City of Aurora, IL

Network, Video, Access Control & Camera Implementation for Public Works Building

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Submitted To:

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1. INTRODUCTION

Scientel Solutions LLC (Scientel) is pleased to present this proposal to the City of Aurora, IL (Aurora) for a comprehensive Network, Video, and Access Control implementation for Aurora's new Public Works Building. This proposal includes the equipment and services to implement and integrate the Public Works Building into the existing Aurora network as well as provide comprehensive video security and access controls for the building.

2. NETWORKING SCOPE OF WORK

Scientel will provide the following Networking services for City of Aurora:

- **Network Design**
    - Scientel has designed the network to incorporate switches, APs, and Firewalls as well as provided Heat Maps per floor.

Table 1 below provides the proposed AP model and quantity breakdown by the floor.

| Floor	DWG Section	AP Quantities by Model		
		U431F	432F	431F
First Floor	Section A	2	2	8
First Floor	Section B	0	2	12
First Floor	Section C, D & E	0	14	0
Second Floor	Section A & B	0	0	5
Outdoor	N/A	0	14	0
	TOTALS	2	32	25

First Floor Section A Heat Map – Picture 1
Picture 1 (below) shows the predicted coverage for Section A using Fortinet APs. As a rule, regions with signal strengths below -65 dBm provide insufficient/no coverage.
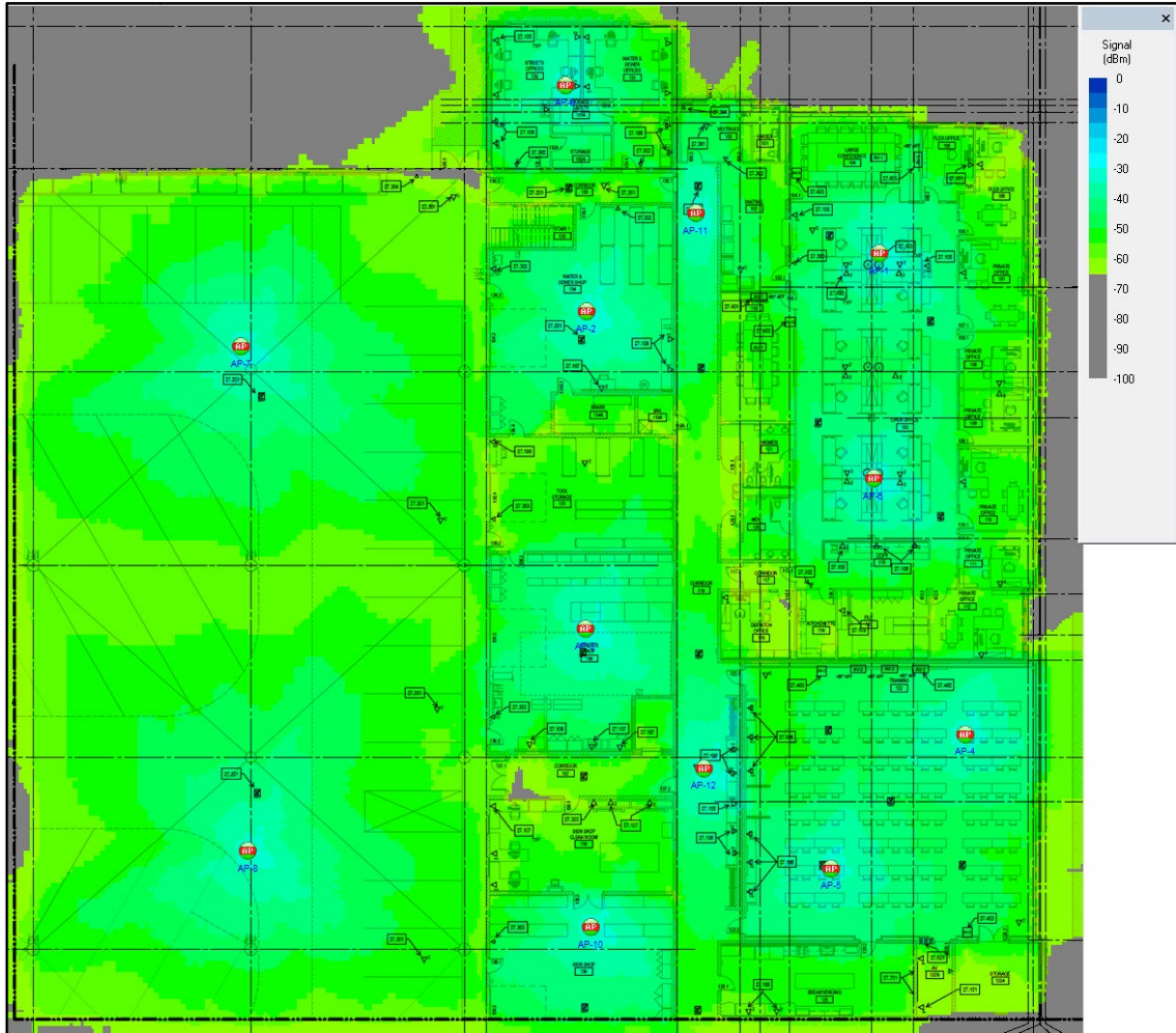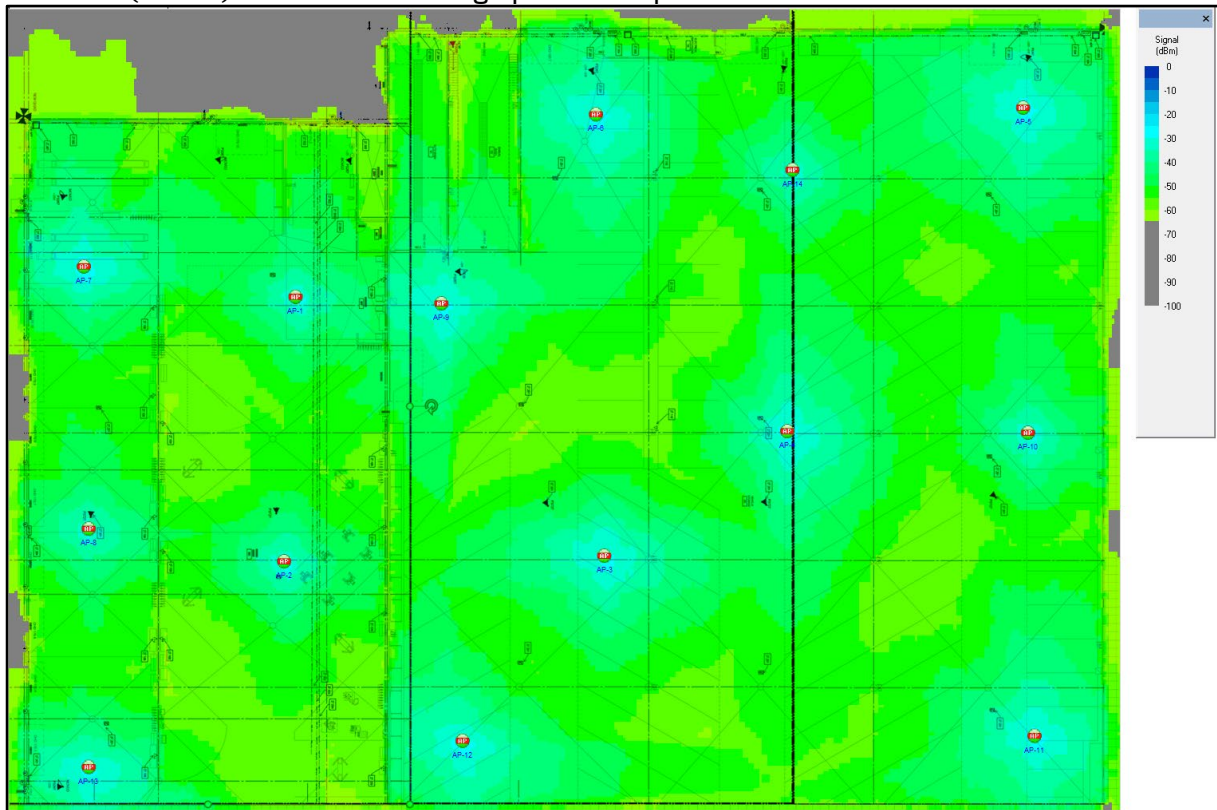
First Floor Section B Heat Map – Picture 2
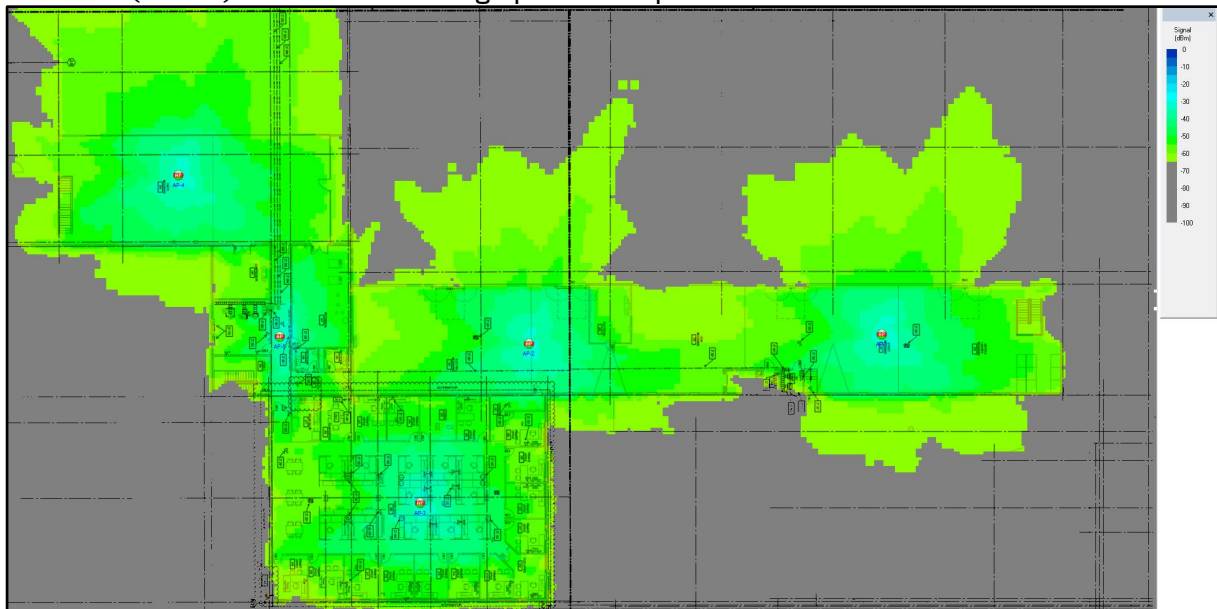Picture 2 (below) shows the coverage prediction plot for this floor with Fortinet APs.
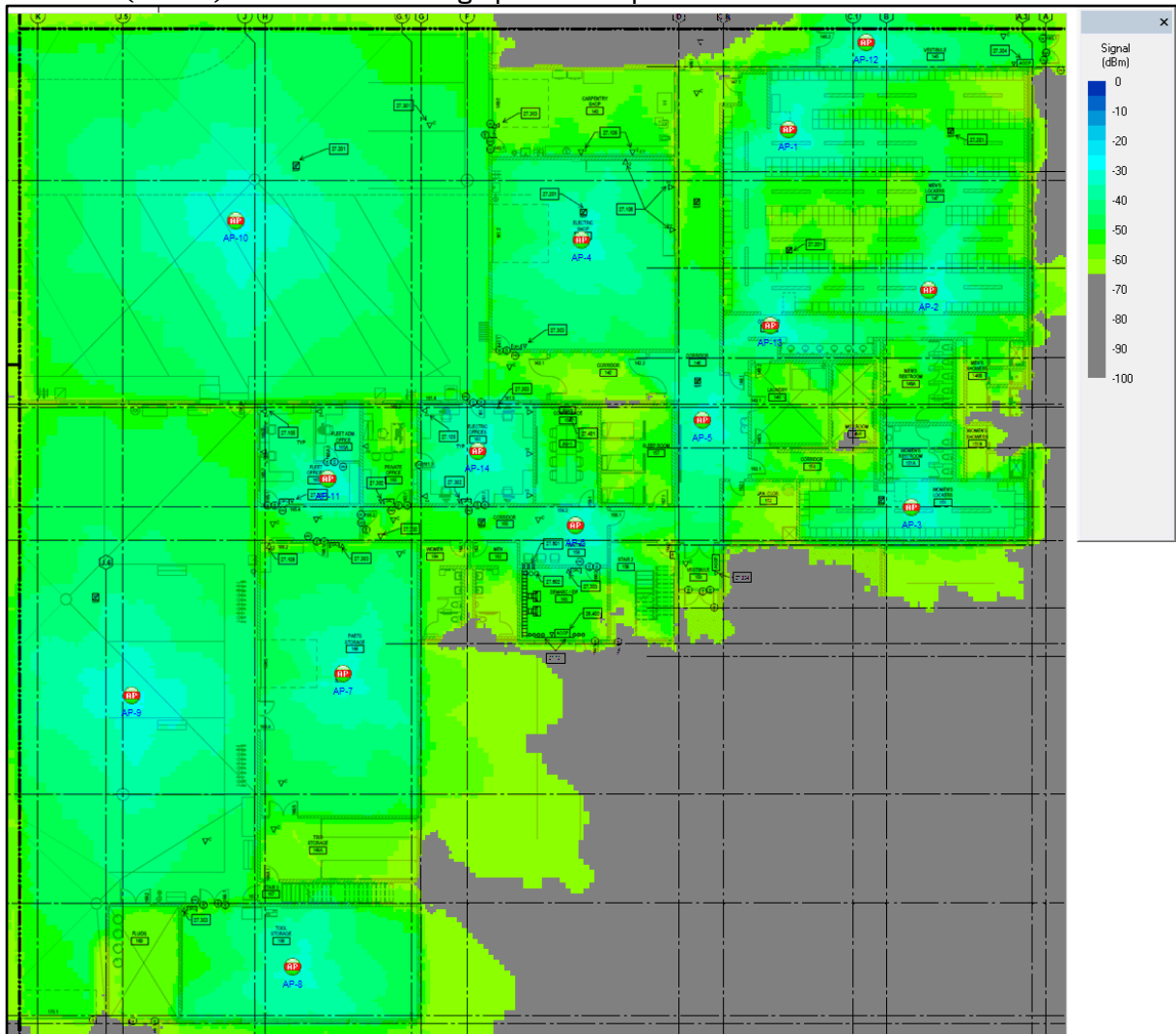
First Floor Section C, D, and E Heat Maps – Picture 3
Picture 3 (below) shows the coverage prediction plot for this floor with Fortinet APs.


Second Floor Section A and B Heat Maps – Picture 4
Picture 4 (below) shows the coverage prediction plot for this floor with Fortinet APs.

Outdoor – Heat Map

Picture 5 (below) shows the coverage prediction plot for Outdoor Coverage with Fortinet APs. As a rule, regions with signal strengths below -65 dBm provide insufficient/no coverage. We will need a total of 14 Outdoor Access Points.
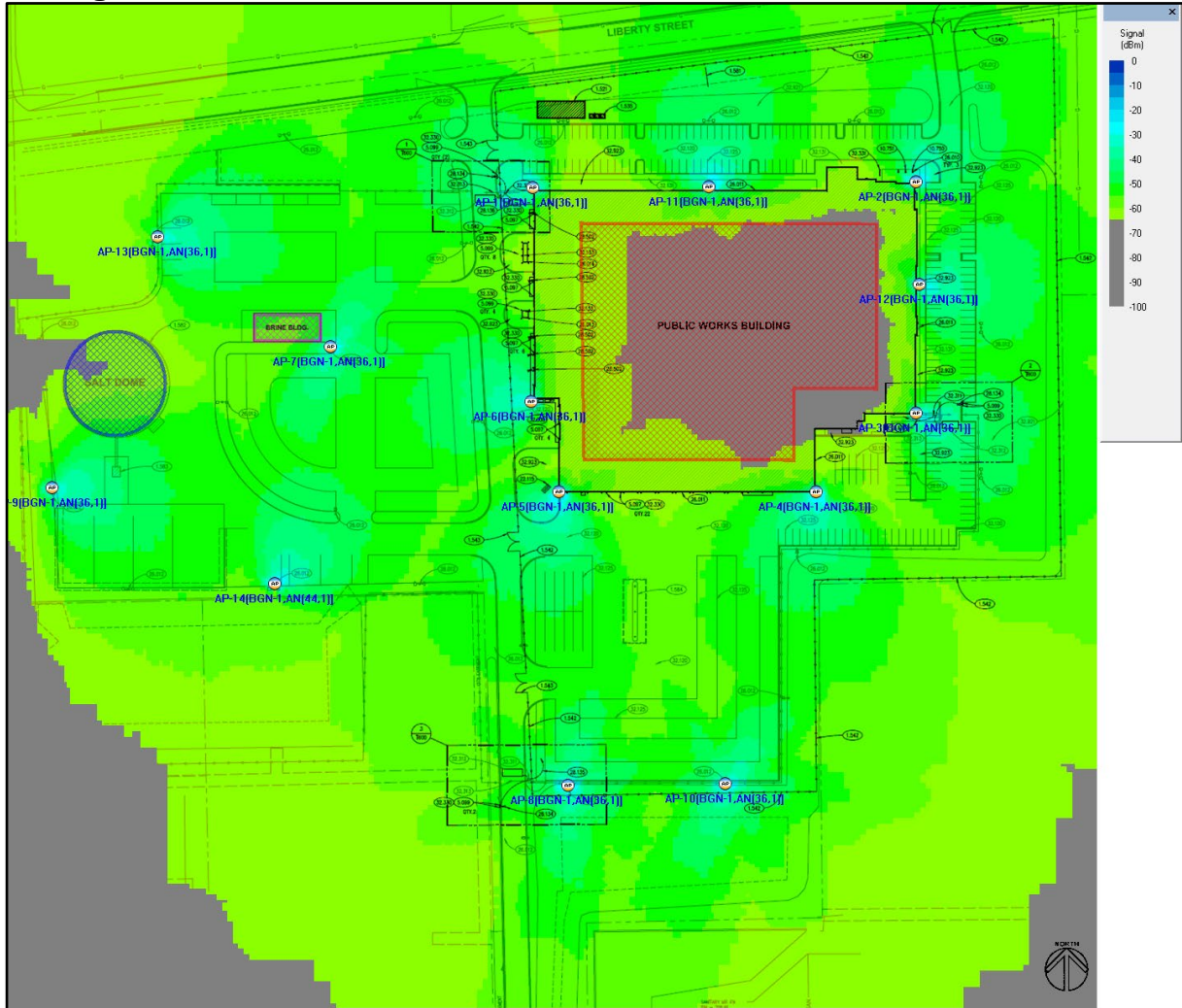
    o   Breakdown of Switch Counts

Table 2 below provides the proposed Switch counts and quantity breakdown by location.

IDF/MDF/Cabinet	FG-601	FS-1048	FS-448	FS-112D
Room 238	2	2	5	
Room 246			5	
Cabinet 1			2	
Cabinet 2			2	
Cabinet 3			2	
Receptacle Cabinets x8				16
Total	**2**	**2**	**16**	**16**

Room 238

Room 246

Cabinet x 3

Fiber Patch Panel

Cable Management

Cable Management

Cable Management
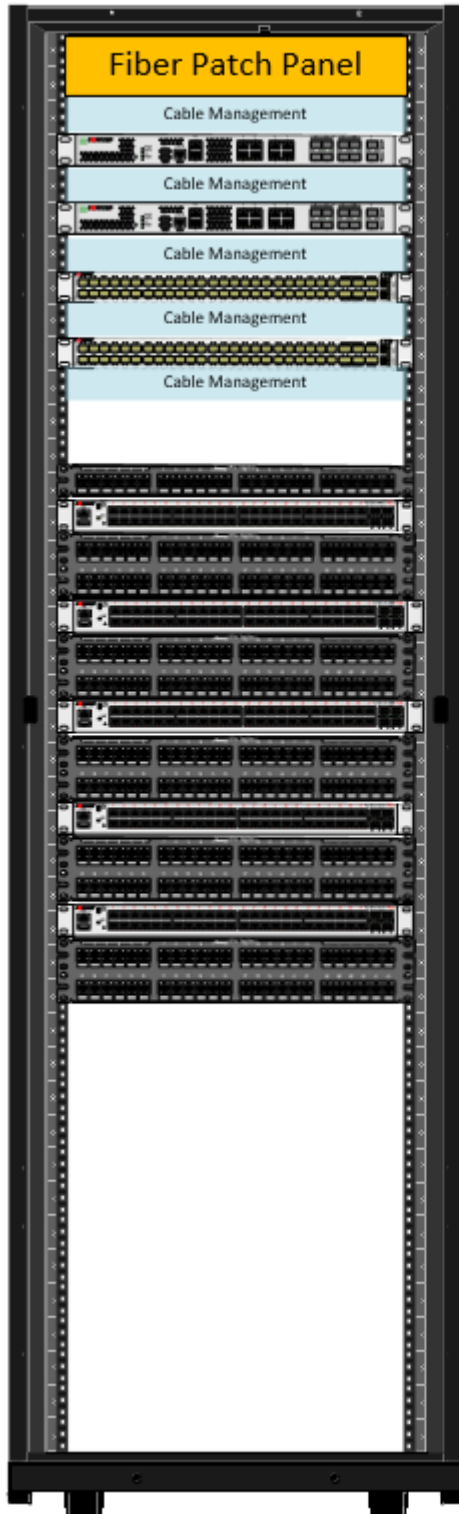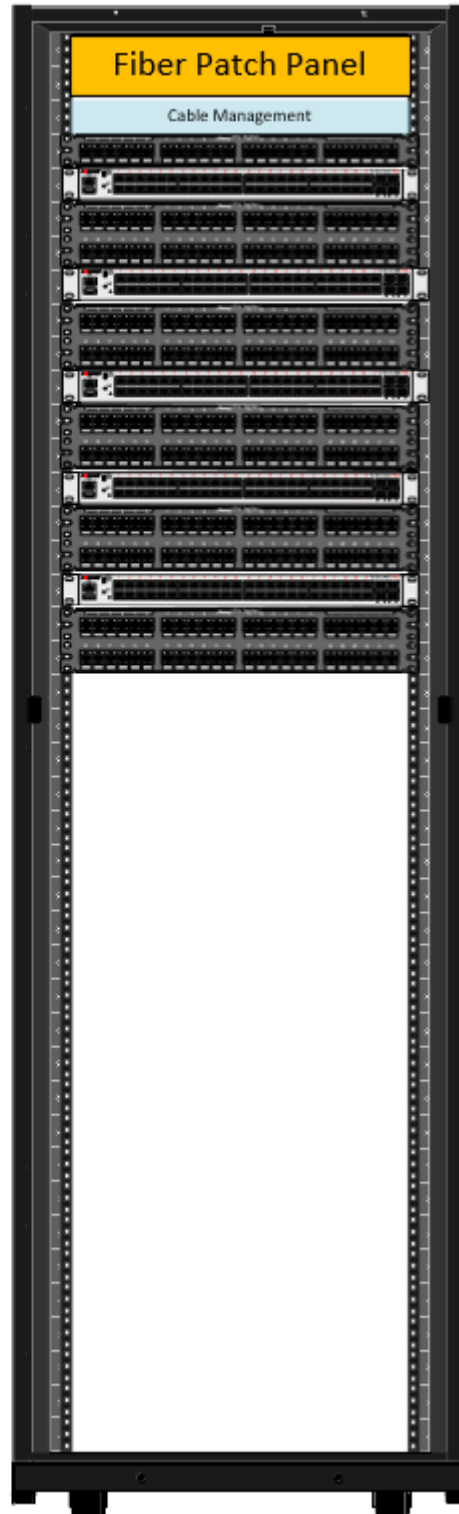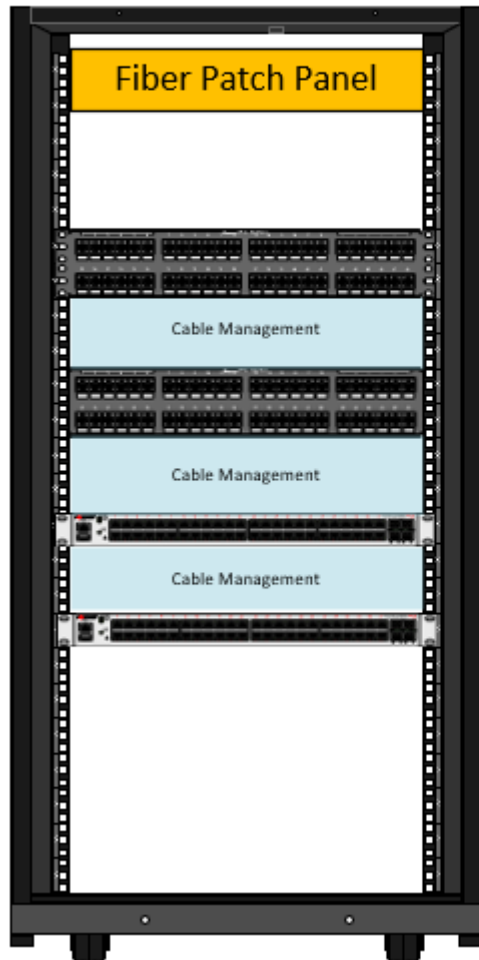
Receptical Cabinet x 8

Fiber Patch Panel
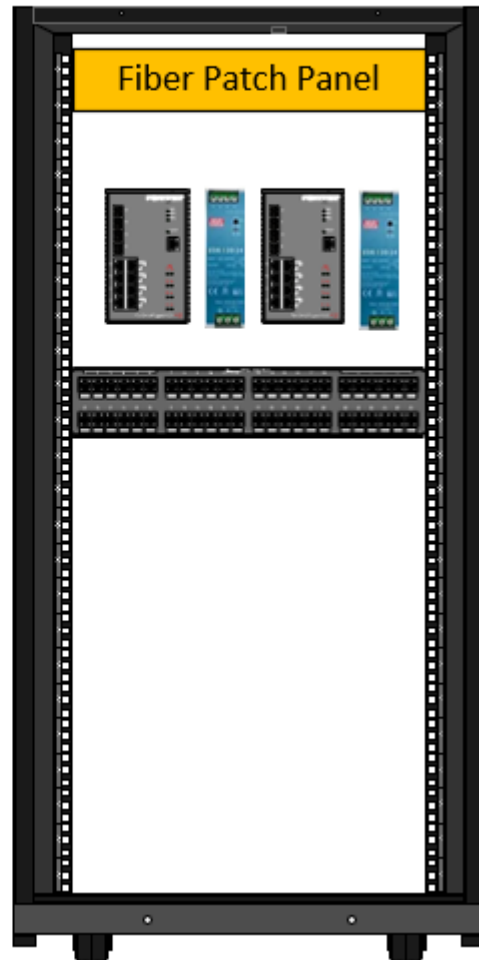
- **Procurement:**

Equipment Description	Qty
FortiGate 601E Firewalls (FG-601E-BDL-811-12) with 1 Year FortiCare	2
FortiSwitch 1048E (FS-1048E) (Distribution Switches) with 1 Year FortiCare	2
FortiSwitch 448E (FS-448-FPOE) (Access Switches for Data, Access Control, Video) with 1 Year FortiCare	16
FortiAP (FAP-U431F) with 1 Year FortiCare	2
FortiAP (FAP-432F) with 1 Year FortiCare	32
FortiAP (FAP-431F) with 1 Year FortiCare	25
FortiSwitchRugged-112D-POE Layer 2 ruggedized FortiGate switch controller compatible PoE+ switch with 8 x GE RJ45 ports with 1 Year FortiCare	16
Adaptors, Transceivers, & SFPs	Lot

- **Staging/Installation:**
  - o Scientel will receive, inspect, catalog, and stage all new networking hardware/equipment at our headquarters in Aurora.
  - o We will unbox, label and preconfigure all networking equipment prior to installation.
  - o Scientel will install the Fortinet Firewalls and Switches into the Aurora provided cabinets in the designated rooms per the technology drawings.
  - o Scientel will install and test all of the APs at the designated install locations.

- **Closeout:**
  - o Scientel will provide Aurora with a closeout package which will include:
    - ▪ Installation photos
    - ▪ Testing results
    - ▪ Documentation with equipment information such as serial #'s, IP Addresses, login credentials, and warranty information.

- **Assumptions:**
  - o IP Scheme to be provided by City of Aurora for all network components.
  - o Scientel has not included any racks in this proposal.
  - o No SFPs have been included in this proposal.
  - o Conduit and Cable runs are provided by the GC

- **Management & Support:**
  - o Network devices to be managed and supported under the ongoing network managed services agreement.

3. VIDEO SECURITY & VMS SCOPE OF WORK

Scientel will provide the following Video services for City of Aurora:

- **Design:**
  - o Scientel has designed the Video Security coverages based off the T3 Technology Package Drawings (1/11.23), which were prepared by Kueny Arc. Please see the following proposed Field of View Coverages.

First Floor Camera Design – Area A:
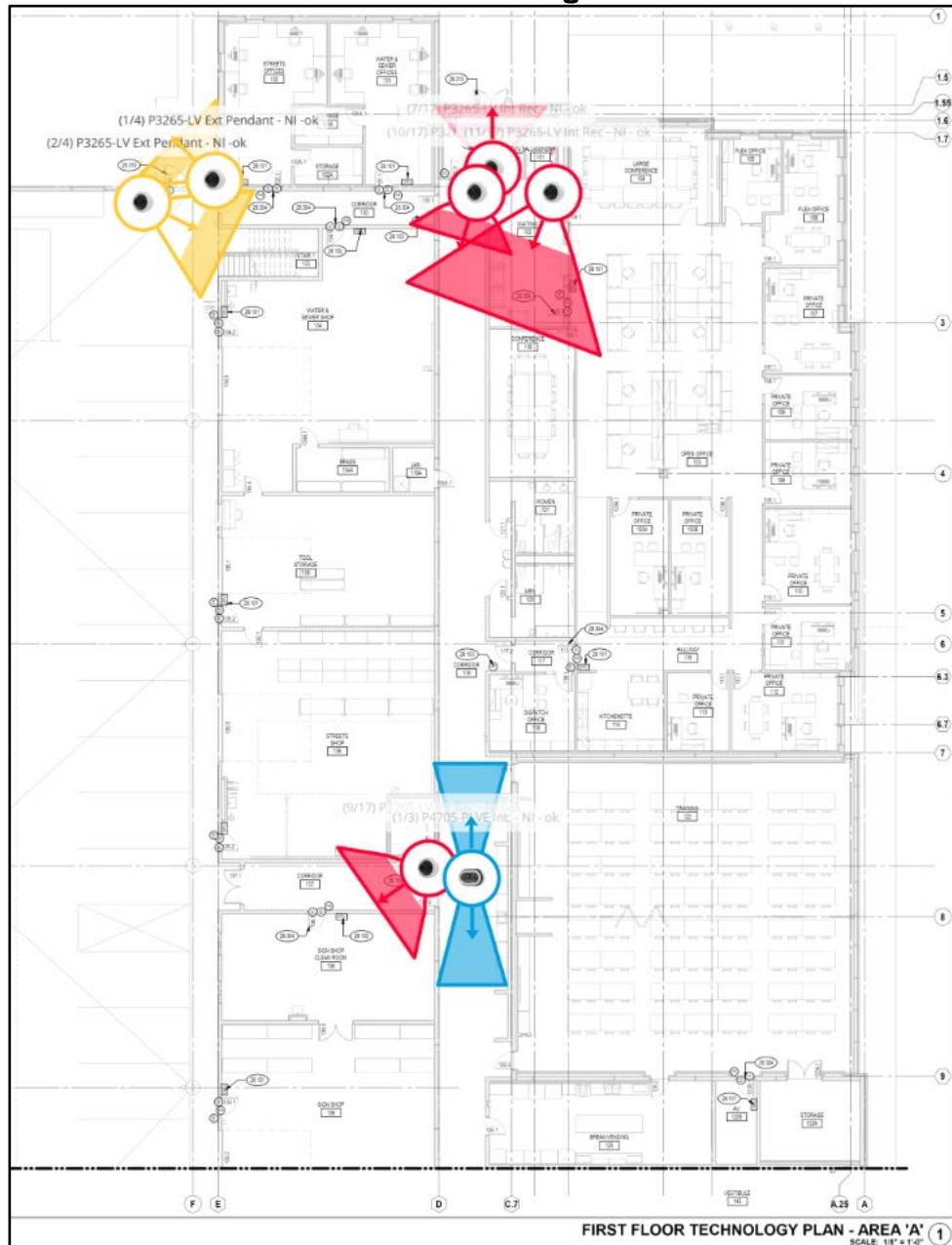
First Floor Camera Design – Area B:

FIRST TECHNOLOGY FLOOR PLAN - AREA 'B'
SCALE: 1/8" = 1'-0"
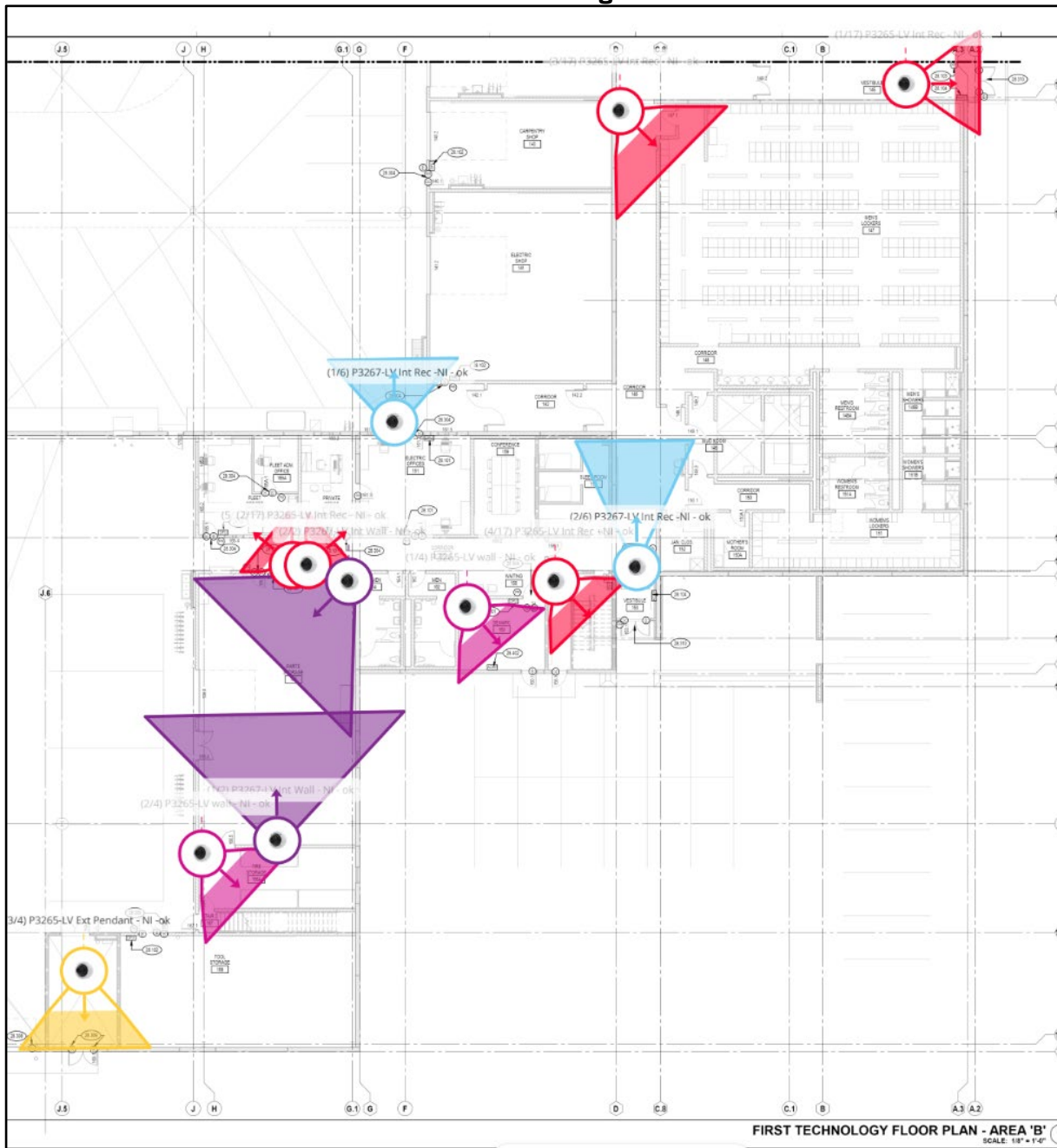
First Floor Camera Design – Area C:

First Floor Camera Design – Area D:

First Floor Camera Design – Area E:

(6/6) P3719-PLE ...t/garage - NI - ok

(5/6) P3719-PLE ...t/garage - NI - ok

FIRST FLOOR TECHNOLGY PLAN - AREA 'E'
SCALE: 1/8" = 1'-0"
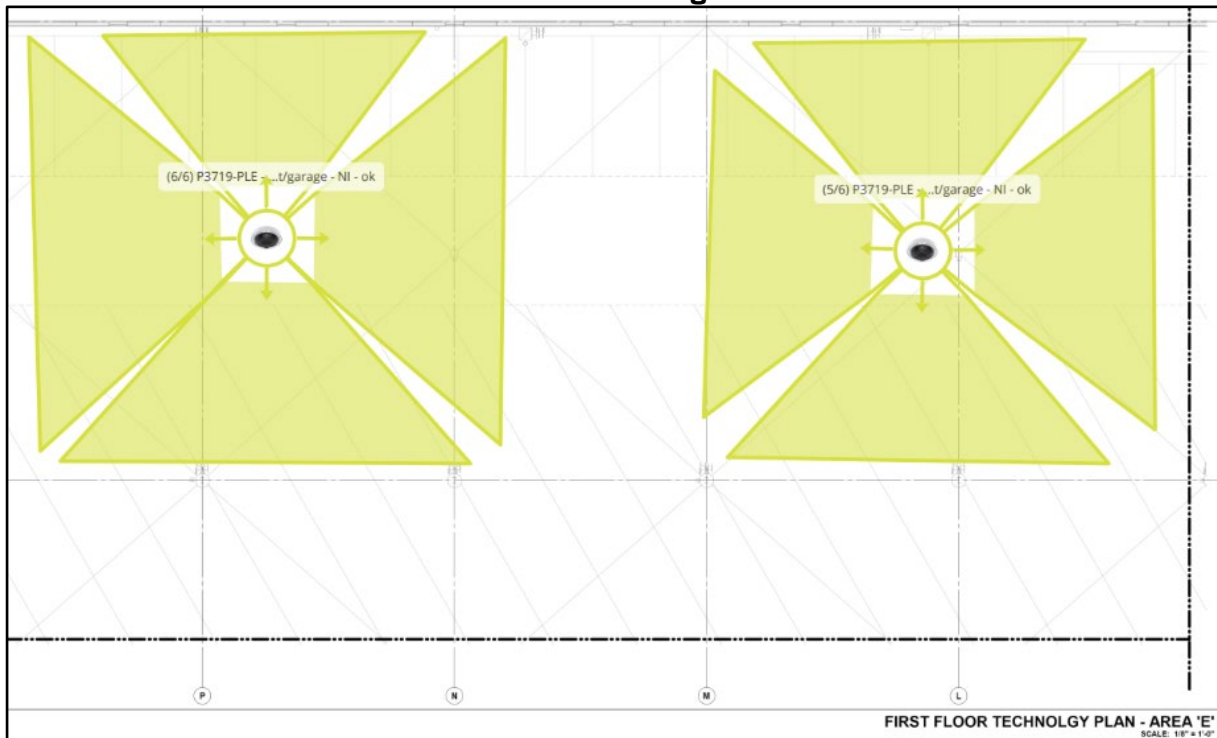
Second Floor Camera Design – Area A:

SECOND FLOOR TECHNOLOGY PLAN - AREA 'A'
SCALE: 1/8" = 1'-0"

- **Procurement (Camera & Gate Equipment):**
  - Scientel will provide the following Video Equipment based on the above designs:

Equipment Description - Cameras	Qty
AXIS P3738-PLE Panoramic Camera with required mounting & cabling hardware	6
AXIS P3267-LV Dome Camera with required mounting & cabling hardware	4
AXIS Q6100-E 60 Hz Network Camera (Quad) with required mounting & cabling hardware	4
AXIS P3265-LV Dome Camera (2MP) with required mounting & cabling hardware	18
AXIS P4705-PLVE Panoramic Camera (Dual Sensor) with required mounting & cabling hardware	3
AXIS Q6135-LE 60 Hz PTZ Network Camera with required mounting & cabling hardware	3
AXIS P3737-PLE Panoramic Camera with required mounting & cabling hardware	6
AXIS I8016-LVE 5MP IR Compact Network Video Intercom (Gates)	6
AXIS TI8602 Indoor/Outdoor Wall Mount for Video Intercoms (Gates)	6

  - Scientel has ensured the VMS System below will hold the capacity of cameras listed above.

Equipment Description - VMS	Qty
StreamVault SV-2020E-R12-120T-12-410 with required Genetec Camera licensing	1

- **Staging/Installation:**
  - Scientel will receive, inspect, catalog, and stage all new hardware/equipment at our headquarters in Aurora.
  - Scientel will install, aim, and focus all new cameras at the designated mounting locations per the T3 Technology Package Drawings.
  - Scientel will provision, program, and test the video server and confirm camera licensing is applied.
  - Scientel will program, and test equipment to ensure desired functionality / field of views are achieved in the Genetec VMS with City of Aurora IT.

- **Closeout:**
  - Scientel will provide Aurora with a closeout package which will include:
    - Installation photos and Testing results
    - Documentation with equipment information such as serial #'s, IP Addresses, login credentials, and warranty information.

- **Maintenance & Support:**
  - Video cameras to be maintained supported under the ongoing video maintenance and support agreement.
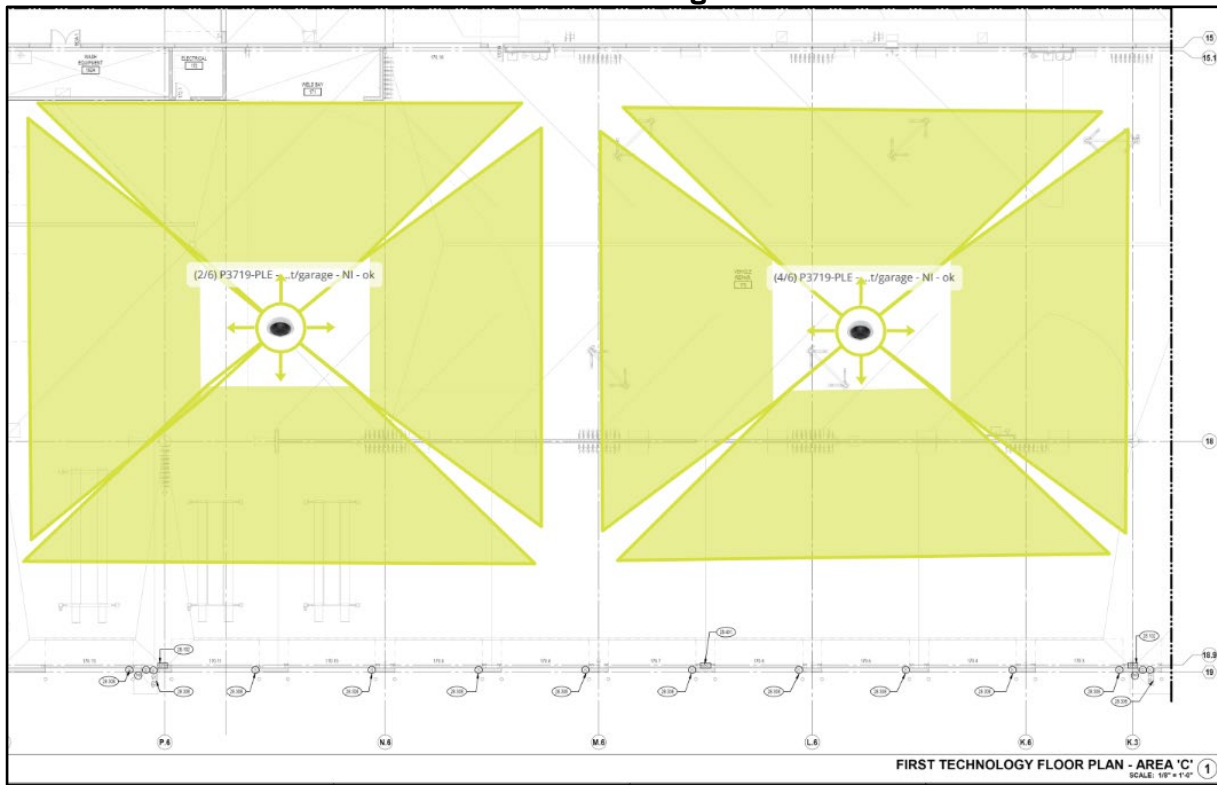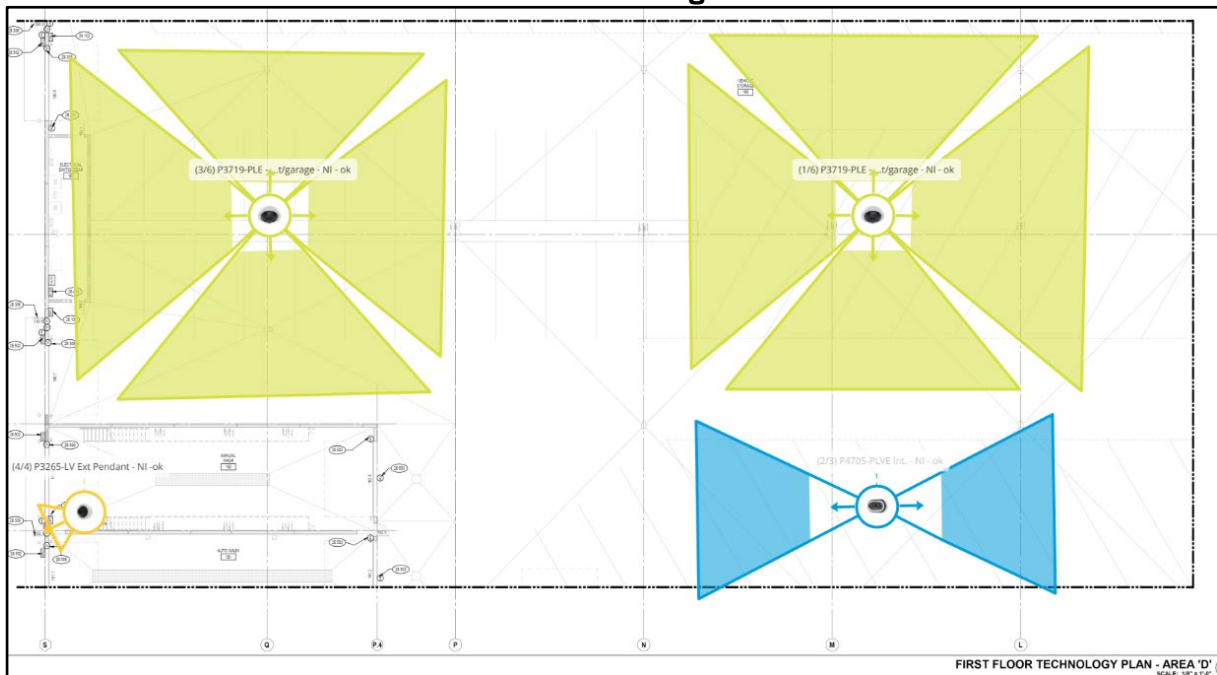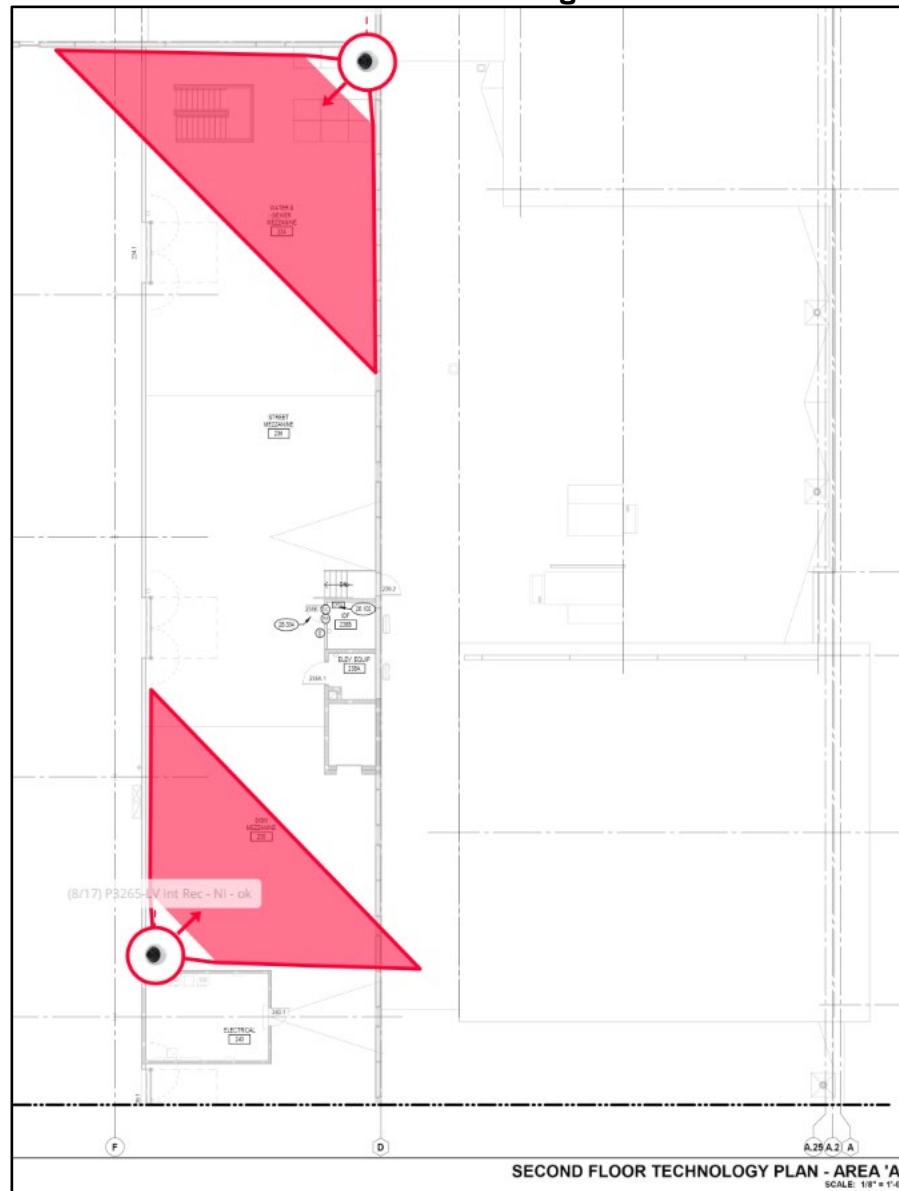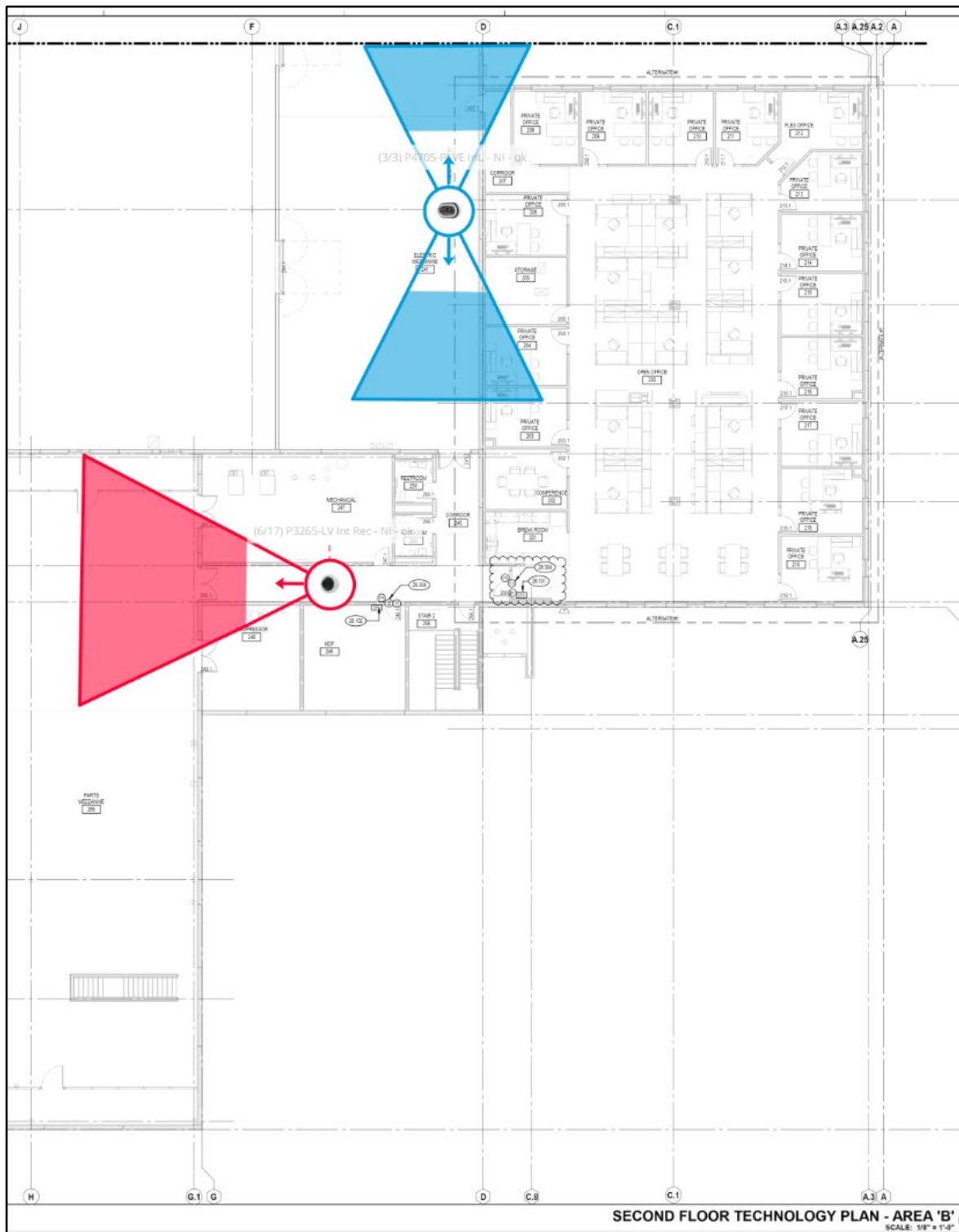
4. ACCESS CONTROL SCOPE OF WORK

Scientel will program, and test equipment (minus cameras) pertaining to the scope of work listed below.

Access Control Equipment Included:
* One (1) Genetec Cloudlink
* Thirty-Six (36) Genetec LP-1501
* Eight (8) Genetec LP-1502
* Four (4) Genetec MR52
* Two (2) Genetec MR16IN-S3
* Forty-Four (8) Altronix TM400
* Seventeen (17) HID Readers
* Twenty-Seven (27) HID Mullion Readers
* Five (5) HID Long Range Readers
* Five (5) Altronix Linear PS for Long Range readers
* Thirty-Eight (38) PIR Request to Exit Sensors
* Fifty (50) DPDT Door Contacts
* Seventeen (17) Roll-up Door Contacts
* Three (3) 72-DSP-3-12-12 Dual Height Pedestals
* Six (6) Pedestal Back Boxes to house one (1) HID reader and one (1) I8016 Intercom each

Scope of Work – Access Control.
* Installation of 8 1502's, 36 LP1501's, 8 MR52's and 2 MR16's
* Installation of 8 TM400 enclosures
* Supply and install cable from 1501 boards to access door devices.
* Supply and install card access door devices and terminate wiring at the board.
* Install wiring at each ACP location.
* Supply and install cabling for rail mounted contacts.
* Supply and install high/low reader pedestals with reader/intercom mounting boxes for gates.
* Install door contacts.
* One (1) year warranty on materials and workmanship.
* Final pre-test.

CLARIFICATIONS
* Scientel has proposed the Genetec Archiver with the following requirements 15 FPS, 60 days of retention at 50% motion recording.
* Construction schedules to be provided by customer within 2 weeks of purchase order issuance.
* All designs have been based on the specification provided in the T3 Technology Package Drawings (1/11.23), which were prepared by Kueny Arc, as well as amendments to camera quantities and access control readers.
* Dedicated 120 VAC / 20 AMP circuit and network connection at each access control panel and long-range readers shall be provided by others.
* Customer to provide a listing of cardholders and their respective access levels prior to the start of work.
* Panel power supplies have been provided based on locking hardware provided by others, as scheduled within Div. 08.

Full Genetec & Access Control Equipment List Included:

Qty	Ref #	Description
61	195-12B	Door Contact
17	4701-AXL	ALUMINUM OVERHEAD DOOR, RAIL MOUNT
3	72-DSP-3-12-12	72" AND 42" DUAL HEIGHT PEDESTAL, 3X3" SQ TUBE, TOP 12", BOTTOM 12"
27	910PTNNEK0001Q	MultiClass Reader, RP15, Mullion, HID/AWID/EM4102 Prox, SIO/SEOS + Legacy, Std Ver. 1 Keyset, Wiegand, Pigtail Cable: 18" (0.45m), Idel LED: Red, Response: Green LED, 1 Beep, Black
17	920PTNNEK0001Q	RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 26-BIT (W/DEFAULT FC), IPM OFF
5	940NTNTEK00000	RDR, R90, ICLASS, SE REV E, NO PROX, STD, WIEGAND, TERM, BLK, STD 1 SECURITY, LED RED, FLASH GRN, BZR ON, IPM OFF, 32 BIT
10	ACM4CB	CONVERTS ONE 12 TO 24 VOLT AC OR DC INPUT INTO FOUR PTC OUTPUTS
50	ADV-CAM-E-5Y	Genetec Advantage for 1 Omnicast Enterprise Camera 5 Years
80	ADV-RDR-E-5Y	Genetec™ Advantage for 1 Synergis™ Enterprise Reader – 5 Years
5	AL624ET	1 OUTPUT LINEAR POWER SUPPLY/CHARGER - 6VDC OR 12VDC @ 1.2 AMP OR 24VDC @ 750MA, 16VAC/20VA PLUG-IN XFMR, ENCL. 8.5"H X 7.5"W X 3.5"D.
38	DS-DS160	PIR REQUEST TO EXIT SENSOR WITH SOUNDER GRAY
10	eFlow4NB	POWER SUPPLY CHARGER, SINGLE OUTPUT, 12/24VDC, 4A, AUX OUTPUT, FAI, 115VAC
1	GSC-1SCFED	1 Federated Security Center 4.0 (or higher) Directory connection
50	GSC-OM-E-1C	SC-OMN ENT 1 CAM LICENSE
44	HAC-TAMP01	Alarm
6	MC-SS-06-E	HOUSING, SQUARE, 6X6X6, STAINLESS
1	SV-2040E-R12-120T-12-410	Streamvault™ 2040E Series - 2U 12-Bay Appliance 120TB Raw RAID 6 1x Xeon Silver 4410Y 32GB RAM 2x 480GB M.2 SSD 10x 12TB 3.5" Enterprise HDDs 2x 1GbE RJ45 2x 1100W PSU Windows Server Standard 5YR NBD KYHD Warranty - Genetec™ Security Center Security
2	SV-CFG-SRV-5.11	Streamvault™Configure Server with Genetec 5.11 Latest

1	SY-CLOUDLINK	Synergis Cloud Link with 2GB of RAM, 16GB Flash, image installed with Synergis access control firmware, four RS-485 ports, PoE.
36	SY-LP1501	Mercury Intelligent Controller, Linux Based, 2In/2Out/2Rd, PoE+ Support (Software Connections included)
8	SY-LP1502	Mercury Intelligent Controller, Linux Based, 8In/4Out/2Rd (Software Connections included)
2	SY-MR16IN-S3	Mercury MR16IN 16-input Monitor Module Series 3 (2 relays, PCB only, software connections included)
4	SY-MR52	Access Control Hardware
8	TM400	Altronix Compact Access & Power Integration Enclosure Easily Combines Altronix Power With Access Controllers And Accessories From Mercury | Perfect For Edge Deployments And Space Saving Applications
1	TP1650	Plugin Transformer, 16VAC @ 50VA

5. ASSUMPTIONS & EXCLUSIONS

- All work will be performed during normal business hours Monday through Friday between 8AM-5PM.
- Scope of work allows for coordinated scheduled deployment and site access, any interruptions to project schedule may be subject to change order.
- Customer is responsible for any license or permit fees required by local ordinance
- Any other networking configuration not defined in this proposal is beyond the scope of this proposal.
- All rough-ins, conduits, cabling and data drops provided by General Contractor
- Tentative project schedule pending equipment lead times.
- Provision or installation of enclosures for LP1501 controllers (3 gang junction box installed by others).
- Server racks.
- Line voltage dedicated 120 VAC/20 AMP circuit(s), and network connection(s), fire alarm relay(s).
- IP locks, electrified locks, trim, transfer-hinge, and related door hardware by others.
- Push button (PB) and door release buttons (DRB) integrated with ADO and/or Fire Alarm.
- Fire alarm connection and integration.
- Monitor, keyboard, and mouse for workstation(s).
- Door preparation (i.e., coring of doors, door frame modifications) door recertification, and device installation.
- Cutting, patching, & painting.
- Cabling trough, raceway, conduit, conduit fittings & back-boxes, penetrations & fire-stopping.
- Vertical & horizontal conduit and door stub-ups. Security J-boxes & door interface boxes ("DIB") above doors.
- Server Uninterrupted Power Supply (UPS).
- Pedestal reader junction point enclosure by others. Scientel is under the assumption it will be located at or near gate operator.
- Concrete pads for high low reader pedestals by others.
- Trenching to high low reader pedestals by others.
- Overtime (non-business hours), union labor, patching and painting.

6. PRICING

1. Networking Pricing Breakdown:

Description	Qty	Contract Price	Discount	Ext. Discount Price
IT Network Detailed Design & Site Walks	1	$7,637.33	25%	$5,728.00
Firewall Procurement & Installation	2	$58,505.92	25%	$43,879.44
AP Installation	59	$1,067.00	25%	$47,214.75
Switch Installation	34	$1,790.00	25%	$45,645.00
AP Hardware, Mounts and Extended Warranty	59	$2,100.00	N/A	***Incl in Mgd Service Adjustment
Switch Hardware and Extended Warranty	34	$4,850.00	N/A	***Incl in Mgd Service Adjustment

2. Video Security Pricing Breakdown:

Description	Qty	Contract Price	Discount	Ext. Discount Price
Video Security Detailed Design & Site Walks	1	$7,637.33	25%	$5,728.00
CCTV Installation (Outdoor)	2	$1,250.00	-	$2,500.00
CCTV Installation (Bucket Truck)	21	$1,500.00	-	$31,500.00
CCTV Installation (Indoor Regular)	21	$950.00	-	$19,950.00
Camera Equipment & Materials	44	$2,077.04	25%	$68,542.32

3. Genetec Video Server/Licensing & Access Control Equipment & Pricing Breakdown:

Description	Qty	Contract Price	Discount	Ext. Discount Price
Access Control Equipment	80	$1,404.20	5%	$106,719.20
Access Control Installation	80	$3,021.42	5%	$229,627.92
VMS Server	1	$21,985.75	5%	$20,886.47
VMS Camera Licenses	Lot	$19,909.87	5%	$18,914.38

Pricing Summary:

Item / Description	Work Order Price
WiFi and Network Deployments (***)	$142,467.19
Video Security / Situational Awareness System	$128,220.32
Total Scientel	**$270,687.51**
Genetec Access Controls and VMS Solution	$376,147.97
Grand Total	**$646,835.48**

***Managed Service Adjustments (Hardware not included in Item 1. Price above)**
Total Devices added as part of this project:
WiFi Access Points: 59
Network Switches: 34
Total new Devices: 93

With the addition of these 93 devices, the total number of devices managed by Scientel Solutions on the Managed Services Agreement grows to 527 devices.
This offer is made in accordance with the following contract currently in effect between Scientel Solutions and the City of Aurora
Item 1: Networking Upgrades is proposed under City of Aurora **Resolutions R21-136**, passed June 2021

***Camera Maintenance & Support Adjustments (Not included in Item 2. Price above)**
With the addition of 44 new cameras, the ongoing yearly maintenance & support applicable to the existing contract, will be as follows:

44 cameras x $500/camera/year = $22,000

This offer is made in accordance with the following contract currently in effect between Scientel Solutions and the City of Aurora"
Item 2: Situational Awareness is proposed under City of Aurora **Resolution R21-135**, passed June 2021

7. TERMS, CONDITIONS, & ACCPETANCE

Scientel Solutions LLC will accept a written Purchase Order (P.O.) for this work.

Scientel will provide an invoice to the City for services rendered and the City shall approve and thereafter pay any undisputed portions thereof in accordance with the Illinois Local Government Prompt Payment Act (50 ILCS 505/1 et. seq). Approved, but unpaid invoiced amounts shall accrue interest in the manner and to the extent authorized by the Act.

This quote is valid for 30 days. If the above quote and terms are accepted by the quote recipient, please indicate as requested below. The completed document may be returned to Scientel with the necessary Purchase Order via email at
Salesorder@scientelsolutions.com

Signature: _____   Date: ____/____/_____

Name (Print): _____   Title: _____