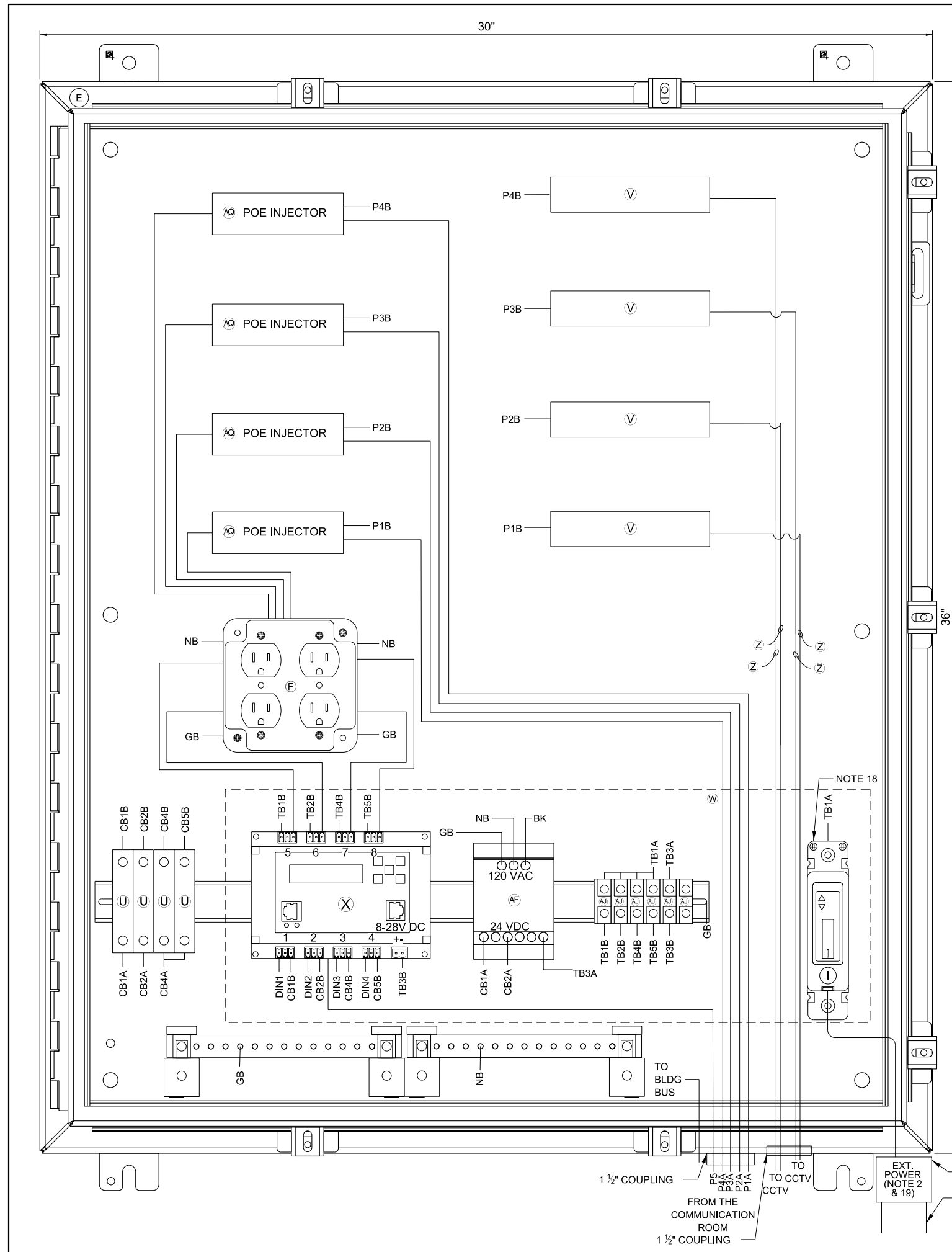


Illinois Tollway Base Sheet Revisions
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Section M Base Sheet Drawings	
Drawing	Modification Summary
	Effective: 03-01-2024
VIDEO POWER JUNCTION BOX - Series 2100	
M-ITS-2100	Video Power Junction Box Model A
	Added a solid line to shop the cutout of the main breaker through the Plexiglass protective cover
	Removed empty box shown near 120VAC to 24VDC transformer
	Added missing line on terminal board near TB1A
M-ITS-2101	Video Power Junction Box Model B
	Added a solid line to shop the cutout of the main breaker through the Plexiglass protective cover
	Connect SFP1 to port 1 and port 2 on Gator Patch
	Connect SFP2 to port 7 and port 8 on Gator Patch
	Relocate cable P5 to port on Cisco switch
	Reverse SFP1 and SFP2 port on cisco switch

 New Sheet

 Retired Standard



ITEM DESCRIPTION

- (A) NOT USED
- (B) NOT USED
- (C) NOT USED
- (D) TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K, BONDED OR SEPARATED AS REQUIRED.
- (E) NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"x27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
- (F) ONE QUAD 120V RECEPTACLE
- (G) NOT USED
- (H) NOT USED
- (I) 120V, 1P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON
- (J) NOT USED
- (K) NOT USED
- (L) NOT USED
- (M) NOT USED
- (N) NOT USED
- (O) NOT USED
- (P) NOT USED
- (Q) NOT USED
- (R) NOT USED
- (S) NOT USED
- (T) NOT USED
- (U) 5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
- (V) AXIS SURGE SUPPRESSOR T8061, MOUNTED ON COMMON DIN RAIL AND GROUNDED
- (W) CLEAR PLEXIGLASS SAFETY COVER PANEL ENCOMPASSING ITEMS I, X, AF AND AJ (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR VOLTAGE AS FIELD CONDITIONS WARRANT.)
- (X) POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
- (Y) NOT USED
- (Z) CATEGORY 6 CABLE, 23AWG, OUTDOOR RATED CABLE BELDEN/7953A
- (AA) NOT USED
- (AB) NOT USED
- (AC) NOT USED
- (AD) NOT USED
- (AE) NOT USED
- (AF) AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204
- (AG) NOT USED
- (AH) NOT USED
- (AI) NOT USED
- (AJ) TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
- (AP) #10 AWG
- (AQ) POE INJECTOR AXIS T8154 60W MIDSPAN 120VAC

NOTES:


1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. EACH 120VAC OUTLET, OR (ITEM F, & AF) SHALL BE FED FROM A SEPARATE POWER CIRCUIT.
5. MOUNT ITEMS U, X, AF & AJ ON A 21 INCH CONTINUOUS SECTION OF DIN RAIL.
6. ALL BREAKERS SHALL BE LABELED (e.g. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
7. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE DIN RAIL. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
8. IP RELAY IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
9. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
10. BOND NEUTRAL AND GROUND BUSES TOGETHER, WHEN REQUIRED. TIE THE ENCLOSURE INTO THE GROUND BUS.
11. THE PLEXIGLASS PANEL DENOTED BY THE DASHED LINE SHALL BE ATTACHED TO THE BACKPLATE WITH 4 MOUNTING STUDS.
12. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
13. ALL INTERNAL 24VAC, 120VAC AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
14. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER, MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.
15. 120V POWER COMES FROM THE BUILDING CIRCUIT PANEL.
16. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.

NOTE TO DESIGNER

IF DESIGN REQUIRES MORE THAN 4 CCTV'S PLEASE ADD THE ADDITIONAL CCTV/POE INJECTOR/POWER SUPPRESSOR INTO A SMALLER CABINET SIDE BY SIDE AND CONTROLLED BY THE MAIN CABINET.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



**VIDEO POWER JUNCTION BOX
MODEL A**

VERSION: 2024-03 STANDARD: M-ITS-2100 SHEET: 1 OF 1

1 1/2" COUPLING

FROM THE COMMUNICATION ROOM

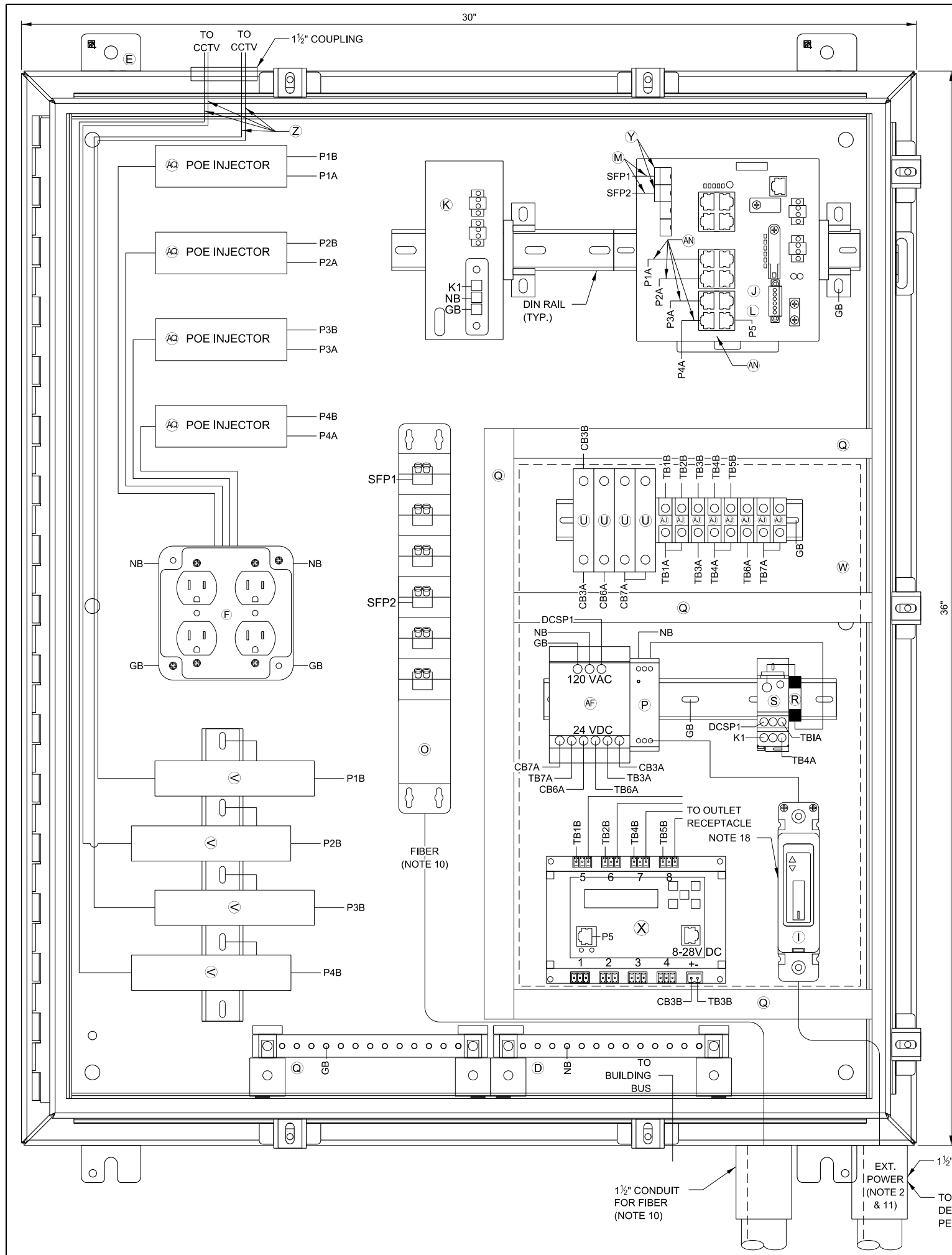
TO BLDG BUS

TO CCTV

TO CCTV

EXT. POWER (NOTE 2 & 19)

1 1/2" CONDUIT FOR POWER TO UPS PANEL OR DEDICATED UPS PER PLANS



ITEM DESCRIPTION

- A NOT USED
- B NOT USED
- C NOT USED
- D TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
- E NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"x27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30. IF VPJB IS INSTALLED INSIDE A BUILDING (ABOVE GROUND) THEN USE NEMA 1 CABINET, IF THE VPJB IS INSTALLED OUTDOOR OR IN A TUNNEL WHERE THERE IS A RISK OF WATER DRIPPING ONTO THE VPJB THEN USE NEMA 4X GRADE FOR VPJB.
- F ONE QUAD 120V RECEPTACLE
- G NOT USED
- H NOT USED
- I 120V, 1P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B229G07
- J NETWORK SWITCH CISCO IE-4000-8T4G-E
- K CISCO POWER SUPPLY, PWR-IE70W-PC-AC=
- L IP SERVICES LICENSE: L-IE4000-RTU=
- M 2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
- N NOT USED
- O SMF PATCH PANEL WITH LC CONNECTORS FIBER CONNECTIONS G620U012LAN-100-0
- P 120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
- Q PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/FIX1LG6 WITH COVER-C1LG6
- R 10 AMP FUSE, GOULD (MERSEN)/ATM-10
- S SPLICE BLOCK, ALTECH/38041
- T NOT USED
- U 5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
- V AXIS SURGE SUPPRESSOR T8061, MOUNTED ON COMMON DIN RAIL AND GROUNDED
- W CLEAR PLEXIGLASS SAFETY COVER PANEL ENCOMPASSING ITEMS I, R, S, P, X & AF. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR VOLTAGE AS FIELD CONDITIONS WARRANT.)
- X POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
- Y (2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
- Z CATEGORY 6 CABLE, 23AWG, OUTDOOR RATED CABLE BELDEN/7953A
- AA NOT USED
- AB NOT USED
- AC NOT USED
- AD NOT USED
- AE NOT USED
- AF AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204
- AG NOT USED
- AH NOT USED
- AI NOT USED
- AJ TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
- AN INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
- AO NOT USED
- AP #10 AWG
- AQ POE INJECTOR AXIS T8154 60W MIDSPAN 120VAC

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. EACH 120VAC OUTLET, OR (ITEM F, K, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
5. MOUNT ITEMS J & K ON A 15 INCH CONTINUOUS SECTION OF DIN RAIL. THE DIN RAIL SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
6. MOUNT ITEMS AJ & U ON A 9 INCH CONTINUOUS SECTION OF DIN RAIL.
7. MOUNT ITEMS AF, P & S ON A 10 INCH CONTINUOUS SECTION OF DIN RAIL.
8. ALL BREAKERS SHALL BE LABELED (e.g. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
9. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
10. THE FIBER CABLE SHALL ENDURE MINOR BENDING AS IT RUNS FROM THE GATOR PATCH UP THROUGH THE LEFT MOST CONDUIT.
11. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
12. IP RELAY IS USED TO CONTROL POWER TO THE CAMERAS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
13. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
14. BOND NEUTRAL AND GROUND BUSES TOGETHER, WHEN REQUIRED. TIE THE ENCLOSURE INTO THE GROUND BUS.
15. THE PLEXIGLASS PANEL DENOTED BY THE DASHED LINE SHALL BE ATTACHED TO THE BACKPLATE WITH 4 MOUNTING STUDS.
16. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
17. ALL INTERNAL 24VAC, 120VAC AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
18. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER, MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.
19. NOT USED
20. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

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VIDEO POWER JUNCTION BOX MODEL B