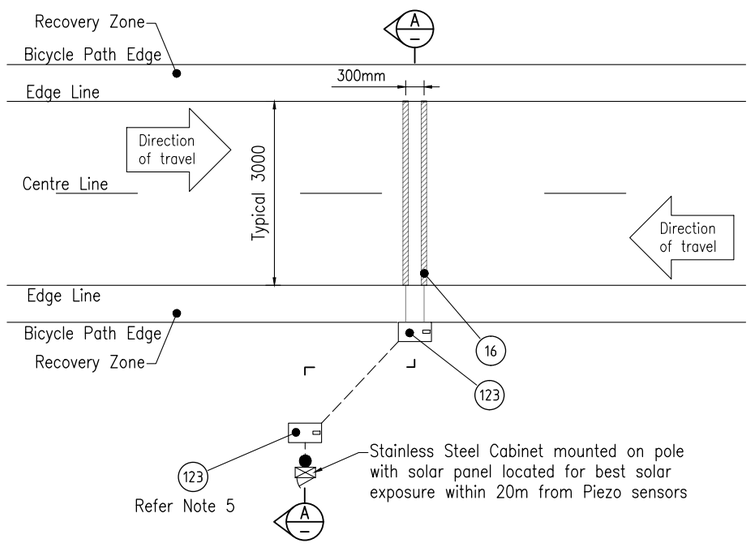


PIEZO–PIEZO CONFIGURATION
BI–DIRECTIONAL BICYCLE PATH

EQUIPMENT LIST

ITEM No.	EQUIPMENT DESCRIPTION	QTY
1	Pole Mount Cabinet SS IP65 Lockable with TMR 190 Key	1
2	Cycle Monitoring Unit with built in 3G/4G/5G modem	1
3	Sensor connector interface	1
4	MPPT Solar charge controller	1
5	12vdc to 6vdc Converter (if required)	0 or 1
6	Sealed lead acid AGM battery 12V 30AH	1
7	Bluetooth Antenna of CMU for laptop connection	1
8	PV Isolator (32A double pole)	1
9	Load Isolator (16A double pole)	1
10	Fuse 20A	2
11	DC Surge Diverter 16A	1
12	RF (Coaxial) Surge Protector with DIN rail clip	1
13	Solar Panel 12V, 80W(min) –175W(max)	1
14	3G/4G/5G Antenna (Low Profile)	1
15	Alternative Antenna to suit site having weak signal coverage	0 or 1
16	Piezo Sensor	1
17	False back mounting panel	1
18	Solar Panel Pole, Bracket and Frame	1
19	Communications Earth Terminal Junction Box	1
123	Type 3 lockable pit and lid – Part no. 123 listed on SD1699	1 or 2
537	Cabinet ID Label – Part no. 537 listed on SD1699.	1

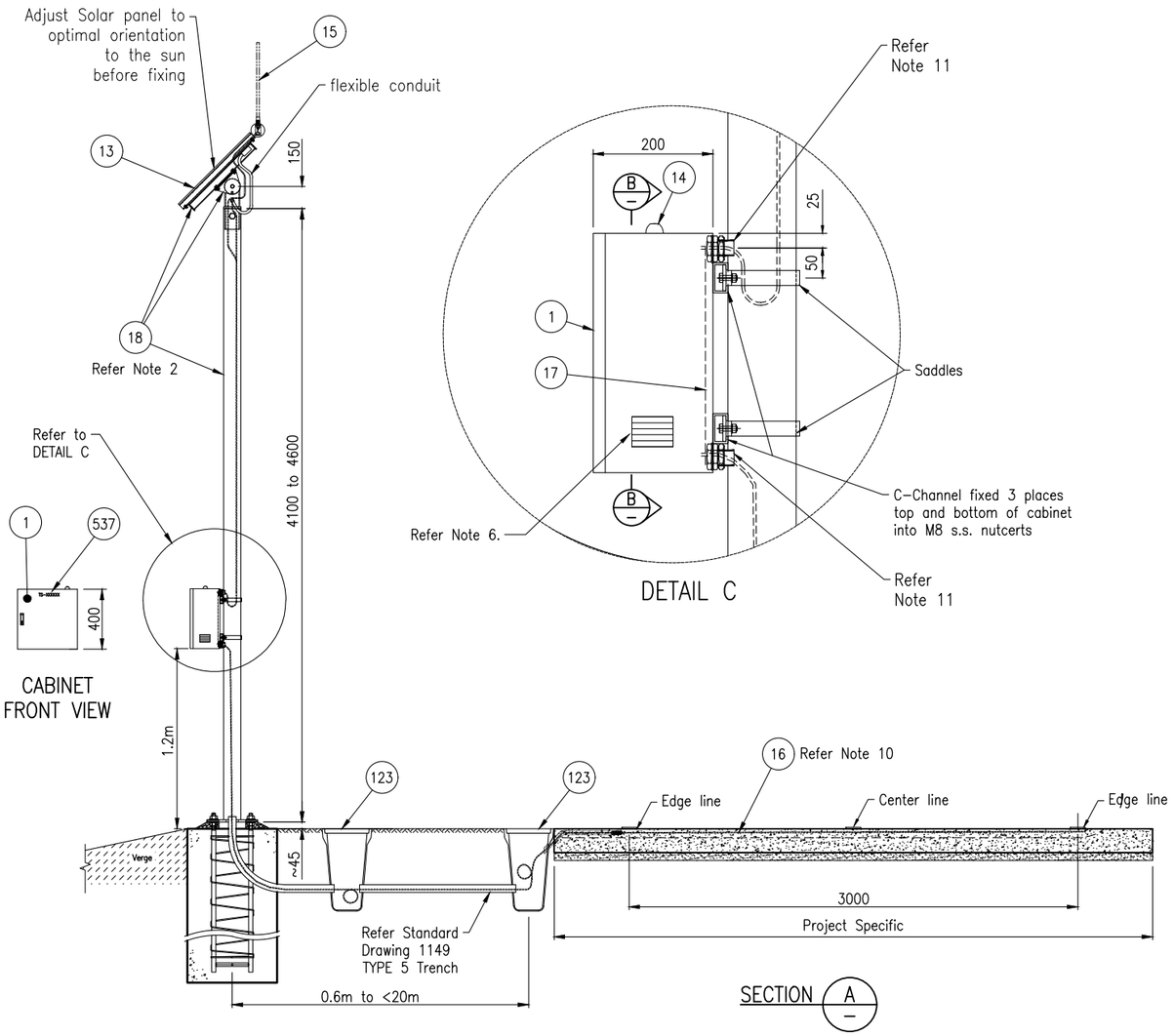
NOTES:

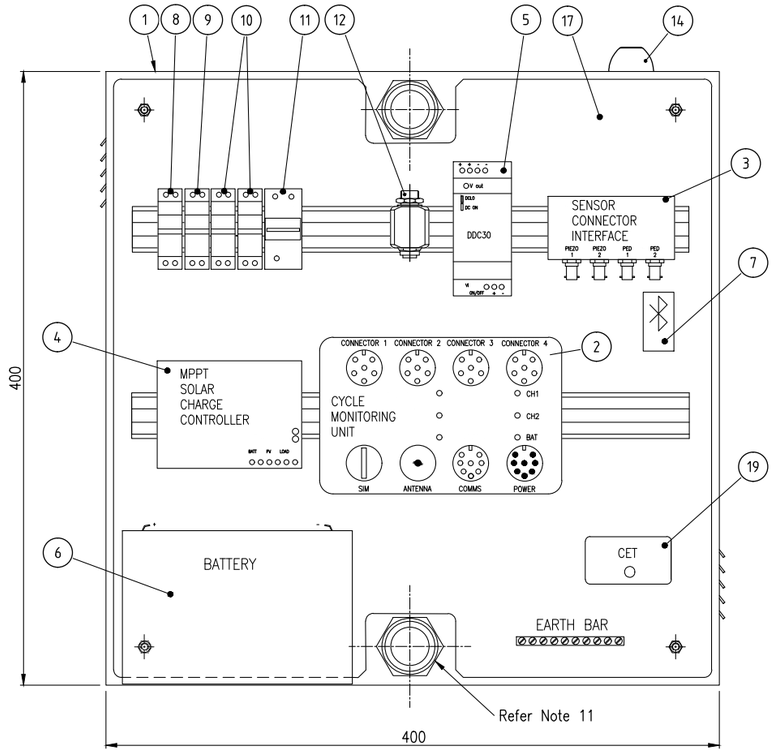
1. This drawing is conceptual arrangement of a typical bicycle counting site. Exact arrangement will vary from project to project.
2. Pole, footing, brackets, and associated steelwork for solar panel installation shall be RPEQ certified by qualified engineers of appropriate disciplines.
3. Contact Engineering and Technology / Structures team for approval of structural components and installations.
4. The maximum design parameters for solar panel installation (height, panel dimensions and weight) shall be as per MRTS97.
5. This Type 3 pit is not needed if the cabinet pole is less than 3m away from the piezo installation.
6. Stainless steel cabinet is to have louvre vents with vermin mesh behind one on the upper side and on the lower opposite side.
7. Stainless steel cabinet to be mounted 1.2m above ground.
8. Antenna to be external to cabinet. If alternative antenna is used in lieu of low profile antenna, then low loss coax cable shall be considered.
9. Refer to manufacturer's manual for wiring instruction. Cabinet internal layout shall be adjusted accordingly.
10. Refer Standard Drawing 1916 for installation of piezo sensors.
11. Cable entry Adaptaflex (or equivalent) M25 swivel fitting & conduit rated at IP66.
12. Dimensions are in millimetres (mm) unless noted otherwise.

ASSOCIATED DEPARTMENTAL DOCUMENTS:
Standard Drawings
Specifications

REFERENCED DOCUMENTS:
Departmental Standard Drawings:
1149 Traffic Signals/Road Lighting/ITS – Installation of Underground Electrical and Communications Conduit
1314 Traffic Signals/Road Lighting – Cable Jointing Pit Drainage Details
1329 Road Lighting – Typical Physical Arrangement
1392 Road Lighting – Base Plate Mounted Pole and Footing Installation Details for Crossfalls Upto and Including 1:2
1440 Traffic Signals/Road Lighting – Cable Jointing Pit Rectangular Concrete Surround
1631 Traffic Signals/Road Lighting – Cable Jointing Pit Types 1(J), 3, 4. 7, & 8
1635 Traffic Signal – Traffic Signal Upper Mounting Assembly and Split Shell Assembly
1699 Traffic Signals/Road Lighting/ITS – Parts List
1916 ITS – Axle–based Vehicle Classifier Sensor Installation Details

Departmental Specifications:
MRTS97 Mounting Structures for Roadside Equipment
MRTS200 General Requirements for Intelligent Transport Systems (ITS) Infrastructure
MRTS201 General Equipment Requirements
MRTS251 Traffic Counter / Classifier
MRTS263 Standalone Solar (PV) Power Systems





Acronyms
MPPT = Maximum Power Point Tracking (Solar Charge Controller)
CMU = Cycle Monitoring Unit
AGM = Absorbent Glass Mat (Battery)
CET = Communications Earth Terminal

LEGEND

SYMBOL	DESCRIPTION
	Stainless Steel Cabinet
	Type 3 Pit (Lockable)
	1x50mm dia Conduit (White)

SECTION B – TYPICAL CABINET LAYOUT

INSTALLATION OF CONDUITS AND PITS IS THE RESPONSIBILITY OF THE LICENSED ELECTRICAL CONTRACTOR

Department of Transport and Main Roads

ITS

BICYCLE COUNTER
SHEET 1 OF 2

Queensland Government

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A3
Not to Scale

Standard Drawing No
1928
Date 7/2022

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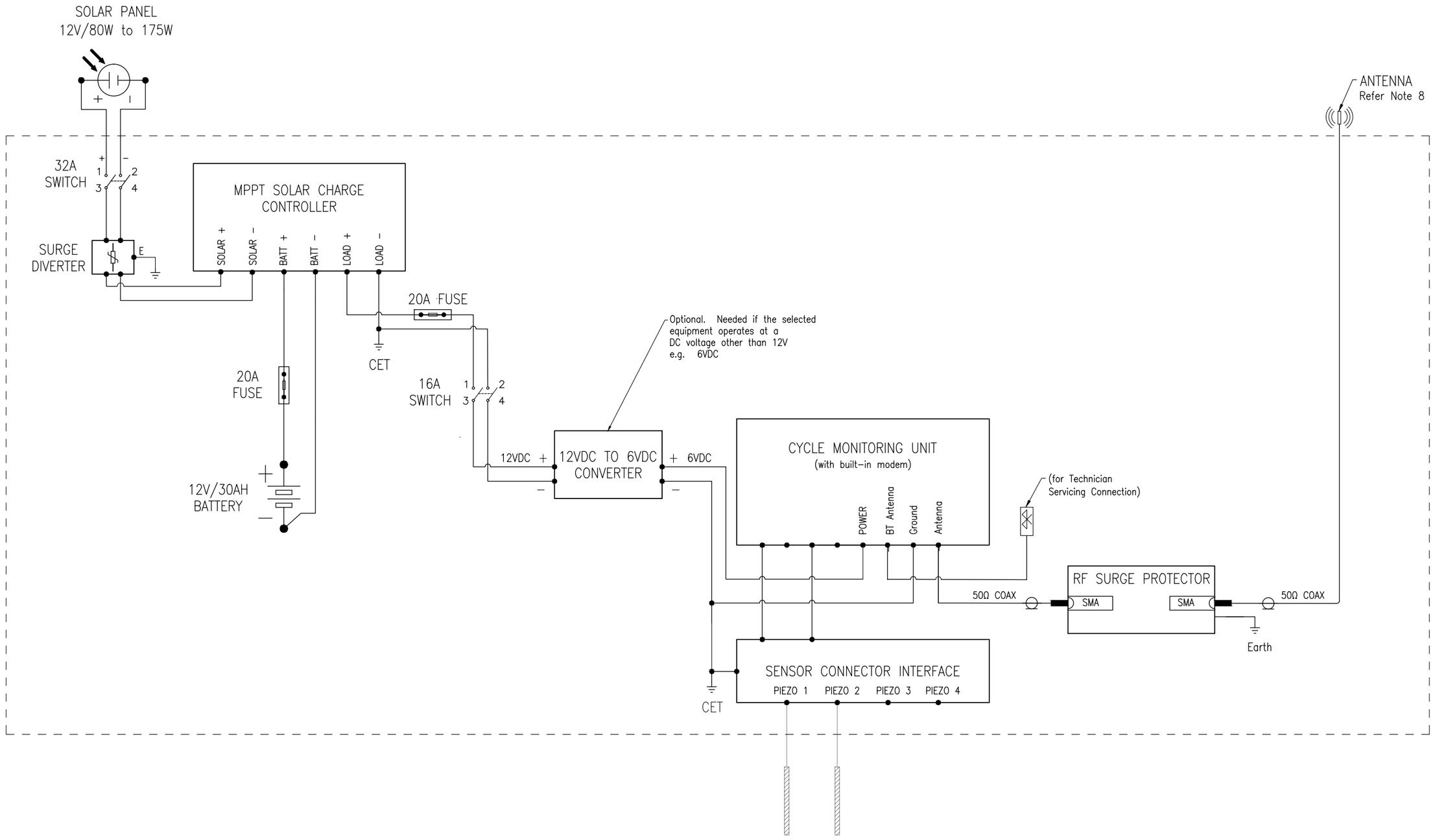

TYPICAL SCHEMATIC DIAGRAM

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ITS	A3	Standard Drawing No 1928
BICYCLE COUNTER SHEET 2 OF 2	Not to Scale	Date 7/2022
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