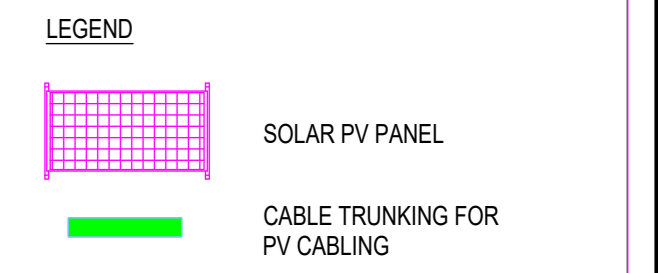


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DESIGNERS RISK ASSESSMENT
REFER TO APPENDIX 1 OF M&E SPECIFICATION FOR DESIGNERS RISK ASSESSMENT SCHEDULE

DRAWING BACKGROUND:
ROOF LEVEL PV ARRAY AND INVERTOR



- PV NOTES:**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, SUPPLY, INSTALLATION & COMMISSIONING FOR THE COMPLETE SERVICES INSTALLATION.
 - THE PROPOSED SYSTEM CONSISTS OF 2400x 550W PANELS AND CAPACITY OF 1320kWp. THE OVERALL AREA OF PV TO ACHIEVE THE PEAK GENERATING LOAD IS 720m².
 - THE CONTRACTOR SHALL ENSURE THE PV PANELS COMPLY WITH THE SOLAR PANEL PROCUREMENT AND LABOUR RISK MITIGATION GUIDANCE.
 - ALL ROOF MOUNTED CABLE TRAY SHALL BE GALVANISED WITH GALVANISED COVERS AND SUITABLY SALINE TREATED.
 - ALL PHOTOVOLTAIC PANELS SHALL BE WIRED & INTERCONNECTED USING JMCABLES HY222-4 CABLE OR EQUIVALENT TO COMPLY WITH BS EN 50618 OR EQUAL AND APPROVED.
 - A SPECIALIST CONTRACTOR SHALL BE EMPLOYED FOR THE DESIGN, SUPPLY, INSTALLATION AND COMMISSION OF THE NEW PHOTOVOLTAIC SYSTEM.
 - A SPECIALIST CONTRACTOR SHALL BE EMPLOYED FOR THE DESIGN, SUPPLY, INSTALLATION AND COMMISSION OF THE NEW PHOTOVOLTAIC SYSTEM.
 - SPECIALIST ROOF SUPPORT BRACKETS TO BE PROVIDED FOR PV ARRAYS.
 - PV PANELS ON THE FLAT ROOF SMALL PITCH TO BE INSTALLED USING A PROPRIETARY RAIL MOUNTING SYSTEM.
 - PV STRING GENERATOR JUNCTION BOX SHALL CONTAIN BLOCKING DIODES AND SURGE PROTECTION DEVICE.
 - A DATA CONNECTION UNIT SHALL BE PROVIDED TO LINK TO THE EXISTING ON SITE BUS SYSTEM.
 - ALL NEW PHOTOVOLTAIC FRAME SUPPORT SHALL BE INSTALLED USING A PROPRIETARY RAIL MOUNTING SYSTEM.
 - ALL SOLAR PANELS SHALL BE 550W OR EQUAL AND APPROVED SOLAR MONOCRYSTALLINE SOLAR PANELS. THE TECHNICAL SPECIFICATION SHALL BE AS FOLLOWS:
- PEAK POWER: 550W
- MAX POWER VOLTAGE: 41.7V
- MAX POWER CURRENT: 13.2A
- OPEN CIRCUIT VOLTAGE: 49.8V
- SHORT CIRCUIT CURRENT: 14A
- POWER TOLERANCE: 0+10W
- DIMENSIONS: 2281x1343x35mm
- WEIGHT: 27.8kg
 - THE APPOINTED PV SPECIALIST SHALL MAKE ALL NECESSARY G99 METER APPLICATIONS AND LIAISE WITH THE STATUTORY BODY IN RELATION TO ANY UPSTREAM NETWORK REINFORCEMENTS THAT MAY BE REQUIRED ON THE SPEN NETWORK IN RELATION TO THE PEAK GENERATING LOAD.
 - FINAL ORIENTATION OF PV PANELS TO BE AGREED AND FINAL ROOF ACCESS TO BE AGREED. THIS MAY AFFECT SOME PANEL LOCATIONS AND

- GENERAL NOTES:**
- ALL INFORMATION CONTAINED ON THIS DRAWING IS INDICATIVE FOR INFORMATION PURPOSES ONLY.
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERING SERVICES DRAWINGS, SPECIFICATIONS, SCHEDULES AND PROJECT SPECIFIC DOCUMENTATION.
 - THE CONTRACTOR SHALL ENSURE FULL COORDINATION WITH ALL OTHER MEP SERVICES, BUILDING CONSTRUCTION AND FABRIC PRIOR TO INSTALLATION.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM FINAL ROUTES AND SIZES. CHECK ALL SITE DIMENSIONS AND ENSURE THAT SERVICES ARE FULLY COORDINATED WITH REGARD TO ACCESS FOR INSTALLATION, COMMISSIONING, MAINTENANCE AND REMOVAL/REPLACEMENT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGE 4 ONWARD THE FULL DETAILED DESIGN.
 - INFORMATION QUANTITIES AND LOCATIONS ARE INDICATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED SERVICES DESIGN INCLUDING FINAL SETTING OUT AND COORDINATION.
 - ALL PLANT AND EQUIPMENT SHALL BE SUITABLE FOR THE ENVIRONMENTAL LOCATION.
 - ALL PLANT AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS.

P1	09.06.23	PRELIMINARY ISSUE	SB	LS
Rev	Date	Description	Eng	CHK

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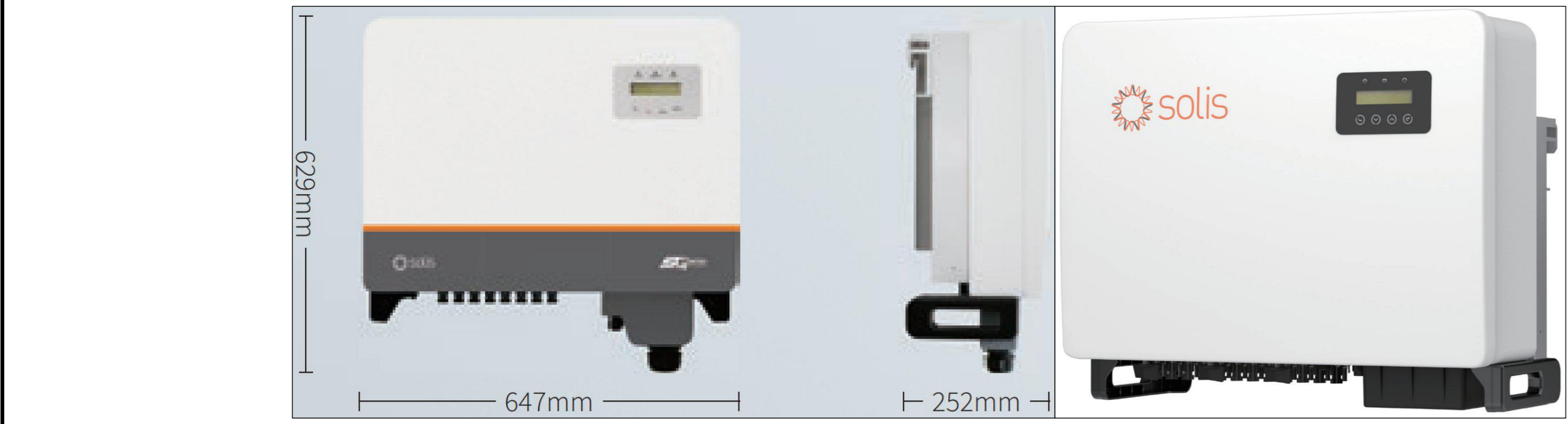


Project
WASTE TRANSFER CENTER LLANDUDNO

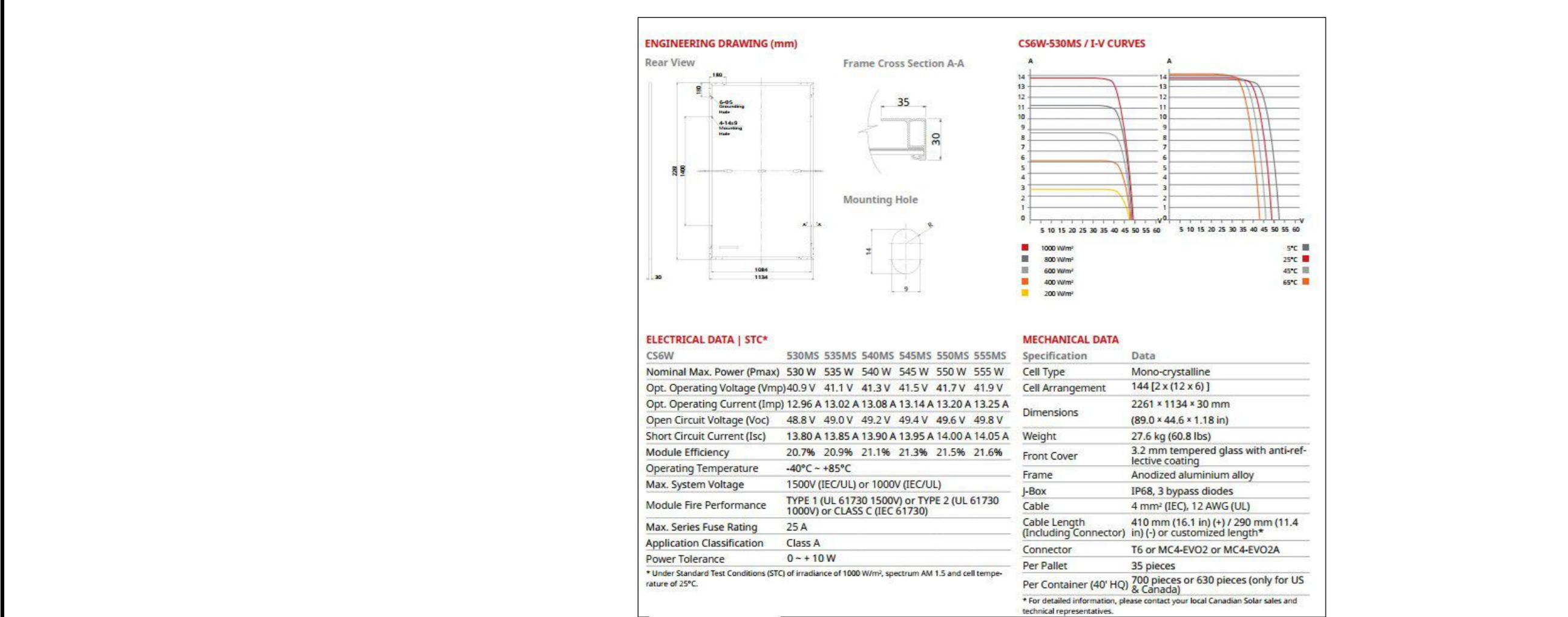
Drawing Title
ROOF LEVEL PV ARRAY AND INVERTOR LAYOUT

Status: **PRELIMINARY**

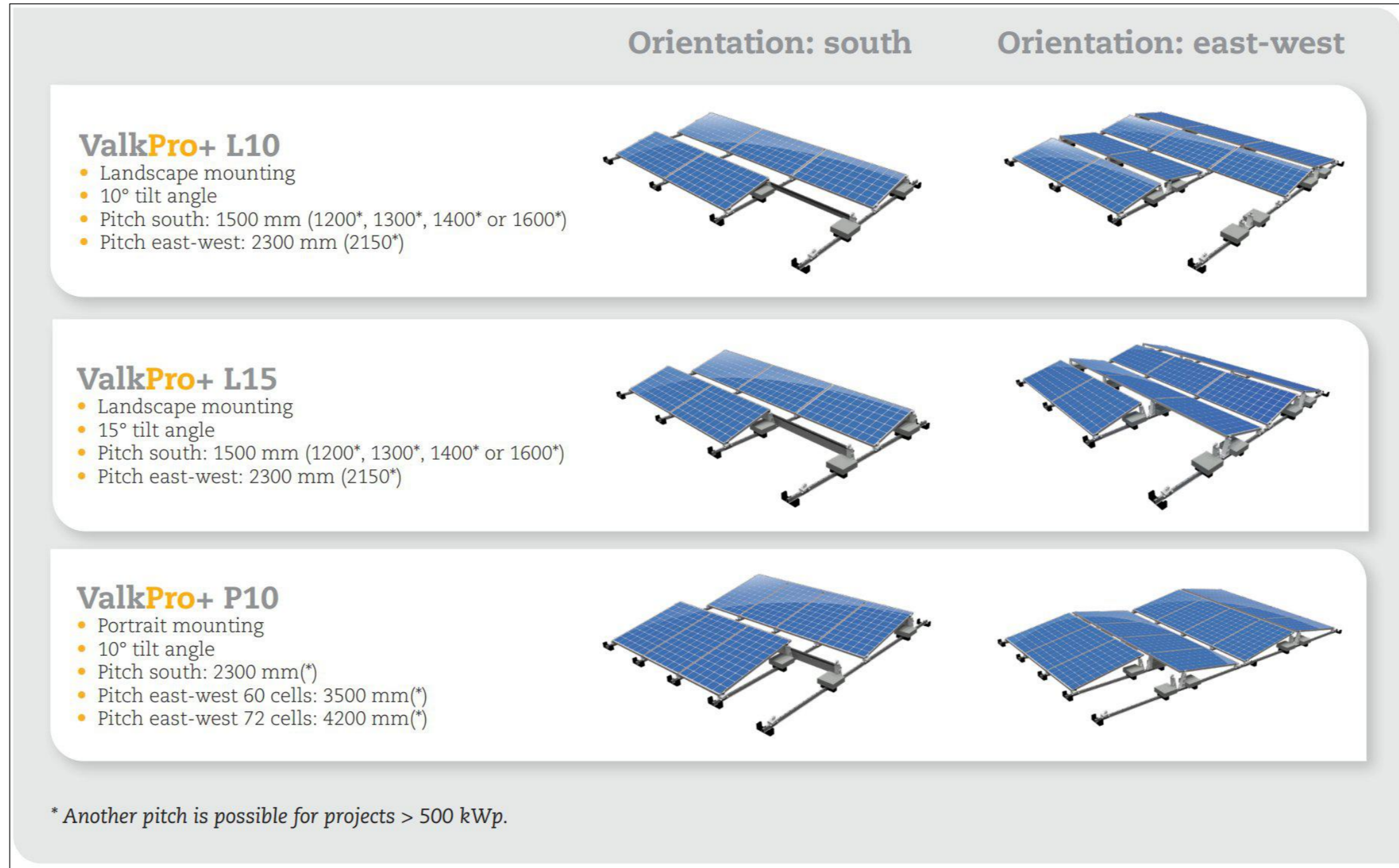
Project No.	2821	Draw	BW	Scale / Paper Size	1:100 @ A0
Drawing No.	2821-CWC-XX-EX-DR-E-6001	Rev			P1



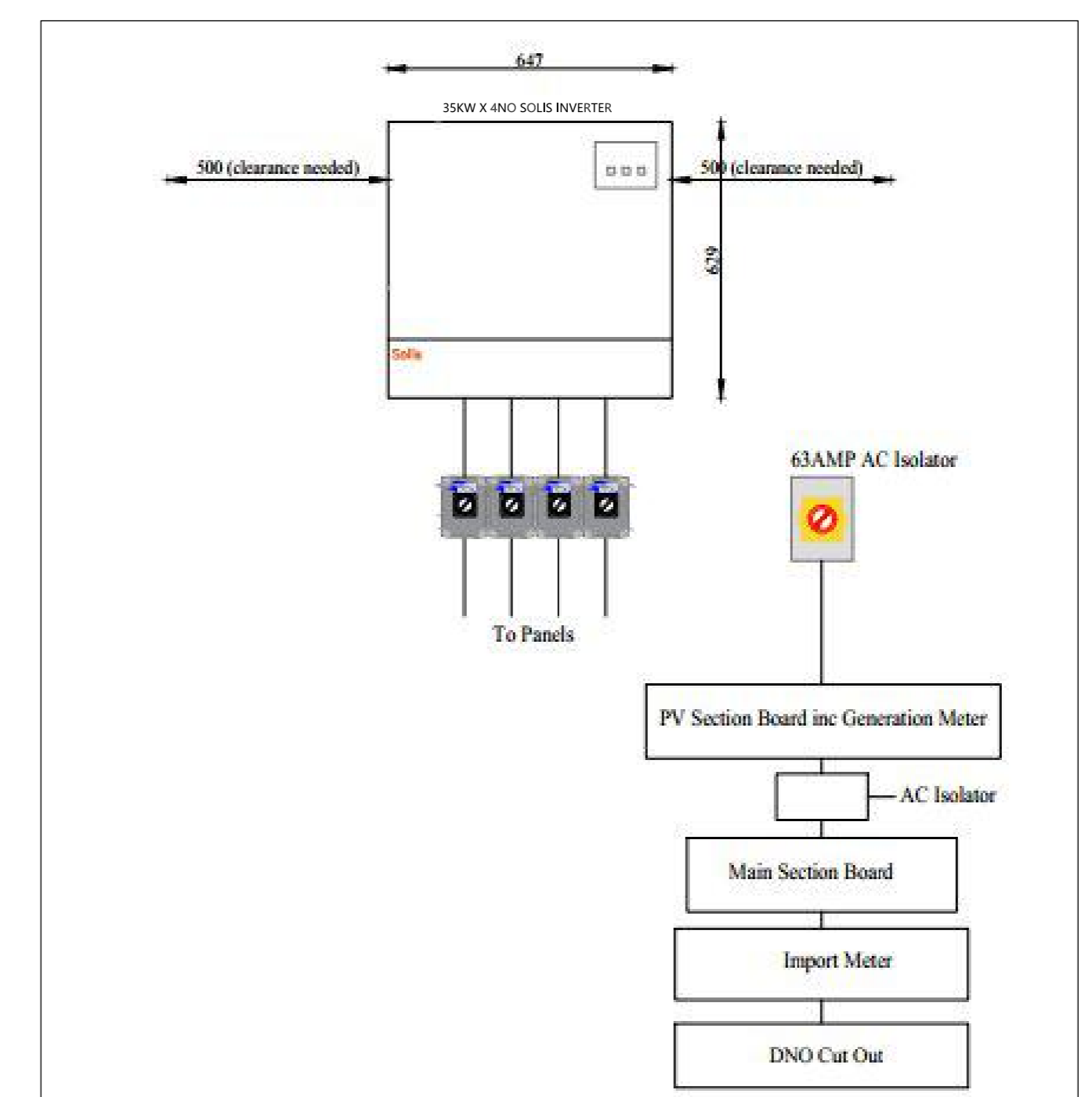
A TYPICAL PV INVERTER DETAILS FOR UNITS FROM 25KW TO 60KW BY SOLIS
NTS



B DETAIL OF THE PROPOSED PV MONOCRYSTALLINE PV PANEL - 550W BY CANADIAN SOLAR
NTS



C TYPICAL FLAT ROOF FIXING DETAIL FOR PROPOSED PV ARRAY
NTS



D DETAIL OF INVERTORS AND WIRING BACK INTO LOCAL DISTRIBUTION
NTS