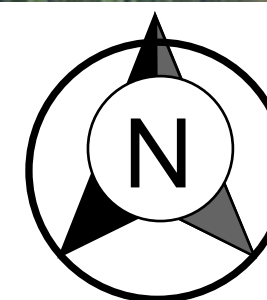




# VIDEO SURVEILLANCE UPGRADES

## High School

### REQUEST FOR PROPOSAL



MONA SHORES HIGH SCHOOL  
1121 Seminole Rd  
Norton Shores, MI 49441

#### SHEET INDEX

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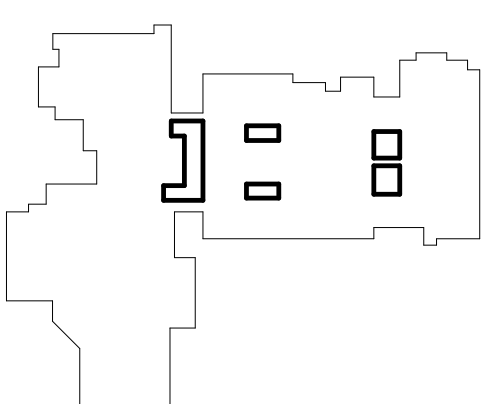
#### RESPONSIBILITY MATRIX

COMPONENT	OWN	DIV 27	28	DIVISION OF RESPONSIBILITY
DOOR HARDWARE, INCLUDING ELECTRIC STRIKES, MAGLOCKS, LOCKSETS, ETC.	N/A	N/A	N/A	N/A
AUTOMATIC OPERATORS, PUSH PLATES, AND ASSOCIATED CABLING	N/A	N/A	N/A	N/A
ACCESS CONTROL CABLE	N/A	N/A	N/A	N/A
CAMERA DATA CABLE	C	P,I	C	DIV 27 CONTRACTOR TO SUPPLY AND INSTALL ALL CAMERA DATA AND LOW VOLTAGE CABLING, SUPPORTS, ETC. WITH COORDINATION FROM OWNER AND DIV 28 CONTRACTOR.
CAMERA PATCH CABLES (DEVICE SIDE AND SWITCH SIDE)	C	P,I	N/A	DIV 27 CONTRACTOR TO PROVIDE ALL PATCH CABLES FOR THIS PROJECT.
ROUGH-INS, CONDUIT, WIREMOLD, ETC.	C	P,I	N/A	DIV 27 CONTRACTOR TO PROVIDE ALL ROUGH IN, SUPPORTS, AND ENCLOSURE/TYPE OF SUPPORTS WHERE NECESSARY.
CAMERAS, INCLUDING MOUNTING, INSTALLING, AND PROGRAMMING	P	N/A	I	DIVISION 28 CONTRACTOR TO INSTALL ALL VIDEO PRODUCTS/CAMERAS INCLUDING HARDWARE, POWER SUPPLIES, ETC. TO MEET REQUIREMENTS AS SHOWN IN THIS DRAWING SET AND WITHIN OWNER PROVIDED DOCUMENTATION.
ACCESS CONTROL HARDWARE DEVICES INCLUDING CARD READER, DPS, REX	N/A	N/A	N/A	N/A

Legend:  
C: Coordinate/Input  
P: Procure/Furnish  
I: Install

ORIGINAL ISSUANCE  
RFP SET  
12/05/2023

REVISIONS	BY	DATE
OWNER COMMENT & REVIEW	DM	11/29/2023



HIGH SCHOOL  
SHEET NUMBER  
**CV 000**  
COVER PAGE

**DIVISION 27 0000 SPECIFICATIONS**

**PROJECT OVERVIEW**

THIS SPECIFICATION RELATES TO BIDDERS RESPONDING TO THE WORK CATEGORY REFERENCED BY TRIANGLE'S BID SCOPE FOR THE PROCUREMENT, INSTALLATION, AND TERMINATION OF NETWORK INFRASTRUCTURE. REQUIRED FOR THE CAMERAS NOTED IN THIS PROJECT, THIS SPECIFICATION REQUIRES BIDDERS TO: DEMOLISH AND ABATE ALL EXISTING ANALOG CAMERAS AT THE HIGH SCHOOL. CABLING, ENCODERS, AND EXISTING POWER SUPPLIES SHALL ALSO BE ABATED IN THEIR ENTIRETY. DEMOLISH AND ABATE ALL EXISTING IP CAMERAS AT THE HIGH SCHOOL. CABLING SHALL BE RE-USED WHERE INDICATED IN THE CAMERA SCHEDULE. RELOCATE EXISTING DATA CABLES AS NOTED IN THE DRAWING SET/CAMERA SCHEDULE. PULL, SUPPORT, AND TERMINATE NEW CAT6 DATA CABLES (SEE "PRODUCT SPECIFICATION" SECTION) FOR EACH CAMERA AS INDICATED IN THE CAMERA SCHEDULE. ALL CABLES SHALL RUN BACK TO THE NEAREST TELEPHONE RACK (TR). PULL, SUPPORT, AND LEAVE COILED AT EACH END NEW 18AWG 2C CABLING (SEE "PRODUCT SPECIFICATION" SECTION) FOR EACH CAMERA AS INDICATED IN THE CAMERA SCHEDULE. ALL CABLES SHALL RUN BACK TO THE NEAREST TR. PROVIDE NEW EMT CONDUIT, WIREMOLD, J-HOOKS, AND FIRE-STOPPING WHERE NECESSARY TO PROVIDE A COMPLETE AND CODE-COMPLIANT INFRASTRUCTURE INSTALLATION. ALL EXPOSED CABLING SHALL BE FULLY PROTECTED WITHIN CONDUIT, INCLUDING EXTERIOR AND INTERIOR LOCATIONS NOT CONCEALED ABOVE CEILINGS. PULL ALL REQUIRED PERMITS REQUIRED BY THE STATE OF MICHIGAN BFS/LOCAL INSPECTOR FOR LOW VOLTAGE CABLING. ALL PERMITS MUST BE PULLED, INSPECTED, AND CLOSED PRIOR TO PROJECT CLOSE-OUT. PROVIDE PATCH PANELS AS REQUIRED TO SUPPORT THE NEW DATA CABLING PROVIDED IN THIS PROJECT. 24- OR 48-PORT PATCH PANELS SHALL BE PROVIDED IN THE QTY REQUIRED AT EACH TR TO SUPPORT THE NEW CAMERA DATA CABLING INFRASTRUCTURE. PROVIDE PATCH CABLES FOR BOTH DEVICE-SIDE AND TR-SIDE CAMERAS. DEVICE-SIDE PATCH CABLES SHALL BE 10' IN LENGTH AND TR-SIDE PATCH CABLES SHALL BE 3' IN LENGTH. DEVICE-SIDE PATCH CABLES SHALL BE TURNED OVER TO CAMERA INSTALLER AT TIME OF CAMERA INSTALLATION. PROVIDE, INSTALL, CONFIGURE, AND CONNECT WIRELESS POINT TO POINT DEVICES AS SHOWN IN THE DRAWING SET. PROVIDE APPROPRIATE DATA CABLES TO CONNECT THE "BUILDING SIDE" PTP UNIT TO THE OWNER'S NETWORK INFRASTRUCTURE, AND PROVIDE 8-PORT PATCH PANEL AT THE "OUTBUILDING SIDE" OF THE PTP UNIT.

**PRODUCT SPECIFICATIONS**

THE PROPOSED BIDDERS SHALL PROVIDE EQUIPMENT BASED ON THE PRODUCT IDENTIFIED IN THIS SECTION. ALL PRODUCT LISTED IN THIS SECTION IS CONSIDERED A "B" WITH SUGGESTED MANUFACTURERS LISTED. ALL PRODUCT PROVIDED WITHIN BIDDER'S RESPONSE SHALL BE DEMONSTRATED IN THE BID RESPONSE TO MEET OR EXCEED THE BASIS OF DESIGN PRODUCT.

**HORIZONTAL COPPER DATA CABLING AND PATCH CABLES**

RECOMMENDED MANUFACTURERS  
- BELDEN  
- COMMSCOPE  
- CENTRAL CABLE  
- SMARTWIRE  
PRODUCT REQUIREMENTS  
- ALL HORIZONTAL DATA CABLING SHALL BE PLENUM RATED WHERE RUN INSIDE BUILDINGS, OR OUTDOOR-RATED FOR ALL "STADIUM" AND "BASEBALL" LOCATIONS.  
- ALL CABLING SHALL BE MANUFACTURED IN THE UNITED STATES  
- HORIZONTAL CATEGORY CABLING SHALL BE WHITE  
- NETWORK JACKS SHALL BE VIOLET IN COLOR ON BOTH DEVICE- AND TR-SIDE.  
- PATCH CABLES SHALL BE VIOLET IN COLOR  
- CONDUIT SHALL BE WHITE  
- CAMERA END WITH PRE-MADE PATCH CABLES ONLY.

**PATCH PANELS**

RECOMMENDED MANUFACTURERS  
- OPEN  
PRODUCT REQUIREMENTS  
- PATCH PANELS MUST BE 8-, 24-, OR 48- PORT PANELS SIZED TO FIT WITHIN THE OWNER'S EXISTING TR NETWORK RACKS. PATCH PANELS MUST BE SIZED TO SUPPORT ALL NEW CABLING PROVIDED AS PART OF THIS PROJECT. QTY AND SIZE OF PANELS ARE THE RESPONSIBILITY OF THE BIDDING CONTRACTOR TO CALCULATE AND PROVIDE.  
WIRELESS POINT TO POINT DEVICES  
BASIS OF DESIGN  
- SIKLU MULTITRAUL

PRODUCT REQUIREMENTS  
- PRODUCT MUST BE CAPABLE OF 1GB/S TRANSMISSION; WIRELESS POINT TO POINT "A" SHALL BE A POINT TO MULTI-POINT. WIRELESS POINT TO POINT "B" SHALL BE A SINGLE POINT TO POINT.  
INSTALLATION AND WARRANTY REQUIREMENTS

THE AWARDED CONTRACTOR SHALL INSTALL ALL DEVICES WITHIN THIS SCOPE TO BE FREE FROM DEFECT FOR ONE YEAR FROM SUBSTANTIAL COMPLETION. NO INFRASTRUCTURE SHALL BE INSTALLED IN A MANNER THAT WOULD BE SUBJECT TO NON-MALICIOUS DAMAGE. EXAMPLES OF NON-MALICIOUS DAMAGE INCLUDE (BUT ARE NOT LIMITED TO):  
- INAPPROPRIATE FASTENING EQUIPMENT (E.G. NON-STAINLESS SCREWS IN OUTDOOR APPLICATIONS)  
- WATER-DAMAGED DEVICES DUE TO IMPROPERLY SEALED HOUSINGS, FASTENERS, ETC.  
- FALL-DAMAGED DEVICES DUE TO IMPROPER INSTALLATION

EXAMPLES OF DAMAGE THAT WOULD NOT BE REQUIRED TO BE COVERED UNDER THIS WARRANTY INCLUDE:  
- INTENTIONALLY DAMAGED EQUIPMENT BY STUDENTS, STAFF, VISITORS, ETC.  
- ENVIRONMENTAL DAMAGE SUCH AS DAMAGE CAUSED BY LIGHTNING STRIKES, TORNADO, ETC. EQUIPMENT SHALL BE FREE FROM DAMAGE THAT COULD BE CAUSED BY HEAVY WINDS.  
- EQUIPMENT DAMAGED BY NETWORK EQUIPMENT FAILURE, SUCH AS NETWORK SWITCH POWER SURGES.

A CABLE TEST SHALL BE PROVIDED TO THE OWNER INDICATING ALL CABLING IS INSTALLED WITHIN SPECIFICATIONS AND PASSING ALL TESTING DEVICE. CABLING CONTRACTOR SHALL ATTACH ADHESIVE LABEL TO DEVICE-END OF EACH DATA CABLE WITH A NON-HANDWRITTEN (E.G. LABEL-PRINTER) LABEL INDICATING THE TR AND PATCH PANEL PORT THE CABLE TERMINATES IN, THE TR-SIDE PORT SHALL ALSO BE LABELED. PROVIDE AS PART OF THE SUBMISSION IN THE FORM OF PASSED CABLE TEST RESULTS AND ELECTRONICALLY DOCUMENTED (E.G. EXCEL SPREADSHEET) CABLE TERMINATIONS.

**CONTRACTOR MINIMUM REQUIREMENTS**

PROSPECTIVE BIDDERS MUST HAVE A BRICK AND MORTAR INSTALLATION AND SERVICE TEAM WITHIN 50 MILES OF MONA SHORES HIGH SCHOOL. PROSPECTIVE BIDDERS MUST HAVE AT LEAST ONE (1) BICSI CERTIFIED TECHNICIAN ASSIGNED TO THIS PROJECT AND AT LEAST ONE (1) RCDG ASSIGNED TO THIS PROJECT. CERTIFICATIONS MUST BE PRESENTED AS PART OF THE SUBMISSION OF THIS BID RESPONSE.

**DIVISION 28 2000 SPECIFICATIONS**

**PROJECT OVERVIEW**

THIS SPECIFICATION RELATES TO BIDDERS RESPONDING TO THE WORK CATEGORY REFERENCED BY TRIANGLE'S BID SCOPE FOR INSTALLATION OF CAMERAS AND SERVERS. THIS SPECIFICATION REQUIRES BIDDERS TO: INSTALL ALL OWNERS' SERVERS, CAMERAS, MOUNTS, AND ACCESSORIES AS NOTED IN THE CAMERA SCHEDULE AND LOCATED ON THE DRAWING SET.  
- AIM, CONFIGURE, AND RE-MAP ALL CAMERAS WITHIN ACC AS NOTED IN THE CAMERA SCHEDULE AND LOCATED ON THE DRAWING SET. AIMING SHALL BE COMPLETED AS INDICATED IN THE OWNER-PROVIDED IPVM LINK POST-AWARD. CONFIGURATION OF CAMERAS (E.G. FPS, HDSM, CONTINUOUS RECORDING, ETC.) SHALL BE COMPLETED AS INDICATED IN OWNER-PROVIDED SDT POST-AWARD.  
- LOAD-BALANCING NEWLY INSTALLED/CONFIGURED CAMERAS ONTO NEW NVRS AS SHOWN IN THE OWNER-PROVIDED AVIGON SDT POST-AWARD.  
- UPGRADING THE OWNER'S ENTIRE ACC7 SYSTEM TO UNITY 8. ASSUME THE ENTIRE DISTRICT'S SYSTEM ALREADY HAS SMART ASSURANCE AND NO ADDITIONAL LICENSING IS NEEDED. THERE ARE FIVE (5) EXISTING NVRS, ONE (1) OF WHICH IS AN NVR4X-PRM, THE OTHER FOUR (4) EXISTING ARE HD NVRS.  
- APPLYING AND CONFIGURING FAILOVER FOR ALL EXISTING 212 CAMERAS AND NEW CAMERAS TO FAIL OVER TO THE NEW NVRS AND THE NVR4X. NO CAMERA SHALL FAIL OVER TO THEIR PRIMARY STORAGE TARGET. NO CAMERAS SHALL FAIL OVER TO THE EXISTING HD NVRS. ASSUME ALL FAILOVER LICENSING IS PROVIDED AND NO ADDITIONAL FAILOVER LICENSING IS NEEDED.  
- AS NOTED ABOVE AND WITHIN TRIANGLE'S SCOPE, ALL CAMERAS, MOUNTING ACCESSORIES, POWER SUPPLIES, AND LICENSES SHALL BE CONSIDERED "OWNER PROVIDED, CONTRACTOR INSTALLED". THE CONTRACTOR SHALL PROVIDE ANY CONSUMABLES, MOUNTING HARDWARE, AND ACCESSORIES NEEDED TO PROVIDE A SECURE, FINISHED INSTALLATION. EXAMPLES INCLUDE (BUT ARE NOT LIMITED TO) BEAM CLAMPS, CAULKING, FLEX CONDUIT TO CORNER MOUNTED CAMERAS, STAINLESS STEEL FASTENERS, ETC.

**INSTALLATION AND WARRANTY REQUIREMENTS**

THE AWARDED CONTRACTOR SHALL INSTALL, AIM, CONFIGURE, AND PROGRAM ALL DEVICES WITHIN THIS PROJECT TO BE FREE FROM DEFECT FOR ONE YEAR FROM SUBSTANTIAL COMPLETION. NO CAMERAS SHALL BE INSTALLED IN A MANNER THAT WOULD BE SUBJECT TO NON-MALICIOUS DAMAGE. EXAMPLES OF NON-MALICIOUS DAMAGE INCLUDE (BUT ARE NOT LIMITED TO):  
- INAPPROPRIATE FASTENING EQUIPMENT (E.G. NON-STAINLESS SCREWS IN OUTDOOR APPLICATIONS)  
- WATER-DAMAGED CAMERA EQUIPMENT DUE TO IMPROPERLY SEALED HOUSINGS, FASTENERS, ETC.  
- FALL-DAMAGED CAMERAS DUE TO IMPROPER CEILING INSTALLATION

EXAMPLES OF DAMAGE THAT WOULD NOT BE REQUIRED TO BE COVERED UNDER THIS WARRANTY INCLUDE:  
- INTENTIONALLY DAMAGED EQUIPMENT BY STUDENTS, STAFF, VISITORS, ETC.  
- ENVIRONMENTAL DAMAGE SUCH AS DAMAGE CAUSED BY LIGHTNING STRIKES, TORNADO, ETC. EQUIPMENT SHALL BE FREE FROM DAMAGE THAT COULD BE CAUSED BY HEAVY WINDS.  
- EQUIPMENT DAMAGED BY NETWORK EQUIPMENT FAILURE, SUCH AS NETWORK SWITCH POWER SURGES.

PROGRAMMING REQUIREMENTS  
- EACH CAMERA SHALL BE PROGRAMMED WITH STATIC IP ADDRESSES. OWNER-PROVIDED PASSWORDS, SET TO TOPICS, ORGANIZED IN NUMERICAL ASCENDING ORDER WITHIN ACC7, AND PROVIDED AS SHOWN ON DRAWINGS WITH AN ADDITIONAL PREFIX OF "HS". E.G. CE-01 SHALL BE NAMED "HSC01"; C-01 SHALL BE NAMED "HSC01".  
AS BUILTS SHALL BE PROVIDED IN THE FORM OF DIGITAL/PDF'S OF CAMERA LOCATION ON DRAWINGS WITH ITS NAME, VIEW, AND THE LOCATION OF THE CABLE RUN TO THE IDF (E.G. IDF G).  
- AVIGON ACS SHALL BE FULLY CONFIGURED AND SETUP TO PROVIDE REMOTE ACCESS CAPABILITIES VIA APP OR WEB INTERFACES.  
- SHOULD THERE BE ANY CONFIGURATION QUESTIONS, REFER ONE OF THE FINISHED ELEMENTARY SCHOOLS FOR REFERENCE.

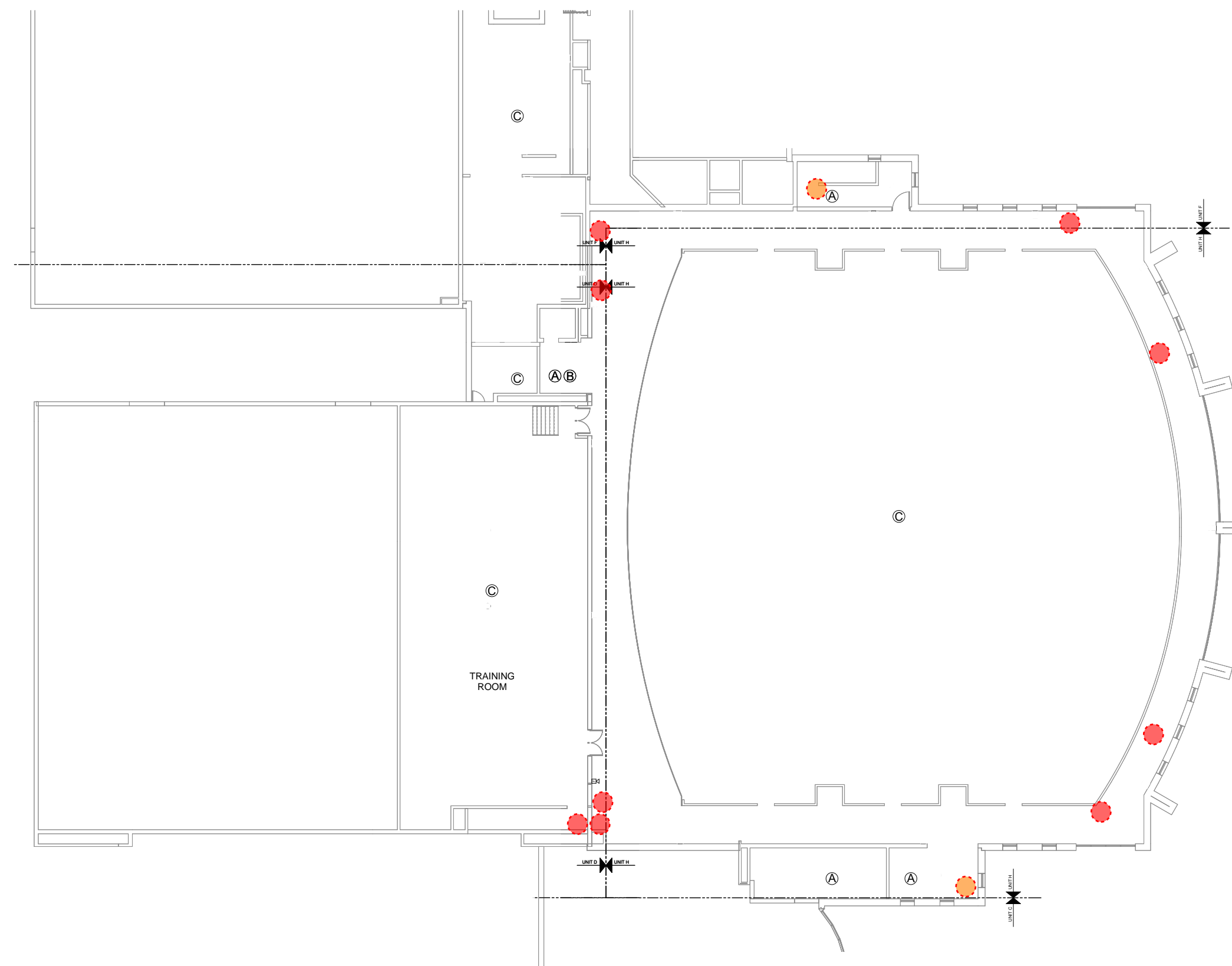
**CONTRACTOR MINIMUM REQUIREMENTS**

PROSPECTIVE BIDDERS MUST HAVE A BRICK AND MORTAR INSTALLATION AND SERVICE TEAM WITHIN 50 MILES OF MONA SHORES HIGH SCHOOL. PROSPECTIVE BIDDERS MUST HAVE AT LEAST THREE (3) AVIGON CERTIFIED PROFESSIONALS BASED OUT OF A BRICK AND MORTAR OFFICE WITHIN 50 MILES OF MONA SHORES HIGH SCHOOL AND DEMONSTRATE THESE CERTIFICATES AS PART OF THE SUBMISSION OF THIS BID RESPONSE.

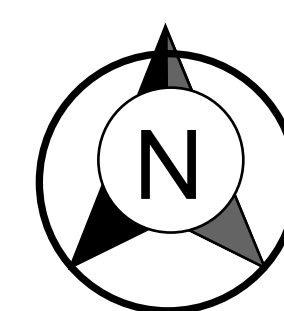
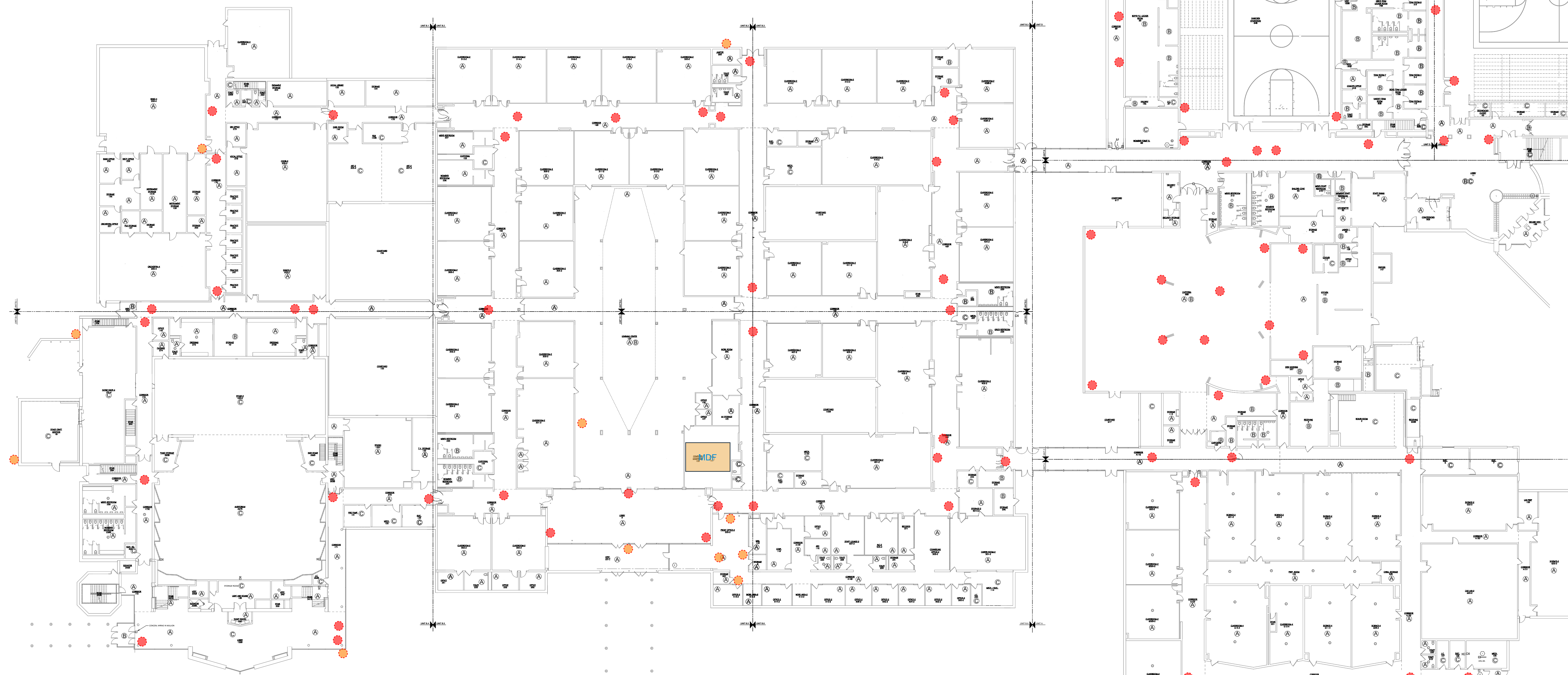
DEVICE NAME (DRAWINGS)	MODEL	RESOLUTION	LOCATION	CAMERA LOCATION SPECIFICS (DIV 27/28)			MOUNTING ACCESSORIES AND AIMING REQUIREMENTS (DIV 28) (OWNER PROVIDED EQUIPMENT)						CABLING REQUIREMENTS (DIV 27)	
				INT/EXT	ROOF SURFACE	HEIGHT AFF/AFG*	HOUSING ATTACHMENT	DOVE COVER/LENS	MOUNTING SURFACE ATTACHMENT	IR ATTACHMENT	POWER ACCESSORY	CORNER/POLE ATTACHMENT		HORIZONTAL FOV**
C-01	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-02	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-03	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-04	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-05	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-06	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-07	8.0C-H5A-FE-D01-IR	2048x2048	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-08	2.0C-H6A-D1-IR	1080p	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-09	2.0C-H6A-D01-IR	1080p	HIGH SCHOOL	INT	SURFACE MOUNT	-1' BELOW DECK	CLADP-1001	CLPNL-1011	N/A	N/A	N/A	N/A	56	NEW CABLE
C-10	2.0C-H6A-D1-IR	1080p	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-100	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	REUSE EXISTING CABLE
C-101	6.0C-H6A-D01-IR	3200x1800	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	REUSE DATA CABLE
C-102	8.0C-H5A-FE-D01-IR	2048x2048	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-103	24C-H5A-3MH	2960x1440	HIGH SCHOOL	INT	HARD CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-104	2.0C-H6A-D1-IR	1080p	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-11	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-12	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-13	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-14	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-15	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	91	NEW CABLE
C-16	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	91	NEW CABLE
C-17	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-18	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-19	4.0C-H6A-B01-IR	2560x1440	HIGH SCHOOL	EXT	SURFACE MOUNT	12' AFG	H4-BC-JBOX1	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-20	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-21	24C-H5A-3MH	4K	HIGH SCHOOL	EXT	WALL ARM	SEE NOTE BELOW TABLE	HSAMH-AD-PEND1	HSAMH-DC-COVR1	N/A	N/A	N/A	N/A	61	NEW CABLE
C-22	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-23	4.0C-H6A-B01-IR	2560x1440	HIGH SCHOOL	EXT	SURFACE MOUNT	12' AFG	H4-BC-JBOX1	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-24	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-25	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-26	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-27	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	91	NEW CABLE
C-28	2.0C-H6A-D1	1080p	HIGH SCHOOL	INT	RECESSED CEILING	N/A	CLADP-1001	CLPNL-1011	N/A	N/A	N/A	N/A	92	NEW CABLE
C-29	2.0C-H6A-D1	1080p	HIGH SCHOOL	INT	RECESSED CEILING	N/A	CLADP-1001	CLPNL-1011	N/A	N/A	N/A	N/A	91	NEW CABLE
C-30	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-31	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	91	NEW CABLE
C-32	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-33	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-34	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	91	NEW CABLE
C-35	2.0C-H6A-D1-IR	1080p	HIGH SCHOOL	INT	SURFACE MOUNT	-1' BELOW DECK	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-36	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-37	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-38	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-39	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-40	8.0C-H6A-D1	4K	HIGH SCHOOL	INT	RECESSED CEILING	N/A	CLADP-1001	CLPNL-1011	N/A	N/A	N/A	N/A	92	NEW CABLE
C-41	12.0W-H5A-FE-D01-IR	12MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-42	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-43	15C-H5A-3MH	2560x1440	HIGH SCHOOL	INT	WALL ARM	SEE NOTE BELOW TABLE	HSAMH-AD-PEND1	HSAMH-DC-COVR1	WLMT-1001	H4AMH-AD-IRL1	POE60U-1BTE	N/A	56	NEW CABLE
C-44	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	WALL ARM	SEE NOTE BELOW TABLE	HSAMH-AD-PEND1	HSAMH-DC-COVR1	N/A	CM-MT-WALL1	N/A	N/A	91	NEW CABLE
C-45	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	WALL ARM	10' AFF	HSAMH-AD-PEND1	HSAMH-DC-COVR1	N/A	CM-MT-WALL1	N/A	N/A	91	NEW CABLE
C-46	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	RECESSED CEILING	N/A	HSAMH-AD-PEND1	HSAMH-DC-COVR1	N/A	CM-MT-WALL1	N/A	N/A	68	NEW CABLE
C-47	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	WALL ARM	10' AFF	HSAMH-AD-PEND1	HSAMH-DC-COVR1	N/A	CM-MT-WALL1	N/A	N/A	91	NEW CABLE
C-48	2.0C-H6A-D1-IR	1080p	HIGH SCHOOL	INT	SURFACE MOUNT	9' AFF	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-49	8.0C-H5A-FE-D01-IR	2048x2048	HIGH SCHOOL	INT	HARD CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	360	NEW CABLE
C-50	8.0C-H6A-D01-IR	2960x1440	HIGH SCHOOL	INT	SURFACE MOUNT	9' AFF	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-51	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	WALL ARM	10' AFF	HSAMH-AD-PEND1	HSAMH-DC-COVR1	N/A	CM-MT-WALL1	N/A	N/A	91	NEW CABLE
C-52	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-53	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-54	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-55	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-56	6.0C-H5DH-D01-IR	3MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-56	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-57	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-58	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-59	15C-H5A-3MH	2560x1440	HIGH SCHOOL	INT	WALL ARM	SEE NOTE BELOW TABLE	HSAMH-AD-PEND1	HSAMH-DC-COVR1	WLMT-1001	H4AMH-AD-IRL1	POE60U-1BTE	N/A	56	NEW CABLE
C-60	8.0C-H6A-D01-IR	4K	HIGH SCHOOL	INT	SURFACE MOUNT	MATCH EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	92	NEW CABLE
C-61	10.0C-H5DH-D01-IR	5MP	HIGH SCHOOL	INT	RECESSED CEILING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	NEW CABLE
C-62	4.0C-H6A-D1	2560x1440	HIGH SCHOOL	INT	RECESSED CEILING	N/A								

**SYMBOL LEGEND**

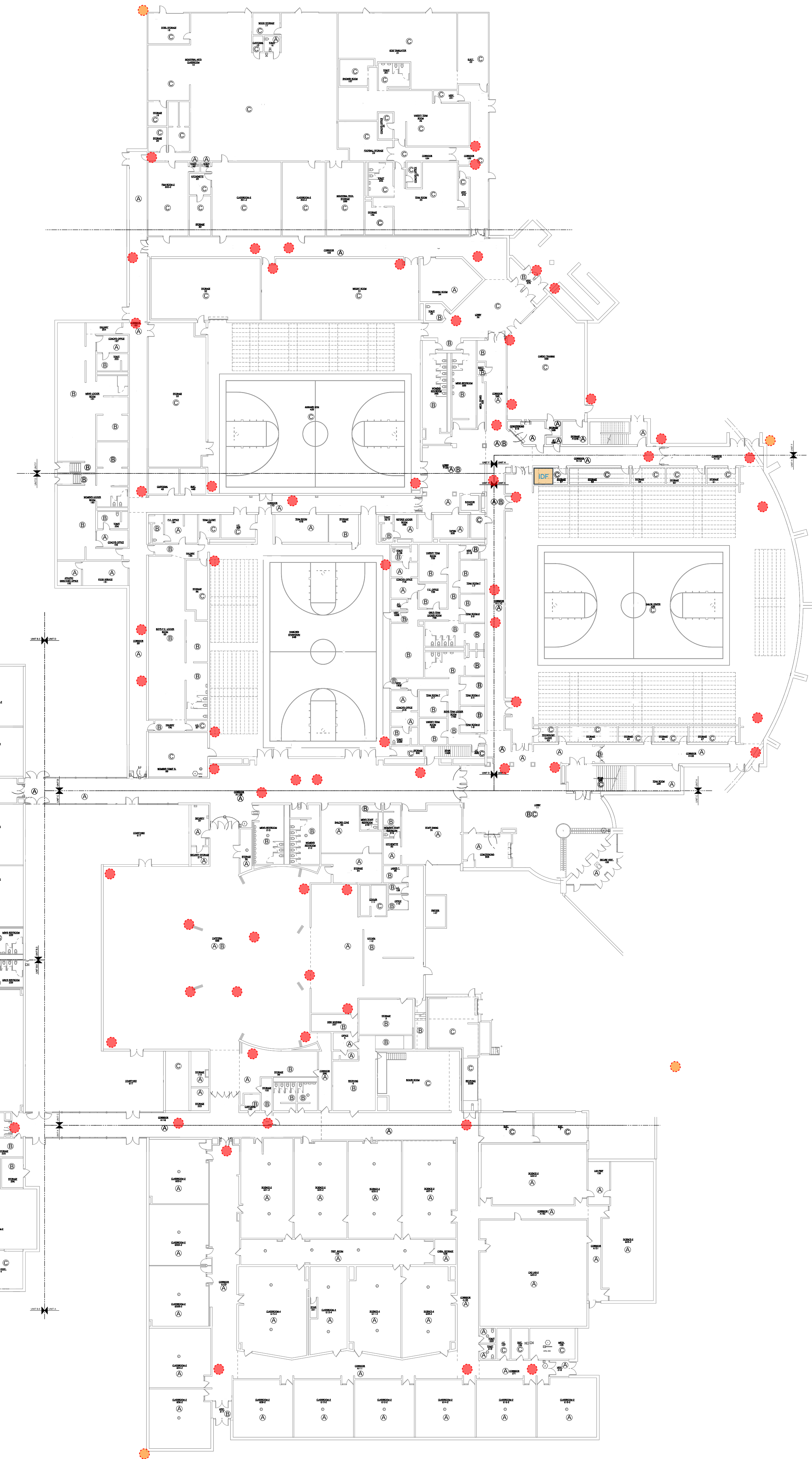
- EXISTING ANALOG CAMERA TO BE DEMOED
- EXISTING IP CAMERA TO BE DEMOED



**HIGH SCHOOL EXISTING SURVEILLANCE PLAN - GYM MEZZANINE**



**HIGH SCHOOL EXISTING SURVEILLANCE PLAN - MAIN FLOOR**



**VIDEO SURVEILLANCE  
UPGRADES**

MONA SHORES PUBLIC SCHOOLS  
1121 Seminole Rd  
Norton Shores, MI 49441

ORIGINAL ISSUANCE  
RFP SET  
12/05/2023

REVISIONS	BY	DATE
OWNER COMMENT & REVIEW	DM	11/20/2023

HIGH SCHOOL  
SHEET NUMBER  
**VS 100**  
HIGH SCHOOL EXISTING CAMERA  
DEMOLITION PLAN



**SYMBOL LEGEND**

- PRO SERIES HIGH MP CAMERA
- SINGLE SENSOR (BULLET) CAMERA
- SINGLE SENSOR (DOME) CAMERA
- WIRELESS POINT TO POINT (PTP)  
(X INDICATES THE PAIRING "A"-"A", "B"-"B")
- POWER SUPPLY LOCATION
- PANORAMIC (FISHEYE) CAMERA
- 2-SENSOR MULTISENSOR CAMERA
- 3-SENSOR MULTISENSOR CAMERA (180°)
- 3-SENSOR MULTISENSOR CAMERA (270°)
- 4-SENSOR MULTISENSOR CAMERA

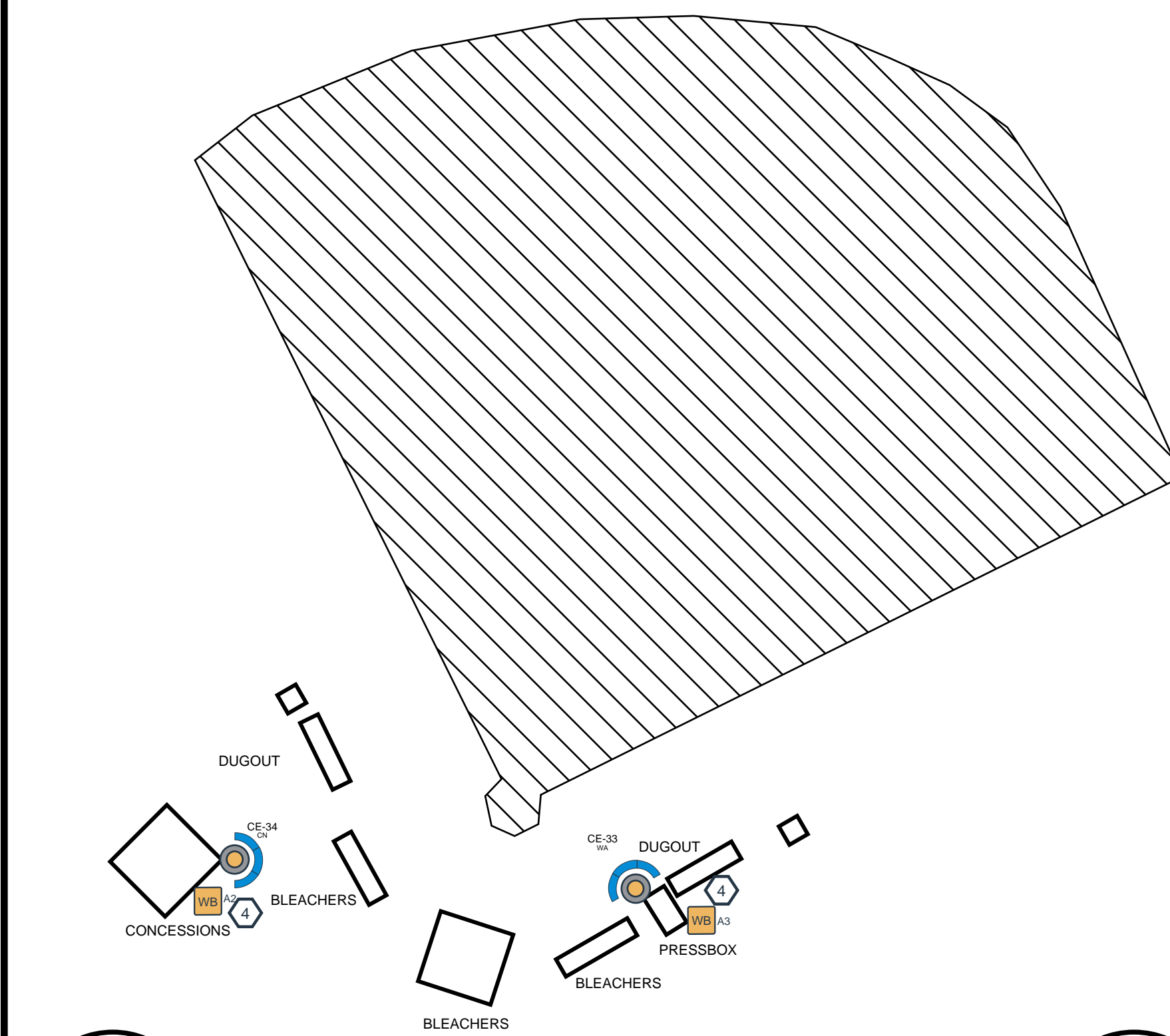
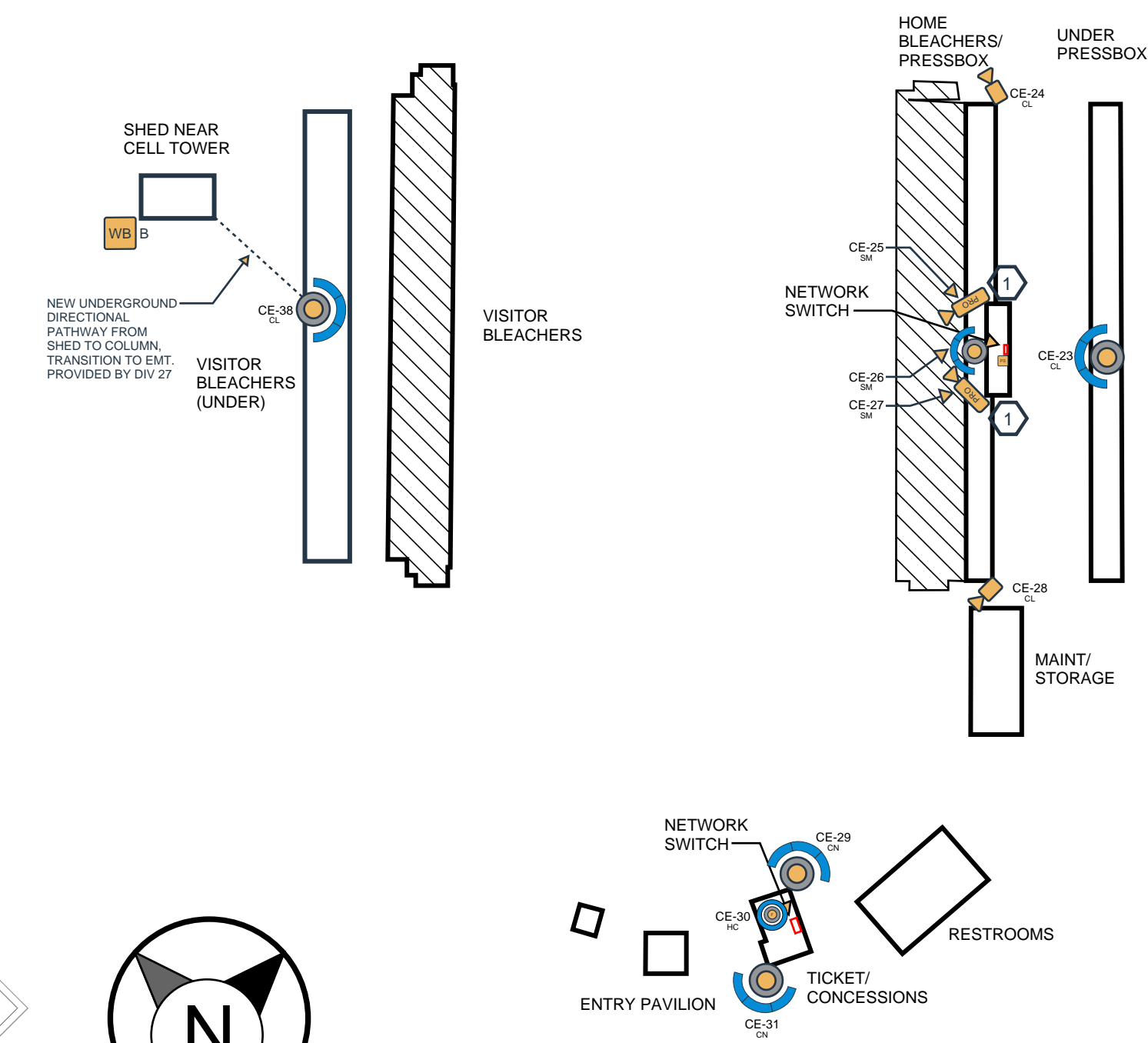
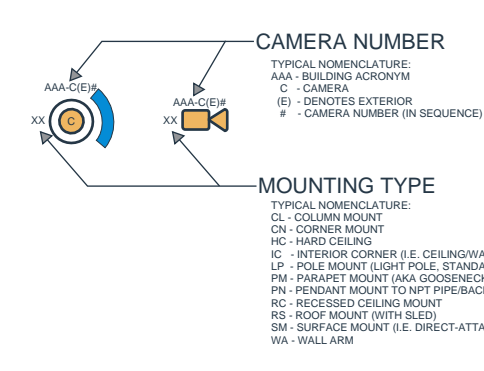
**CEILING TYPE LEGEND**

- LAY IN/DROP CEILING
- HARD LID CEILING
- EXPOSED/OPEN TO DECK

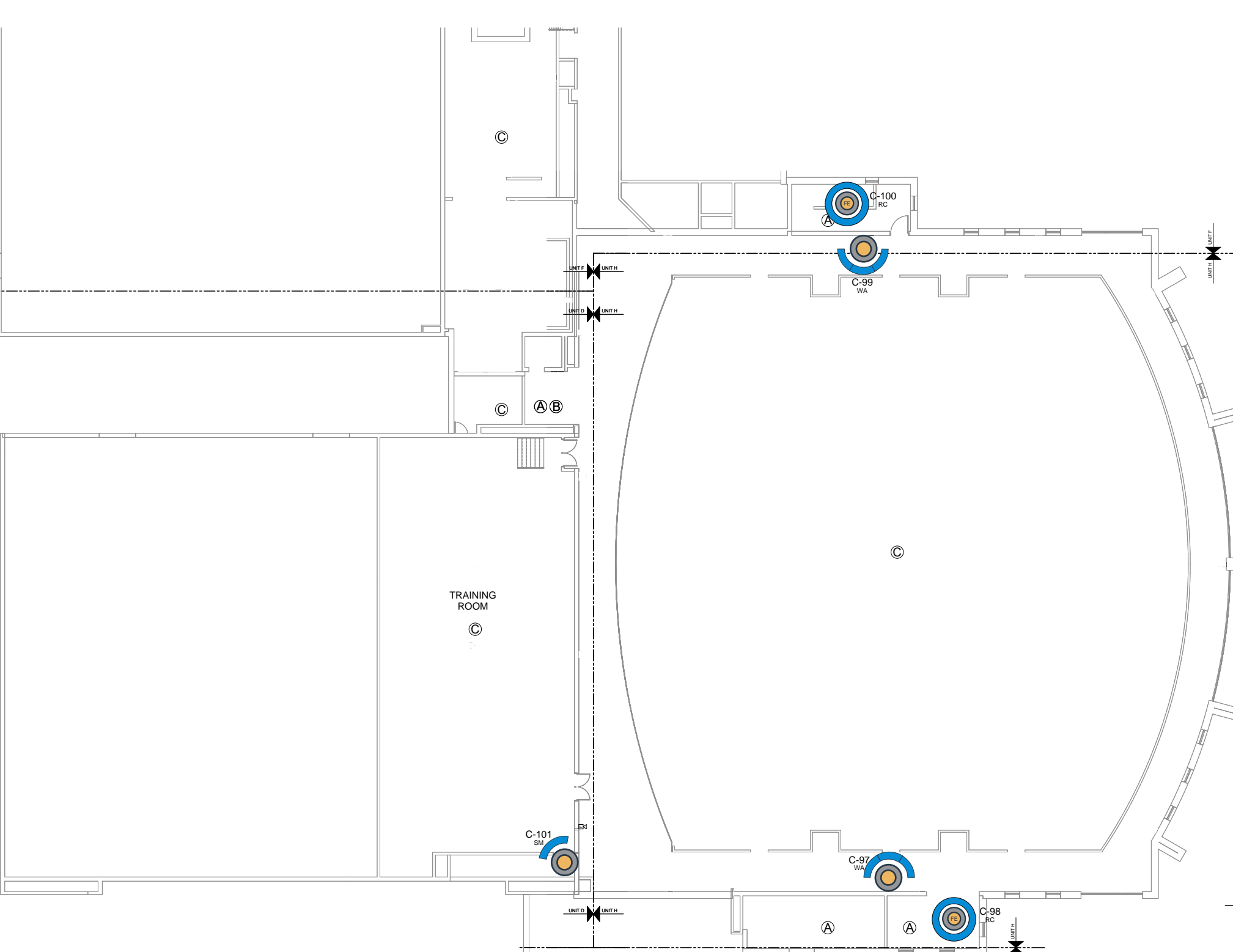
**KEYED NOTES**

- (1) CAT6 + (1) 18/2AWG TO POWER SUPPLY IN TR
- (2) RE-USE EXISTING CABLE AND ROUGH IN
- (3) RELOCATE EXISTING DATA CABLE
- (4) WIRELESS PTP BY CABLE PROVIDER; BASIS OF DESIGN: SIKLU MULTHAUL SERIES, 1GBS

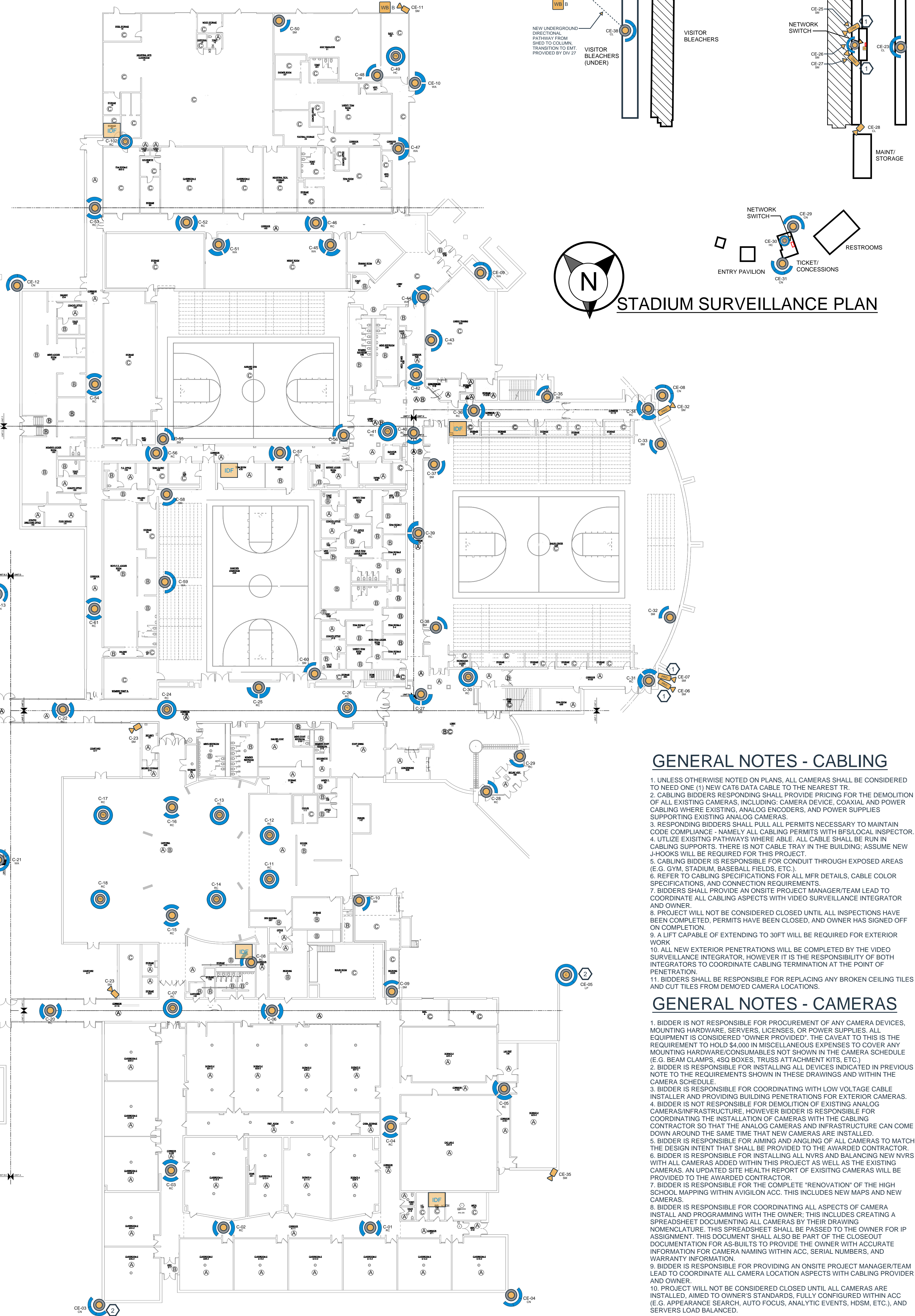
**CAMERA NAMING CONVENTIONS**



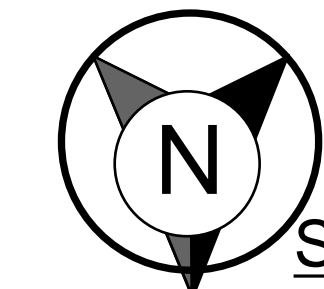
**BASEBALL FIELD SURVEILLANCE PLAN**



**HIGH SCHOOL SURVEILLANCE PLAN - UPPER GYM FLOOR**



**HIGH SCHOOL SURVEILLANCE PLAN - MAIN FLOOR**



**STADIUM SURVEILLANCE PLAN**

**GENERAL NOTES - CABLING**

1. UNLESS OTHERWISE NOTED ON PLANS, ALL CAMERAS SHALL BE CONSIDERED TO NEED ONE (1) NEW CAT6 DATA CABLE TO THE NEAREST TR.
2. CABLING BIDDERS RESPONDING SHALL PROVIDE PRICING FOR THE DEMOLITION OF ALL EXISTING CAMERAS, INCLUDING CAMERA DEVICE, COAXIAL AND POWER CABLING WHERE EXISTING, ANALOG ENCODERS, AND POWER SUPPLIES SUPPORTING EXISTING ANALOG CAMERAS.
3. RESPONDING BIDDERS SHALL CALL ALL PERMITS NECESSARY TO MAINTAIN CODE COMPLIANCE - NAMELY ALL CABLING PERMITS WITH BLS/CAL INSPECTOR.
4. UTILIZE EXISTING PATHWAYS WHERE AVAILABLE. ALL CABLE SHALL BE RUN IN CABLING SUPPORTS. THERE IS NO CABLE TRAY IN THE BUILDING. ASSUME NEW J-HOOKS WILL BE REQUIRED FOR THIS PROJECT.
5. CABLING BIDDER IS RESPONSIBLE FOR CONDUIT THROUGH EXPOSED AREAS (E.G. GYM, STADIUM, BASEBALL FIELDS, ETC.).
6. REFER TO CABLING SPECIFICATIONS FOR ALL MFR DETAILS, CABLE COLOR SPECIFICATIONS, AND CONNECTION REQUIREMENTS.
7. BIDDERS SHALL PROVIDE AN ONSITE PROJECT MANAGER/TEAM LEAD TO COORDINATE ALL CABLING ASPECTS WITH VIDEO SURVEILLANCE INTEGRATOR AND OWNER.
8. PROJECT WILL NOT BE CONSIDERED CLOSED UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED, PERMITS HAVE BEEN CLOSED, AND OWNER HAS SIGNED OFF ON COMPLETION.
9. A LIFT CAPABLE OF EXTENDING TO 30FT WILL BE REQUIRED FOR EXTERIOR WORK.
10. ALL NEW EXTERIOR PENETRATIONS WILL BE COMPLETED BY THE VIDEO SURVEILLANCE INTEGRATOR. HOWEVER IT IS THE RESPONSIBILITY OF BOTH INTEGRATORS TO COORDINATE CABLING TERMINATION AT THE POINT OF PENETRATION.
11. BIDDERS SHALL BE RESPONSIBLE FOR REPLACING ANY BROKEN CEILING TILES AND CUT TILES FROM DEMOED CAMERA LOCATIONS.

**GENERAL NOTES - CAMERAS**

1. BIDDER IS NOT RESPONSIBLE FOR PROCUREMENT OF ANY CAMERA DEVICES, MOUNTING HARDWARE, SERVERS, LICENSES, OR POWER SUPPLIES. ALL EQUIPMENT IS CONSIDERED "OWNER PROVIDED". THE CAVEAT TO THIS IS THE REQUIREMENT TO HOLD \$4,000 IN MISCELLANEOUS EXPENSES TO COVER ANY MOUNTING HARDWARE CONSUMABLES NOT SHOWN IN THE CAMERA SCHEDULE (E.G. BEAM CLAMPS, ASO BOXES, TRUSS ATTACHMENT KITS, ETC.).
2. BIDDER IS RESPONSIBLE FOR INSTALLING ALL DEVICES INDICATED IN PREVIOUS NOTE TO THE REQUIREMENTS SHOWN IN THESE DRAWINGS AND WITHIN THE CAMERA SCHEDULE.
3. BIDDER IS RESPONSIBLE FOR COORDINATING WITH LOW VOLTAGE CABLE INSTALLER AND PROVIDING BUILDING PENETRATIONS FOR EXTERIOR CAMERAS.
4. BIDDER IS NOT RESPONSIBLE FOR DEMOLITION OF EXISTING ANALOG CAMERAS/INFRASTRUCTURE. HOWEVER BIDDER IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF CAMERAS WITH THE CABLING CONTRACTOR SO THAT THE ANALOG CAMERAS AND INFRASTRUCTURE CAN COME DOWN AROUND THE SAME TIME THAT NEW CAMERAS ARE INSTALLED.
5. BIDDER IS RESPONSIBLE FOR AIMING AND ANGLING OF ALL CAMERAS TO MATCH THE DESIGN INTENT THAT SHALL BE PROVIDED TO THE AWARDED CONTRACTOR.
6. BIDDER IS RESPONSIBLE FOR INSTALLING ALL NVRs AND BALANCING NEW NVRs WITH ALL CAMERAS ADDED WITHIN THIS PROJECT AS WELL AS THE EXISTING CAMERAS. AN UPDATED SITE HEALTH REPORT OF EXISTING CAMERAS WILL BE PROVIDED TO THE AWARDED CONTRACTOR.
7. BIDDER IS RESPONSIBLE FOR THE COMPLETE "RENOVATION" OF THE HIGH SCHOOL MAPPING WITHIN ANVILOW ACC. THIS INCLUDES NEW MAPS AND NEW CAMERAS.
8. BIDDER IS RESPONSIBLE FOR COORDINATING ALL ASPECTS OF CAMERA INSTALL AND PROGRAMMING WITH THE OWNER. THIS INCLUDES CREATING A SPREADSHEET DOCUMENTING ALL CAMERAS BY THEIR DRAWING NOMENCLATURE. THIS SPREADSHEET SHALL BE PASSED TO THE OWNER FOR IP ASSIGNMENT. THIS DOCUMENT SHALL ALSO BE PART OF THE CLOSEOUT DOCUMENTATION FOR AS-BUILTS TO PROVIDE THE OWNER WITH ACCURATE INFORMATION FOR CAMERA NAMING WITHIN ACC. SERIAL NUMBERS, AND WARRANTY INFORMATION.
9. BIDDER IS RESPONSIBLE FOR PROVIDING AN ONSITE PROJECT MANAGER/TEAM LEAD TO COORDINATE ALL CAMERA LOCATION ASPECTS WITH CABLING PROVIDER AND OWNER.
10. PROJECT WILL NOT BE CONSIDERED CLOSED UNTIL ALL CAMERAS ARE INSTALLED, AIMED TO OWNER'S STANDARDS, FULLY CONFIGURED WITHIN ACC (E.G. APPEARANCE SEARCH, AUTO FOCUS, ANALYTIC EVENTS, HDSM, ETC.), AND SERVERS LOAD BALANCED.

**VIDEO SURVEILLANCE UPGRADES**

MONA SHORES PUBLIC SCHOOLS  
1121 Seminole Rd  
Norton Shores, MI 49441

**REVISIONS**

OWNER COMMENT & REVIEW	DATE	BY DATE

HIGH SCHOOL  
SHEET NUMBER  
**VS 101**  
HIGH SCHOOL SURVEILLANCE PLAN



**VIDEO SURVEILLANCE  
UPGRADES**

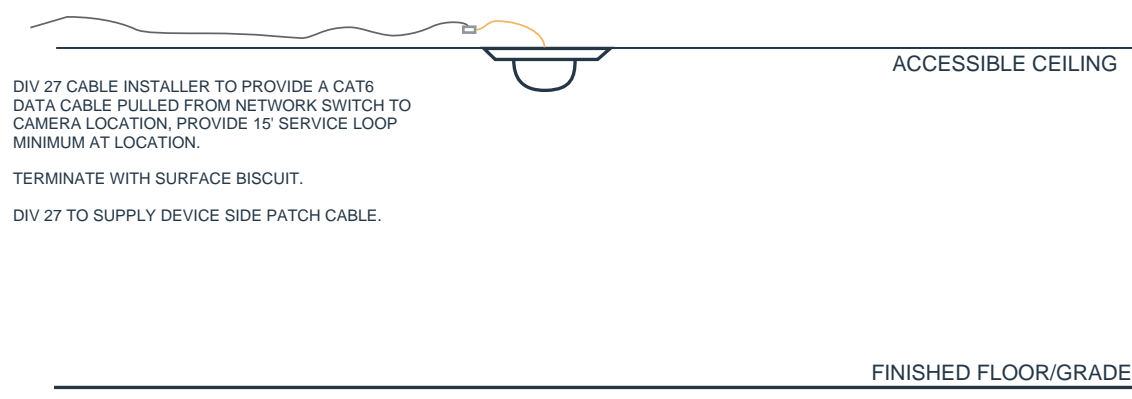
MONA SHORES PUBLIC SCHOOLS  
1121 Seminole Rd  
Norton Shores, MI 49441

**ORIGINAL ISSUANCE**

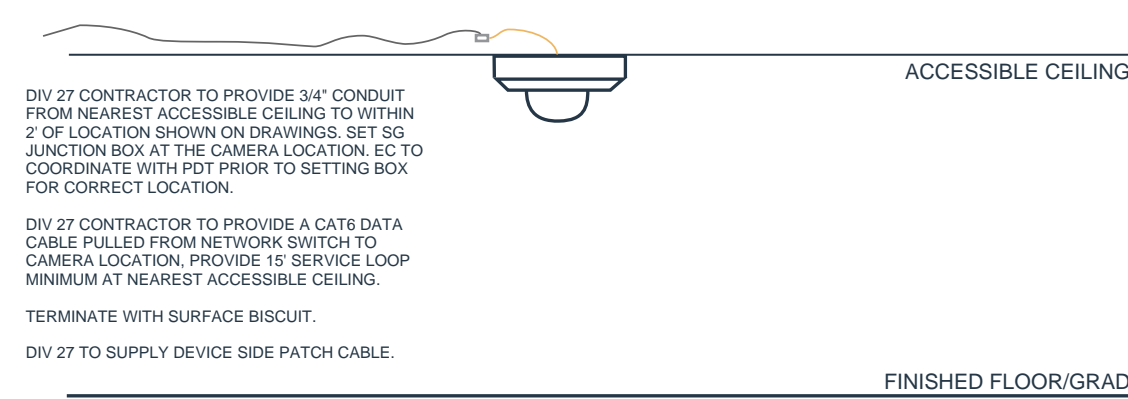
RFP SET  
12/05/2023

REVISIONS	BY	DATE
OWNER COMMENT & REVIEW	DM	11/29/2023

SHEET NUMBER  
**VS 201**  
VIDEO SURVEILLANCE SYSTEM  
AND NETWORK INFRASTRUCTURE  
DETAILS

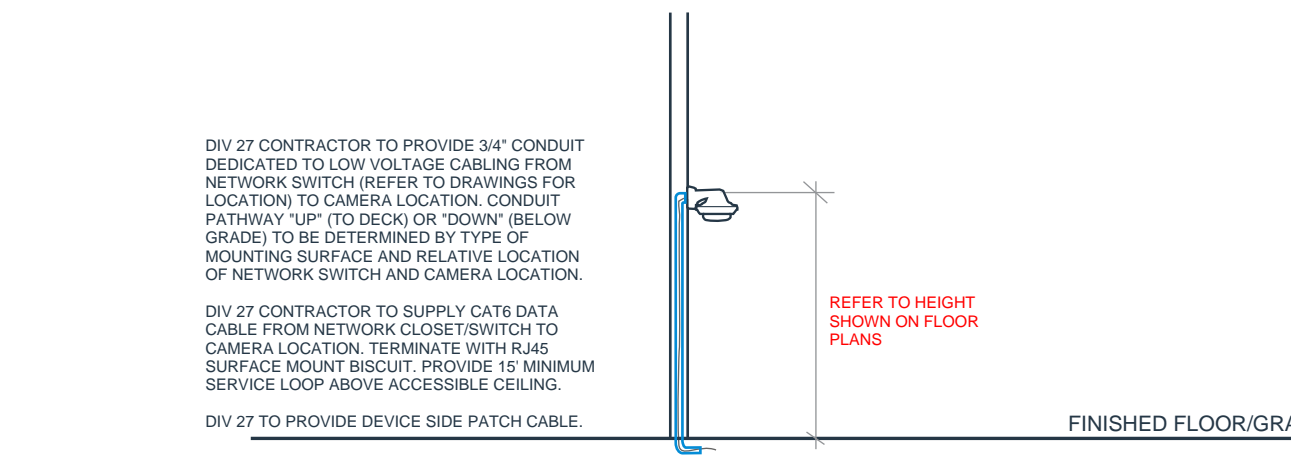


**RECESSED CAMERA ROUGH IN**



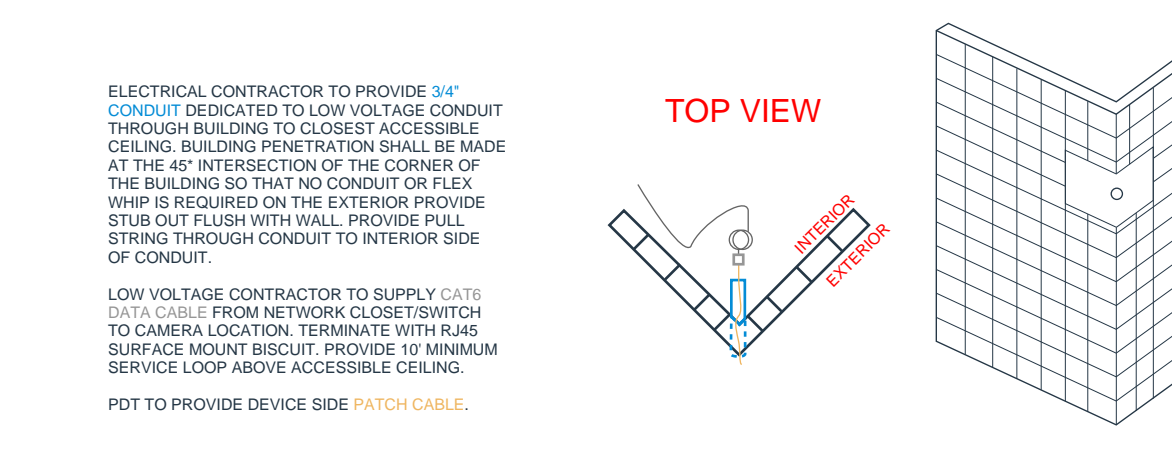
**HARD CEILING/NON-RECESSED  
CAMERA ROUGH IN**

**EXISTING WALL, INTERIOR SURFACE/WALL  
MOUNT CAMERA ROUGH IN**

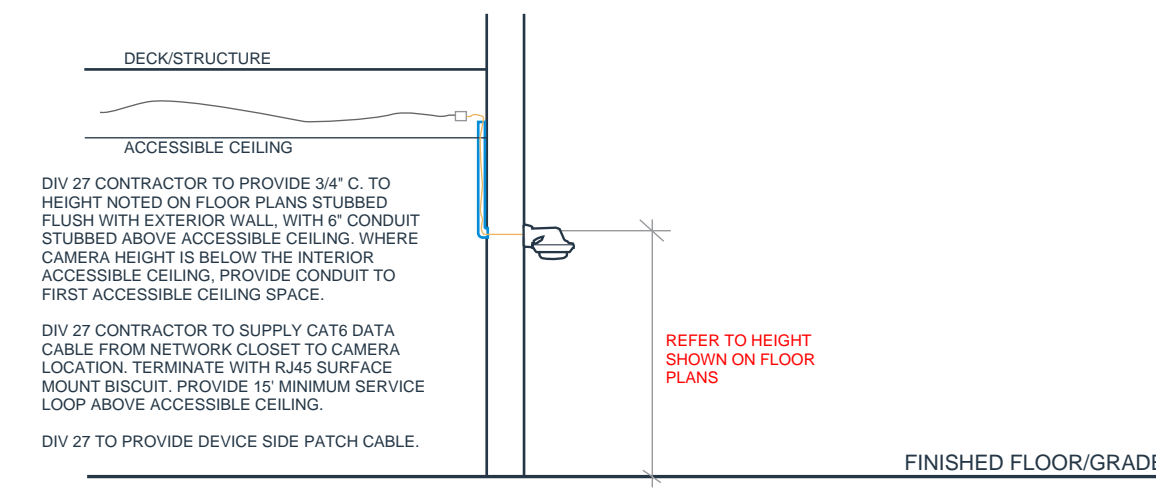


**POLE MOUNTED CAMERA ROUGH IN**

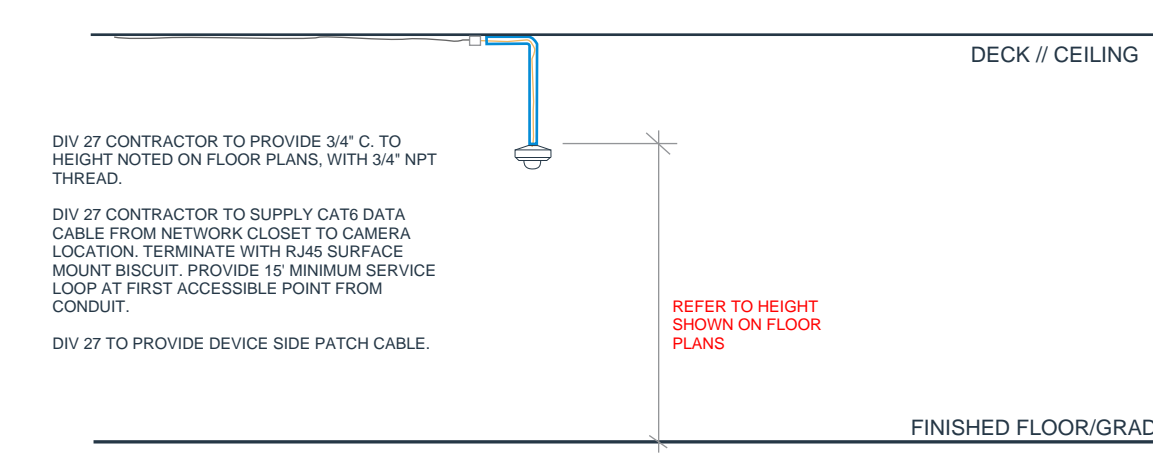
**NEW WALL, INTERIOR SURFACE/WALL  
MOUNT CAMERA ROUGH IN**



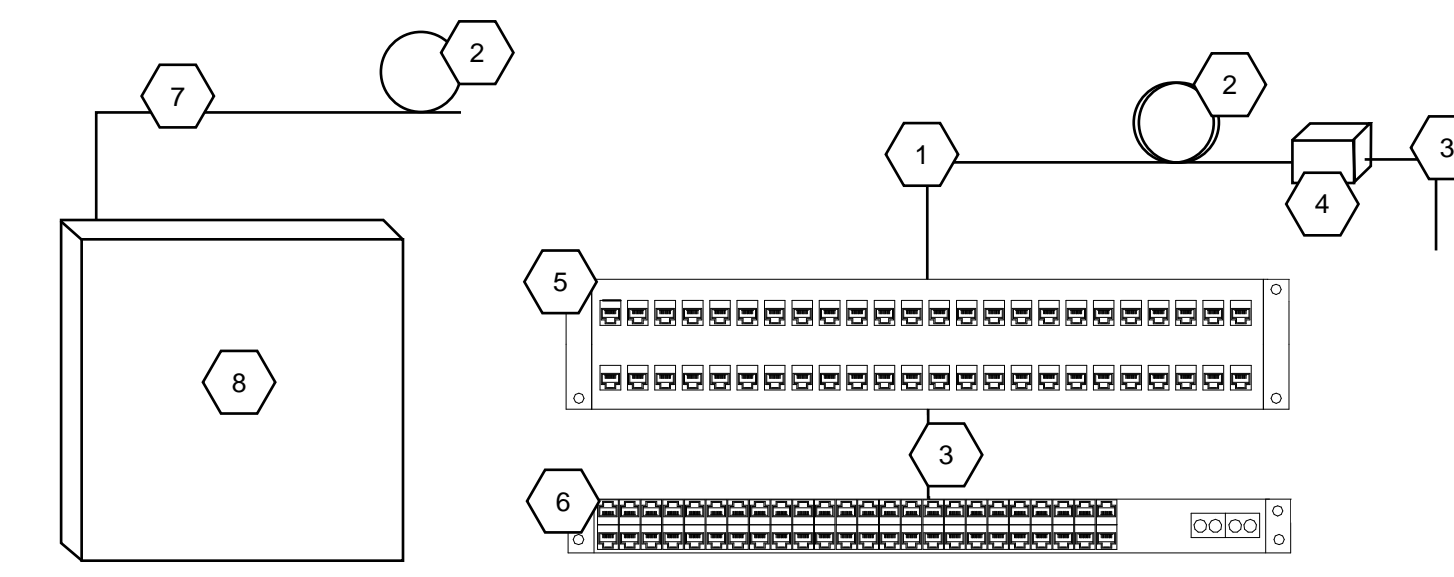
**CORNER MOUNTED CAMERA ROUGH IN**



**EXTERIOR WALL, SURFACE/WALL  
MOUNT CAMERA ROUGH IN**

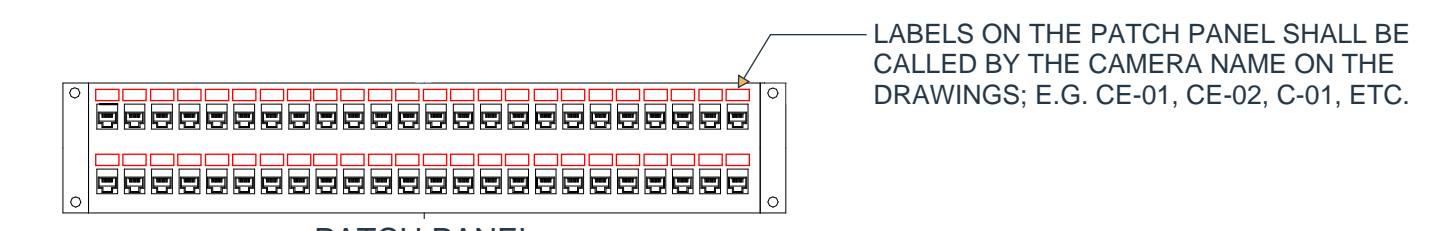


**PENDANT MOUNTED CAMERA ROUGH IN**

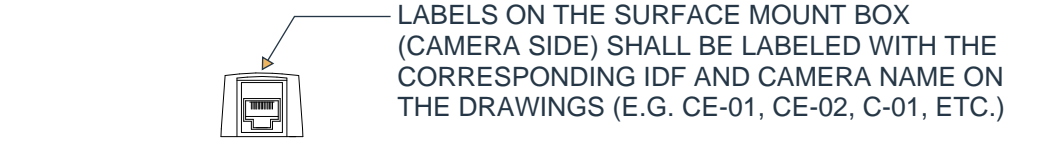


- 1 CATEGORY CABLE - WHITE IN COLOR REFER TO SPECIFICATIONS
- 2 SERVICE LOOP - REFER TO SPECIFICATIONS/DETAILS
- 3 PATCH CABLE - VIOLET IN COLOR REFER TO SPECIFICATIONS/DETAILS
- 4 PATCH CABLE - VIOLET IN COLOR REFER TO SPECIFICATIONS/DETAILS
- 5 PATCH PANEL - 8, 24, OR 48 PORT REFER TO SPECIFICATIONS/DETAILS
- 6 NETWORK SWITCH OWNER PROVIDED
- 7 18AWG 2C CABLE; UNTERMINATED, COILED AT POWER SUPPLY & DEVICE END
- 8 POWER SUPPLY OWNER PROVIDED

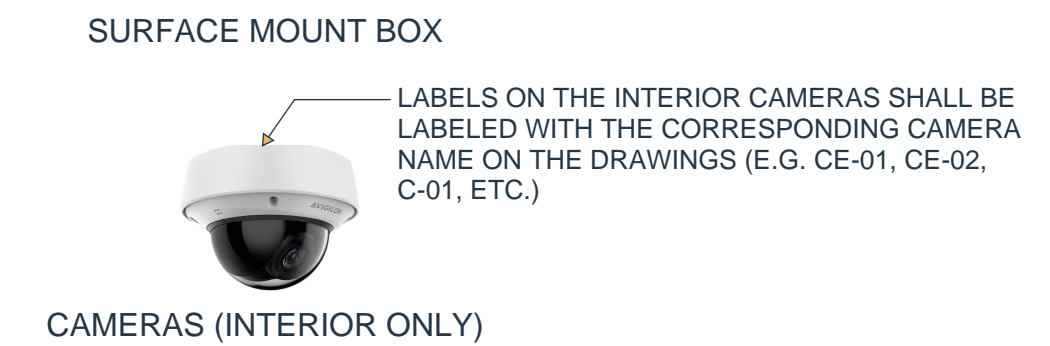
**CABLE TERMINATION DETAILS**



LABELS ON THE PATCH PANEL SHALL BE CALLED BY THE CAMERA NAME ON THE DRAWINGS; E.G. CE-01, CE-02, C-01, ETC.

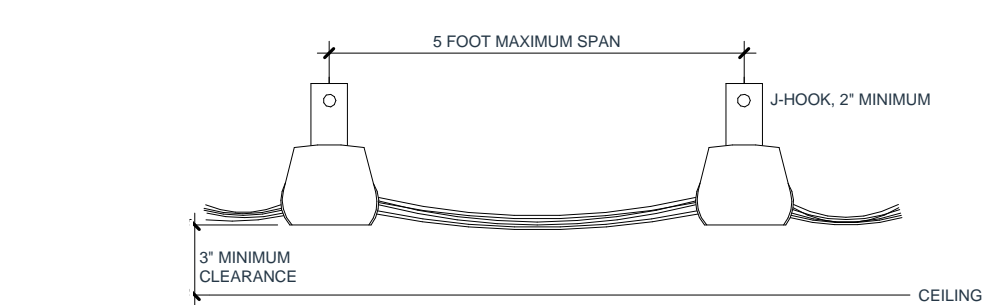


LABELS ON THE SURFACE MOUNT BOX (CAMERA SIDE) SHALL BE LABELED WITH THE CORRESPONDING IDF AND CAMERA NAME ON THE DRAWINGS (E.G. CE-01, CE-02, C-01, ETC.)



LABELS ON THE INTERIOR CAMERAS SHALL BE LABELED WITH THE CORRESPONDING CAMERA NAME ON THE DRAWINGS (E.G. CE-01, CE-02, C-01, ETC.)

**LABELING DETAILS**



**J-HOOK CABLE SUPPORT DETAIL**