



ASTI-FM 03-11
REV 1/13 January 2020

**DOST-ASTI Bids and Awards Committee
Invitation to Bid (Public Bidding)**

ITB No:	20-04-3105	Date:	April-03-2020
PR No:	EPIIC P2-20-02-9643	Date:	February-04-2020
Source of Funds:			
Total ABC:		Php 9,527,485.00	
Time, Date & Venue of Pre-bid Conference:		April 16, 2020, 1:30 PM at DOST-ASTI	
Time and Date of Submission of Bids:		April 28, 2020, 10:00 AM	
Time, Date & Venue of Opening Bids:		April 28, 2020, 10:30 AM at DOST-ASTI	
Date of availability of Complete Set of Documents:		April 08, 2020	
Deadline of Potential Bidder's Clarifications:		April 18, 2020	
Deadline of ASTI's Supplemental Bid Bulletin:		April 21, 2020	
Delivery Schedule:			

The Advanced Science and Technology Institute (ASTI), through its Bids and Awards Committee (BAC), hereby invites all interested bidders to submit their bids for the item(s) listed below. Guidelines regarding the format, eligibility, technical and financial documents needed are described in the Instruction to Bidders of the Philippine Bidding Documents

Bidding will be conducted through open competitive bidding procedures using a non discretionary "pass/fail" criterion as specified in the 2016 R-IRR of RA 9184.

A complete set of Bidding Documents may be purchased by interested bidders upon payment of a fee for the Bidding Documents. It is also downloadable for free of charge at DOST-ASTI's website -www.asti.dost.gov.ph

For further inquiries, contact ASTI's BAC Secretariat via email atbac-sec@asti.dost.gov.ph. Interested bidders may also call the number - (632)-426-7423 and look for ASTI's BAC Secretariat.

Respectfully,

PEDRITO B. MANGAHAS
Chairperson, BAC-1

NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE(Php)	TOTAL PRICE(Php)
1	Supply and Delivery of PCB Board Cutter Specifications: 1. Ability to cut PCBs up to 3.0 mm in thickness or aluminum up to 1.5 mm. If desired, cutting of steel sheets up to 1mm or plastic up to 5 mm is possible as well as cutting of film sheet material or paper. 2. Cutting width of 500 mm. 3. Angle and scale tolerance of 0.1 mm. 4. Adjustable cutting angle and clearance. 5. Cutting width max. 530 mm 6. Two blades made of hardened and ground steel 7. Spring loaded built-in clamping unit in the front (removable) 8. Bedstop with metric scale in the right front 9. Fully adjustable back stop with metric scale for batch work (0...300 mm) 10. Angle and scale tolerance 0.1 mm 11. Durable full steel construction	1	unit	181500.00	181,500.00

Email : info@asti.dost.gov.ph

	<p>12. All important parts angular adjustable 13. Simple exchange of blades 14. Adjustable cutting angle 15. Adjustable clearance</p> <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications. Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>				
2	<p>Supply and Delivery of Brush Cleaning Equipment</p> <p>Specifications:</p> <ol style="list-style-type: none"> Oscillating brush with quick change system. Adjustable brush oscillation frequency and transport speed. Parallel height adjustment for the brushes. Equipped with finishing brushes. Full scale squeeze-off and hot air drying compartment. Working width: 300 mm Board thickness (rigid boards only): 0.3 - 5mm Board sizes max.: 300 mm x endless Brushing speed: 1360 rpm Conveyor speed: 0.2 - 2 m/min Oscillation stroke: 10 mm Oscillation frequency: 10 - 110 l/min Rinsing system water consumption: 6.8 l/min Power supply: 220 - 240 V~, 50 - 60 Hz, 1P Includes a closed loop water management with filtration. Bench top mounted with option to refit as freestanding. <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications. Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>	1	unit	968000.00	968,000.00
3	<p>Supply and Delivery of CNC-drilling and Contour Routing Equipment</p> <p>Specifications:</p> <ol style="list-style-type: none"> This is a computer controlled drilling machine with Automatic Tool Change (ATC). Allows direct processing of Excellon / Sieb & Meyer drill data or HP/GL route data for producing PCBs (drilling, cut-out-routing, isolation milling) or routing/engraving plastics, aluminum and other metals. With automatic 16-slot tool changer. Can handle 19 inch rack boards 	1	unit	1314720.00	1,314,720.00

	<p>5. Integrated mechanical milling depth limiter and pressure foot.</p> <p>6. 500-2000 watt vacuum cleaner + start adapter for vacuum cleaner.</p> <p>7. Manual, USB serial adapter, set of Allen keys.</p> <p>8. ATC air hose</p> <p>9. Can handle 300 x 400 mm PCBs.</p> <p>10. Tool change, can hold: at least 16 automatic / semi-automatic 99 tools.</p> <p>11. Power supply: 220 - 240 V~, 50 - 60 Hz, 1P. + vacuum cleaner (1500W).</p> <p>12. Range of RPM: 3,000 – 63,000</p> <p>13. Traveling speed: 1 – 9,000 mm/min</p> <p>14. Software resolution: 0.00001mm (0.01µm)</p> <p>15. Mechanical resolution: step resolution: Software selectable: 1 mil, ½ mil, ¼ mil (= 3,175 µm).</p> <p>16. Tool diameter: 0.1 mm – 3,175 mm.</p> <p>17. Position accuracy: 20 ppm (0.002%) over the entire workspace.</p> <p>18. Maximum position speed per axis: 9000mm/min (=150 mm/s).</p> <p>19. Maximum working speed per axis: 9000mm/min (=150 mm/s), individual setting on a per-tool basis, independent from position speed.</p> <p>20. Drill speed: 5 holes/s (= 18.000 holes/h= 300 holes/min).</p> <p>21. Includes full software/driver package support for drilling and milling.</p> <p>22. Board fixation: span fixing, clamp fixing, reference pin system, stack processing possible.</p> <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p> <p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>				
4	<p>Supply and Delivery of Through Hole Plating Machine</p> <p>Specifications:</p> <p>1. Accommodate board size up to 300 x 400 mm.</p> <p>2. DC gear motor with step-less variable stroke speed adjustment for bath agitation.</p> <p>3. Treatment tank capacity: 20 l.</p> <p>4. Galvanic copper tank capacity: 60 l.</p> <p>5. Integrated air injection and stepless regulated rectifier for the galvanic plating tank.</p> <p>6. Total of five (5) treatment tanks (cleaning, pre-dip, catalyst, intensifier, reserve tank) and a separate galvanic plating tank.</p> <p>7. Two treatment tanks equipped with thermostatically controlled Teflon heater.</p> <p>8. Heaters: 2 x 800 W.</p> <p>9. Rectifier: 2 x 6 V, 80 A.</p> <p>10. Power supply: 220 - 240 V~, 50 - 60 Hz, 1P</p>	1	unit	1182500.00	1,182,500.00

	<p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p> <p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>				
5	<p>Supply and Delivery of Dry Film Laminator</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Easy and fast mounting of resist rollers of nearly all coil diameters. 2. Detachable inlet table for easy access to low resist roll. 3. Adjustable laminating speed. 4. Electrically heated lamination rollers with uniform temperature distribution. 5. Separate transport rollers for non-creasing laminate transport. 6. Digital setting and read out of lamination temperature. 7. Manually adjustable lamination pressure for all common dry film resists with 3 and 5 inch core diameter. 8. Suitable for solder mask application. 9. Lamination width max.: 400 mm 10. Transport width max.: 440 mm 11. Board thickness: 0.3 – 5 mm 12. Board size: Min 50 x 50mm; max. 450mm x endless 13. Lamination speed: Adjustable 14. Resist tension: Adjustable 15. Lamination pressure: 0.2-1.2 m/min adjustable 16. Roller temperature: Adjustable 17. Temperature range: 20-120 °C 18. Power supply: 220 - 240 V~, 50 - 60 Hz, 1P <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p> <p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>	1	unit	742720.00	742,720.00
6	<p>Supply and Delivery of PCB Developing Machine</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Maximum capacity of not less than 3 sqm per 8-hour shift. 2. Maximum board size of 300 x 400 mm. 3. Line resolution of 0.100 mm or better. 4. Magnetic centrifugal pump for developer circulation. 5. Transparent lid with safety switch. 6. Removable board holder with locking position for drip-off. 7. Integrated rinsing zone with drip-off holder. 	1	unit	352000.00	352,000.00

	<p>8. Maintenance free design with self-cleaning nozzles and magnetic pump.</p> <p>9. In-built 1000W quartz heater.</p> <p>10. Power supply: 220 - 240 V~, 50-60 Hz, 1P</p> <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p> <p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>				
7	<p>Supply and Delivery of PCB Etching Machine</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Maximum capacity of not less than 3 sqm per 8-hour shift. 2. Maximum board size of 300 x 400 mm. 3. Line resolution of 0.100 mm or better. 4. Magnetic centrifugal pump for developer circulation. 5. Transparent lid with safety switch. 6. Removable board holder with locking position for drip-off. 7. Integrated rinsing zone with drip-off holder. 8. Maintenance free design with self-cleaning nozzles and magnetic pump. 9. In-built 1000W quartz heater. 10. Power supply: 220 - 240 V~, 50-60 Hz, 1P <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p> <p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>	1	unit	352000.00	352,000.00
8	<p>Supply and Delivery of PCB Stripping Machine</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Maximum capacity of not less than 3 sqm per 8-hour shift. 2. Working width of 400 mm. 3. Line resolution of 0.100 mm or better. 4. Foot-activated fresh water spray zone with splash protection. 5. Magnetic centrifugal pump for developer circulation. 6. Integrated mechanical squeeze dryer. 7. Transparent top with security switch. 8. Maintenance free design and easy disassembly and full access to all inner parts without special tools. 9. In-built 1000W quartz heater. 10. Power supply: 220 - 240 V~, 50-60 Hz, 1P <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p>	1	unit	544500.00	544,500.00

	<p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>				
9	<p>Supply and Delivery of PCB Exposure Unit</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Banks of 2 x 7 super-actinic UV tubes (20W each). 2. Independent controls for top and bottom UV light banks. 3. Suitable for exposing and curing solder mask. 4. Suitable for fine-line PCBs. 5. Maintenance free vacuum with gauge display (1380 l/hour). 6. Digital countdown timer (1 sec. to 9 min 59 sec.) with auto-reset and beeper, ammeter, and cooling fans for extended exposure time. 7. Minimum exposure area of 300 x 400 mm. 8. Power supply: 220 - 240 V~, 50 - 60Hz, 1P 9. Special reflectors for minimum undercut 10. Analogue light emission display 11. Lower exposure surface from 8 mm special glass 12. Upper exposure area from structured Mylar foil in a sturdy frame 13. Working area 570 x 300 mm 14. Built in cooling fan allows long time exposure or baking processes 15. Separate choice of upper/low exposure possible 16. Sturdy steel housing <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications. Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>	1	unit	242000.00	242,000.00
10	<p>Supply and Delivery of Photoplotter</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Stand alone unit - no separate PC required. 2. Includes full software package for additional functionalities such as film arrangement, print preview, aperture editing, negative plotting, and image mirroring. 3. Output resolution of 16256 x 12700 dpi. 4. Plotting speed of 7 mm of film width per minute. 5. Source light: Laser diode (670 nm - red). 6. Data input format: Gerber (RS 274D, RS 274X), high resolution BMP. 7. Data transfer thru USB stick or via USB cable. 8. Changeable plot speeds (at least three settings). 9. Can support board size of 300 x 400 mm. 10. Power supply: 220 - 240 V~, 50 - 60Hz, 1P 	1	unit	986370.00	986,370.00

Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.

Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.

Inclusive of all government fees, taxes and duties.

Delivery Date: On or before June 15, 2020

Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City

11	<p>Supply and Delivery of One (1) Lot Recirculating Wastewater Treatment</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Rinsing waste water treatment using ion exchange technology. Should decrease chemical oxygen demand with post treatment of etching and galvanic rinsing water. 2. Filter arrangement: a cotton pre-filter, two cation filters, and a pH neutraliser. 3. Storage sump tank capacity: 220 litres. 4. Cleaning capacity: 20 l/hour. 5. Lower and upper sump control switches. 6. Built-in hose pump. 7. In-built pH meter. 8. Integrated cotton filter candle 10 µm (active carbon filter) 9. Significant change of color when loaded with metals 10. Can additionally do PH neutralization and discharge to the drain, if desired. 11. Includes drain water recirculation. 12. Regeneration of ion exchange resins by supplier or by user at little cost 13. Drain water quality should be in accordance with Philippine regulations including but not limited to, RA 9275 - Clean Water Act, RA 1364 - Sanitary Engineering Law, and DENR AO 35 - Revised Effluent Regulations of 1990. 14. Power supply: 220 - 240 V~, 50 - 60 Hz, 1 <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p> <p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties.</p> <p>Delivery Date: On or before June 15, 2020</p> <p>Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>	lot	440,220.00		440,220.00
12	<p>Supply and Delivery of Surface Finish Chemical Nickel and Gold (ENIG)</p> <p>Specifications:</p> <ol style="list-style-type: none"> 1. Suitable for lead-free soldering, contact switches, AL-wire bonding, and high aspect ratio boards. 2. Can support board size of up to 300 x 400 mm. 3. Completely planar surface finish for surface-mounted devices. 4. E-Test compatible. 	unit	155,100.00		1,551,000.00

	<p>5. Produces PCBs with long storage time, as long as 12 months, and excellent resistance to ageing.</p> <p>6. DC gear motor with step-less variable stroke speed adjustment for bath agitation.</p> <p>7. Treatment tank capacity: 20 l.</p> <p>8. Galvanic copper tank capacity: 60 l.</p> <p>9. Integrated air injection and step-less regulated rectifier for the galvanic plating tank.</p> <p>10. Total of five (5) treatment tanks (cleaning, pre-dip, catalyst, intensifier, reserve tank) and a separate galvanic plating tank.</p> <p>11. Two treatment tanks equipped with thermostatically controlled teflon heater.</p> <p>12. Heaters: 2 x 800 W.</p> <p>13. Rectifier: 2 x 6 V, 80 A.</p> <p>14. Power supply: 220 - 240 V~, 50 - 60 Hz, 1P</p> <p>Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.</p> <p>Note 2: The Bidder shall supply all items with the specifications equal to or better than as specified above.</p> <p>Inclusive of all government fees, taxes and duties. Delivery Date: On or before June 15, 2020 Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City</p>				
13	<p>Supply and Delivery of One (1) Lot Rapid Prototyping Upgrade Accessories</p> <p>Includes:</p> <p>I. One (1) set Film Punch with the ff specifications:</p> <ol style="list-style-type: none"> 1. Additional accessory for the Photoplotter. 2. Can support films for board size up to 300 x 400 mm. 3. In-built magnifier for layout position control. 4. X and Y axes adjustment with handwheel. 5. LED light for the punch bush. 6. Includes pins for fixing the layout with reference holes. <p>II. One (1) set Dark Room with the ff specifications:</p> <ol style="list-style-type: none"> 1. Portable and easy to disassemble. 2. Provide total blackout. 3. Additional accessory for the Photoplotter. 4. One tank each for developing, fixing, and rinsing. 5. Tank accessories such as covers and hoses for emptying. 6. External dimensions: 200 x 120 x 120 cm <p>III. One (1) set Photoplotter Film Processing Unit with the ff specifications:</p> <ol style="list-style-type: none"> 1. Additional accessory for the Photoplotter. 2. One tank each for developing, fixing, and rinsing. 3. Tank accessories such as covers and hoses for emptying. <p>IV. One (1) set CNC/Milling with the ff specifications:</p> <ol style="list-style-type: none"> 1. Depth limiter 2. Pressure foot 3. USB Camera 4. Enhanced dust extraction system 	lot	669955.00	669,955.00	

- 5. Vacuum table
- 6. Protective hood and rack
- 7. Calibration board
- 8. Tool boxes

Note 1: Please refer to attached Terms of Reference (TOR) for the complete scope/specifications.

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Inclusive of all government fees, taxes and duties.

Delivery Date: On or before June 15, 2020

Must be delivered to EPDC Bldg., MIRDC Compound, Bicutan, Taguig City

TOTAL APPROVED BUDGET FOR THE CONTRACT (ABC):

Php 9,527,485.00

RESERVATION CLAUSE

The Advanced Science and Technology Institute reserves the right to accept or reject any proposal, to annul the bidding process, and to reject all proposals at any time prior to contract award, without thereby incurring any liability to the affected proponent or proponents.

