

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI



BIDDING DOCUMENT

SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 43kW GRID TIED SOLAR SYSTEM AT DUHS, OJHA CAMPUS KARACHI

**NIT # DUHS/W&S/2021/460
DATED: JULY 12, 2021**

**OFFICE OF THE PROJECT DIRECTOR, WORKS & SERVICES,
DOW UNIVERSITY OF HEALTH SCIENCES,
BABA-E-URDU ROAD, BESIDES CIVIL HOSPITAL, KARACHI
Tel / Fax # 021-99216065**

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SECTION I INVITATION FOR BIDS (IFB)

No. DUHS/W&S/2021/460

Dated: 12-07- 2021

NOTICE INVITING TENDER

Sealed tenders from interested Dealers / Distribution / Manufacturers having registration with Federal Board of Revenue (FBR), Income Tax Department, Sindh Revenue Service Board, Sales Tax and Pakistan Engineering Council (PEC) in appropriate category and License of Electric Inspectorates Sindh.

S. No:	NAME OF WORK	ESTIMATE COST	METHOD OF PROCUREMENT	COMPLETION PERIOD
1.	S/F/I/C of 43kW Grid Tied Solar System at Pharmacy Building DUHS OJHA Campus Karachi Ref No: DUHS/W&S-NIT/2021/073	Quoted Rate	Single Stage Single Envelope	02 Months

Tender Fee	Rs. 2,000/- (<i>Rupees Two Thousand Only</i>) Non-Refundable in shape of Pay Order / Demand Draft in favor of Dow University of Health Sciences, Karachi.
Bid Security	2% of the total bid value.
Purchasing Date & Time	15-07-2021 to 03-08-2021 (11 a.m to 02 p.m)
Bids Delivery & Opening Date & Time	04-08-2021 at 1:30 P.M & 02:00 P.M.

Detailed Specification are mentioned in the prescribed tender documents alongwith terms and conditions. Bidding documents can be obtained from the Office of the Project Director, Works & Services Department, 5th Floor, Administration Block, Dow University of Health Sciences, Karachi and download from SPPRA website or Dow University of Health Sciences, website. Conditional Bids, Telegraphic Bids, Bids not accompanied by Bid Security of required amount and form, bids received after specific date and time and bids of Black Listed firms will be rejected.

In case of any unforeseen situation or government holiday resulting in closure of office on the date of opening, bids shall be submitted / opened on next working day at the given time.

The Dow University of Health Sciences, Karachi (DUHS) reserves the right to reject any or all the bids subject to the relevant provisions of SPP Rules 2010 (Amended upto date).

PROJECT DIRECTOR
Works & Services Department,
Dow University of Health Sciences,
Karachi

SECTION-II INSTRUCTION TO BIDDERS

PREPARATION OF BIDS

1. SCOPE

- 1.1 Dow University of Health Sciences, Karachi intend to purchase “**SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 43kW GRID TIED SOLAR SYSTEM AT PHARMACY BUILDING IN DUHS OJHA CAMPUS, KARACHI**”. Through Bidding Single Stage Two Envelope Procedure as per SPPRA Rules-2010 (Amended upto date).

2. LANGUAGE OF BID

- 2.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring agency shall be written in the English language.

3. DOCUMENTS COMPRISING THE BID

- 3.1 The bid prepared by the Bidder shall comprise the following components:
- a) Price Schedule completed in accordance with ITB Clauses 4, 5 and 6.
 - b) Bid security furnished in accordance with ITB Clause-9.

4. BID PRICES

- 4.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.
- 4.2 The prices shall be quoted on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location specified in the schedule of Requirements. No separate payment shall be made of the incidental services.
- 4.3 Prices quoted by the by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet.
- 4.4 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet.

5. BID FORM

- 5.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.

6. BID CURRENCIES

- 6.1 Prices shall be quoted in Pak Rupees.

7. DOCUMENTS

- 7.1 The Bidder shall furnish, as part of its bid, documents establishing Bidder's Eligibility to bid and its qualifications to perform the contract if its bid is accepted.

- a) that, in the case of a Bidder offering to supply goods under the contract which the bidder did not manufacture or otherwise produce, the bidder has been duly authorized by the good Manufacture or producer to supply the goods in the Islamic Republic of Pakistan.
- b) that the Bidder has the financial, technical, and production capability necessary to perform the contract;
- c) that the Bidders meets the qualification criteria listed in the Bid Data Sheet.

8. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS

- 8.1 The documents evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and Data, and shall consist of:
- a) a detailed description of the essential technical and performance characteristics of the goods;
 - b) the Bidder shall note that standards for workmanship, material ,and equipment, as well as references to brand names or catalogue numbers designated by the Procuring agency in its Technical Specification are intended to be descriptive only and not restrictive till stated otherwise in Technical Specifications or Bid Data Sheet. The Bidder may substitute alternative standards, brand names, and /or catalogue numbers in its bid, provided that demonstrates to the Procuring agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the in the Technical Specifications

9. BID SECURITY

- 9.1 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct, which would warrant the security's forfeiture The bid security shall be denominated in the currency of the of the bid:
- a) at the Bidder's option, be in the form of either demand draft/call deposit or an unconditional bank guarantee from a reputable Bank;
 - b) be submitted in its original form: copies will not be accepted;
 - c) remain valid for a period of at least 14 days beyond the original validity period of bids, or at least 14 days beyond any extended period of bid validity.
- 9.2 Bid security shall release to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.
- 9.3 The successful Bidder's bid security shall be discharged upon the Bidder signing the contract, and furnishing the performance security.
- 9.4 The bid security may be forfeited:
- a) If a Bidder withdraws its bid during the period of bid validity or
 - b) In the case of a successful Bidder, if the bidder fails:
 - (i) To sign the contract in accordance or
 - (ii) To furnish performance security

10. PERIOD OF VALIDITY OF BIDS

- 10.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Procuring agency. A bid valid for a shorter period shall be rejected by the Procuring agency as non-responsive.
- 10.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security shall also be suitable extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required not be required nor permitted to modify its bid.

11. FORMAT AND SIGNING OF BID

- 11.1 The Bidder shall prepared an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID" as appropriate. In the event of any discrepancy between them, the original shall govern.
- 11.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 11.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

SUBMISSION OF BIDS

12. SEALING AND MARKING OF BIDS

- 12.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as "**ORIGINAL BID**" and "**ONE COPY**". The envelopes shall then be sealed in an outer envelope. The inner and outer envelopes shall be addressed to the Procuring agency at the address given in the BDS, and carry statement "**Do Not Open Before. 04-08-2021 at 02.00 PM**".
- 12.2 If the outer envelope is not sealed and marked as required, the Procuring agency shall assume no responsibility for the bid's misplacement or premature opening.

13. DEADLINE FOR SUBMISSION OF BIDS

- 13.1 Bids must be received by the Procuring agency at the address specified in BDS, not later than the time and date specified in Bid Data Sheet.
- 13.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents, in such case all rights and obligations of the Procuring agency and bidders previously subject to the deadline will thereafter be subject to the deadline.

14. LATE BIDS

- 14.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribes by the Procuring agency shall be rejected and returned unopened to the Bidder.

15. MODIFICATION AND WITHDRAWAL OF BIDS

- 15.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the deadline prescribed for submission of bids.
- 15.2 No bid may be modified after the deadline for submission of bids.
- 15.3 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security.

OPENING AND EVALUATION OF BIDS

16. OPENING OF BIDS BY THE PROCURING AGENCY

- 16.1 The Procuring agency shall open all bids in the presence of bidder's representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register/attendance sheet evidencing their attendance.
- 16.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presences or absence of requisite bid security and such other details as the Procuring agency, at its discretion, may consider appropriate, will be announced at the opening.

17. CLARIFICATION OF BIDS

- 17.1 During evaluation of the bids, the Procuring agency may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

18. PRELIMINARY EXAMINATION

- 8.1 The Procuring agency shall examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- 8.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
- 8.3 Prior to the detailed evaluation, the Procuring agency will determine the substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Procuring agency's determination of a bid's responsiveness is to be based on the contents of the bid itself.
- 8.4 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

19. EVALUATION AND COMPARISON OF BIDS

- 19.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive.
- 19.2 The Procuring agency's evaluation of a bid will be on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location and shall exclude any allowance for price adjustment during the period of execution of the contract.

20. CONTACTING THE PROCURING AGENCY

- 20.1 No Bidder shall contact the procuring agency on any matter relating to its bid, from the time of bid opening to the time the announcement of Bid Evaluation Report. If the Bidder wishes to bring additional information to the notice of the procuring agency, it should do so in writing.
- 20.2 Any effort by a Bidder to influence the Procuring agency in its decision on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

AWARD OF CONTRACT

21. POST – QUALIFICATION

- 21.1 In the absence of prequalification, the procuring agency may determine to its satisfaction whether that selected Bidder having submitted the lowest evaluation responsive bid is qualified to perform the contract satisfactorily.
- 21.2 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Claus-7 as well as such other information as the Procuring agency deems necessary and appropriate.
- 21.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to perform satisfactorily.

22. AWARD CRITERIA

- 22.1 The Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

23. PROCURING AGENCY'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

- 23.1 Subject to relevant provisions of SPP Rules 2010 (Amended upto date), the Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award.

- 23.2 Pursuant to Rule 45 of SPP Rules 2010 (Amended Upto Date), Procuring agency shall hoist the evaluation report on Authority's web site, and intimate to all the bidders seven days prior to notify the award of contract.

24. NOTIFICATION OF AWARD

- 24.1 Prior to the expiration of the period of bid validity, the Procuring agency shall notify the successful Bidder in writing, that its bid has been accepted.
- 24.2 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 26, the Procuring agency will promptly notify each unsuccessful Bidder and will discharge its bid security.

25. SIGNING OF CONTRACT

- 25.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 25.2 Within fourteen (14) days, or any other period specified in BDS, of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.

26. PERFORMANCE SECURITY

- 26.1 Within seven (07) days, or any other period specified in BDS, of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.
- 26.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 25 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.

27. CORRUPT OR FRAUDULENT PRACTICES

- 27.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPP Act, 2009 and Rules made there under:
- a) "Corrupt and Fraudulent Practices" means either one or any combination of the practices given below;
- (i) "Coercive Practice" means any impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;
- (ii) "Collusive Practice" means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;

- (iii) "Corrupt Practice" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;
 - (iv) "Fraudulent Practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- b) "Obstructive Practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under the Rules.

SECTION – III
GENERAL CONDITIONS OF CONTRACT

1. DEFINITIONS

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) "The Goods" means all of the equipment, machinery, and/or other materials, which the Supplier is required to supply to the Procuring agency under the Contract.
- (d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Procuring agency" means the Sindh Public Procurement Regulatory Authority (SPPRA), Government of Sindh.
- (h) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
- (i) "SPP Rules 2010" means the Sindh Public Procurement Rules 2010 (Amended Upto Date).
- (j) "Day" means calendar day.

2. STANDARDS

2.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.

3. PATENT RIGHTS

3.1 The Supplier shall indemnify the Procuring agency against all third- party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Islamic Republic of Pakistan.

4. PERFORMANCE SECURITY

4.1 Within seven (07) days, or any other duration as specified in SCC, of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.

- 4.2 The proceeds of the performance security shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 4.3 The performance security shall be denominated in the Pak rupees and shall be an unconditional bank guarantee, pay order, call deposit as, provided in the bidding documents or another form acceptable to the Procuring agency;
- 4.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

5. INSPECTIONS AND TESTS

- 5.1 The Procuring agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring agency. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 5.2 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring agency.
- 5.3 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Manufacturer.
- 5.4 Nothing in GCC Clause 5 shall in any way release the Supplier from any warranty or other obligations under this Contract.

6. PACKING

- 6.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage.

7. DELIVERY AND DOCUMENTS

- 7.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping/ transportation and/or other documents to be furnished by the Supplier are specified in SCC.

8. INSURANCE

- 8.1 The Goods supplied under the Contract shall be delivered consignee's end under which risk is transferred to the Procuring agency after having been delivered; hence insurance coverage is Supplier's responsibility.

9. TRANSPORTATION

9.1 The Supplier is required under the Contract to transport the Goods to a specified place of destination and shall be arranged by the Supplier, and related costs shall be deemed to have been included in the Contract Price.

10. INCIDENTAL SERVICES

10.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) Performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) Furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract;

11. SPARE PARTS

11.1 The Supplier should provide any or all of the notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) in the event of termination of production of the spare parts:
 - (i) Advance notification to the Procuring agency of the pending termination, in sufficient time to permit the Procuring agency to procure needed requirements; and
 - (ii) Following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.

12. WARRANTY

12.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of desired models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

12.2 This warranty shall remain valid as per BOQ after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract.

- 12.3 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Procuring agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.

13. PAYMENT

- 13.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 13.2 The Supplier's request(s) for payment shall be made to the Procuring agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and upon fulfillment of other obligations stipulated in the Contract.
- 13.3 Payments shall be made promptly by the Procuring agency, but in no case later than thirty (30) days after submission of an invoice or claim by the Supplier. The currency of payment is Pak. Rupees.

14. PRICES

- 14.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid,

15. CONTRACT AMENDMENTS

- 15.1 No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

16. DELAYS IN THE SUPPLIER'S PERFORMANCE

- 16.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring agency in the Schedule of Requirements.
- 16.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.
- 16.3 Except as provided under GCC Clause 17 a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages unless an extension of time is agreed upon pursuant to GCC Clause 16.2 without the application of liquidated damages.

17. LIQUIDATED DAMAGES

- 17.1 Subject to GCC Clause 20, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or

unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring agency may consider termination of the Contract pursuant to GCC Clause 18.

18. TERMINATION FOR DEFAULT

18.1 The Procuring agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring agency pursuant to GCC Clause 16; or
- (b) If the Supplier fails to perform any other obligation(s) under the Contract.
- (c) If the Supplier, in the judgment of the Procuring agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

19. FORCE MAJEURE

19.1 Notwithstanding the provisions of GCC Clauses 16, 17 and 18, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

19.2 For purposes of this clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

19.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

20. RESOLUTION OF DISPUTES

20.1 Resolution of dispute shall be through Mechanism for Redressal of Grievances as provided in the rules or through Arbitration Act 1942.

21. GOVERNING LANGUAGE

21.1 The Contract shall be written in English language all correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

22. APPLICABLE LAW

22.1 The Contract shall be interpreted in accordance with the SPP Rules 2010 (Amended Upto Date).

23. TAXES AND DUTIES

23.1 Supplier shall be entirely responsible for all taxes, duties (including stamp duty), license fees, etc., incurred until delivery of the contracted Goods to the Procuring agency.

24. OVERRIDING EFFECT OF SINDH PUBLIC PROCUREMENT RULES 2010 (AMENDED UPTO DATE)

24.1 In case of conflict or primacy of interpretation the provisions of SPP Rules 2010 (Amended Upto Date) shall have an overriding effect notwithstanding anything to the contrary contained in these bidding documents.

**SECTION-IV
BID DATA SHEET**

The following specific data for “**SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 45kW GRID TIED SOLAR SYSTEM AT PHARMACY BUILDING DUHS OJHA CAMPUS, KARACHI**” to be procured where the solar power has to be inducted in the main DB of Pharmacy building, shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) Part One. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

- ITB 1. Name of Procuring Agency: Works & Services Department,
Dow University of Health Sciences, Karachi. Tel / Fax No. 021-99216065.
- ITB 2. Name of Contract: “**SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 43kW GRID TIED SOLAR SYSTEM AT PHARMACY BUILDING DUHS OJHA CAMPUS, KARACHI**” Bid Price and Currency
- ITB 3. Prices quoted by the Bidder shall be “fixed” and in” Pak Rupees”. Preparation and Submission of Bids
- ITB 4. Selection Criteria / Responsiveness Criteria:
1. The bidder should supply solar panels of TIER-1 brands like JA Solar, Jinko Solar, Risen etc.
 2. The bidder should supply inverters of Top brands like Sungrow, Huawei, Solis etc. Service center of supplied inverters must be available in Karachi.
 3. Copy of NTN registration Certificate, Electrical Inspector (Karachi) valid till Dec 2021 and Valid PEC Registration Certificate in appropriate category C5 with the specialization following codes EE04, EE11, for the bidder should be submit.
 4. The Bidder should not have been barred by any of Provincial or Federal Govt. Deptt., Agency, Organization or autonomous body or Private sector organization anywhere in Pakistan. (Submission of undertaking on 100/- legal stamp paper). All the proposed products should be well known for its quality, performance and reliability.
 5. The bidder must have done at least Five (05) Contracts of similar nature. “**Similar Nature Means Supply of Grid Tied Solar system greater or equal to 50kW in any Institute**” (Please submit copy of PO/Contract Agreement/Notification of Award).
 6. List of technical staff of bidders and subcontractor must be submit
 7. Solar panels must have minimum 10 years warranty.
 8. Solar Inverter must have minimum 5 years warranty.
 9. Panel fixing mountings must have minimum 10 years warranty.
 10. Minimum 1-year workmanship warranty should be provided by bidder.
 11. All the proposed products should be well known, well reputed brands and widely used for its quality, performance and reliability.

Note:

Bidder must provide necessary supporting documents as proof in respect of the selection criteria mentioned above.

- ITB 5. Amount of bid security @ **2%** of Bid.
- ITB 6. Bid validity period. **90 days**.
- ITB 7. Number of copies. **One original** only
- ITB 8. Amount of Performance Guarantee of @ **10%** for Bid successful Bidder
- ITB 9. Deadline for bid submission. **04-08-2021** at 01:30 PM
- ITB 10. Bid Evaluation: Lowest bid of the technically qualified bidders

SECTION-V
SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

1. DEFINITIONS (GCC CLAUSE 1)

GCC 1 (g)—The Procuring Agency is: Office of the Director Works & Services Department, DUHS, Karachi

2. PERFORMANCE SECURITY (GCC CLAUSE 4)

GCC 4. The amount of performance security, as a percentage of the Contract Price, shall be: 10%.

3. INSPECTIONS AND TESTS (GCC CLAUSE 5)

Representative of Procuring Agency or his nominee shall inspect the procured good and ensure that it meets the tender specifications before its acceptance. Representative of Procuring Agency or his nominee shall also inspect the service center.

4. DELIVERY AND DOCUMENTS (GCC CLAUSE 7)

GCC 10. Supplier shall supply and install the good within 45 to 60 Days after signing the contract and shall submit the following.

- (i) Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- (ii) Packing List identifying the contents of Supply;
- (iii) Delivery note.
- (iv) Warranty and guarantee certificate;

5. WARRANTY (GCC CLAUSE 12)

The equipment shall bear Standard Warranty as mentioned in BID DATA from the date of installation / acceptance.

6. PAYMENT (GCC CLAUSE 13)

Hundred percent (100%) of the Contract Price shall be paid upon delivery, and satisfactory Installation, integration and testing of the products at the Project site (s), subject to the production of installation and Operational Acceptance certificates.

7. LIQUIDATED DAMAGES (GCC CLAUSE 18)

If the Supplier fails to deliver the goods or perform the services within the time period(s) specified in the contract, the Purchaser shall, without prejudice to its other remedies under the contract deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.07 percent of the Contract Price for each day of delay until actual delivery or performance, up to a maximum deduction of 10% of the Contract Price. Once the maximum is reached, the purchaser may consider termination of the contract.

8. RESOLUTION OF DISPUTES (GCC CLAUSE 21)

In the case of a dispute between the Procuring agency and the Supplier, the dispute shall be referred to the dispute resolution mechanism as defined in rule 31, 32 and 34 of the (SPPR 2010) Amended Upto Date.

9. APPLICABLE LAW (GCC CLAUSE 23)

GCC 29.1 Contract shall be interpreted in accordance with the Sindh Public Procurement law of Sindh.

SECTION-VI
SCHEDULE OF REQUIREMENTS

The delivery schedule hereafter expressed the date of delivery required.

SR.	DESCRIPTION	QTY	REQUIRED DELIVERY SCHEDULE FROM THE DATE OF CONTRACT AWARD	LOCATION
01.	Supplying, Fixing, Installation & Commissioning of 43kw Grid Tied Solar System to generate green energy. The System must be compatible with Genset also. (SPECIFICATIONS OF ABOVE ITEMS ARE ATTACHED)	01	Delivery & Installation within 45 to 60 Days or earlier.	OJHA Campus, DUHS, Karachi

NOTE: SPECIFICATIONS OF ABOVE ITEMS ARE ATTACHED.

SECTION-VII

SAMPLE FORMS

FORM-I

LETTER OF ACCEPTANCE

Date: _____

To:

PROJECT DIRECTOR

Works & Services Department,
Dow University of Health Sciences, Karachi

Dear Sir:

Having examined the bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver the required item in conformity with the said bidding documents for the sum of [total bid amount in words and figures] or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to Five (5) percent of the Contract Price/Pay order for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this Bid for a period of 15 days from the date fixed for Bid opening under Clause 10 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____ 2021.

[signature] [in the capacity of]

Duly authorized to sign Bid for and on behalf of _____

ELIGIBILITY CRITERIA

S.NO	DESCRPTION	TOTAL MARKS	MARKS OBTAINED	REMARKS	ATTACHMENT OF RELEVANT EVIDENCE IN EACH CASE IS MANDATORY.IN CASE OF NON COMPLIANCE NO MARK WILL BE AWARDED	EVIDENCE ATTACHED AS
1	YEARS IN BUSINESS IN THE REQUISITE FIELD (AS A SUPPLIER AND INSTALLATION OF SOLAR SYSTEMS)	10		5 YEAR AND ABOVE	NTN CERTIFICATE IS REQUIRED TO BE ENCLOSED	
		7		3 YEAR AND ABOVE		
		5		2 YEAR		
2	ELECTRICAL LICENSE OF BIDDER AND/OR SUBCONTRACTOR	20		Yes	DOCUMENTARY PROOF TO BE ATTACHED.	
		0		No		
3	PEC REGISTRATION CATEGORY WITH SPECIALIZATION CODES OF EE04, EE11 OF BIDDER AND/OR SUBCONTRACTOR	20		C5 OR ABOVE WITH MENTIONED CODES	DOCUMENTARY PROOF TO BE ATTACHED.	
		10		C5 WITHOUT MENTIONED CODES		
		0		C6		
4	COUNTRY OF ORIGIN OF INVERTERS	10		TOP 6 rated CHINA/European	DOCUMENTARY PROOF TO BE ATTACHED	
		7		ANY OTHER		
5	IMPORTED ITEMS DELIVERY TIME	10		READY STOCK	DOCUMENTARY PROOF TO BE ATTACHED	
		5		WITHIN 45 DAYS		
6	SERVICE CENTER AND TRAINED ENGINEER	10		AVAILABLE IN KARACHI	DOCUMENTARY PROOF TO BE ATTACHED	
		5		NOT AVAILABLE		
7	EXPERIENCE OF SIMILAR PROJECTS	20		5 OR MORE	DOCUMENTARY PROOF TO BE ATTACHED	
		10		LESS THAN 4		
	TOTAL MARKS	100		QUALIFIED / DISQUALIFIED		

NOTE:

1. ATTACHMENT OF RELEVANT EVIDENCE IN EACH ABOVE REQUISITE IS MANDATORY. IN CASE OF NON-PROVISION OF EVIDENCE IN ANYOF THE REQUISITE, NO MARKS WILL BE AWARDED.
2. ACQURING OF 70% MARKS OF THE TOTAL SCORE WILL MAKE THE BIDDER QUALIFY IN ELIGILIBTY CRITERIA.

Form-II
PRICE SCHEDULE

Name of Bidder :
IFB Number :

Components	Make	Model	Spec	Qty	Unit Price	Total
Solar panel			535W	*15 Nos.		
Inverter			60kW, 3P	1 No.		
Datalogger / Monitoring				1 No.		
Cables						
D/C cable Flexible	1000V DC Cable - Imported		4mm ² single core, red	350m		
D/C cable Flexible	1000V DC Cable - Imported		4mm ² single core, black	350m		
A/C cable	Pakistan Cable		35mm ² , 4 core	15m		
Earthing cable	Pakistan Cable		mm ²	100m		
			6mm ²	50m		
Breakers						
DC fuse for strings	ABB/Little Fuse		20A, 1000V	8 Nos.		
AC Breaker	Terasaki/ABB		125A, 4Pole	1 Nos.		
Mechanical and civil						
Panel Mounting (As per provided drawing)	Anodized Aluminum Mounting		Pane fixing Rails	600ft.		
			Front poles with foots & fixing accessories	59 Nos.		
			Back poles with foots & fixing accessories	59 Nos.		
			Bracing	59 Nos.		
			SS nut bolts	1 lot		
Resin Epoxy for sealing holes in roof				1 lot		
GI Cable tray with lid and fixing stands	GI, 18 gauge, powder coated		1.5"x 2" x 8ft	15 Nos.		
PVC pipe for DC Cables with complete fixing accessories	Pak Arab/Eqv		1"	5 Nos.		
PVC pipe for DC Cables with complete fixing accessories	Pak Arab/Eqv		1.25"	13 Nos.		
PVC pipe for AC Cables with complete fixing accessories	Pak Arab/Eqv		1.5"	15 Nos.		
Complete Installation accessories				1 lot		
Earth Pit at 10-15ft depth						
Copper Plate			1'x1'x6mm	1		
Copper conductor			25sqmm	15ft		
Chemical bags				10 Nos.		
UPVC pipe with accessories	Steelex		1.5"	15ft		
Bus bar and copper fixing accessories						
Services						
Transportation						
Installation, testing, and commissioning Charges for 45kW						
Grand Total including tax						

*65Nos. of panels will be provided by DUHS.

SIGNATURE OF BIDDER

Note:

- (i) In case of discrepancy between unit price in figure and words and total price mentioned in words shall prevail.
- (ii) DG set price should be in CNF / CFR, local items will be quoted in PKR (DDP).

Form-III

EXPERIENCE OF SIMILAR SUPPLY AND INSTALLATION

S. NO	ASSIGNMENT DESCRIPTION	NAME / CONTACT DETAILS OF CLIENT	COST	START DATE	END DATE	REMARKS

Form-IV

CONTRACT FORM

THIS AGREEMENT made the ____ day of _____ 2021 between Dow University of Health Sciences, Karachi. (hereinafter called “the Procuring agency”) of the one part and [name of Supplier] of [city and country of Supplier] (hereinafter called “the Supplier”) of the other part:

WHEREAS the Procuring agency invited bids for certain goods and ancillary services, viz., **SUPPLY, INSTALLATION & COMMISSIONING OF 43kW SOLAR GRID TIED SYSTEM AT PHARMACY BUILDING DUHS OJHA CAMPUS, KARACHI** and has accepted a bid by the Supplier for the supply of those goods and services in the sum of [contract price in words and figures] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Bid Form and the Price Schedule submitted by the Bidder;
 - (b) The Schedule of Requirements;
 - (c) The Technical Specifications.
 - (d) The General Conditions of Contract;
 - (e) The Special Conditions of Contract; and
 - (f) The Procuring Agency’s Notification of Award.
3. In consideration of the payments to be made by the Procuring agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring agency to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring agency hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by _____ the _____ (for the Procuring agency)

Signed, sealed, delivered by _____ the _____ (for the Supplier)

Form-V

PERFORMANCE SECURITY FORM

To:

THE PROJECT DIRECTOR

Works & Services Department
Dow University of Health Sciences, Karachi.

WHEREAS [name of Supplier] (hereinafter called "the Supplier") has undertaken, in pursuance of Contract No. [reference number of the contract] dated _____ 2021_____ to supply [description of goods and services] (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of [amount of the guarantee in words and figures], and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without recourse or argument, any sum or sums within the limits of [amount of guarantee] as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____ 2021.

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]

SECTION-VIII TECHNICAL SPECIFICATION

(BIDDERS TO ENDORSE REPLY/REMARKS AGAINST EACH CLAUSE AND STAMP, SIGN EACH PAGE)

S. No	DETAILED SPECIFICATIONS AND REQUIREMENTS	<u>BIDDER'S REPLY/ REMARKS</u>
01	<u>SOLAR PANEL</u>	
a.	Solar Module of Tier 1 Chinese Company, American, UK or equivalent. The company should come in Top 10 list of Bloomberg's Rankings 2021.	
b.	Photovoltaic module: 535Wp (110 cells)	
c.	Technology: P type Mono-crystalline	
d.	Module frame: Non-corrosive anodized aluminum	
e.	Module efficiency: equal to or greater than 20.5%	
f.	Junction box: IP68 enclosure with minimum 3 diodes	
g.	Temp power coefficient: equal or less than -0.34%/°C	
h.	Annual Degradation: equal to or less than 0.55% per year	
i.	Certifications: i. IEC 61215:2016 ii. IEC 61730:2016	
j.	Manufacturer must be certified with: i. ISO 9001:2015 ii. ISO 14001:2015 iii. ISO 45001:2018	
k.	PID resistance test passed	
l.	Product material & workmanship warranty: 12 years (minimum) Product Linear power output warranty: 25 years	
2.	<u>SOLAR INVERTER</u>	
a.	Solar Inverter should be in TOP 6 rating either Chinese, USA, Europe or equivalent	
b.	Rated Capacity of three phase solar On-grid Inverters 60kW	
c.	Operating temperature range: -25~60°C (>50°C derating)	
d.	Inverter enclosure class: IP65	
e.	Efficiency of inverter: >98%	
f.	Night time consumption <2W	
g.	Inverter must have following certifications: i. EN 62109-1/-2 ii. IEC 62109-1/-2 iii. EN 50530 iv. IEC 62116 v. IEC 60068 vi. IEC 61683	
h.	Inverter Must have following protections: i. Input-side Disconnection Device ii. Anti-islanding Protection iii. AC Overcurrent Protection iv. DC Reverse-polarity Protection v. PV-array String Fault Monitoring vi. DC Surge Arrester vii. AC Surge Arrester viii. DC Insulation Resistance Detection ix. Residual Current Monitoring Unit	

i.	Inverter must be equipped with 4G or WAN option for remote monitoring the PV plant from any PC or smart phone around the world.	
j.	Warranty of inverter: 5 years	
3.	<u>SPV PANEL STRUCTURE: (As per Drawing)</u>	
a.	Mounting must be of Anodized Aluminum.	
b.	Module & structure should be fixed with SS 304grade fastening bolts.	
c.	Mounting should withstand the wind gust of 100km/h. Provide its analysis report	
d.	Design life of mountings: 25 years	
e.	Warranty of mountings: 10 years against corrosion and other seasonal effects	
4.	<u>CABLES AND DUCTS</u>	
a.	DC cables: Flexible (voltage range 600V-800V) and voltage Losses <1%	
b.	AC cables: Pakistan cables/crescent/fast cable made & Voltage losses < 2%	
c.	GI cable trays with rust proof coating must be used for outdoor installation.	
5.	<u>DC FUSES, BREAKERS AND AC BREAKERS</u>	
	All AC breaker and DC fuses should be Schneider, ABB, little fuse or Terasaki made.	
6.	<u>EARTHING</u>	
a.	PV Structure, PV modules & inverters should be properly ground.	
b.	Earth pit prepared must have resistance under 5ohms.	
7.	<u>SEALING WORKS</u>	
	Rawal bolts/screws should be fixed using epoxy resin in roof to prevent water leakage.	

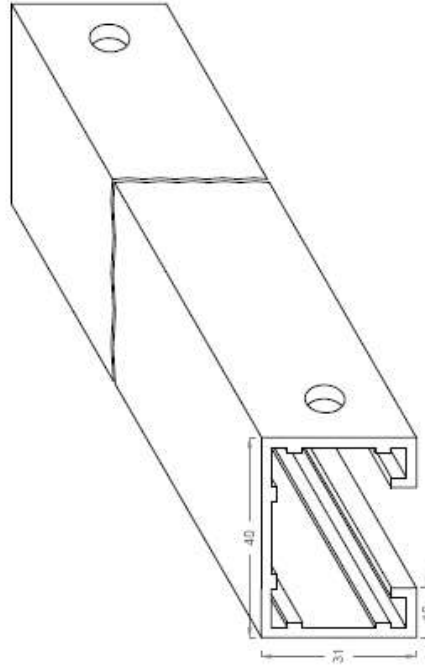
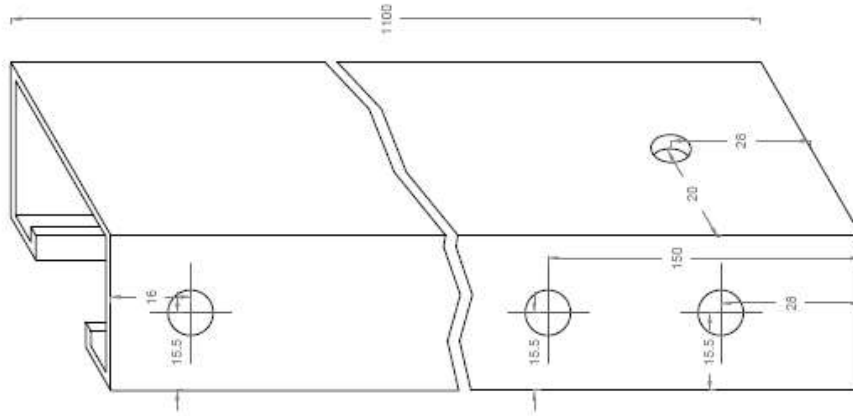
SECTION-IX COMPLAINEE ON HSE

(BIDDERS TO ENDORSE REPLY/REMARKS AGAINST EACH CLAUSE AND STAMP, SIGN EACH PAGE)

S. No	DETAILED SPECIFICATIONS AND REQUIREMENTS	<u>BIDDER'S REPLY/ REMARKS</u>
01	Bidder should compliance below HSE Standards according to Article 690 of NEC.	
a.	Medical Fitness of installation team	
b.	Work Permit of site	
c.	Incident investigation & proper reporting (if any)	
d.	Hazard identification & inspection	
e.	Electrical Safety Rules	
f.	Remedy for Snake, Scorpio bite etc.	
g.	Personal Protective Equipment should be used during work <ul style="list-style-type: none"> • Safety Shoe • Helmet • Gloves • Safety Glasses • Mask 	
h.	Site will be NO Smoking zone	
i.	Proper Materials Handling	
j.	Maintenance & Construction Safety	
k.	Hand Tools & equipment lifting should be proper	
l.	Emergency Procedures	
m.	Fire Protection & Fire Fighting	
n.	Health Guide for Travel	
o.	Chemical, Physical & Radiation Hazard	
p.	Welding & Flame Cutting	
q.	Waste Management	
r.	Ambient Noise Management	

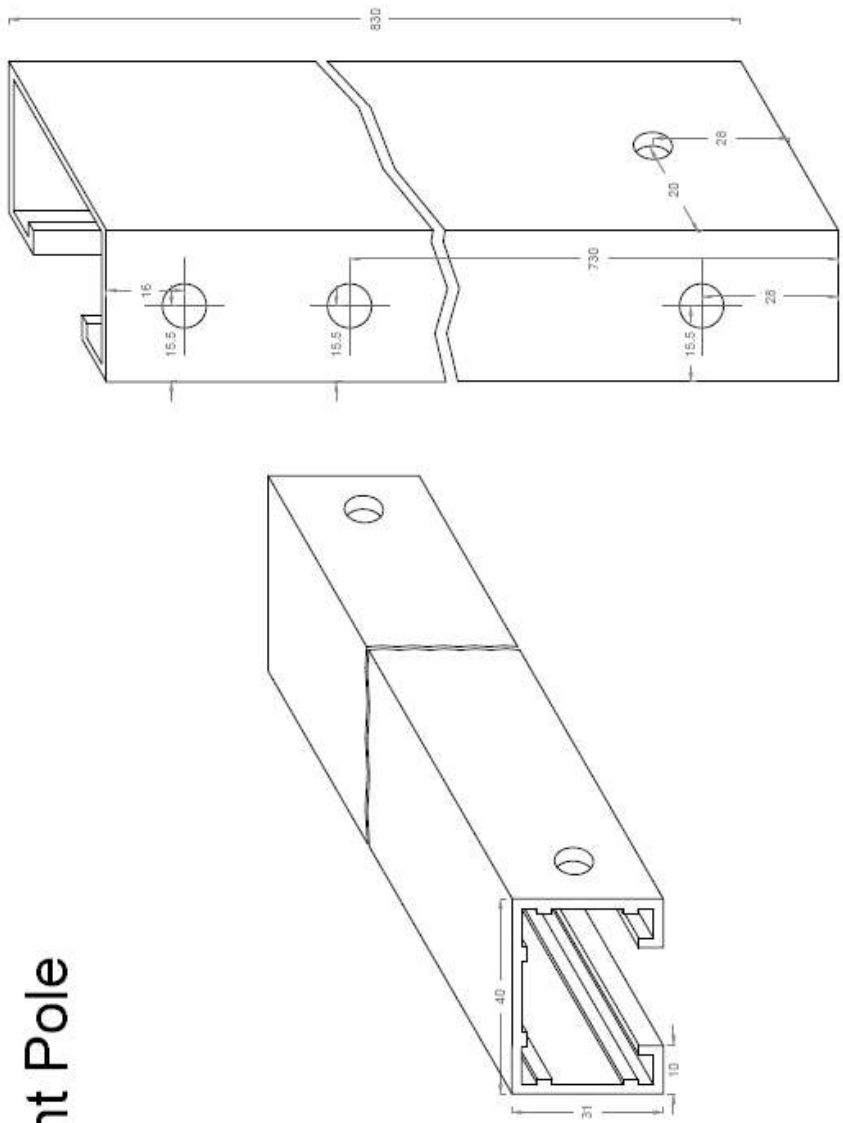
SECTION-X DRAWINGS

Back Pole



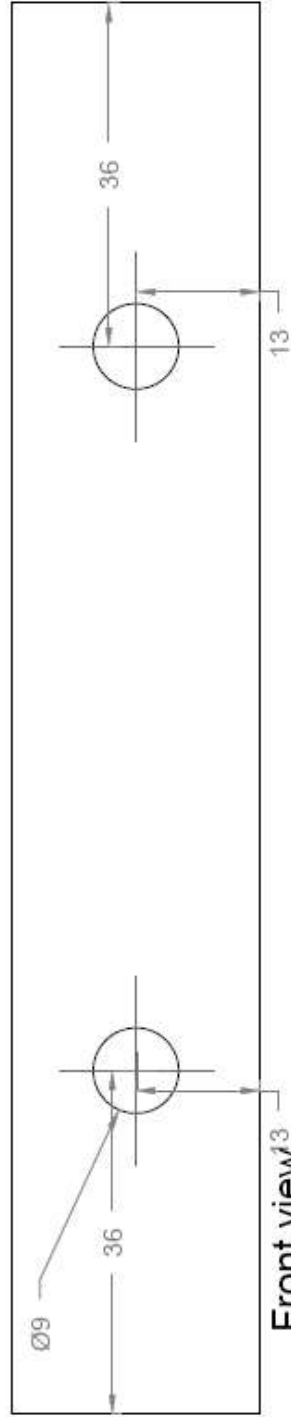
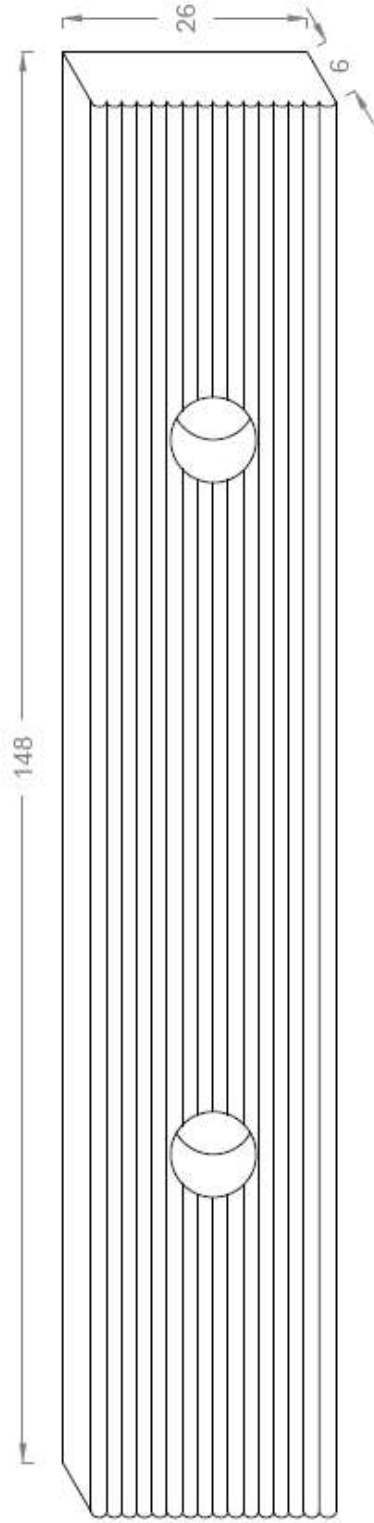
CLIENT: NEW UNIVERSITY OF WALES & SWANSEA PROJECT NUMBER: 46345 and New System NEW SWANSEA BUILDING, ONE SWANSEA QUAYS, SWANSEA SA1 8QW QUOTE NUMBER:		PROJECT DEVELOPER DRAWING DATE: 17th June 2021 DRAWING NO: DWG/DA/10273		DESIGNED BY: [Name] [Signature] CHECKED BY: [Name] [Signature]		CLIENT PROJECT COORDINATOR NAME: [Name] [Signature] PHONE: +44 1493 215100 EMAIL: [Email]		ALL DIMENSIONS ARE IN MM DRAWING NUMBER: 10273 DATE: 17th June 2021	
--	--	---	--	---	--	--	--	---	--

Front Pole



CLIENT: ION UNIVERSITY OF MASS & SUSSEX PROJECT NAME: 48000 010 THE TOWER SITE: NEW UNIVERSITY BUILDING, 094 CANNON DRIVE, SUSSEX ROAD, SUSSEX, ENGLAND		PROJECT DEVELOPER DRAWING DATE: 17th June 2021 DRAWING NO.: CHG/010/012		CHANGED BY: NAME: [Blank] SIGN: [Blank] COPY TO PROJECT MANAGER NAME: [Blank] SIGN: [Blank]		COPY TO PROJECT COORDINATOR NAME: [Blank] SIGN: [Blank] COPY TO PROJECT ENGINEER NAME: [Blank] SIGN: [Blank]		DRAWING CHECKED: NAME: [Blank] SIGN: [Blank] DATE: 17th June 2021	
DRAWING DATE: 17th June 2021 DRAWING NO.: CHG/010/012		CHANGED BY: NAME: [Blank] SIGN: [Blank] COPY TO PROJECT MANAGER NAME: [Blank] SIGN: [Blank]		COPY TO PROJECT COORDINATOR NAME: [Blank] SIGN: [Blank] COPY TO PROJECT ENGINEER NAME: [Blank] SIGN: [Blank]		DRAWING CHECKED: NAME: [Blank] SIGN: [Blank] DATE: 17th June 2021		ALL DIMENSIONS ARE IN MM DRAWING RELEASE DATE: 17th June 2021	

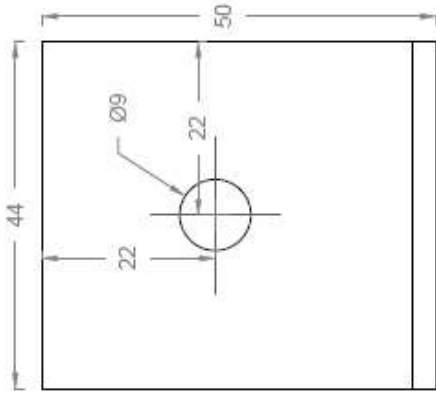
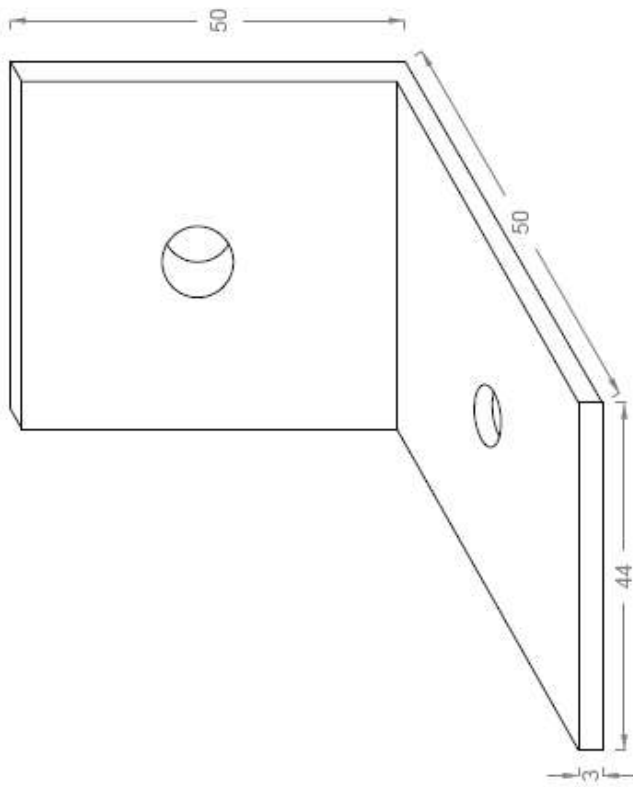
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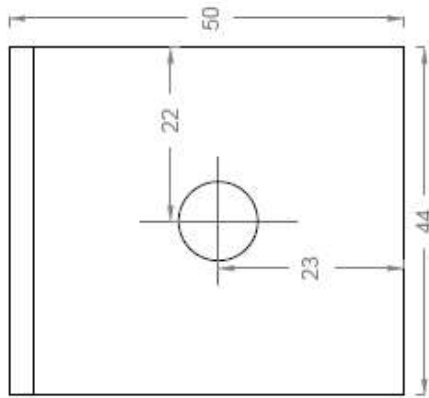
Front view³

CLIENT: Don Invernizzi of HARB & Suter Project Name: 4800 and 1400 streets Site: New Parkway Building, Old Campus Drive, Toronto East 4800 PARKWAY		Project Developer Drawing Date: 17th June 2021 Drawing No: Dwg/DUM/05		Checked By: Name: _____ Sign: _____ Copy to Project Manager Name: _____ Sign: _____		Copy to Project Coordinator Name: _____ Sign: _____ Inverter: Name: _____ Sign: _____		All dimensions are in mm Drawing Release Date: 17th June 2021	
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L Foot



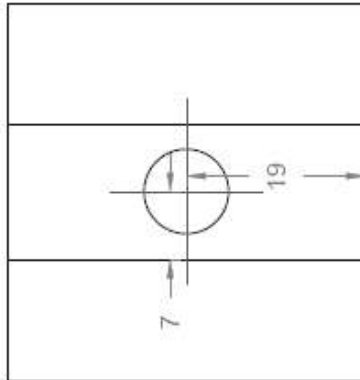
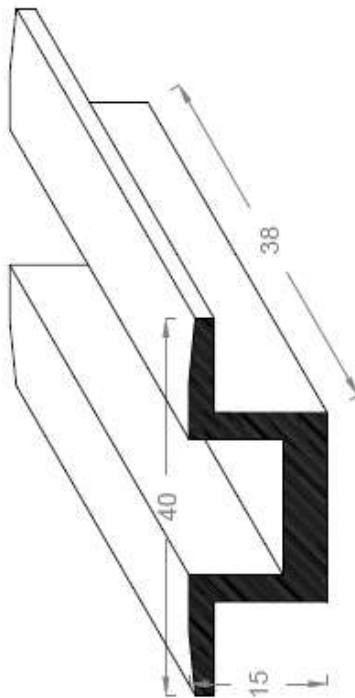
Side view



Top view

Client: One University of North Carolina		Project Developer		Drawing Date: 17th June 2021		Checked By: Name: _____ Sign: _____		Copy to Project Coordinator: Name: _____ Sign: _____		Revised: BOWEN, S. S25W9		All dimensions are in mm	
Project Name: above and the below		Project Developer		Drawing No. ENG0000000		Copy to Project Manager: Name: _____ Sign: _____		Copy to Project Engineer: Name: _____ Sign: _____		Inventor: JAC. S. BOWEN		Drawing Release Date: 17th June 2021	
Site: See Avenue Building, Old Campus Drive, Raleigh NC 27608-0001		Project Developer		Drawing No. ENG0000000		Copy to Project Manager: Name: _____ Sign: _____		Copy to Project Engineer: Name: _____ Sign: _____		Inventor: JAC. S. BOWEN		Drawing Release Date: 17th June 2021	

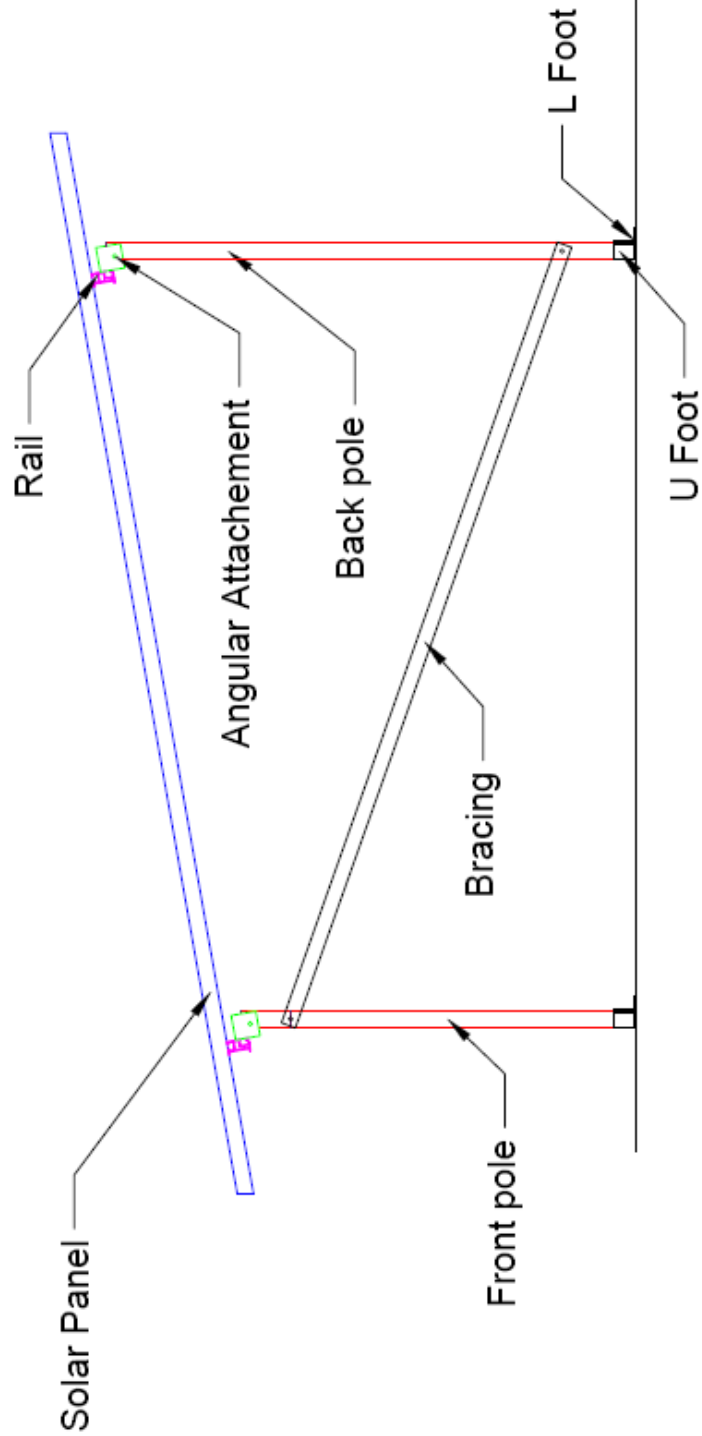
Mid Clamp



Top view

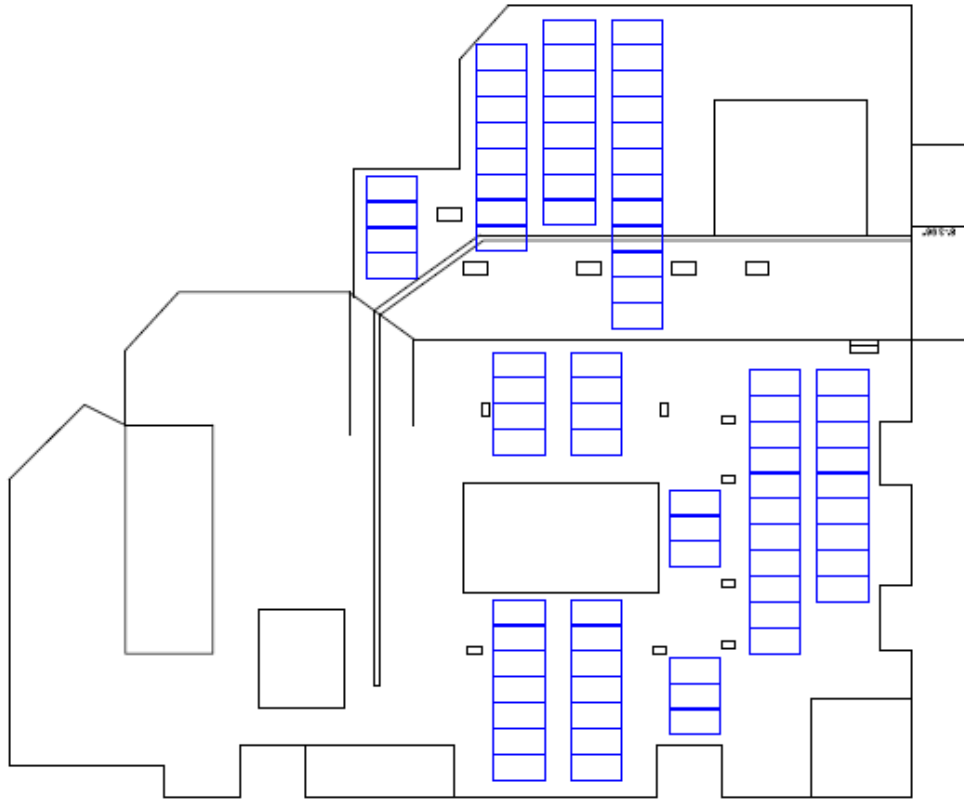
CLIENT: Don Armstrong of IM&B S. Sawdon PROJECT NAME: Alloys and the System SITE: New Pinesley Building, Old Campus Drive, SOMERSET Road SOUTH AFRICA		PROJECT DEVELOPER Name: _____ Sign: _____	DESIGNED BY: Name: _____ Sign: _____	COPY TO PROJECT COORDINATOR Name: _____ Sign: _____	PLOTTER: 600cm x 515cm INVERTER: 3No. x 60Wp	ALL DIMENSIONS ARE IN MM DRAWING RELEASE DATE: 17th June 2021
DRAWING NO: Desg/DA/HS/07		COPY TO PROJECT MANAGER Name: _____ Sign: _____		COPY TO PROJECT ENGINEER Name: _____ Sign: _____		DRAWING RELEASE DATE: 17th June 2021

Mounting Assembly Drawing



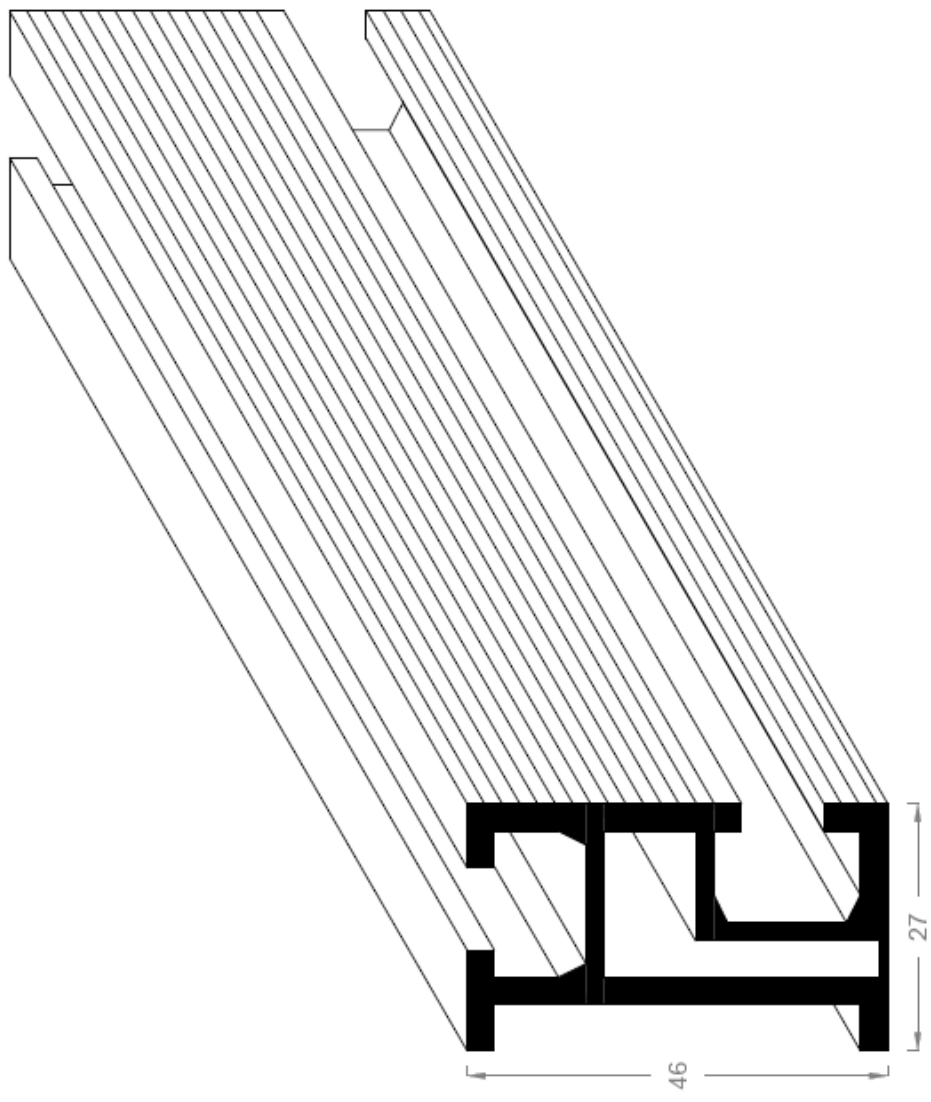
Client: Dow University of Health & Sciences		Project Developer		Drawing Date: 17th June 2021		Designed By: Name: Sign:		Copy to Project Coordinator Name: Sign:		Panels: 80Nos. x 535Wp		All dimensions are in mm	
Project Name: 400kg Grid Tied System		Site: New Pharmacy Building, OUM Campus DUIS, SUPARCO Road, Kuching, Sarawak		Drawing No: DWG/0005/02		Copy to Project Manager Name: Sign:		Copy to Project Engineer Name: Sign:		Inverter: 1No x 50kWp		Drawing Release date: 17th June 2021	

Panel Placement Drawing



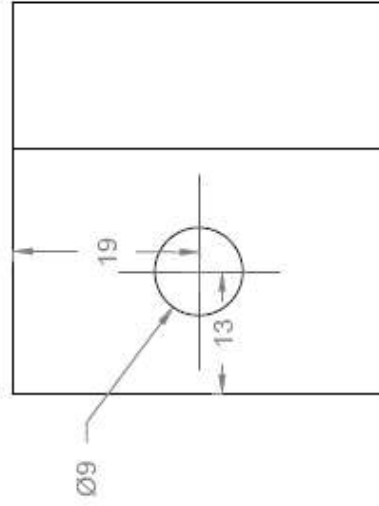
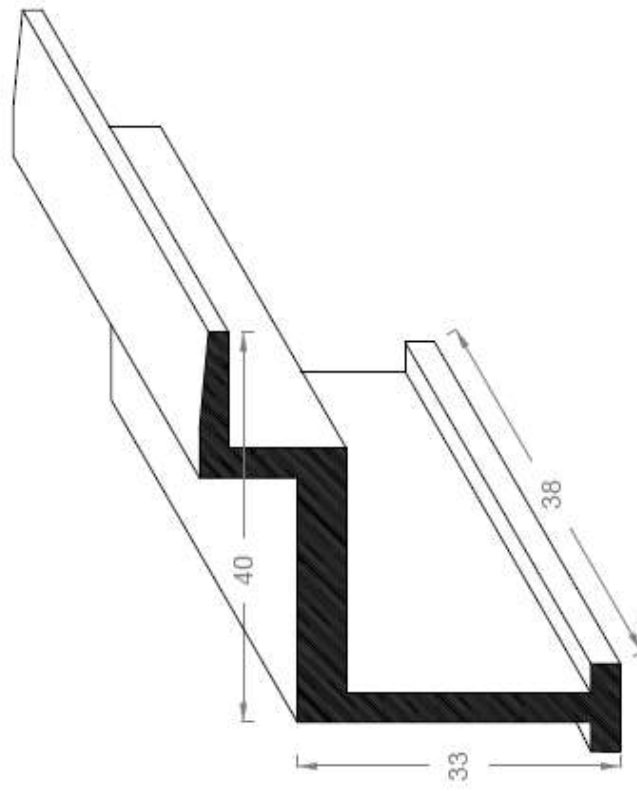
Client: Iowa University of Health & Science Project Name: 4000 east 1st Avenue		Project Designer: Drawing Date: 1/20/2021 Drawing No.: DWG(DHE)01		Designed By: [Name] Sign: [Signature] Copy to Project Manager: [Name] Sign: [Signature]		Panels: 6250s x 3350p Inverter: 300 x 5000p		All dimensions are in feet Drawing Release Date: 1/20 June 2021	
SMC: New Parkway Building, 4000 Campus Drive, Sparks Road South Dakota		Copy to Project Engineer: [Name] Sign: [Signature]		Copy to Project Coordinator: [Name] Sign: [Signature]		Copy to Project Manager: [Name] Sign: [Signature]		Copy to Project Engineer: [Name] Sign: [Signature]	

Rail



Client: One University of Waikato Project Name: 4000 and 700 Site: 4000 Building, One Campus Drive, Hamilton 3210 1000000		Project Developer Name: [Blank] Email: [Blank]		Drawing Date: 17th June 2021 Drawing No: DWG20210203		Checked By: Name: [Blank] Copy to Project Manager Name: [Blank]		Copy to Project Coordinator Name: [Blank] Copy to Project Engineer Name: [Blank]		Review: R0001, x E33WP Date: 17th June 2021		All dimensions are in mm Drawing Release date: 17th June 2021	
--	--	--	--	---	--	--	--	---	--	--	--	---	--

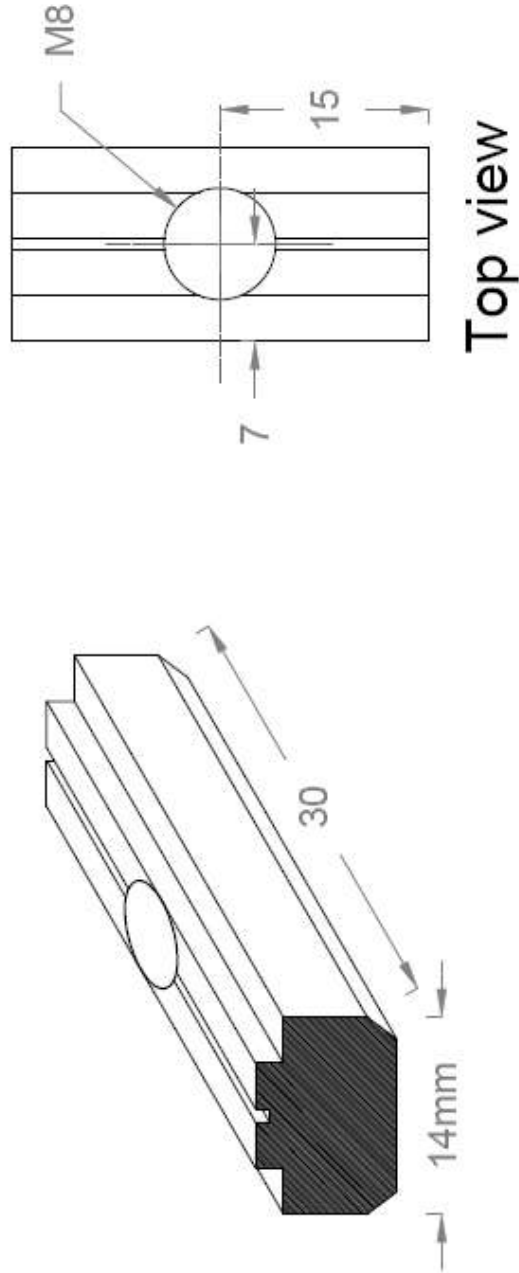
Side Clamp



Top view

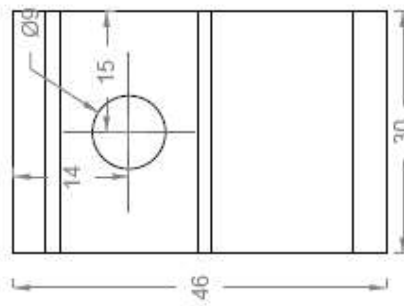
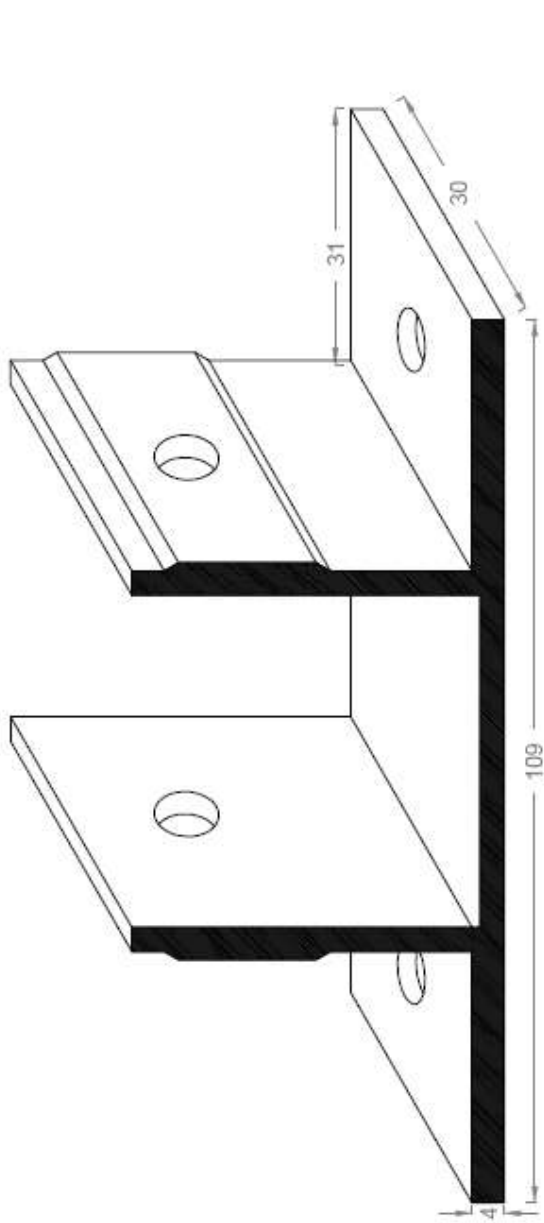
CLIENT: <i>San University of Health & Sciences</i> Project Name: <i>40000 and the 30000</i>		Project Developer		Drawing Date: 17th June 2021		Designed By: Name: _____ Sign: _____		Copy to Project Coordinator: Name: _____ Sign: _____		Review: BOMs: x 53/WP JMS: x 60/WP		All dimensions are in mm Drawing Release Date: 17th June 2021	
Site: <i>Avicenna Building, Old Campus Bldg, Sumbawa Road</i> District: <i>Malindi</i>		Drawing No.: Des/CD/HS/06		Copy to Project Manager: Name: _____ Sign: _____		Copy to Project Engineer: Name: _____ Sign: _____		Copy to Project Engineer: Name: _____ Sign: _____		Inset No.: JMS: x 60/WP		Drawing Release Date: 17th June 2021	

Slider

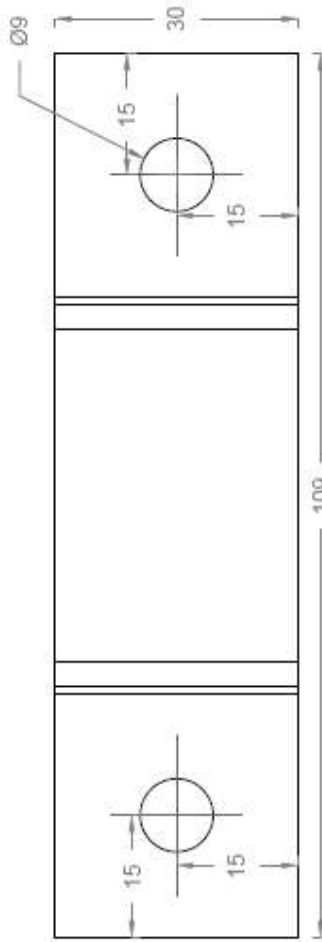


Client: Dow University of Health & Sciences	Project Developer	Drawing Date: 17th June 2021	Designed By: Name: Sign:	Copy to Project Coordinator: Name: Sign:	Scale: 80Nos. x 535Wp	All dimensions are in mm
Project Name: 43Wep GHM Tied System		Drawing No. DWG/CIHS/08	Copy to Project Manager: Name: Sign:	Copy to Project Engineer: Name: Sign:	Printer: 1/No. x 604Wp	
Site: New Pharmacy Building, COW Campus CIHS, SOMBICO Road Harare, Pakistan						Drawing Release date: 17th June 2021

U Foot



Side view



Top view

Client: New University of Health & Science	Project Developer	Project Manager	Project Engineer	Project Designer	Project Checker	Project Coordinator	Project Approver	All dimensions are in mm
Project Name: 48000 and 7000 System	Project No.: 1700 June 2021	Project No.: 1700 June 2021	Project No.: 1700 June 2021	Project No.: 1700 June 2021	Project No.: 1700 June 2021	Project No.: 1700 June 2021	Project No.: 1700 June 2021	
Site: New University Building, Old Campus DHS, Jeddah Road, Jeddah, Saudi Arabia	Project Manager: Eng. Oudat Aljohar	Project Manager: Eng. Oudat Aljohar	Project Manager: Eng. Oudat Aljohar	Project Manager: Eng. Oudat Aljohar	Project Manager: Eng. Oudat Aljohar	Project Manager: Eng. Oudat Aljohar	Project Manager: Eng. Oudat Aljohar	
	Project Engineer: Eng. Oudat Aljohar	Project Engineer: Eng. Oudat Aljohar	Project Engineer: Eng. Oudat Aljohar	Project Engineer: Eng. Oudat Aljohar	Project Engineer: Eng. Oudat Aljohar	Project Engineer: Eng. Oudat Aljohar	Project Engineer: Eng. Oudat Aljohar	
	Project Designer: Eng. Oudat Aljohar	Project Designer: Eng. Oudat Aljohar	Project Designer: Eng. Oudat Aljohar	Project Designer: Eng. Oudat Aljohar	Project Designer: Eng. Oudat Aljohar	Project Designer: Eng. Oudat Aljohar	Project Designer: Eng. Oudat Aljohar	
	Project Checker: Eng. Oudat Aljohar	Project Checker: Eng. Oudat Aljohar	Project Checker: Eng. Oudat Aljohar	Project Checker: Eng. Oudat Aljohar	Project Checker: Eng. Oudat Aljohar	Project Checker: Eng. Oudat Aljohar	Project Checker: Eng. Oudat Aljohar	
	Project Coordinator: Eng. Oudat Aljohar	Project Coordinator: Eng. Oudat Aljohar	Project Coordinator: Eng. Oudat Aljohar	Project Coordinator: Eng. Oudat Aljohar	Project Coordinator: Eng. Oudat Aljohar	Project Coordinator: Eng. Oudat Aljohar	Project Coordinator: Eng. Oudat Aljohar	
	Project Approver: Eng. Oudat Aljohar	Project Approver: Eng. Oudat Aljohar	Project Approver: Eng. Oudat Aljohar	Project Approver: Eng. Oudat Aljohar	Project Approver: Eng. Oudat Aljohar	Project Approver: Eng. Oudat Aljohar	Project Approver: Eng. Oudat Aljohar	
								Drawing Release Date: 17th June 2021