v) interfere with or disrupt the integrity, availability, reliability, or performance of the Cloud Services or the data contained therein; (vi) store or transmit malicious code; (vii) launch or facilitate, whether intentionally or unintentionally, a denial of service attack on any of the Cloud Services, its users, or us; or (viii) attempt to gain unauthorized access to the Cloud Services, computer systems, or networks related to the Cloud Services.

(d) Data Transfer and Personal Information. You and your Authorized Users understand and acknowledge that we use third-party service providers, including cloud storage and transfer platforms, in conjunction with the Cloud Services (including, as applicable, Microsoft Azure). Accordingly, any information, including personal information, that you or your Authorized Users collect in connection with the use of the Cloud Services may be processed in, and subject to the laws of jurisdictions other than the jurisdiction(s) where you or your Authorized Users are located, or where the personal information was originally collected. We do not represent or warrant that the Cloud Services is appropriate for use in any particular jurisdiction. By using the Cloud Services, you and your Authorized Users represent that you, and they, have provided appropriate notice of, and obtained appropriate consent to, the cross-border transfer and processing of any personal information that you or your Authorized Users collect, record, transmit, or store in connection with the Cloud Services, in accordance with the laws and regulations applicable to such transfers and processing.

(e) Aggregated Statistics. We may monitor your use of the Cloud Services to gather data and information related to your use of the Cloud Services and/or information compiled from Subscriber Data that we may use in an aggregate and anonymized manner (collectively, the "**Aggregated Statistics**"), for one or more of the following purposes: (i) to compile statistical and performance information related to the provision and operation of the Cloud Services; (ii) to provide routine or Subscriber-requested maintenance, repairs, analytical or diagnostic services related to the Cloud Services, Provider IP, or Subscriber Data; (iii) to ensure compliance with, or provide updates or revisions to, this Agreement, Service Level performance metrics, or the Cloud Services, and policies and protocols related thereto; or (iv) to compile analytical and statistical information for purposes of developing and improving our products and services..

(f) Suspension. Notwithstanding anything to the contrary in this Agreement, we may temporarily suspend your access and any Authorized User's access to any portion or all of the Cloud Services if: (i) we reasonably determine that (A) there is a threat or attack on any of the Provider IP; (B) use of the Provider IP disrupts or poses a security risk to the Provider IP or to any other subscriber or vendor; (C) the Provider IP is used for fraudulent or illegal activities; (D) subject to applicable law, you have ceased to continue its business in the ordinary course, made an assignment for the benefit of creditors or similar disposition of its assets, or become the subject of any bankruptcy, reorganization, liquidation, dissolution, or similar proceeding; or (E) our provision of the Cloud Services to you or any Authorized User is prohibited by applicable law; (ii) any vendor of ours has suspended or terminated our access to or use of any Third-Party Products required to enable you to access the Cloud Services; or (iii) in accordance with Section 5 (any such suspension described in subclause (i), (ii), or (iii), is a "**Service Suspension**").

(g) Effect of Suspension. Upon any restriction or suspension of your access to the Cloud Services for your failure to comply with this Agreement, until the causal factor of any such restriction/suspension is rectified to our satisfaction: (i) you and you Authorized Users must immediately discontinue all use of the Cloud Service (except as we may otherwise specifically permit pursuant to the terms of such restriction/suspension); (ii) to the extent within your reasonable control, you must promptly rectify the causal factor of the restriction/suspension; and (iii) we will, in our discretion, cease providing the Cloud Services (or portion thereof) to you and your Authorized Users.

3. Subscriber Responsibilities.

(a) Account Use. You are responsible and liable for all uses of the Cloud Services and Documentation resulting from access provided by you, directly or indirectly, whether such access or use is permitted by or in violation of this Agreement. You are responsible for all acts and omissions of Authorized Users, and you will be deemed to have breached this Agreement if an Authorized User takes an act or omission that, if instead were taken by you, would constitute a breach of this Agreement. You shall use reasonable efforts to make all Authorized Users aware of this Agreement's provisions as

applicable to such Authorized User's use of the Cloud Services and shall cause Authorized Users to comply with such provisions.

(b) Your Data. You hereby grant to us a non-exclusive, royalty-free, worldwide license to reproduce, distribute, and otherwise use and display the Subscriber Data and perform all acts with respect to the Subscriber Data as may be necessary for us to provide the Cloud Services to you, and a non-exclusive, perpetual, irrevocable, royalty-free, worldwide license to reproduce, distribute, modify, and otherwise use and display Subscriber Data incorporated within the Aggregated Statistics.

(c) Passwords and Access Credentials. You are responsible for keeping your passwords and access credentials associated with the Cloud Services confidential and to manage your account according to the requirements set forth in the Documentation.

(d) Third-Party Products. The Cloud Services may permit access to Third-Party Products. For purposes of this Agreement, such Third-Party Products are subject to their own terms and conditions. Do not install, access, or use such Third-Party Products if you do not accept their terms.

(e) Contact Information. You are responsible for providing us with correct contact information for your account, updated as necessary from time to time during the Term.

4. Service Levels and Support.

(a) Service Levels. Subject to your continued payment of all license and subscription fees applicable to your use of the Cloud Services, and subject to continued compliance with this Agreement by you and your Authorized Users, we shall use commercially reasonable efforts to make the Cloud Services available 24-hours a day, seven days a week, except for (i) planned downtime, where we will provide you with eight hours advance notice; and (ii) temporary unavailability resulting from circumstances beyond our reasonable control, in which instance we shall provide you with notice of such unavailability as soon as is reasonably practicable following such event.

5. Fees and Payment. If applicable, You shall pay us the fees ("**Fees**") in the amounts and in the manner set forth in applicable Order Forms.

6. Confidential Information. In connection with this Agreement and provision of the Cloud Services each party (as the "**Disclosing Party**") may disclose or make available Confidential Information to the other party (as the "**Receiving Party**"). As used herein, "**Confidential Information**" means information in any form or medium (whether oral, written, electronic, or other) that the Disclosing Party considers confidential or proprietary, including information consisting of or relating to the Disclosing Party's technology, trade secrets, know-how, business operations, plans, strategies, customers, and pricing, and information with respect to which the Disclosing Party has contractual or other confidentiality obligations, in each case whether or not marked, designated, or otherwise identified as "confidential".

7. Privacy Policy. By accessing, using, and providing information to or through the Cloud Services, you acknowledge that you have reviewed and accepted the Cloud Services Privacy Policy, and you consent to all actions taken by us with respect to your information in compliance with the then-current version of such policy.

8. Intellectual Property Ownership; Feedback. As between you and us, (a) we own all right, title, and interest, including all intellectual property rights, in and to the Cloud Services and (b) you own all right, title, and interest, including all intellectual property rights, in and to Subscriber Data. If you or any of your employees, contractors, or agents ("**your representatives**") send or transmit any communications or materials to us suggesting or recommending changes to the Cloud Services, including without limitation, new features or functionality relating thereto, or including any comments, questions, suggestions, or the like ("**Feedback**"), we are free to use such Feedback irrespective of any other obligation or limitation between you and us governing such Feedback. All

Feedback is and will be treated as non-confidential. You hereby assign to us on your behalf, and shall cause your representatives to assign to us on their behalf, all right, title, and interest in any ideas, know-how, concepts, techniques, or other intellectual property rights contained in the Feedback, without any attribution or compensation to you, your representatives, or any third party.

9. Limited Warranty and Warranty Disclaimer.

(a) We warrant that the Cloud Services will conform in all material respects to the Service Levels when accessed and used by you in accordance with the Documentation. We do not make any representations or guarantees regarding uptime or availability of the Cloud Services unless specifically identified in the Service Levels. The remedies set forth in the Service Levels are your sole remedies and our sole liability under the limited warranty set forth in this Section 9(a). THE FOREGOING WARRANTY DOES NOT APPLY, AND WE STRICTLY DISCLAIM, ALL WARRANTIES WITH RESPECT TO ANY THIRD-PARTY PRODUCTS.

(b) Subscriber Warranty. You warrant that you own all right, title, and interest, including all intellectual property rights, in and to Subscriber Data and that both the Subscriber Data and your use of the Cloud Services are in compliance with this Agreement.

(c) EXCEPT FOR THE LIMITED WARRANTY SET FORTH IN SECTION 9(a) THE CLOUD SERVICES ARE PROVIDED "AS IS" AND WE SPECIFICALLY DISCLAIM ALL WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE. WE SPECIFICALLY DISCLAIM ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT, AND ALL WARRANTIES ARISING FROM COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

10. Indemnification.

(a) Provider Indemnification.

(i) We shall indemnify, defend, and hold harmless you from and against any and all losses, damages, liabilities, deficiencies, claims, actions, judgments, settlements, interest, awards, penalties, fines, costs, or expenses of whatever kind, including reasonable attorneys' fees ("**Losses**"), incurred by you resulting from any third-party claim, suit, action, or proceeding ("**Third-Party Claim**") that the Cloud Services, or any use of the Cloud Services in accordance with this Agreement, infringes or misappropriates such third party's US intellectual property rights, provided that you promptly notify us in writing of the Third-Party Claim, cooperate with us, and allow us sole authority to control the defense and settlement of such Third-Party Claim.

(ii) If such a Third-Party Claim is made or we reasonably anticipate such a Third-Party Claim will be made, you agree to permit us, at our sole discretion, to (A) modify or replace the Cloud Services, or component or part thereof, to make it non-infringing, or (B) obtain the right for you to continue use. If we determine that neither alternative is reasonably available, we may terminate this Agreement, in its entirety or with respect to the affected component or part, effective immediately on written notice to you. This Section 10(a)(ii) sets forth your sole remedies and our sole liability and obligation for any actual, threatened, or alleged Third-Party Claims that the Cloud Services infringe, misappropriate, or otherwise violate any intellectual property rights of any third party.

(iii) This Section 10(a) will not apply to the extent that any such Third-Party Claim arises from Subscriber Data, Third-Party Products, or from the use of the Cloud Services in combination with any products, content, services, information, websites, or other materials that we have not provided or authorized.

(b) Subscriber Indemnification. You shall indemnify, hold harmless, and, at our option, defend us and our officers, directors, employees, agents, affiliates, successors, and assigns from and against any and all Losses arising from or relating to any Third-Party Claim (i) that the Subscriber Data, or any use of the Subscriber Data in accordance with this Agreement, infringes or misappropriates such third party's US intellectual property rights; or (ii) based on your negligence or willful misconduct or any Authorized User's negligence or willful misconduct or use of the Cloud Services in a manner not authorized by this Agreement; provided that you may not settle any Third-Party Claim against us unless we consent to such settlement, and further provided that we will have the right, at our option, to defend against any such Third-Party Claim or to participate in the defense thereof by counsel of our own choice.

11. Limitations of Liability. Except for personal injury or death, Avigilon's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, or otherwise, will be limited to the direct damages recoverable under law. ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT AVIGILON WILL NOT BE LIABLE FOR ANY COMMERCIAL LOSS; INCONVENIENCE; LOSS OF USE, TIME, DATA, GOODWILL, REVENUES, PROFITS OR SAVINGS; OR OTHER SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO OR ARISING FROM THIS ADDENDUM OR THE PERFORMANCE OF THE SUBSCRIPTION SERVICES BY AVIGILON. This limitation of liability provision survives the expiration or termination of this Agreement and applies notwithstanding any contrary provision. No action for contract breach or otherwise relating to the transactions contemplated by this Agreement may be brought more than one (1) year after the accrual of the cause of action, except for money due upon an open account. The exclusions and limitations in this Section 11 do not apply to the parties' obligations under Section 10.

12. Term and Termination.

(a) Term and Renewal. The term of this Agreement begins on the Effective Date and continues until the one-year anniversary of the Effective Date ("**Term**"). At the beginning of the initial Term, you will elect one of two options for renewal: (i) auto-renewal or (ii) a one-year term with automatic termination.

(i) Auto Renewal. If you elect auto-renewal this Agreement will automatically renew for successive one-year terms unless we elect to terminate this Agreement as provided herein, or you provide us with written notice of your intent not to renew at least 60-days prior to the expiration of the then current Term. Pricing for the Cloud Services for any renewal Term will be the same as pricing for the current Term, unless we have provided you with 60-days notice of a price increase; provided, that any such price increase shall not exceed the greater of 7% of the then current price or the rate of inflation determined as of the time of renewal.

(ii) One-Year Term. If you do not elect the auto-renewal option, the Term will automatically expire on the one-year anniversary of the effective date of the then current Term. If you do not elect the auto-renew option, you must provide us with written notice of your intent to renew this Agreement at least 60-days prior to the expiration of the then current Term. If you do not provide timely notice, this Agreement will automatically terminate upon expiration of the then current Term. Pricing for a new Term will be at the then current rates for our provision of the Cloud Services to new subscribers. If you do not elect to renew this Agreement, your access to the Cloud Services will be terminated and your ability to access stored Subscriber Data will be governed by the terms of this Agreement.

(b) Termination. In addition to any other express termination right set forth in this Agreement:

(i) We may terminate this Agreement, for any reason upon thirty (30) days' advance notice.

(ii) either party may terminate this Agreement, effective on written notice to the other party, if the other party materially breaches this Agreement, and such breach: (A) is incapable of cure; or (B) being capable of cure, remains uncured 30 days after the non-breaching party provides the breaching party with written notice of such breach; or

(iii) either party may terminate this Agreement, effective immediately upon written notice to the other party, if the other party: (A) becomes insolvent or is generally unable to pay, or fails to pay, its debts as they become due; (B) files or has filed against it, a petition for voluntary or involuntary bankruptcy or otherwise becomes subject, voluntarily or involuntarily, to any proceeding under any domestic or foreign bankruptcy or insolvency law; (C) makes or seeks to make a general assignment for the benefit of its creditors; or (D) applies for or has appointed a receiver, trustee, custodian, or similar agent appointed by order of any court of competent jurisdiction to take charge of or sell any material portion of its property or business.

(c) Effect of Termination. Upon termination of your subscription for or access to the Cloud Services pursuant to this Section 12 or otherwise: (i) you and your Authorized Users must immediately discontinue all use of the Cloud Services; (ii) you must promptly pay all remaining amounts, if any, due and payable under the applicable Order Form(s); and (iii) we will cease providing the Cloud Services to you and your Authorized Users.

(d) Access to Subscriber Data. We will not delete Subscriber Data for a period of 60 days following termination (the "**Post -Termination Retention Period**"). During the Post-Termination Retention Period you may retrieve Subscriber Data only if you have paid all amount due under this Agreement. We will make the Subscriber Data available to you in a non-proprietary format and assist you with retrieval during the Post-Termination Retention Period. You agree to pay our reasonable expenses, on a time and materials basis, for the assistance we provide in assisting you with retrieval of the Subscriber Data. WE HAVE NO OBLIGATION TO MAINTAIN THE SUBSCRIBER DATA BEYOND THE POST-TERMINATION RETENTION PERIOD, AND WE MAY THEREAFTER DELETE THE SUBSCRIBER DATA, UNLESS LEGALLY PROHIBITED FROM DOING SO, OR UNLESS AN EXTENSION OF THE POST-TERMINATION RETENTION PERIOD IS AGREED TO. Upon your request and provided that you have paid all amounts due under this Agreement, we may agree to a reasonable extension of the Post-Termination Retention Period. If we are legally prevented from deleting the Subscriber Data beyond the Post-Termination Retention Period you agree to pay all costs associated with continued storage until the Subscriber Data is either deleted or retrieved by you.

(e) Survival. This Section 12(e), and any right, obligation, or required performance of the parties in this Agreement which, by its express terms or nature and context is intended to survive termination or expiration of this Agreement, will survive any such termination or expiration.

13. Modifications. You acknowledge and agree that we have the right, in our sole discretion, to modify this Agreement and the Cloud Services from time to time, and that changes to this Agreement become effective on posting to this page. You will be notified of changes to the Cloud Services when you first access the Cloud Services after such a change is made. You will be required to accept the changes to continue to use the Cloud Services. You are responsible for reviewing and becoming familiar with any such modifications. Your continued use of the Cloud Services after the effective date of the modifications will be deemed acceptance of the modified terms. Provider will use reasonable efforts to provide advance notice of modifications to the Cloud Services or this Agreement that Provider reasonably believes are material by placing a notice on the Avigilon.com website, notifying you through the Cloud Services, by sending you an email, or by some other means. Please check the Cloud Services Terms and Conditions page periodically for updates. Notwithstanding the foregoing, from time to time we may develop updates, upgrades, patches, bug fixes, or other modifications to improve the performance of the Cloud Services or for other purposes in our sole discretion ("**Updates**"). You agree that we may automatically install such Updates without providing any additional notice to you or receiving any additional consent from you.

14. Governing Law and Jurisdiction. This agreement is governed by and construed in accordance with the internal laws of the state of Delaware without giving effect to any choice or conflict of law provision or rule that would require or permit the application of the laws of any jurisdiction other than those of the state of Delaware. Any legal suit, action, or proceeding arising out of or related to this agreement or the rights granted hereunder will be instituted exclusively in the courts of the state of Delaware, and each party irrevocably submits to the exclusive jurisdiction of such courts in any such suit, action, or proceeding.

15. Miscellaneous. This Agreement constitutes the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and supersedes all prior and contemporaneous understandings, agreements, representations, and warranties, both written and oral, with respect to such subject matter. Any notices to us must be sent to our corporate headquarters address at Box 378, #101-1001 West Broadway, Vancouver, Canada V6H 4E4, attention: Customer Service, and must be delivered either in person, by certified or registered mail, return receipt requested and postage prepaid, or by recognized overnight courier service, and are deemed given upon receipt by us. Notwithstanding the foregoing, you hereby consent to receiving electronic communications from us. These electronic communications may include notices about applicable fees and charges, transactional information, and other information concerning or related to the Cloud Services. You agree that any notices, agreements, disclosures, or other communications that we send to you electronically will satisfy any legal communication requirements, including that such communications be in writing. The invalidity, illegality, or unenforceability of any provision herein does not affect any other provision herein or the validity, legality, or enforceability of such provision in any other jurisdiction. Any failure to act by us with respect to a breach of this Agreement by you or others does not constitute a waiver and will not limit our rights with respect to such breach or any subsequent breaches. This Agreement is personal to you and may not be assigned or transferred for any reason whatsoever without our prior written consent and any action or conduct in violation of the foregoing will be void and without effect. We expressly reserve the right to assign this Agreement and to delegate any of its obligations hereunder.