

PREPARED FOR:
 MIAMI INTERNATIONAL AIRPORT
 P.O. BOX 99-6610
 MIAMI FLORIDA 33299-6610

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HOMESTEAD GENERAL AVIATION AIRPORT
SECURITY FENCING
 PROJECT NO. 1636-06

REVISIONS	REVIEW COMMENTS
08/10/2021	

DRAWING TITLE:
OVERALL SITE PLAN, AND SCOPE

ISSUE DATE: 04/02/2021

R&B PROJ. NO. 1636-06

SCALE: 1/128"=1'

DRAWN BY: J.DIAZ

CHECKED BY: R.SAYEGH

SHEET NO.: **TY1-00**

LEVEL:

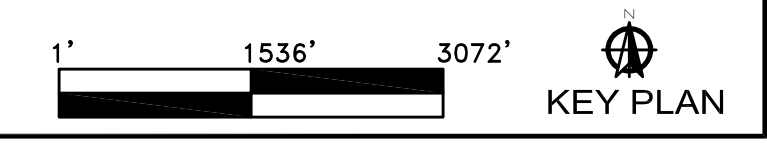
- BASE SCOPE OF WORK**
- ALL WORK SHALL MEET THE CURRENT REQUIREMENTS OF NFPA, FLORIDA BUILDING CODES, AND MDAD DESIGN GUIDE MANUALS.
 - BASE SCOPE OF WORK INCLUDES PROVIDING POWER, COMMUNICATIONS, & SECURITY EQUIPMENT TO THE GATES OF THE NEW SECURITY FENCE.
 - SCOPE OF WORK INCLUDES PROVIDING SIGNED AND SEALED SHOP DRAWINGS FOR THE SPECIFICATION, INSTALLATION DETAIL OF GATE MOTORS, AND INTERFACE WITH GATES. GATE MOTORS SHALL BE LIFTMASTER SL585151U.
 - THERE ARE A TOTAL OF SEVEN (7) GATES. SIX (6) OF THESE GATES WILL BE CONNECTED TO THE ADMINISTRATION OPERATIONS BUILDING WITH FIBER OPTIC CABLING.
 - THE SEVENTH GATE (G1) WILL COMMUNICATE WITH THE ADMINISTRATION OPERATIONS BUILDING THROUGH WIRELESS COMMUNICATIONS. GATE G1 WILL ALSO NOT HAVE A LOCAL CAMERA, BUT WILL BE MONITORED FROM A REMOTE CAMERA MOUNTED ON THE ADMINISTRATION BUILDING ITSELF.
 - EACH GATE WILL HAVE A SOURCE OF POWER FROM THE NEAREST BUILDING OR FROM FP&L AS SHOWN ON DRAWINGS.
 - REPLACE SURFACE COVER SIMILAR TO EXISTING FOR ALL EXCAVATIONS.
 - DUE TO EXISTING SOIL CONTAMINATION IN THE VICINITY OF THE PROPOSED GATES G6 & G7, THE CONTRACTOR SHALL COORDINATE WITH DERM & MDAD THE EXACT ROUTING OF UNDERGROUND CONDUIT AND OTHER EXCAVATIONS AND SHALL NOT PROCEED WITH ANY WORK PRIOR TO WRITTEN APPROVAL FROM DERM ON THE SHOP DRAWINGS SHOWING THE EXACT PROPOSED ROUTING. REFER TO BOUNDARY DRAWINGS IN SPECIFICATIONS.
 - ANY SOIL EXCAVATED WITHIN THE CONTAMINATED BOUNDARY SHALL BE CONSIDERED CONTAMINATED. AS A RESULT, THE SOIL SHALL BE PROPERLY STOCKPILED PURSUANT TO MDAD SPECIFICATION P-160 AND COVERED. SOIL SHALL BE DISPOSED AT AN APPROVED CLASS 1 LINED LANDFILL AND NOT REUSED. MANIFESTS FOR THE DISPOSAL OF THE SOIL SHALL BE PROVIDED TO BECKY VARLEY, RER-DER (BECKY.VARLEY@MIAMIDADE.GOV) IMMEDIATELY UPON RECEIPT.
 - PROVIDE A 72-HOUR NOTIFICATION OF EXCAVATION OF ACTIVITIES TO BECKY VARLEY PRIOR TO EXCAVATION AND DO NOT PROCEED WITH EXCAVATION WORK WITHOUT WRITTEN DIRECTION.
 - IF DEWATERING IS REQUIRED, A CLASS V PERMIT WILL BE REQUIRED FROM RER-DERM.
 - CONTRACTOR SHALL OBTAIN THE SERVICES OF AN ENGINEER TO PERFORM SHORT CIRCUIT AND ARCFLASH STUDIES AND SHALL PROVIDE ARCFLASH HAZARD WARNINGS ON ALL PANELS AND DISCONNECT SWITCHES AS REQUIRED BY THE NEC.

- ALTERNATE SCOPE OF WORK**
- THE ALTERNATE SCOPE OF WORK REVISES THE SCOPE OF GATE G1 SERVICES ONLY.
 - THE ALTERNATE SCOPE SUBSTITUTES THE WIRELESS COMMUNICATION OF GATE G1 SHOWN IN BASE SCOPE WITH A FIBER CONNECTION FROM GATE G1 TO THE ADMINISTRATION OPERATIONS BUILDING.
 - THE ALTERNATE SCOPE ALSO INCLUDES SUBSTITUTING THE REMOTE CAMERA MOUNTED ON THE OPERATIONS BUILDING WITH TWO LOCAL CAMERAS AT THE GATE SIMILAR TO OTHER GATES.

- BURROWING OWL NOTES:**
- THE GENERAL AVIATION SITE AT HOMESTEAD IS HOME TO BURROWING OWLS. IF OWLS ARE FOUND CLOSE TO CONSTRUCTION AREA, MDAD WILDLIFE CONTROL MUST BE CONTACTED PRIOR TO CONTACTING FWC OR OBTAINING PERMITS.
 - BURROWING OWLS AND THEIR NESTS AND EGGS ARE PROTECTED BY STATE AND FEDERAL LAWS. EVEN IF NO BURROWING OWLS ARE OBSERVED AT A BURROW, THE BURROW MAY NOT BE DESTROYED WITHOUT A PERMIT ISSUED BY THE FWC (39-27.002 F.A.C.).
 - BURROWING OWLS AND THEIR BURROWS ARE ALSO PROTECTED UNDER THE FEDERAL MIGRATORY BIRD TREATY ACT.
 - IN MOST CASES, FWC WILL ISSUE A NEST REMOVAL PERMIT FOR AN ACTIVE BURROW, BUT THE APPLICANT WILL HAVE TO WAIT UNTIL THE END OF THE NESTING SEASON BEFORE CONSTRUCTION CAN BEGIN.
 - BURROWING OWL NESTING SEASON IS FROM FEBRUARY 15TH THROUGH JULY 10TH.

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW, AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

1 OVERALL SITE PLAN AND SCOPE
 SCALE: 1/128" = 1'-0"



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GENERAL NOTES:

1. COORDINATE EARLY LOCATION OF POWER AND COMMUNICATIONS EQUIPMENT WITH GATE AND FENCE CONTRACTOR.
2. PROVIDE A MOCKUP CAMERA VIEW FOR EVERY CAMERA IN PRESENCE OF OWNER AND ENGINEER PRIOR TO PERMANENTLY LOCATING AND INSTALLING CAMERAS AND CAMERA POLES.
3. REFER TO SHEET TY7-01 FOR POWER AND COMMUNICATION DETAILS OF EACH GATE.

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HOMESTEAD GENERAL AVIATION AIRPORT
 SECURITY FENCING
 PROJECT NO. 1636-06

REVISIONS	REVIEW COMMENTS
08/10/2021	

DRAWING TITLE:

ENLARGED PLAN GATES AREA

ISSUE DATE: 04/02/2021

R&B PROJ. NO. 1636-06

SCALE: 1:50

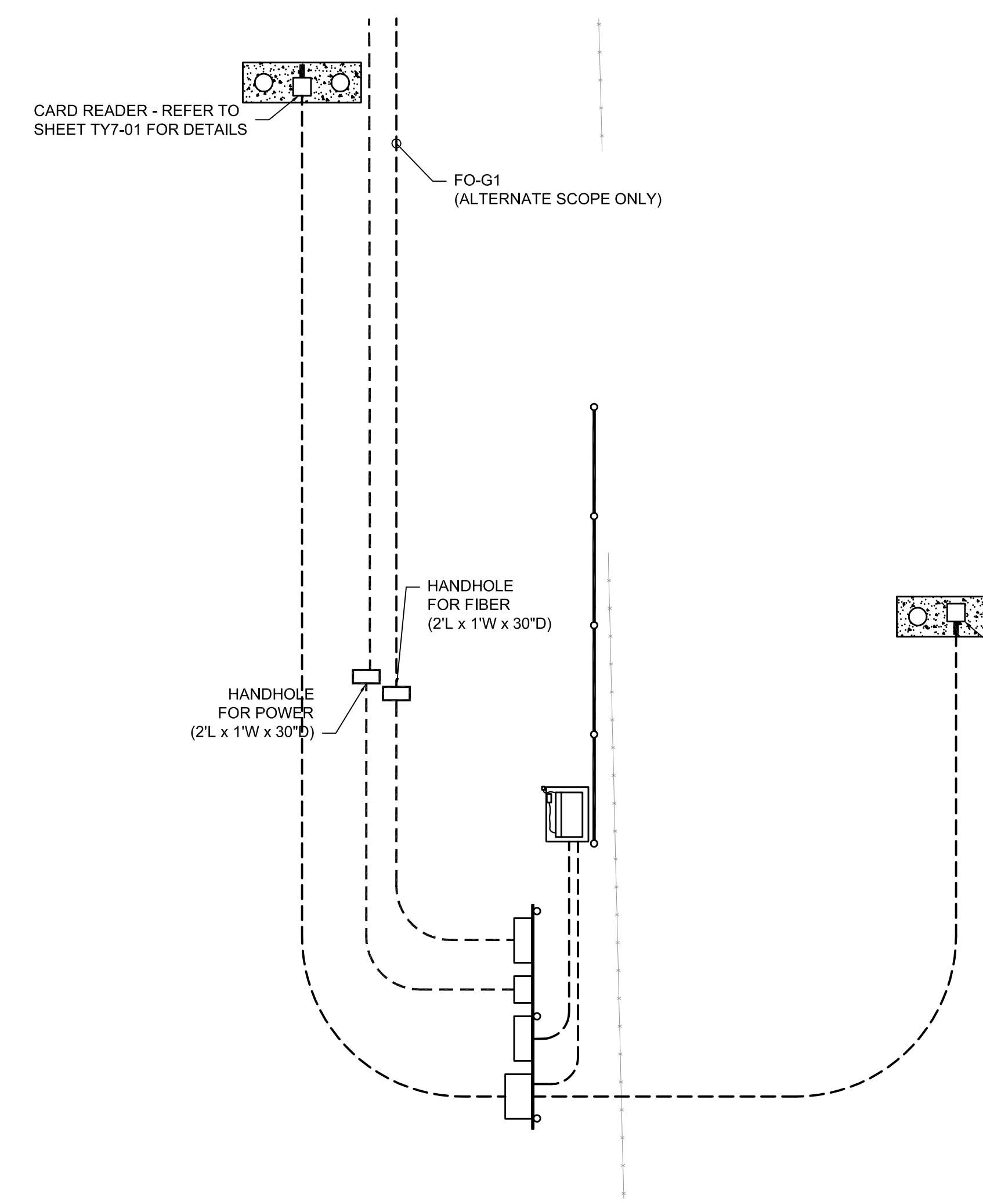
DRAWN BY: J.DIAZ

CHECKED BY: R.SAYEGH

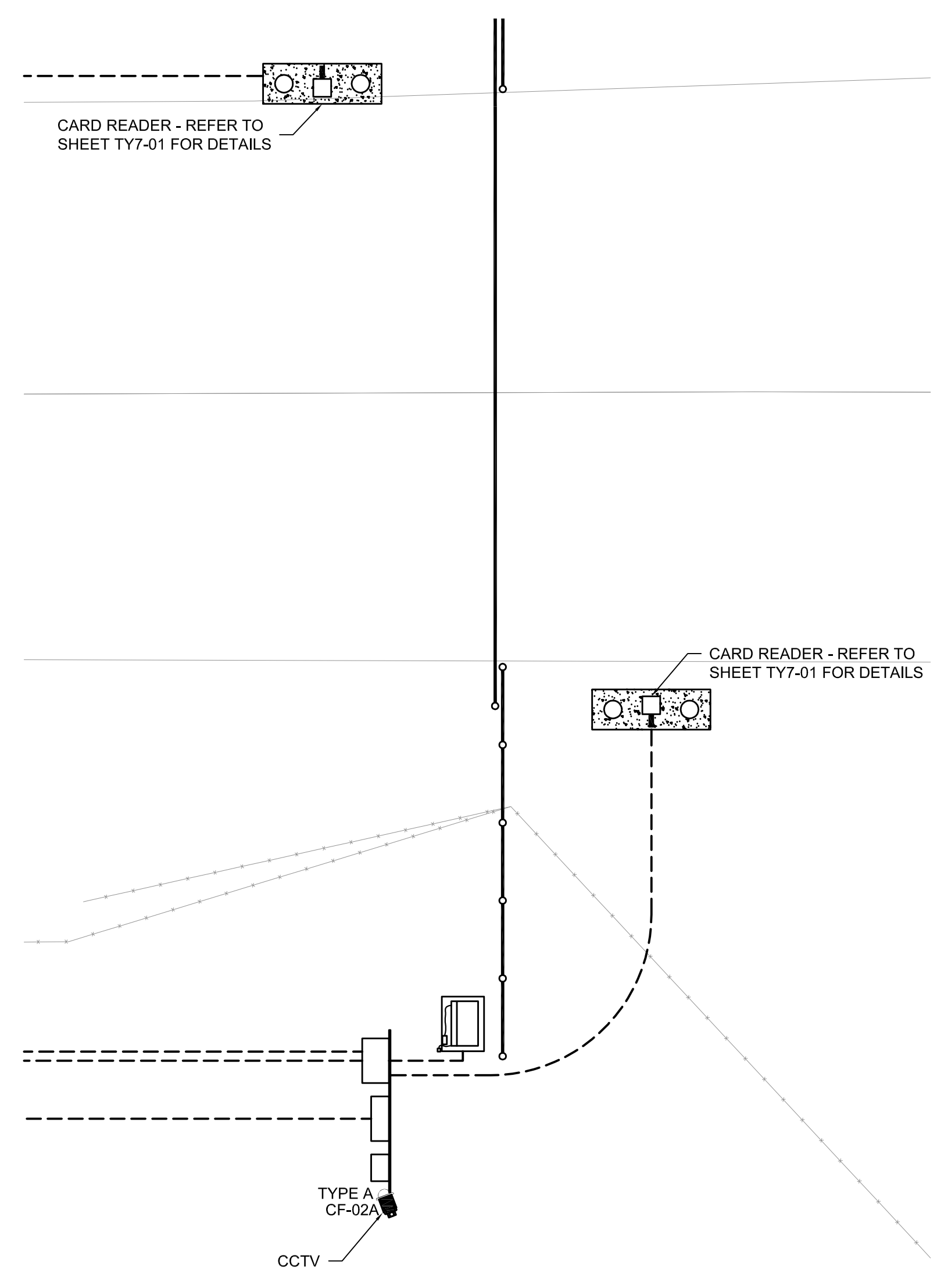
SHEET NO.:

TY4-01

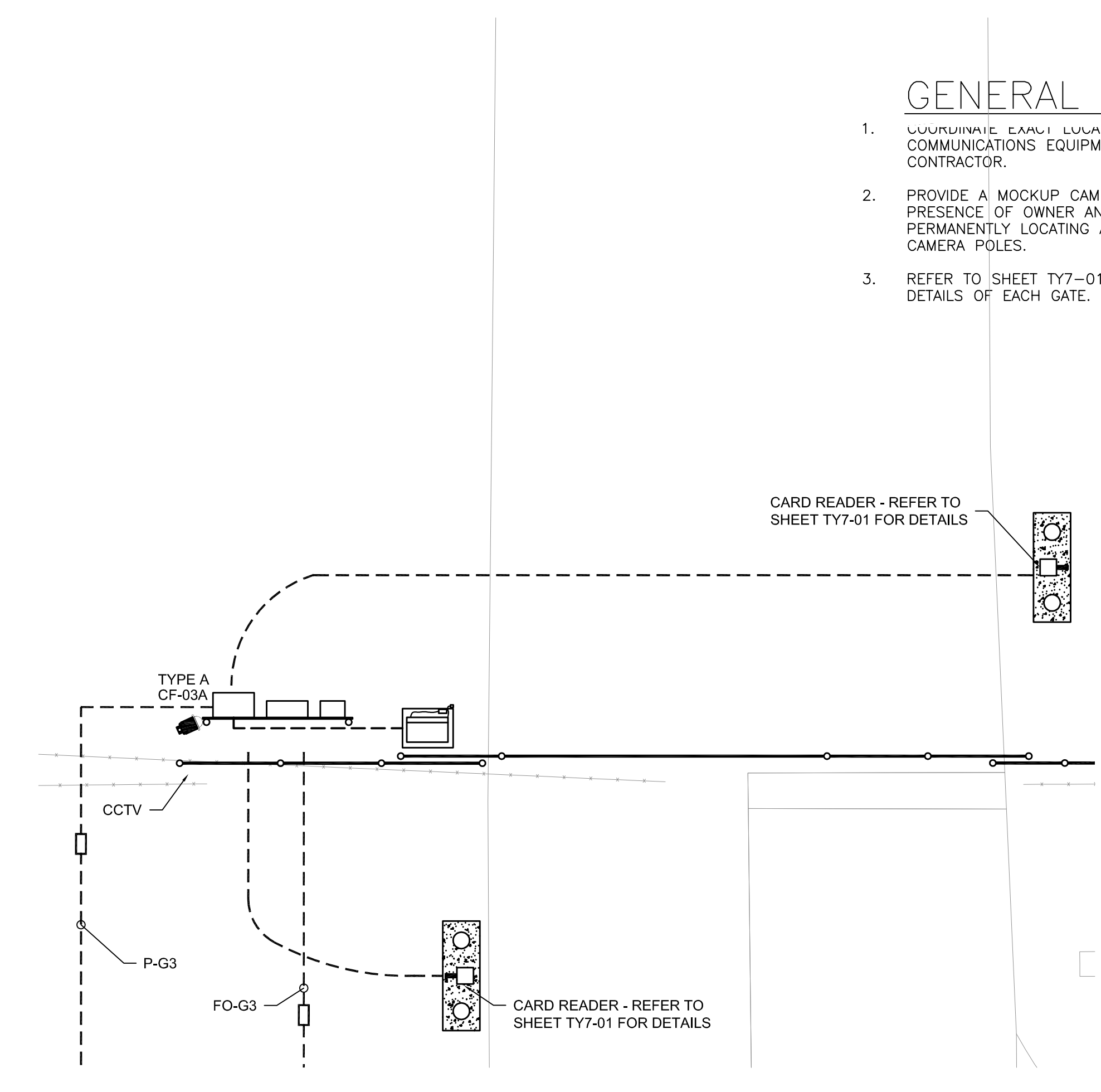
LEVEL:



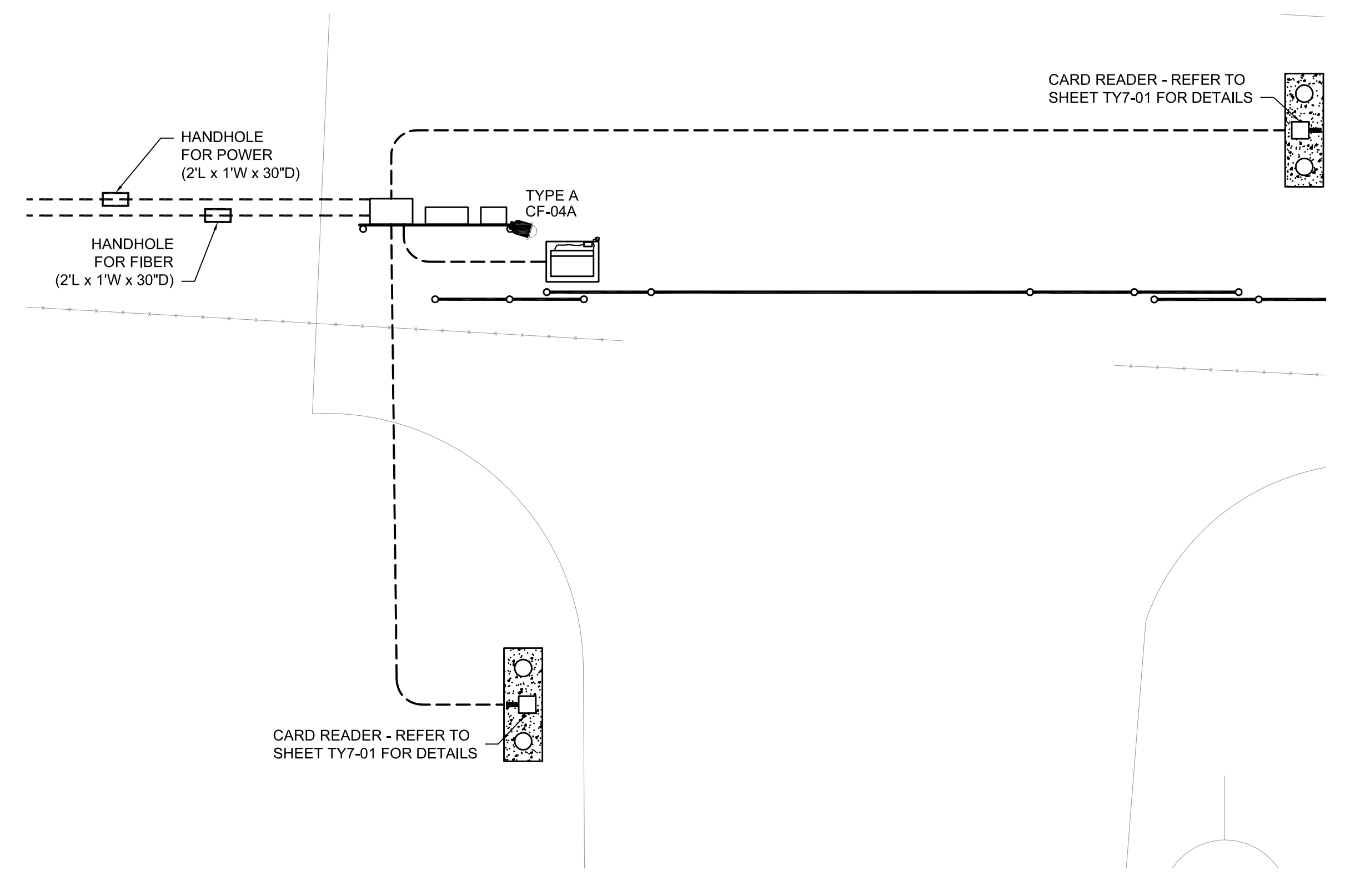
1 ENLARGED PLAN GATE G1 AREA
 SCALE: 1:50



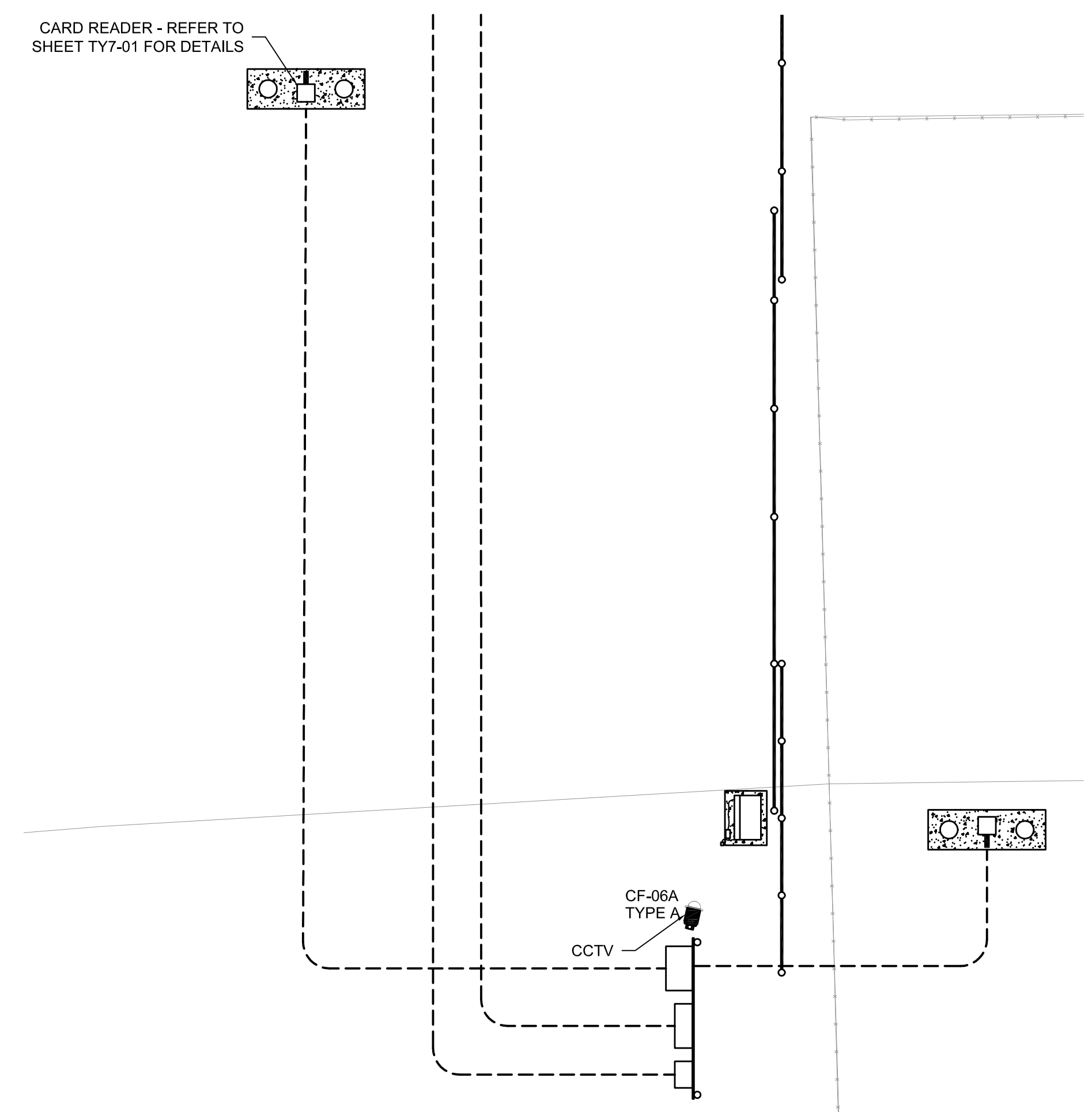
2 ENLARGED PLAN GATE G2 AREA
 SCALE: 1:50



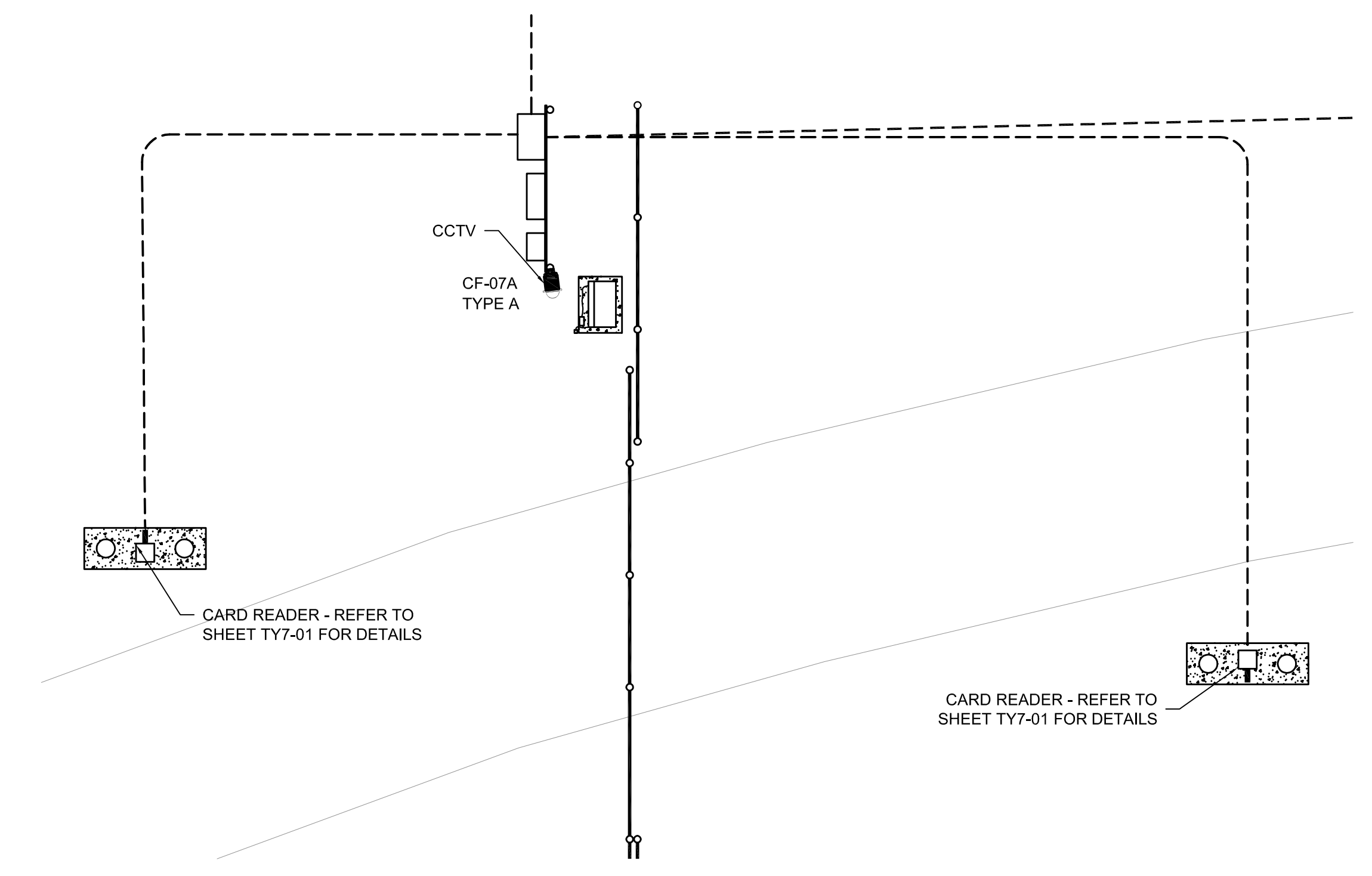
3 ENLARGED PLAN GATE G3 AREA
 SCALE: 1:50



4 ENLARGED PLAN GATE G4 AREA
 SCALE: 1:50

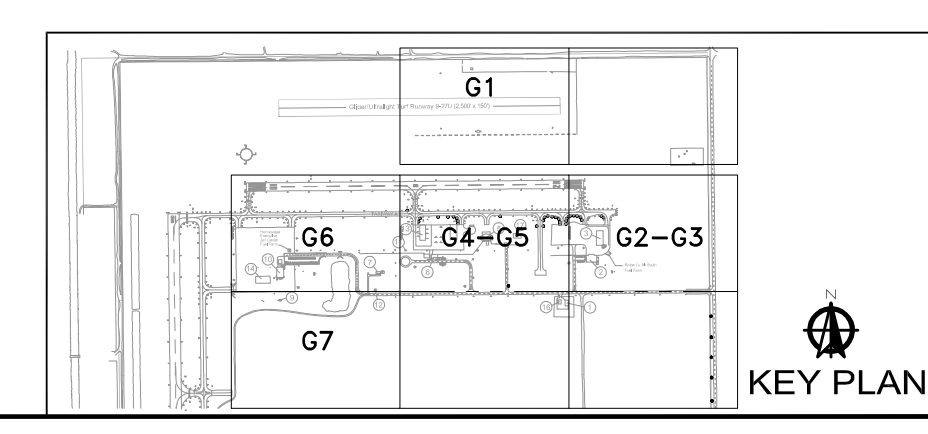


5 ENLARGED PLAN GATE G6 AREA
 SCALE: 1:50



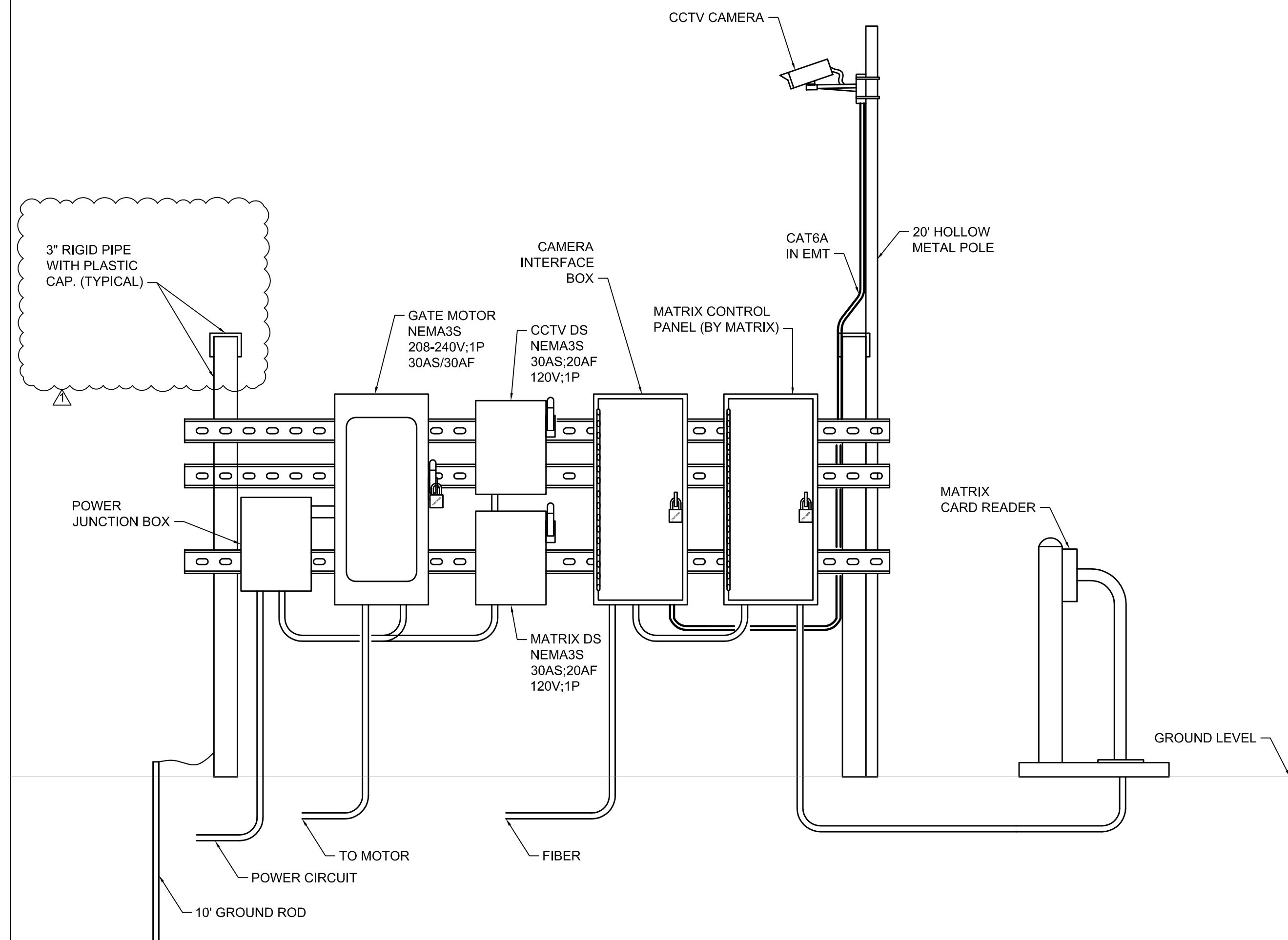
6 ENLARGED PLAN GATE G7 AREA
 SCALE: 1:50

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DETAIL NOTES:

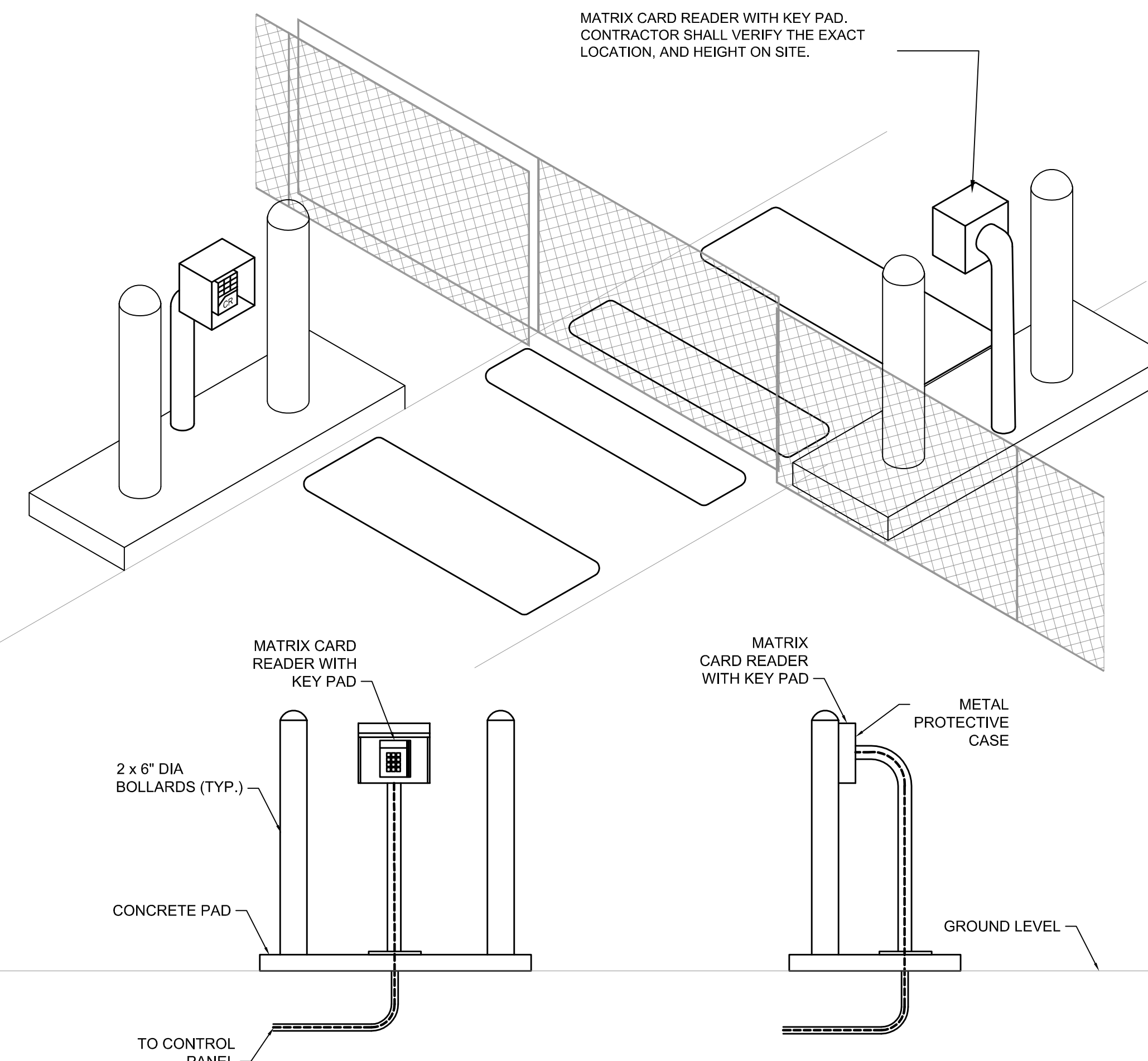
1. ALL GATES WITH THIS DETAIL ARE POWERED FROM BRANCH CIRCUITS IN EXISTING PANELS. REFER TO SITE PLAN FOR LOCATION OF GATES AND REFER TO PANEL SCHEDULES AND CIRCUIT SCHEDULES FOR RATINGS OF CONDUCTORS.



1 TYPICAL GATE POWER, SECURITY, AND CONTROL
SCALE: NTS

GENERAL NOTES:

1. LOCATE POWER AND CONTROLS LINEUP ON SECURE SIDE OF FENCE. COORDINATE EXACT LOCATION WITH CLIENT ON SITE.
2. COORDINATE EXACT ROUTING OF POWER AND CONTROLS TO GATE MOTOR.
3. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SHOWING POLE BASE DETAILS SIGNED AND SEALED BY A FLORIDA LICENSED STRUCTURAL PE.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SHOWING EXACT LINEUP OF POWER AND COMMUNICATION PANELS ON UNISTRUT STRUCTURE FOR APPROVAL.
5. BOND ALL METALLIC EQUIPMENT TO STEEL FRAME AND BOND FRAME TO GROUND ROD.
6. ALL CONDUIT UNDER 10' ELEVATION AFF INCLUDING ELBOW TRANSITIONING TO HORIZONTAL PVC SHALL BE RIGID GALVANIZED STEEL.



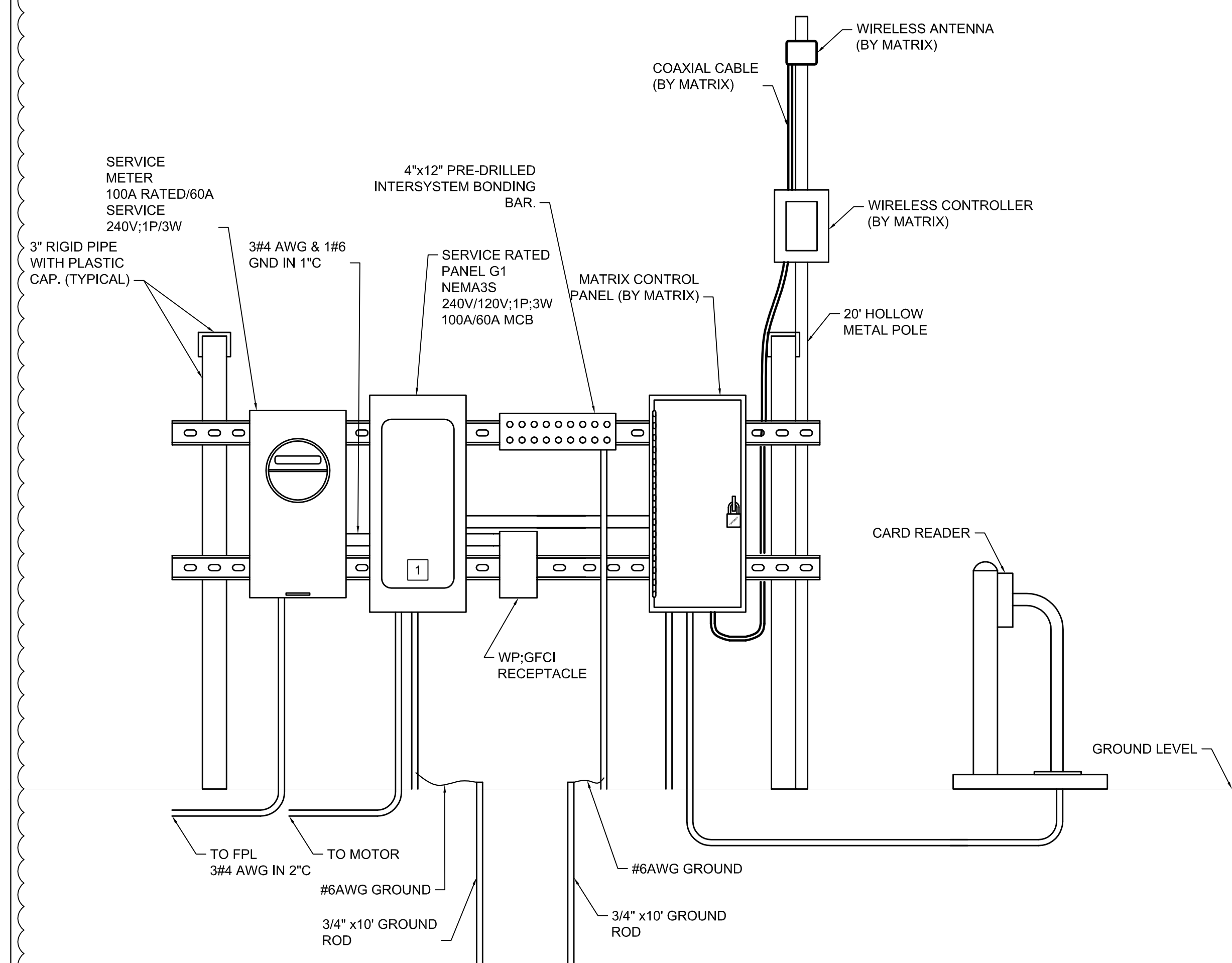
2 MATRIX CARD READER PEDESTAL
SCALE: NTS

SCOPE NOTES:

1. THIS DETAIL APPLIES ONLY TO GATE G1. REFER TO SITE PLAN FOR GATE LOCATION AND REFER TO PANEL SCHEDULES FOR SCHEDULE OF PANEL G1 AND BRANCH CIRCUIT CONDUCTOR RATINGS.
2. BASE SCOPE OF GATE G1 INCLUDES PROVIDING WIRELESS COMMUNICATIONS FOR THE MATRIX ACCESS CONTROL AND PROVIDING NO SURVEILLANCE CAMERA AND NO FIBER CONNECTION.

KEY NOTES:

1. BOND NEUTRAL TO GROUND AT THE SERVICE DISCONNECT SWITCH AND BOND TO GROUND ROD. REFER TO PANEL SCHEDULE FOR RATINGS OF BRANCH CIRCUIT CONDUCTORS.



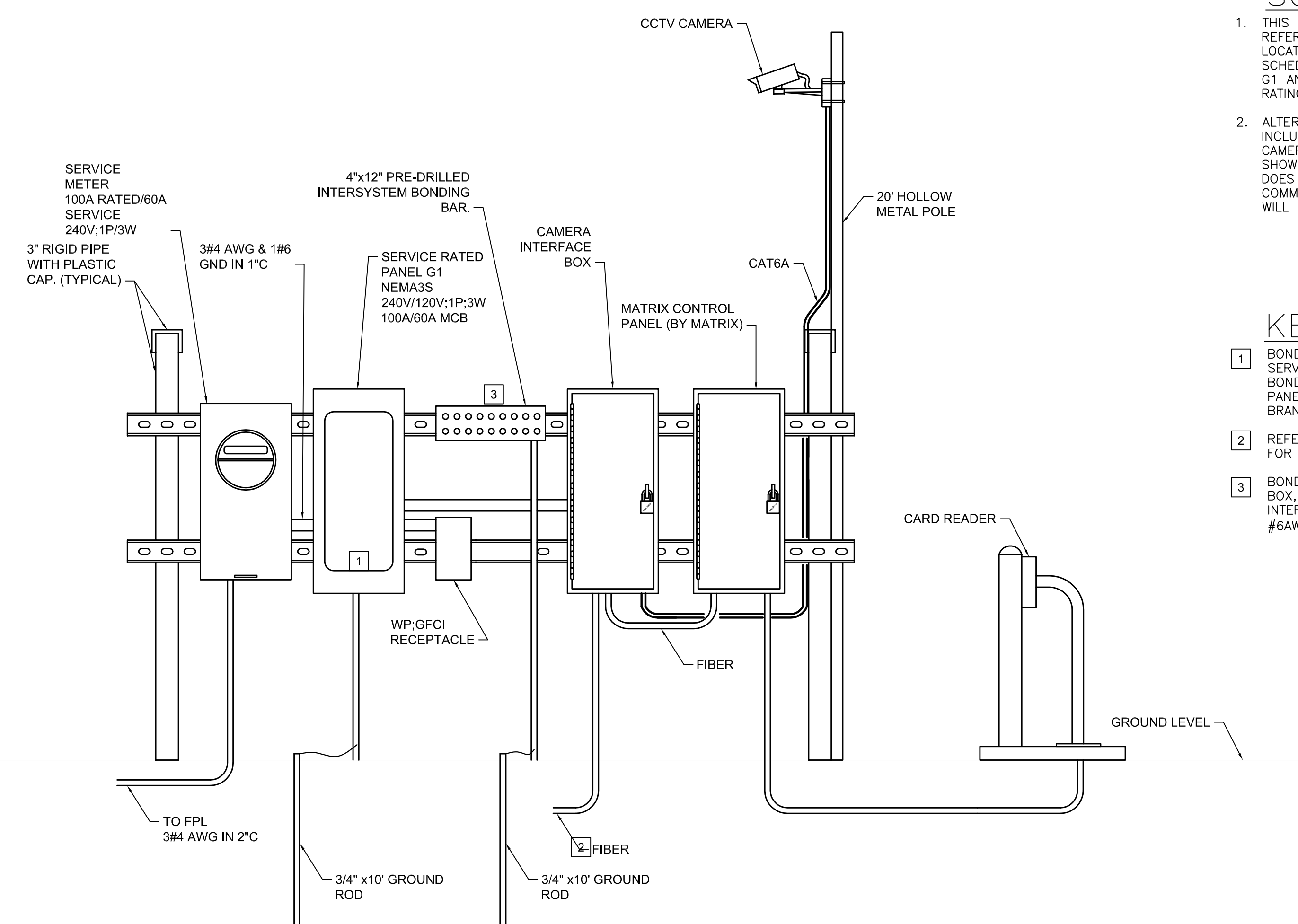
3 GATE G1 POWER, SECURITY AND CONTROL-BASE SCOPE
SCALE: NTS

SCOPE NOTES:

1. THIS DETAIL APPLIES ONLY TO GATE G1. REFER TO SITE PLAN FOR GATE LOCATION AND REFER TO PANEL SCHEDULES FOR SCHEDULE OF PANEL G1 AND BRANCH CIRCUIT CONDUCTOR RATINGS.
2. ALTERNATE SCOPE OF GATE G1 INCLUDES PROVIDING A SURVEILLANCE CAMERA AND A FIBER CONNECTION AS SHOWN ON SITE PLAN. THIS SCOPE DOES NOT INCLUDE WIRELESS COMMUNICATIONS. THE MATRIX SYSTEM WILL COMMUNICATE THROUGH THE FIBER.

KEY NOTES:

1. BOND NEUTRAL TO GROUND AT THE SERVICE DISCONNECT SWITCH AND BOND TO GROUND ROD. REFER TO PANEL SCHEDULE FOR RATINGS OF BRANCH CIRCUIT CONDUCTORS.
2. REFER TO SITE PLAN AND CIB DETAIL FOR EXACT FIBER CABLE AND CONDUIT.
3. BOND PANEL G1, CAMERA INTERFACE BOX, AND MATRIX CONTROL PANEL TO INTERSYSTEM BONDING BAR WITH #6AWG GROUND CONDUCTOR.



4 GATE G1 POWER, SECURITY, AND CONTROL-ALTERNATE SCOPE
SCALE: NTS

ALTERNATE SCOPE FOR GATE G1. REFER TO DESCRIPTION ON SHEET TY1-00

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HOMESTEAD GENERAL AVIATION AIRPORT
SECURITY FENCING
PROJECT NO. 1636-06

REVISIONS	DATE	DESCRIPTION

DRAWING TITLE:

POWER, CONTROL, AND SECURITY GATE DETAILS

ISSUE DATE: 04/02/2021

R&B PROJ. NO. 1636-06

SCALE: NTS

DRAWN BY: J.DIAZ

CHECKED BY: R.SAYEGH

SHEET NO.:

TY7-01

LEVEL:

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PANEL E		225 AMPS (MCB) (MLO)	
LOCATION MAIN ADMINISTRATION BUILDING		120/240 VOLTS 1 Ø W	
MOUNTING_WALL			
DESCRIPTION	VOLT AMPS	BRKR. SIZE NO. OF POLES	POLE NO. PHASE
LGTS REAR OFFICE / STORAGE		20 1 1 A	2 1 20
LGTS BTH RMS, MECH RM & CORR.		20 1 3 B	4 1 20
LGTS LOBBY & PORCH		20 1 5 A	6 1 20
RECEPTS TELEPHONE B / BOARD		20 1 7 B	8 1 20
RECEPTS TELEPHONE B / BOARD		20 1 9 A	10 1 20
RECEPTS TREAR OFF (COMP)		20 1 11 B	12 1 20
RECEPTS TREAR OFF		20 1 13 A	14 1 20
GATE 4	1320	20 2 15 B	16 2 20
SPARE	1320	20 2 17 B	18 2 20
SPARE		20 1 19 B	20 1 20
A/C COMPRESSOR (outside)		50 1 21 A	22 1 20
AIR FIELD LIGHTING COMP UPS		20 1 23 B	24 1 20
GATE 5	1320	20 2 25 A	26 2 20
SPARE	1320	20 2 27 B	28 2 20
LGTS / RECEPT. SHED		20 1 29 A	30 1 20
TOTAL VOLT AMPS	-A =		-B =

PANEL A		225 AMPS (MCB) (MLO)	
LOCATION MAINTENANCE BUILDING		120/240 VOLTS 1 Ø W	
MOUNTING_WALL			
DESCRIPTION	VOLT AMPS	BRKR. SIZE NO. OF POLES	POLE NO. PHASE
EXISTING		70 1 1 A	2 1 100
EXISTING		70 1 3 B	4 1 30
EXISTING		5 1 5 A	6 1 30
EXISTING		30 1 7 B	8 1 30
EXISTING		20 1 9 A	10 1 30
EXISTING		20 1 11 B	12 1 30
EXISTING		20 1 13 A	14 1 30
EXISTING		20 1 15 B	16 1 30
EXISTING		20 1 17 A	18 1 30
EXISTING		20 1 19 B	20 1 30
EXISTING		20 1 21 A	22 1 20
EXISTING		20 1 23 B	24 1 20
EXISTING		20 1 25 A	26 2 20
EXISTING		20 1 27 B	28 2 20
EXISTING		20 1 29 A	30 1 20
GATE 2	1320	20 2 27 B	28 2 20
SPARE	1320	20 2 29 A	30 1 20
TOTAL VOLT AMPS	-A =		-B =

PANEL X		100 AMPS (MCB) (MLO)	
LOCATION PUMP HOUSE EXTERIOR		120/240 VOLTS 1 Ø W	
MOUNTING_POLE			
DESCRIPTION	VOLT AMPS	BRKR. SIZE NO. OF POLES	POLE NO. PHASE
SPARE		15 1 1 A	2 1 20
SPARE		15 1 3 B	4 1 15
SPARE		15 1 5 A	6 1 15
GATE 6	1320	20 2 7 B	8 2 20
SPARE	1320	20 2 9 A	10 2 20
SPARE		11 1 B	12 1 20
TOTAL VOLT AMPS	-A =		-B =

1 ELECTRICAL PANEL SCHEDULES

SCALE: NTS

PANEL G1 (BASE SCOPE)		60A MCB AMPS (MCB) (MLO)	
LOCATION GATE G1 UNISTRUT		120/240 VOLTS 1 Ø 3 W	
MOUNTING_UNISTRUT			
DESCRIPTION	VOLT AMPS	BRKR. SIZE NO. OF POLES	POLE NO. PHASE
GATE MOTOR	720	20 1 1 A	2 1 20
GATE MOTOR	720	20 3 3 B	4 1 20
SPARE		20 1 5 A	6 1 20
SPACE		20 1 7 B	8 1 20
SPACE		20 9 9 A	10 1 20
SPACE		20 11 11 B	12 1 20
TOTAL VOLT AMPS	-A = 1440		-B = 780

PANEL G1 (ALTERNATE SCOPE)		60A MCB AMPS (MCB) (MLO)	
LOCATION GATE G1 UNISTRUT		120/240 VOLTS 1 Ø 3 W	
MOUNTING_UNISTRUT			
DESCRIPTION	VOLT AMPS	BRKR. SIZE NO. OF POLES	POLE NO. PHASE
GATE MOTOR	720	20 1 1 A	2 1 20
GATE MOTOR	720	20 3 3 B	4 1 20
SPARE		20 1 5 A	6 1 20
SPACE		20 1 7 B	8 1 20
SPACE		20 9 9 A	10 1 20
SPACE		20 11 11 B	12 1 20
TOTAL VOLT AMPS	-A = 1440		-B = 1380

TYPICAL GATE LOAD CALCULATION				
LOAD	RATING	VOLTAGE	AMPERAGE	POWER (VA)
GATE MOTOR	1-1/2HP	240V	6A	1440
CAMERA INTERFACE BOX		120V	5A	600
MATRIX BOX		120V	5A	600
TOTAL GATE LOAD		240V	11A	2640

2 TYPICAL GATE LOAD

SCALE: NTS

POWER CIRCUIT SCHEDULE					
GATES	CABLE TYPE	CONDUIT	APP. CKT LENGTH (FT)	VOLTAGE DROP	
PO-G1 (FROM SERVICE DISCONNECT TO EQUIPMENT DISCONNECT)	3#12 AWG & 1#12GND	3/4"	10	0.23%	
PO-G2	3#1 AWG & 1#1GND	2"	1345	2.97%	
PO-G3	3#6 AWG & 1#6GND	2"	475	2.95%	
PO-G4	3#4 AWG & 1#4GND	2"	600	2.30%	
PO-G5	3#12 AWG & 1#12GND	2"	50	1.16%	
PO-G6	3#2 AWG & 1#2GND	2"	1175	2.86%	
PO-G7	3#6 AWG & 1#6GND	2"	400	2.36%	

3 POWER FEEDER & BRANCH CIRCUIT SCHEDULE

SCALE: NTS

FIBER OPTIC CABLE SCHEDULE		
GATES	CABLE TYPE	QUANTITY
FO-G1	SINGLE MODE	24 STRANDS
FO-G2	SINGLE MODE	24 STRANDS
FO-G3	SINGLE MODE	24 STRANDS
FO-G5	SINGLE MODE	24 STRANDS
FO-G6	SINGLE MODE	24 STRANDS
FO-G7	SINGLE MODE	24 STRANDS

4 FIBER CABLE SCHEDULE

SCALE: NTS

CAMERA SCHEDULE				
CAMERA #	MARK	RESOLUTION	TYPE	MODEL
CF-01A	A	1080P	PTZ	AXIS Q6075-E
CF-01C	B	4K	PTZ	AXIS Q6125-E
CF-02A	A	1080P	PTZ	AXIS Q6075-E
CF-03A	A	1080P	PTZ	AXIS Q6075-E
CF-04A	A	1080P	PTZ	AXIS Q6075-E
CF-05A	A	1080P	PTZ	AXIS Q6075-E
CF-06A	A	1080P	PTZ	AXIS Q6075-E
CF-07A	A	1080P	PTZ	AXIS Q6075-E

5 CAMERA SCHEDULE

SCALE: NTS

GENERAL NOTES:

- CONTRACTOR SHALL METER EACH PANEL FOR 30 DAYS AND PROVIDE RESULTS TO ENGINEER PRIOR TO COMMENCING WORK.
- PANEL SCHEDULES WERE DEVELOPED BASED ON PICTURES OF PANELS ON SITE. CONTRACTOR TO VERIFY EXACT PANEL SCHEDULES ON SITE.
- BRANCH CIRCUIT FOR EACH GATE IS BASED ON 240V 1-1/2HP MOTOR. IF FINAL MOTOR SELECTION IS DIFFERENT, CONTRACTOR SHALL NOTIFY ENGINEER TO REVISE CIRCUIT.

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REVISIONS

08/10/2021

DRAWING TITLE:

ELECTRICAL PANEL SCHEDULES

ISSUE DATE: 04/02/2021

R&B PROJ. NO. 1636-06

SCALE: NTS

DRAWN BY: J.DIAZ

CHECKED BY: R.SAYEGH

SHEET NO.:

TY8-01

LEVEL:

AXIS Q6155-E PTZ Network Camera

High-speed PTZ with instant laser focus

The compact, outdoor-ready AXIS Q6155-E features a built-in laser that provides instant focus even in challenging lighting conditions. It also delivers top performance HDTV 1080p video, with 30x optical zoom. Axis Sharpdome and Lightfinder technologies provide full scene fidelity and perfect image quality in all directions, even in low-light conditions, while Axis Zipstream technology significantly reduces bandwidth and storage requirements. The quick and precise pan makes it easy to change viewing position and follow fast moving objects. The speed dry function easily removes water drips from the dome glass, providing clear images in rainy weather.

- > [Laser focus](#)
- > [Sharpdome technology with Speed Dry](#)
- > [Lightfinder technology](#)
- > [Zipstream technology](#)
- > [HDTV 1080p and 30x optical zoom](#)

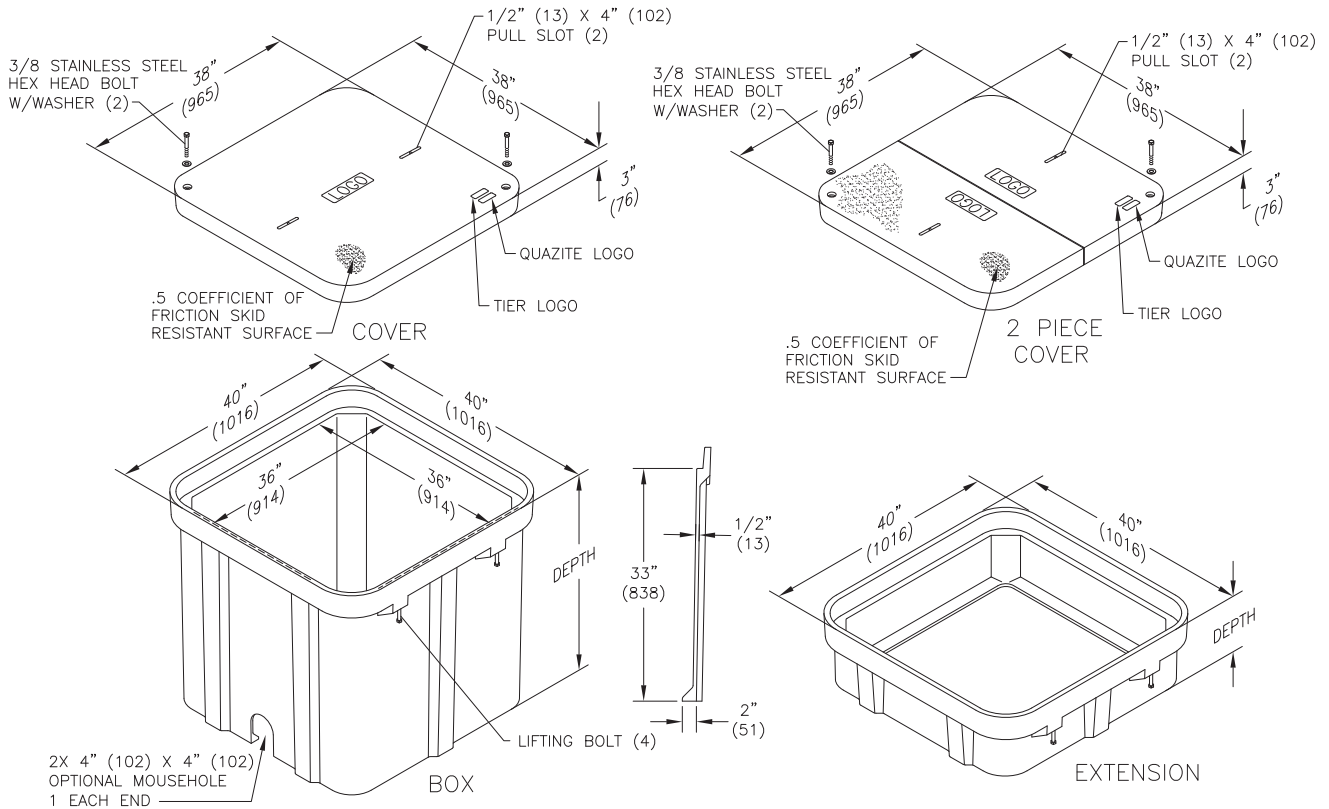


AXIS Q6155-E PTZ Network Camera

Models	AXIS Q6155-E 50 Hz AXIS Q6155-E 60 Hz	IP address removed, network lost, new IP address, shock detected, storage failure, system ready, within operating temperature Edge storage: recording ongoing, storage disruption I/O: digital input, manual trigger, virtual input PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready Scheduled and recurring: scheduled event Video: live stream open
Camera		
Image sensor	1/2.8" Progressive scan CMOS	
Lens	4.3–129 mm, F1.6–4.7 Horizontal field of view: 66.7°–2.36° Vertical field of view: 39.5°–1.37° Laser focus, auto-iris	
Day and night	Automatically removable infrared-cut filter	
Minimum illumination	Color: 0.15 lux at 30 IRE, F1.6 B/W: 0.01 lux at 30 IRE, F1.6 Color: 0.2 lux at 50 IRE, F1.6 B/W: 0.02 lux at 50 IRE, F1.6	
Shutter time	1/60000 s to 2 s	
Pan/Tilt/Zoom	Pan: 360° endless, 0.05°–700°/s Tilt: +20 to -90°, 0.05°–500°/s Zoom: 30x optical, 12x digital, total 360x zoom Nadir flip, 256 preset positions, tour recording, guard tour, control queue, on-screen directional indicator, set new pan 0°, adjustable zoom speed, speed dry	
Video		
Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles Motion JPEG	
Resolution	1920x1080p (HDTV 1080p) to 320x180	
Frame rate	Up to 25/30 fps (50/60 Hz) in 1080p Up to 50/60 fps (50/60 Hz) in 720p	
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Axis Zipstream technology in H.264 Controllable frame rate and bandwidth VBR/MBR H.264	
Image settings	Compression, color, brightness, sharpness, white balance, exposure control, exposure zones, rotation, fine tuning of behavior at low light, electronic image stabilization (EIS), manual shutter time, text and image overlay, image freeze on PTZ Contrast, local contrast, automatic backlight compensation, autofocus, WDR - forensic capture: 120 dB 32 individual 3D privacy masks	
Network		
Security	Password protection, IP address filtering, HTTPS ^a encryption, IEEE 802.1x (EAP-TLS) ^a network access control, Digest authentication, User access log, Centralized Certificate Management, Brute force delay protection, signed firmware	
Supported protocols	IPv4, IPv6 USGv6, HTTP, HTTPS ^a , SSL/TLS ^a , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP TM , SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SRTP, SFTP, TCP, UDP, IGMP, RTPC, ICMP, DHCP, ARP, SOCKS, SSH, NTCIP	
System integration		
Application Programming Interface	Open API for software integration, including VAPIX [®] and AXIS Camera Application Platform; specifications at axis.com AXIS Video Hosting System (AVHS) with One-Click Connection ONVIF [®] Profile G and ONVIF [®] Profile S, specifications at onvif.org	
Analytics	Included AXIS Video Motion Detection, AXIS Fence Guard, AXIS Motion Guard Supported Support for AXIS Camera Application Platform enabling installation of third-party applications, see axis.com/acap	
Event triggers	Detectors: live stream accessed, motion detection, shock detection, day/night mode Hardware: network, temperature, fan Input Signal: manual trigger, virtual inputs PTZ: autotracking, error, moving, preset reached, ready Storage: disruption, recording System: system ready Time: recurrence, use schedule	
Event conditions	Analytics, external input, virtual inputs through API Audio: audio detection Device status: above operating temperature, above or below operating temperature, below operating temperature, fan failure,	
Event actions	Record video: SD card and network share Pre- and post-alarm video or image buffering for recording or upload Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email Notification: email, HTTP, HTTPS, TCP, and SNMP trap PTZ: PTZ preset, guard tour Overlay text, day/night mode WDR mode	
Data streaming	Event data	
Built-in installation aids	Focus assistant, pixel counter, remote back focus	
General		
Casing	IK08, IK10 housing and mounting ^b , IP66- and NEMA 4X-rated Repaintable metal casing (aluminum), hard coated Polycarbonate (PC) clear dome with Sharpdome technology	
Sustainability	PVC free	
Memory	512 MB RAM, 256 MB Flash	
Power	Axis High PoE midspan 1-port: 100–240 V AC, max 74 W Camera consumption: typical 11 W, max 51 W Axis PoE+ midspan 1-port: 100–240 V AC, max 37 W IEEE 802.3at Type 2 Class 4 Camera consumption: typical 11 W, max 25 W	
Connectors	RJ45 10BASE-T/100BASE-TX RJ45 Push-pull Connector (IP66)	
Storage	Support for SD/SDHC/SDXC card Support for SD card encryption Support for recording to network-attached storage (NAS) For SD card and NAS recommendations see axis.com	
Operating conditions	With 30 W midspan: -20 °C to 50 °C (-4 °F to 122 °F) With 60 W midspan: -55 °C to 50 °C (-67 °F to 122 °F) Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F) Arctic Temperature Control: Start-up as low as -40 °C (-40 °F) Humidity 10–100% RH (condensing)	
Storage conditions	-40 °C to 70 °C (-40 °F to 158 °F) Humidity 5–95% RH (non-condensing)	
Approvals	EMC EN 55022 Class A, EN 55024, EN 50121-4, IEC 62236-4, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR22 Class A KCC KN32 Class A, KN35 Safety IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, Laser Safety Regulations IEC/EN 60825-1 Class I Ed. 3 (2014), IS 13252 Environment IEC/EN 62262 IK08, IEC/EN 60529 IP66, NEMA 250, Type 4X, NEMA TS 2 (2.2.7–2.2.9), IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-30, IEC 60068-2-78, ISO4892-2 Midspan: EN 60950-1, GS, UL, cUL, CE, FCC, VCCI, CB, KCC, UL-AR Network NIST SP500-267	
Dimensions	With mounting hook: 274 x 165 x 165 mm (10 13/16 x 6 1/2 x 6 1/2 in) Without mounting hook: 256 x 165 x 165 mm (10 1/16 x 6 1/2 x 6 1/2 in)	
Weight	2.9 kg (6.4 lb)	
Included accessories	IP66-rated RJ45 connector kit, Axis High PoE SFP Midspan, Installation guide, Windows decoder 1-user license	

Optional accessories	AXIS T91/T94 Mounting Accessories, Axis High PoE midspans For more accessories, see axis.com	a. <i>This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).</i> b. <i>Mounting not included</i>
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development Partners available on www.axis.com/vms	Environmental responsibility: axis.com/environmental-responsibility
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese	
Warranty	Axis 3-year warranty and AXIS Extended Warranty option, see axis.com/warranty	

Hex Head Bolts are Standard



Covers

	DESCRIPTION	TIER	DESIGN / TEST LOAD #	WEIGHT #	PALLET QTY	PART NO.
UL	W/ 2 Bolts	8	8,000 / 12,000	174	10	PG3636CA00**
	2 Piece w/ 2 Bolts	8	8,000 / 12,000	220	10	PG3636CS00**
UL	W/ 2 Bolts	15	15,000 / 22,500	220	10	PG3636HA00**
UL	2 Piece w/ 2 Bolts	15	15,000 / 22,500	220	10	PG3636HS00**
UL	W/ 2 Bolts	22	22,500 / 33,750	330	10	PG3636HH00**
	2 Piece w/ 2 Bolts	22	22,500 / 33,750	202	10	PG3636H517**
UL	No Bolts	8	8,000 / 12,000	174	10	PG3636WA00**

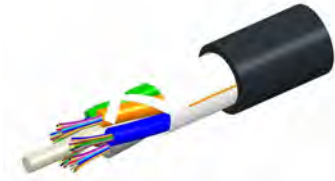
To order gasketed covers, replace the letter "A" with the letter "G".

Replace ** with a logo code found on page 64. See page 70 for meter and touch/radio read cover options.

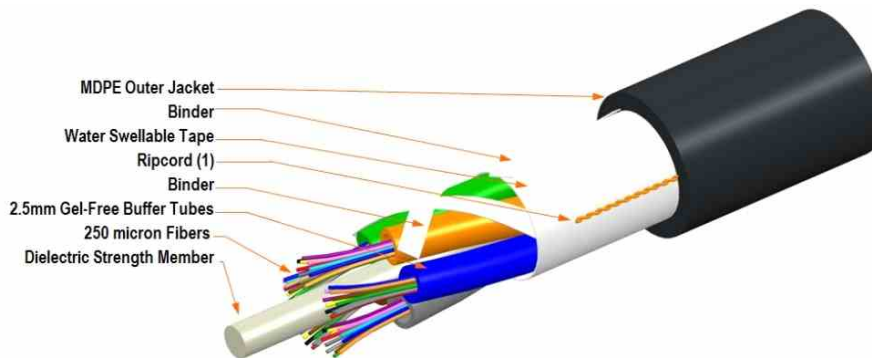
NOTE: Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

760053843 | D-012-LN-8W-F12NS

Single Jacket All-Dielectric, Gel-Free, Outdoor Stranded Loose Tube Cable



Representative Image



General Specifications

Cable Type	Stranded loose tube
Construction Type	Non-armored
Subunit Type	Gel-free

Construction Materials

Fiber Type Solution	TeraSPEED®, zero water peak singlemode fiber (G.652.D, G.657.A1 OS2)
Jacket Material	PE
Total Fiber Count	12
Fiber Type	TeraSPEED®, zero water peak singlemode fiber (G.652.D, G.657.A1 OS2)
Fiber Type, quantity	12
Fibers per Subunit, quantity	12
Jacket Color	Black
Jacket UV Resistance	UV stabilized

Dimensions

Buffer Tube/Subunit Diameter	2.50 mm 0.10 in
Cable Weight	66.0 kg/km 44.0 lb/kft
Diameter Over Jacket	10.20 mm 0.40 in
Filler, quantity	4
Subunit, quantity	1

Physical Specifications

Minimum Bend Radius, loaded	15.3 cm 6.0 in
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760053843 | D012IN-8WF12NS

Minimum Bend Radius, unloaded	10.2 cm		4.0 in
Tensile Load, long term, maximum	180 lbf		800 N
Tensile Load, short term, maximum	2700 N		607 lbf
Vertical Rise, maximum	1247.0 m		4091.2 ft

Environmental Specifications

Environmental Space	Aerial, lashed		Buried
Installation Temperature	-30 °C to +70 °C (-22 °F to +158 °F)		
Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)		
Storage Temperature	-40 °C to +75 °C (-40 °F to +167 °F)		

Mechanical Test Specifications

Compression	125 lb/in		22 N/mm
Compression Test Method	FOTP-41		IEC 60794-1 E3
Flex	35 cycles		
Flex Test Method	FOTP-104		IEC 60794-1 E6
Impact	2.17 ft lb		2.94 N-m
Impact Test Method	FOTP-25		IEC 60794-1 E4
Strain	See long and short term tensile loads		
Strain Test Method	FOTP-33		IEC 60794-1 E1
Twist	10 cycles		
Twist Test Method	FOTP-85		IEC 60794-1 E7
Water Penetration	24 h		
Water Penetration Test Method	FOTP-82		IEC 60794-1 F5

Environmental Test Specifications

Cable Freeze	-2 °C		28 °F
Cable Freeze Test Method	FOTP-98		IEC 60794-1 F15
Heat Age	-40 °C to +85 °C (-40 °F to +185 °F)		
Heat Age Test Method	IEC 60794-1 F9		
Low High Bend	-30 °C to +60 °C (-22 °F to +140 °F)		
Low High Bend Test Method	FOTP-37		IEC 60794-1 E11
Temperature Cycle	-40 °C to +70 °C (-40 °F to +158 °F)		
Temperature Cycle Test Method	FOTP-3		IEC 60794-1 F1

Qualification Specifications

Cable Qualification Standards	ANSI/ICEA S-87-640		EN 187105		Telcordia GR-20
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Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system



760053843 | D0124N8WF12NS

Included Products

CS-8W-LT (Product Component—not orderable) — TeraSPEED® OS2 Singlemode Fiber

* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable