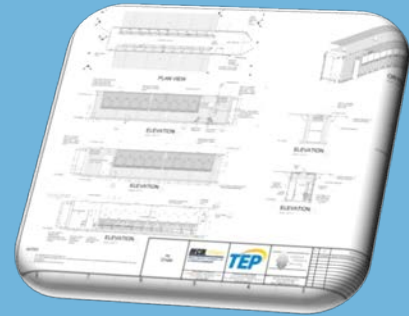
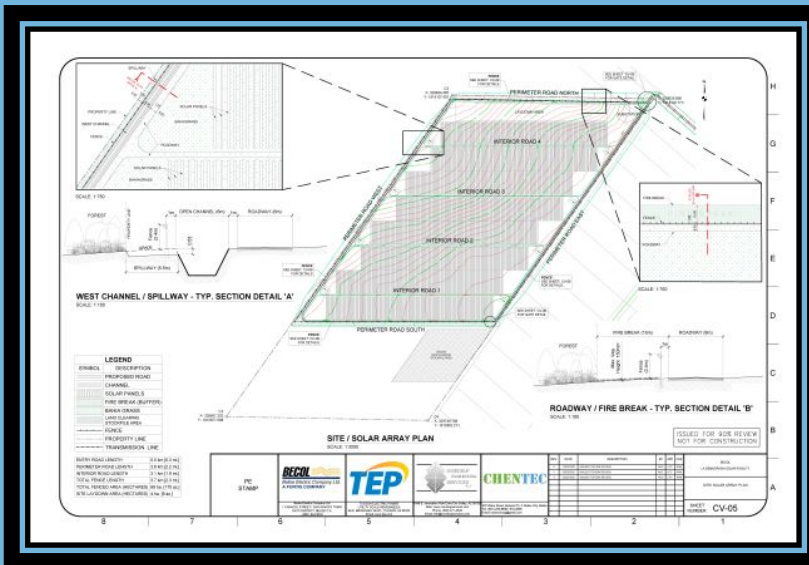


SVERDRUP ENGINEERING SERVICES

PROJECT EXPERIENCE



Democracia 20MWAC SAT Solar Facility

San Ignacio, BZ

Full Civil, Electrical, and Structural system design for 20MWAC Single Axis Tracking Facility near Belmopan in Belize Central America.

Owner: Belize Electric Company Limited

Design: July 2020

Civil design included survey, drainage report, storm water evaluation, road design, site grading and drainage, fencing, and permitting. Structural design included specifying and reviewing geotechnical report, transformer/inverter foundation design, review of rack support/foundation design from rack manufacturer, DC combiner/disconnect support/foundation, and weather station support/foundation design.

Inservice: TBD

Electrical design included 30-year energy production estimate using PVsyst, DC field layout, rack/post layout, modules, string sizing, AC one-line, DC wiring diagrams, cable/conduit schedule, cable/conduit routing, weather station, grounding, and detail sheets. A full material list was provided with manufacturers part numbers to ensure cost control and that contractor purchased and installed quality components that would last 30 years. Calculations include; string sizing, voltage drop, row to row spacing (shading), conduit fill, cable ampacity, cable/conduit pull, grounding, short circuit, protection device coordination, and arc flash calculations. Major system components were SMA Peak3 125KW inverters, Canadian Solar 410-415-watt modules, Single Axis Trackers, SolarBOS combiner boxes, and Eaton DC disconnects. Performed QA/QC over construction, completed commissioning and start up.