



SUPPLEMENTAL/BID BULLETIN

Procurement for the Design, Supply, Installation and Commissioning of Ultraviolet Germicidal Irradiation (UVGI) with Built-In Filtration System (PB-21-21)

2 August 2021

This **addendum No. 3** is issued to amend item in the Bidding Documents specifically in the Technical Specifications. Accordingly, this shall form an integral part of the Bid Documents:

PAGE	PARTICULARS	FROM	TO
		ORIGINAL PROVISION	AMENDED PROVISION
33	BDS Clause 12.1 (a) (ii)	The Bidder must have completed, within the period of five (5) years specified in the Invitation to Bid and ITB Clause 12.1(a)(ii), a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC. For this purpose, similar contracts shall refer to <u>Any Supply and Installation of Ultraviolet Germicidal Irradiation (UVGI).</u>	The Bidder must have completed, within the period of five (5) years specified in the Invitation to Bid and ITB Clause 12.1(a)(ii), a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC. For this purpose, similar contracts shall refer to <u>Any Supply, Design, Delivery, and Installation of Ultraviolet Germicidal Irradiation (UVGI).</u>
57-59	Sec VII. Technical Specifications	Please see attached Annex " A " for the Revised Terms of Reference (TOR) And Additional Provisions and Forms	
61-63	Sec. VIII Checklist of Technical and Financial Documents	Please see attached Annex " B " for the updated Checklist	

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BB No.3_PB-21-21

Technical Specifications

Specification	Statement of Compliance
	<p>Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a)(ii) and/or GCC Clause 2.1(a)(ii).</p>
<p style="text-align: center;">TERMS OF REFERENCE (TOR)</p> <p>Procurement for the Design, Supply, Installation and Commissioning of Ultraviolet Germicidal Irradiation (UVGI) with Built-in Filtration System, for the APO's 2nd Floor Occupied Area and Production Area to maintain an acceptable and safe indoor air quality to mitigate the spread of COVID-19 and other airborne diseases in its workplace.</p> <p>Pursuant to Department Order (DO) 224-21, series of 2021 entitled "Guidelines on the Ventilation for Workplaces and Public Transport to Prevent and Control the Spread of COVID-19."</p> <p>The contractor will provide the necessary design, supply, installation, and commissioning of Ultraviolet Germicidal Irradiation (UVGI) with Built-in Filtration system.</p> <p>I. DESIGN CRITERIA</p> <p>a. The UVGI with built-in filtration system accuracy of PM 2.5 and</p>	

ultrafine particles down to at least 0.3 microns must be supplemented with Minimum Efficiency Reporting Value (MERV) 13, or High-Efficiency Particulate Air (HEPA) filter, the UVGI system ACH value and other computations shall be of ASHRAE standard and in conformity with the DOLE guidelines #224-21 series of 2021.

- b. The contractor must conduct a risk assessment as one of the bases for the design computations and to determine size (air handling capacity), number of lamps, units required per occupant/office area.
- c. The UVGI system designed to disinfect moving air stream, kill viruses, germs, bacteria, fungus, molds and eliminate gaseous pollutants. The purification system must have an over-all efficiency of 95%. The UVC efficiency must be 90-99% kill rate efficiency supported by studies. ~~The system shall not use ozone generators, electrostatic precipitators and ionizers, or negative ion air generator as a means of disinfection.~~
- d. The lamp a high out-put UVC germicidal lamp for application requiring higher flow rates and high dosage shall produce UVC of 254nm +/-1 nm wavelength as required to achieve the required parameters. The UVC germicidal lamp shall not produce ozone or other secondary contamination. The UVGI design shall indicate UV radiation dose, and intensity of UV dose, "the dose is generally interpreted as that occurring on a single pass through the device or system", for the basis of computing the dose for the inactivation of pathogens specifically the Corona virus, since pathogens differ in their susceptibility to UVC inactivation the UVGI Contractor/Designer may seek advice or consult with a public health or medical professional, microbiologist, or other individual with knowledge of the threat or organisms of concern during the design process. UV lamps shall comply with ASHRAE standards for UV Lamps and Electronic Components use in system shall be UL Certified or other certifying bodies.
- e. The lamp shall have effective life of 9000 hours minimum at full intensity of operation.
- f. The UVGI system shall be designed to operate with 230V, 60Hz single phase AC Supply for the 2nd floor and 230V 60Hz single phase or three phase AC supply in the production area. The UVGI units of the 2nd floor electrical power will be drawn from the 2nd floor Main Power Supply. The UVGI units located in the south and north of the Production Area electrical power will be drawn from the Main Power supply on the south and north respectively, the contractor shall provide the electrical power panel boards and junction box for each unit. All the wiring, termination, tagging, ferruling shall be of industry and best practices followed.

- II. The installation shall conform with the Building Code, Mechanical Code and Electrical Code of the Philippines, and existing Local Government codes and ordinances of Quezon City.
- III. Upon receipt Notice to Proceed (NTP), the contractor shall submit within seven (7) working days its Design, drawings and specifications of UVGI with built in filtration system **duly signed by a Professional Mechanical Engineer** for the approval of APO's End-User and TWG.
- IV. All works shall commence after the approval of the design, drawing and specifications and shall be completed within sixty (60) days.
- V. The contractor must have experience of at least five (5) years specifically on design, supply, installation, and commissioning of UVGI with built in filtration system for air purification and disinfection of Buildings, Workplaces, Business Offices, Hospitals, Clinics, etc. ***(Please see Form Number 1-3 which will be accomplished by the Bidder).***
- VI. For the APO offices at the 2nd floor occupied area and the offices in the Production area, in compliance with D.O. 224-21; section 4- article B item 4-where ventilation is greatly recirculated or access to outside air is not is not feasible, air quality must be free of contaminants, germs, and viruses to mitigate the spread of covid-19 and other airborne diseases air purification and disinfection will implement UVGI Upper Room Irradiation with built in air filtration system. The unit is ceiling-suspended, louvered/shielded UVGI fixtures to confine the germicidal radiation to the entire room area above people's heads and the occupant should not be exposed to ultraviolet light exposure and radiation.
- VII. **List of Offices: (with corresponding area, ceiling height, and maximum occupant)**

	LOCATION: (SECOND FLOOR)	AREA (m2)	Ceiling Height (m)	Maximum Occupant
1	Logistics	68	2.5	15
2	PPC	64	2.5	10
3	HRAD	38	2.5	8
4	COA	29.5	2.5	4
5	BAC	42	2.5	6
6	Finance Manager	12	2.5	1
7	Corplan	24	2.5	4
8	Trustees' Office	24	2.5	5
9	GM 1	32	2.5	6
10	GM 2	21	2.5	2
11	I.T. Room	20	2.5	3
12	Purchasing	33	2.5	12
13	Accounting	84	2.5	12
14	Female Restroom North	12.5	2.5	4
15	Security	17.5	2.5	4
16	Male Restroom South	15	2.5	4
17	Female Restroom South	15	2.5	4
18	EVP	21	2.5	2
19	Chairman Staff	36	2.5	6
20	Chairman	36	2.5	2
21	Conference	68.5	2.5	20

22	Special Concerns	24.5	2.5	4
23	Sales and Marketing Extension	27	2.5	6
24	Server IT	25	2.5	4
25	Sales and Marketing	29	2.5	8
26	Treasury	18	2.5	4
27	Billing	18	2.5	7
28	Auditing	22	2.5	4
29	Pantry	39	2.5	12

	LOCATION: PRODUCTION AREA	AREA (m2)	Ceiling Height (m)	Maximum Occupant
1	Materials control	60	2.5	8
2	SPU Manual	212	4	50
3	Foreman/Inspection	24	2.5	4
4	Clinic	24	2.5	4
5	Pre-Press	78	2.5	8
6	Union office	23.5	2.5	8
7	Male Locker room	16.8	3.0	6
8	Female locker room	16.8	3.0	6

VIII. For the APO 2nd floor occupied area and the Production Area, in compliance with D.O. 224-21, for the General Ventilation, non airconditioned workplace supply of fresh air to improve indoor air quality must be free of contaminants, germs, and viruses to mitigate the spread of covid-19 and other airborne diseases, air purification and disinfection will implement UVGI Air Stream Irradiation with built-in filtration system (in-duct UVGI). The design will retrofit the existing air handling unit listed below:

	AIR HANDLING UNIT (AHU) LOCATION	AREA COVERED (m2)	AIR VOLUME FLOW (cfm)
1	Production Area: AHU-North side	(1,505 m2) 16,199 ft2	(2.26 m3/sec) 4,800 cfm
2	Production Area: AHU-South side	(1,839 m2) 19,794 ft2	(2.97 m3/sec) 6,300 cfm
3	2nd Floor AHU	(1300 m2) 14,000 ft2	(2,26 m3/sec) 4,800 cfm

SCOPE OF WORK

- The work to be performed shall comprise design, supply, delivery, installation, and putting into operation of the module to purify and sterilize the indoor air passing through to achieve a kill rate of microorganisms and an efficient clean zone.
- Testing and commissioning of the complete installation of the system for proper operation, safety and correct any adverse air quality trend.
- Briefing and training the users on the function of the system.
- Briefing with End-User personnel on preventive maintenance.

(The bidder should provide training to at least three (3) personnel of APO with corresponding Certificate and the Bidder should submit User's Manual).

- The system supplied shall be warranted against manufacturing defects

and workmanship for a period of twelve (12) months from date of commissioning. Warranty does not include servicing/maintenance and parts with lifetime.

Item	Additional Provisions in the Technical Specifications	Statement of Compliance
I. Design Phase	<p>1.1 The Supplier shall complete the services or "Scope of Works" within sixty (60) calendar days from receipt of Notice to Proceed scheduled as follows:</p> <p>1.1.1 Detailed Design Phase including review and approval by Technical Working Group (TWG-APO) and the End-User should be completed within 7 calendar days from the receipt of Notice to Proceed which shall include the following:</p> <ul style="list-style-type: none"> • Design and Layout • Detailed list of materials including finishing materials. • Other Supplementary Plans • Comments and Suggested Solutions (Design/ Layout Improvements • Bill of Quantities <p>1.1.2 The Supplier must submit One (1) set Original Copies, scaled 1:100 meters prepared in Auto CAD 2000 Format, printed/plotted in Mylar Sepia original copies and Two (2) sets Soft Copies in CD-ROM format or USB within three calendar days after the final approval of the Design.</p>	<p>Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, examples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement, either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a)(ii) and/or GCC Clause 2.1(a)(ii).</p>

II. General Condition	<p>2.1 The Supplier shall supply labor, materials, and equipment, necessary for the Supply and Installation of the said project.</p> <p>2.2 Project Process</p> <p>The APO in coordination with the Bids and Awards Committee (BAC) and TWG-APO with the assistance of the End-User shall ensure the implementation and completion of design development and installation.</p> <p>The Supplier shall provide all materials, labor, equipment, tools, instruments needed or necessary to complete the "Scope of Works":</p> <p>Detailed Design of the approved Plan, which necessarily includes the following:</p> <ul style="list-style-type: none"> • Design and Layout • Detailed list of materials including finishing materials. • Other Supplementary Plans • Risk Assessment • Comments and Suggested Solutions (Design/ Layout Improvements) <p>2.3 The Work to be done shall consist of the design and installation, complete in all details, of all works and materials incidental to the Work.</p> <p>2.4 All work shall be done in accordance with the governing Rules and Regulations.</p> <p>2.5 The installation shall be finished with first class workmanship to the satisfaction of the APO Management.</p> <p>2.6 The installation shall comply with pertinent regulations and shall adopt safety measures, such as but not limited to enclosures, shielding, coverings, warning devices, off limits signs, etc.</p> <p>2.7 The quality of materials to be furnished or work to be done shall be in accordance with industry guidelines, such as but not limited to the following: Building Code, Mechanical Code and Electrical Code of the Philippines, and existing</p>	

	<p>Local Government codes and ordinances of Quezon City.</p> <p>2.8 The Supplier, before commencing work, shall examine the proposed location of the project and all adjoining areas on which this work is in any way dependent for perfect workmanship according to the intent of these specifications. The Supplier shall report to APO any conditions which will prevent the Supplier from performing the work according to requirements. A waiver of responsibility for defective work will not be considered unless notice has been filed at the time the Supplier submitted its proposal.</p> <p>It is the intention of these Specifications to call for furnished work to be tested and ready for operation. Whenever the word "provide" is used, it shall mean "furnish and install, complete and ready for use". Minor details not usually shown or specified, but necessary for the proper and efficient installation shall be included in the work, the same as if herein specified or shown.</p> <p>2.9 <u>Permits:</u> All permits and corresponding fees as may be assessed by the local government units/regulating agencies shall be on the account of the Supplier.</p> <p>2.10 <u>Cleanliness:</u> All debris shall be disposed of by the bidder as per the rules and regulation of local authorities concerned beyond the property limits and the site shall be kept free of safety/ fire hazards.</p> <p>2.11 <u>Safety and statutory measures:</u> The bidder shall take all safety measure during the execution of the work. The APO will not accept any liability for any mishap / accident caused while working. The bidder shall indemnify and keep indemnified the APO against all losses and claims, damages, or compensation for breach of any provision of the Payment of Wages Act.</p> <p>2.12 <u>Non-Disclosure clause:</u> The Bidder shall not disclose directly or indirectly any information, materials, and details of the APO's infrastructure/systems/equipment etc., which may</p>	
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	<p>come to the possession or knowledge of the Bidder during discharging its contractual obligations in connection with this agreement, to any third party and shall at all times hold the same in strictest confidence. The Bidder shall treat the details of the contract as private and confidential, except to the extent necessary to carry out the obligations under it or to comply with applicable laws. The Bidder shall not publish, permit to be published, or disclose any particulars of the works in any trade or technical paper or elsewhere without the previous written consent of the Employer. The Bidder shall indemnify the Employer for any loss suffered by the Employer because of disclosure of any confidential information. Failure to observe the above shall be treated as breach of contract on the part of the Bidder and the Employer shall be entitled to claim damages and pursue legal remedies. The Bidder shall take all appropriate actions with respect to its employees to ensure that the obligations of non-disclosure of confidential information under this agreement are fully satisfied. The Bidder's obligations with respect to non-disclosure and confidentiality will survive the expiry or termination of this agreement for whatever reason.</p> <p>2.13 Installation</p> <ul style="list-style-type: none"> • The UVGI lamps shall be mounted on a self-supporting rigid frame and the flow of air shall be perpendicular to the direction of air flow. • All safety and certification from UL or any other accredited lab shall be attached with the technical submittal of the lamp. • Proper and suitable earthing connections to be made for the UVGI system with the existing AHU earthing system. 	
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FORMS

A. Particulars of the Bidder – FORM Number 1

No.	Particulars	To be filled by Bidder
1.	Whether Original Equipment Manufacturer	
	Or Authorized Dealer (Please submit the certificate of authority)	Indicate Yes/No for certificate of authority
2.	Composition of the firm (Whether partnership / proprietorship / Corporation)	
3.	Names of the proprietor/ partners / Directors of the firm	
4.	Registration Number (DTI or SEC Number)	
5.	Address of the Firm	
	Telephone	
	Email	
	Fax	

B. Qualification Criteria - Form Number 2

Following are our Clients for whom we have executed "eligible" works during last 5 years as per the eligibility criteria (Please submit the documentary evidence in support of the statement under Section V of the Terms of Reference).

No.	Details	Client (1)	Client (2)	Client (3)
1	Name of the Client Organization / Firm:			
	Address :			
	Name of the Contact Person:			
	His/her Mobile No. :			
	His/her Fax No.:			
	His/her Telephone No/s.:			
	His/her e-mail ID:			
2	Name of the "eligible" work with brief particulars			
3	Work order No. and date			
4	Cost of the "eligible" work as per work order / letter of award:			
5	Date of commencement			
6	Stipulated date of completion			
7	Actual date of completion			
8	Amount of compensation levied by the client for			

	delayed completion, if any:				
9	Gross value of the work completed and paid for:				
10	Whether the Bidder has been engaged by the Client for maintenance under Annual Maintenance Contract (AMC) of the commissioned system (please state Yes or No)				

C. Please also provide following details with supporting documents as per qualification criteria – FORM NUMBER 3:

1	Work experience in years (please submit old work order of any amount at least 5 years from the date of publish of this Proposal)		
2	Turnover of the firm for the last 3 years (year wise) and submit the documentary evidence in support of the same duly certified by Chartered Accountant		
	(a) 2019-20		
	(b) 2018-19		
	(c) 2017-18		

Note: Any extra details if Bidder wish to furnish may please be submitted separately. The material use shall be ISO certified or as per the standards as specified by ASHRAE.

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

- ☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
or
- ☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document,
and
- ☐ (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and
- ☐ (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- ☐ (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- ☐ (g) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; **and**
- ☐ (h) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; **and**
- ☐ (i) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable, **Accomplished Form 1, 2 and 3; and**

- ☐ (j) Original duly signed Omnibus Sworn Statement (OSS);
and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- ☐ (k) The Contractor's audited financial statements, showing, among others, the Contractor's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission;
and
- ☐ (l) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC);
or
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

Class "B" Documents

- ☐ (m) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence;
or
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

Other documentary requirements under RA No. 9184 (as applicable)

- ☐ (n) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.
- ☐ (o) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

FINANCIAL COMPONENT ENVELOPE

- ☐ (a) Original of duly signed and accomplished Financial Bid Form; **and**
- ☐ (b) Original of duly signed and accomplished Price Schedule(s).