



Jerrick Hernandez <jhernandez@guamopa.com>

Procurement Appeal Docket No. OPA -PA-21-015 University of Guam's Submission of the Procurement Record

Cynthia Guerrero <cguerrero@triton.uog.edu>

Thu, Dec 16, 2021 at 6:37 PM

To: "jhernandez@guamopa.com" <jhernandez@guamopa.com>, GPE INC <guampacific@gmail.com>

Cc: "Camacho, Anthony" <arcamacho@triton.uog.edu>

Cynthia Guerrero has shared a OneDrive for Business file with you. To view it, click the link below.

 [OPA-PA-21-015.pdf](#)

Hafa Adai:

Attached is a copy of the University of Guam's Submission of the Procurement Record in reference to Docket No. OA-PA-21-015.

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Si Yu'os ma'åse',



Cynthia T. Guerrero, MPA

Office of the Legal Counsel

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<https://www.uog.edu/administration/office-of-the-president/legal-counsel>

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ANTHONY R. CAMACHO, ESQ.
UNIVERSITY OF GUAM
UOG Station
Mangilao, Guam 96923

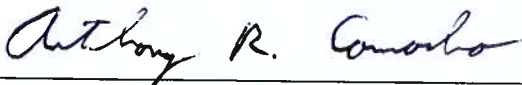
Appearing as Counsel for University of Guam

PROCUREMENT APPEAL

IN THE MATTER OF)	DOCKET NO. OPA-PA-21-015
)	
GUAM PACIFIC ENTERPRISES, INC.,)	UNIVERSITY OF GUAM'S
)	SUBMISSION OF THE
Appellant.)	PROCUREMENT RECORD
_____)	

COMES NOW, Purchasing Agency UNIVERSITY OF GUAM (the "University"), through its General Counsel, ANTHONY R. CAMACHO, ESQ., who, in accordance with 2 G.A.R., Div. 4, §12104(3) and the OPA's December 9, 2021 Notice of Receipt of Appeal of this matter, submits a complete copy of the University's Procurement Record for UOG-IFB-B21-17 (Purchasing of HVAC Equipment) which is attached herein.

SUBMITTED THIS 16th day of December, 2021 by:



ANTHONY R. CAMACHO, ESQ.
Attorney for the University of Guam

**UNIVERSITY OF GUAM
PROCUREMENT RECORD FOR**

**UOG-IFB-B21-17 (PURCHASING OF HVAC
EQUIPMENT)**



ADMINISTRATION & FINANCE
Consolidated Procurement Office

UNIVERSITY OF GUAM
INVITATION FOR BID NO. B21-17
(PURCHASING OF HVAC EQUIPMENT)

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9. Notice of Award
10. Purchase Order
11. Sedfrey Linsangan Complaint
12. Complaint Decision

Determination of Need

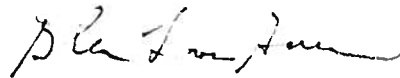
September 15, 2021

RE: Written Determination of need for HVAC Equipment.

Greetings,

This determination is made to comply with 5 G.C.A. §5249(e) and Section 3.27.3.5, UOG Procurement Regulations. The University of Guam's Facilities Management & Services has determined that the purchasing of new HVAC equipment for UOG's RFK Library, PIP/GIE Building, Science Building, English Communication Building, the Computer Center, the Lectur Hall Auditorium, Marine Lab, and the HSS Building are required to replace old and worn out units that require greater maintenance to operate, and to maintain a healthy climate in those buildings.

SUBMITTED this 15th day of September, 2021 by:



GLENN A. LEON GUERRERO, MBA.
Director, UOG Facilities Management & Services

September 15, 2021

RE: Written Determination to solicit for and use a Multi-Term Contract for UOG-IFB-B21-17 (Purchasing of HVAC Units for UOG)

Greetings,

This determination is made to comply with Section 3.21.4, UOG Procurement Regulations. Prior to the issuance of the UOG-IFB-B21-17 (Purchasing of HVAC Units for UOG), the undersigned hereby determined the following:

1. The furnishing of long-term optional services for the HVAC Units, such as services for maintenance and upkeep of the new HVAC Units, services for their disposal, and a replacement or trade in program are required to meet the University's need for new HVAC Units.
2. A multi-term contract will serve the best interest of the University by promoting economies in the University's procurement because a change of the vendor providing the optional services stated above from one fiscal year to the next involves phase-in and phase-out costs during transition periods.
3. The cost and burden of contract solicitation, award, and administration of procuring contractors to perform the optional services described above may be reduced with a multi-term contract.

SUBMITTED this 15th day of September, 2021 by:



EMILY G. GUMATAOTAO
Supply Management Administrator

Log of Communication

UNIVERSITY OF GUAM
COMMUNICATION LOG FOR IFB OR RFP

BID/RFP NO. B21-17	FULL NAME (PERSON CONTACTED)	EMAIL ADDRESS (PRINT NEATLY)	DATE	TIME	PURPOSE/SUBJECT OF EMAIL
	CARMELITA BLAS	cbblas@urion.uog.edu	9/21/2021	1:44p	UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG
	Leon Guerrero, Glenn	glennlg@urion.uog.edu	9/21/2021	3:33p	Re: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG
	John Ryan	jryan@urion.uog.edu	10/22/2021	12:18p	Re: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
JB MODERN TECH	Deo Lagman	dlagman@jbmoderntech.com	10/22/2021	2:38p	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony.s@jwsquam.com	10/22/2021	2:39p	UOG BID NO. B21-17-REQUEST FOR SITE INSPECTION AND PREBID CONFERENCE
UOG	UOG PROCUREMENT	uog.bids@urion.uog.edu	10/22/2021	2:41p	RE: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
JRN GUAM	Teddy Garcia	Teddygarcia@imgu.com	10/22/2021	2:59p	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
UOG	UOG PROCUREMENT	uog.bids@urion.uog.edu	10/25/2021	9:07a	UOG IFB B21-17 (Purchasing of HVAC Equipment)
MEDPHARM	Arthur Adriano	arthur.adriano@medpharmusa.net	10/25/2021	9:18a	UOG IFB B21-17 (Purchasing of HVAC Equipment)
MEDPHARM	Arthur Adriano	arthur.adriano@medpharmusa.net	10/25/2021	9:31a	UOG IFB B21-17 (Purchasing of HVAC Equipment)
Ability Solutions	Nadia Atalig	nadia@abilitysolutionsllc.biz	10/25/2021	10:04	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
MEDPHARM	Arthur Adriano	arthur.adriano@medpharmusa.net	10/25/2021	10:19	UOG IFB B21-17 (Purchasing of HVAC Equipment)
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony.s@jwsquam.com	10/25/2021	12:11	RE: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
JRN GUAM	Teddy Garcia	Teddygarcia@imgu.com	10/25/2021	1:57p	UOG BID NO. B21-17-REQUEST FOR SITE INSPECTION AND PREBID CONFERENCE
UOG	Leon Guerrero, Glenn	glennlg@urion.uog.edu	10/25/2021	2:09p	FW: UOG BID NO. B21-17-REQUEST FOR SITE INSPECTION AND PREBID CONFERENCE
	Sandra McAviffie	Smcaviffie@urion.uog.edu	10/25/2021	2:16p	FW: UOG BID NO. B21-17-REQUEST FOR SITE INSPECTION AND PREBID CONFERENCE
MEDPHARM	Arthur Adriano	arthur.adriano@medpharmusa.net	10/25/2021	5:19p	RE: UOG IFB B21-17 (Purchasing of HVAC Equipment)

UNIVERSITY OF GUAM

COMMUNICATION LOG FOR IFB OR RFP

One Pacific Group	Alex Pearson	alex.pearson@onepacgrp.com	10/26/2021	1045a	UOG IFB B21-17 : Purchasing of HVAC equipment		
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	10/26/2021	357p	UOG IFB B21-17 : Purchasing of HVAC Equipment		
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	10/26/2021	406p	UOG IFB B21-17 : Purchasing of HVAC Equipment		
JRN GUAM	Teddy Garcia	teddygarcia@irngu.com	10/27/2021	935a	UOG IFB B21-17 : Purchasing of HVAC Equipment		
JWS Refrigeration & A/C LI	Anthony Scragg	anthony.s@jwsquam.com	10/27/2021	936a	UOG IFB B21-17 : Purchasing of HVAC Equipment		
JWS Refrigeration & A/C LI	Anthony Scragg	anthony.s@jwsquam.com	10/27/2021	943a	UOG IFB B21-17 : Purchasing of HVAC Equipment		
MJM International	Joeann Pangelinan	joeann@mjmnetc.com	10/29/2021	1051a	UOG IFB B21-17 : Purchasing of HVAC Equipment		
		arnel.francoisco@carrier.com	10/29/2021	1052a	UOG IFB B21-17 : Purchasing of HVAC Equipment		
		PROCUREMENT OFFICE	10/29/2021	1057a	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1		
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	10/29/2021	1111a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1		
JRN GUAM	Teddy Garcia	Teddygarcia@irngu.com	10/29/2021	1134a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1		
JWS Refrigeration & A/C LI	Anthony Scragg	anthony.s@jwsquam.com	10/29/2021	1156a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1		
JB MODERN TECH	Deo Lagman	dlagman@jbmoderntech.com	10/29/2021	224p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1		
MJM International	Joeann Pangelinan	joeann@mjmnetc.com	10/29/2021	228p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2		
		PROCUREMENT OFFICE	10/29/2021	445p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2		
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	10/29/2021	459p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2		
JB MODERN TECH	Deo Lagman	dlagman@jbmoderntech.com	10/29/2021	502p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2		
MJM International	Joeann Pangelinan	joeann@mjmnetc.com	10/29/2021	536p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2		
MJM International	Joeann Pangelinan	joeann@mjmnetc.com	10/29/2021	546p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2		
	John Ryan	jryan@me.com	10/29/2021	609p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2		
MJM International	Caroline Delos Reyes	caroline@mjmnetc.com	11/1/2021	420p	UOG IFB No. B21-17		
JWS Refrigeration & A/C LI	Anthony Scragg	anthony.s@jwsquam.com	11/2/2021	1224p	JWS Signed Amendment 2 and Updated Distribution Registry Form		

UNIVERSITY OF GUAM

COMMUNICATION LOG FOR IFB OR RFP

JRN GUAM	Teddy Garcia	Teddygarcia@irngu.com	11/4/2021	9:15a	RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2			
Green Energy Solutions	Lynn Scott	lynn@gesworld.com	11/4/2021	12:13p	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT			
	Chuck Sanchez	chuck.deesonis@gmail.com	11/4/2021	5:03p	RE: UOG BID NO B21-17			
JWS Refrigeration & A/C LI	Anthony Scragg	anthony@jwsquam.com	11/7/2021	12:00p	RFIs for Bid No. B21-17			
JWS Refrigeration & A/C LI	Anthony Scragg	anthony@jwsquam.com	11/8/2021	1:00:4a	Re: RFIs for Bid No. B21-17			
	Leon Guerrero, Glenn	glehnl@urion.uog.edu	11/8/2021	11:47a	Fw: RFIs for Bid No. B21-17			
	Leon Guerrero, Glenn	glehnl@urion.uog.edu	11/8/2021	11:50a	Fw: RFIs for Bid No. B21-17			
Green Energy Solutions	Lynn Scott	lynn@gesworld.com	11/8/2021	11:53a	RE: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT			
	John Leon Guerrero	johnlg@urion.uog.edu	11/8/2021	12:15p	Re: RFIs for Bid No. B21-17			
Green Energy Solutions	Lynn Scott	lynn@gesworld.com	11/8/2021	1:14p	Re: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT			
Green Energy Solutions	Lynn Scott	lynn@gesworld.com	11/8/2021	1:17p	Re: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT			
	John Leon Guerrero	johnlg@urion.uog.edu	11/8/2021	1:19p	Fw: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT			
Green Energy Solutions	Lynn Scott	lynn@gesworld.com	11/8/2021	1:59p	Re: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT			
Green Energy Solutions	Lynn Scott	lynn@gesworld.com	11/8/2021	2:08p	Re: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT			
Ability Solutions	Carmille Zapanta	carmille@abilitiesolutionsllc.biz	11/9/2021	3:14p	RFI UOG B21-17			
Ability Solutions	Carmille Zapanta	carmille@abilitiesolutionsllc.biz	11/10/2021	1:00:2a	RFI UOG B21-17			
Ability Solutions	Carmille Zapanta	carmille@abilitiesolutionsllc.biz	11/10/2021	1:02:0a	Re: RFI UOG B21-17			
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	11/11/2021	4:59p	IFB No. B21-17			
	John Leon Guerrero	johnlg@urion.uog.edu	11/12/2021	3:00P	B21-17 : RFI/RFI Last day today			
	John Leon Guerrero	johnlg@urion.uog.edu	11/15/2021	10:12A	B21-17 : RFI/RFI Last day today			

UNIVERSITY OF GUAM

COMMUNICATIONS EQUIPMENT FOR BUNKER HVAC EQUIPMENT

Carrier	Bernard Llerenas	bernard.llernas2@carrier.com	11/15/2021	1017a	
	John Leon Guerrero	johnlg@uog.edu	11/16/2021	738a	Re: RFIs for Bid No. B21-17
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony.s@jwsquam.com	11/16/2021	738a	Follow up on RFI for UOG Bid B21-17
Carrier	Bernard Llerenas	bernard.llernas2@carrier.com	11/16/2021	757a	RE: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony.s@jwsquam.com	11/16/2021	932a	Re: Follow up on RFI for UOG Bid B21-17
	Leon Guerrero, Glenn	glennlg@uog.edu	11/16/2021	408p	Re: RFIs for Bid No. B21-17
	Leon Guerrero, Glenn	glennlg@uog.edu	11/16/2021	444p	Re: RFIs for Bid No. B21-17
	Leon Guerrero, Glenn	glennlg@uog.edu	11/17/2021	421p	Re: RFIs for Bid No. B21-17
Carrier	Bernard Llerenas	bernard.llernas2@carrier.com	11/17/2021	354p	RE: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT - Carrier Guam request for information RFI
	Leon Guerrero, Glenn	glennlg@uog.edu	11/18/2021	1219a	Re: RFIs for Bid No. B21-17
Carrier	Bernard Llerenas	bernard.llernas2@carrier.com	11/18/2021	1232a	Re: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT - Carrier Guam request for information RFI
	Leon Guerrero, Glenn	glennlg@uog.edu	11/18/2021	330a	Re: RFIs for Bid No. B21-17
Carrier	Bernard Llerenas	bernard.llernas2@carrier.com	11/18/2021	747a	Re: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT - Carrier Guam request for information RFI
	Leon Guerrero, Glenn	glennlg@uog.edu	11/18/2021	816a	Re: RFIs for Bid No. B21-17
	Leon Guerrero, Glenn	glennlg@uog.edu	11/18/2021	844a	Re: RFIs for Bid No. B21-17
	Leon Guerrero, Glenn	glennlg@uog.edu	11/18/2021	848a	Re: RFIs for Bid No. B21-17
	Leon Guerrero, Glenn	glennlg@uog.edu	11/18/2021	945a	Re: RFIs for Bid No. B21-17

UNIVERSITY OF GUAM

			GAMMISB21-17	RFI FOR RFP	FOR RFP	FOR RFP	FOR RFP	
	John Leon Guerrero	johnljg@triton.uog.edu	11/18/2021	414p				
	John Leon Guerrero	johnljg@triton.uog.edu						
	UOG PROCUREMENT	uog.bids@triton.uog.edu	11/19/2021	936a				UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3
	Carrier	Camacho, Rochelle						
		rochelle.camacho2@carrier.com	11/19/2021	1004a				RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3
	Carrier	Bernard Liarenas						
		bernard.liarenas2@carrier.com	11/19/2021	1004a				RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3
	Green Energy Solutions	Lynn Scott						
		lynn@gesiworld.com	11/19/2021	1106a				RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3
	GPE, INC	Sedfrey Lingsangan						
		quampacific@gmail.com	11/19/2021	1114a				RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3
	JWS Refrigeration & A/C Lt	Anthony Scragg						
		anthony@jwsquam.com	11/19/2021	210p				UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)
	GPE, INC	Sedfrey Lingsangan						
		quampacific@gmail.com	11/19/2021	422p				RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3
	Carrier	Bernard Liarenas						
		bernard.liarenas2@carrier.com	11/19/2021	423p				RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)
	Green Energy Solutions	Lynn Scott						
		lynn@gesiworld.com	11/19/2021	430p				RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)
	JB MODERN TECH	Deo Lagman						
		dlagman@jbmoderntech.com	11/19/2021	455p				RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)
	Green Energy Solutions	Lynn Scott						
		lynn@gesiworld.com	11/19/2021	504p				RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3
	GPE, INC	Sedfrey Lingsangan						
		quampacific@gmail.com	11/19/2021	621p				
	GPE, INC	Sedfrey Lingsangan						
		quampacific@gmail.com	11/22/2021	348p				RE: UOG IFB B21-17
	UOG PROCUREMENT	uog.bids@triton.uog.edu	11/22/2021	500p				UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4
	Carrier	Bernard Liarenas						
		bernard.liarenas2@carrier.com	11/22/2021	520p				RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

UNIVERSITY OF GUAM

COMMUNICATION LOG FOR IFB OR RFP

Green Energy Solutions	Lynn Scott	lynn@gesiworld.com	11/22/2021	552p	RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4			
JWS Refrigeration & A/C L	Anthony Scragg	anthony@jwsquam.com	11/23/2021	1109a	UOG IFB No. B21-17, Signed Amendment 4			
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	11/23/2021	1105a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4			
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	11/23/2021	1237a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4			
JB Modern Tech	Gene Bangayan	GeneBangayan@bjmoderntech.c	11/23/2021	519p	UOG IFB NO. B21-17			
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	11/24/2021	905a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4			
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	11/24/2021	911a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4			
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	11/24/2021	914a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4			
JB Modern Tech	Gene Bangayan	GeneBangayan@bjmoderntech.c	11/24/2021	223p	FW: UOG IFB NO. B21-17			
JB Modern Tech	Gene Bangayan	GeneBangayan@bjmoderntech.c	11/24/2021	324p	Re: UOG IFB NO. B21-17			
Green Energy Solutions	Lynn Scott	lynn@gesiworld.com	11/24/2021	338p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5			
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	11/24/2021	343p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5			
JB Modern Tech	Gene Bangayan	GeneBangayan@bjmoderntech.c	11/24/2021	405p	Re: UOG IFB NO. B21-17			
Carrier	Bernard Llerenas	bernard.llerenas2@carrier.com	11/24/2021	405p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5			
JB MODERN TECH	Deo Lagman	dlagman@bjmoderntech.com	11/24/2021	415p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5			
Carrier	Camacho, Rochelle	rochelle.camacho2@carrier.com	11/24/2021	428p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4			

UNIVERSITY OF GUAM

		COMMUNICATIONS EQUIPMENT		PURCHASING OF HVAC EQUIPMENT - AMENDMENT 5	
Carrier	Camacho, Rochelle	rochelle.camacho2@carrier.com	11/24/2021	429p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony@iwsquam.com	11/24/2021	440p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5
All Business Enterprise	Nelia Bangayan	nbangayan@ibmoderntech.com	11/24/2021	446p	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
One Pacific Group	Alexandra Pearson	alex.pearson@onepacgrp.com	11/29/2021	744a	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5
Tony's Workshop	Michael Ecalhea	mike@tonysworkshop.com	11/29/2021	1134a	Fw: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
	Emer	engineers.surafesolutions@gmail.com	11/29/2021	1151a	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
	Emer	engineers.surafesolutions@gmail.com	11/29/2021	151p	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
	Rey Leung	checkpointinternational@gmail.com	11/29/2021	212p	UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
Tony's Workshop	Michael Ecalhea	mike@tonysworkshop.com	11/30/2021	651a	Fw: UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony@iwsquam.com	12/3/2021	1020a	UOG IFB No. B21-17 submission inquiries
	UOG PROCUREMENT	uog.bids@triton.uog.edu	12/3/2021	439p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6
GPE, INC	Sedfrey Lingsangan	guampacific@gmail.com	12/3/2021	447p	UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6
JB MODERN TECH	Deo Lagman	dlagman@ibmoderntech.com	12/3/2021	533p	RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6
All Business Enterprise	Nelia Bangayan	nbangayan@ibmoderntech.com	12/3/2021	534p	Amendment 6
MJM International	Caroline Delos Reyes	caroline@mimnetc.com	12/4/2021	948p	UOG IFB B21-17: Amendment 3 , 4, 5 & 6
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony@iwsquam.com	12/6/2021	808a	RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6
	UOG PROCUREMENT	uog.bids@triton.uog.edu	12/6/2021	818a	UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link
GPE, INC	Sedfrey Lingsangan	guampacific@gmail.com	12/6/2021	1010a	Fwd: Notice of Protest, Bid 21-17

UNIVERSITY OF GUAM

		COMMUNICATIONS FOR BIDDING		
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony@jwsquam.com	12/6/2021 1102a	Equipment - Bid Opening & Bid Submission Link
	UOG PROCUREMENT	uog.bids@triton.uog.edu	12/6/2021 1107a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony@jwsquam.com	12/6/2021 1119a	UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link
All Business Enterprise	Nelia Bangayan	nbangayan@ibmodemtech.com	12/6/2021 1206p	UOG Bid B21-17
All Business Enterprise	Nelia Bangayan	nbangayan@ibmodemtech.com	12/6/2021 1216p	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link
Tony's Workshop	Michael Ecalnea	mike@tonysworkshop.com	12/6/2021 1226p	RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link
All Business Enterprise	Nelia Bangayan	nbangayan@ibmodemtech.com	12/6/2021 125p	Re: Nelia Bangayan uploaded new files to your request for B21-17 BID SUBMISSION
Tony's Workshop	Michael Ecalnea	mike@tonysworkshop.com	12/6/2021 126p	Re: Mike Ecalnea uploaded new files to your request for B21-17 BID SUBMISSION
JWS Refrigeration & A/C Lt	Anthony Scragg	anthony@jwsquam.com	12/6/2021 127p	Re: Anthony Scragg uploaded new files to your request for B21-17 BID SUBMISSION
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	12/6/2021 305p	Notice of Protest, Bid 21-17
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	12/6/2021 338p	Re: Notice of Protest, Bid 21-17
	UOG PROCUREMENT	uog.bids@triton.uog.edu	12/6/2021 503p	UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD
Green Energy Solutions	Lynn Scott	lynn@qesworld.com	12/6/2021 608p	RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	12/7/2021 728a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	12/7/2021 1011a	Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD
GPE, INC	Sedfrey Lingsangan	quampacific@gmail.com	12/7/2021 1016a	IFB B 21-17, HVAC equipment

UNIVERSITY OF GUAM

COMMUNICATIONS CENTER					
JWS Refrigeration & A/C Ltd	Robert Perez	robertp@jwsquam.com	12/10/2021	847a	RE: Notice of Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment
JB Modern Tech	Gene Bangayan	GeneBangayan@jbmoderntech.com	12/10/2021	946a	RE: BID IFB B21-17
All Business Enterprise	Nella Bangayan	nbangayan@jbmoderntech.com	12/10/2021	1019a	RE: UOG Bid Result - IFB B21-17
JB Modern Tech	Gene Bangayan	GeneBangayan@jbmoderntech.com	12/10/2021	1059a	FW: EMAIL FOIA : BID IFB B21-17
JWS Refrigeration & A/C Ltd	Robert Perez	robertp@jwsquam.com	12/10/2021	439p	RE: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment
	UOG PROCUREMENT	uog_bids@utriton.uog.edu	12/10/2021	909a	Re: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment
	UOG PROCUREMENT	uog_bids@utriton.uog.edu	12/10/2021	1114a	Re: Notice of Protest, Bid 21-17
GPE, INC	Setfrey Lingsangan	guampacific@gmail.com	12/10/2021	1124a	Re: Notice of Protest, Bid 21-17

Copies of Communication

Re: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Tue 9/21/2021 3:33 PM

To: Carmelita Blas <cgbias@triton.uog.edu>; Christine Mabayag <ckamm@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>; Dr. Anita Enriquez <abe@triton.uog.edu>; Randall V. Wiegand <wiegandr@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Rachel F. Cubacub <rachelcf@triton.uog.edu>; Cynthia Guerrero <cguerrero@triton.uog.edu>; Leah Aquino <leah@triton.uog.edu>; MERLITA AZICATE <mazicate@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>; June Calvo <jcalvo@triton.uog.edu>

Thank you Carm.

From: Carmelita Blas <cgbias@triton.uog.edu>

Sent: Tuesday, September 21, 2021 1:44 PM

To: Christine Mabayag <ckamm@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>; Dr. Anita Enriquez <abe@triton.uog.edu>; Randall V. Wiegand <wiegandr@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Rachel F. Cubacub <rachelcf@triton.uog.edu>; Cynthia Guerrero <cguerrero@triton.uog.edu>; Leah Aquino <leah@triton.uog.edu>; MERLITA AZICATE <mazicate@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>; June Calvo <jcalvo@triton.uog.edu>

Subject: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Thank you, Chris!! Forwarding to all parties involved for your records and further processing at Procurement.

Carm

From: Christine Mabayag <ckamm@triton.uog.edu>

Sent: Tuesday, September 21, 2021 11:37 AM

To: Carmelita Blas <cgbias@triton.uog.edu>

Subject: Re: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Attached is the fully executed RFP.

Si Yu'os ma'ase',

Chris Kamminga Mabayag
Executive Secretary



Office of the President
Tel: (671) 735-2990/1
Fax: (671) 734-2296
ckamm@triton.uog.edu
<https://www.uog.edu>

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From: Carmelita Blas <cgbias@triton.uog.edu>
Sent: Monday, September 20, 2021 05:15 PM
To: Christine Mabayag <ckamm@triton.uog.edu>
Subject: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Hi Chris,

Please forward to the BOR Chair and Treasurer for approval signatures on this RFP bid valued at \$647,574 and send back to me for distribution to all parties involved.

Thank you,
Carm

--
Si Yu'os ma'åse',

CARMELITA BLAS
Administrative Officer



ADMINISTRATION AND FINANCE

Office: +1 (671) 735-2900

cgbias@triton.uog.edu

<https://www.uog.edu/administration/administration-finance/>

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Re: UOG Bid No. B21-17

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Tue 10/26/2021 1:52 PM

To: Anthony Scragg <anthony@jwsguam.com>

Cc: rogerj@jwsguam.com <rogerj@jwsguam.com>; Gumataotao, Emily <eggumataotao@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Håfa Adai Mr. Scragg,

Thank you for your interest in our Bid. As you know, we are in the middle of a procurement and thus have to follow our procurement protocol. Kindly email your questions or concerns to Ms. Emily Gumataotao at eggumataotao@triton.uog.edu. She will ensure your questions are answered.

From: Anthony Scragg <anthony@jwsguam.com>

Sent: Tuesday, October 26, 2021 1:45 PM

To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: rogerj@jwsguam.com <rogerj@jwsguam.com>

Subject: UOG Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good Afternoon Mr. Leon Guerrero,

I work for JWS Refrigeration & A/C Guam, and wanted to reach out to you today in regards to a recent bid opportunity for HVAC equipment purchases put out by University of Guam's FMS Department.

Could you help point me in the right direction of who I can contact in regards to questions/RFIs' regarding the bid's scope of work, equipment specifications, and the report by Amorient.

I would greatly appreciate getting in touch with someone by phone or email this week, so our team can began working on our bid submission asap for you guys. Looking forward to hearing back soon.

Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

"This e-mail and any attachments to it (the "Communication") is, unless otherwise stated, confidential, may contain copyright material and is for the use only of the intended recipient. If you receive the Communication in error, please notify the sender immediately by return e-mail, delete the Communication and the return e-mail, and do not read, copy, retransmit or otherwise deal with it. Any views expressed in the Communication are those of the individual sender only. JWS (company) does not accept liability in connection with the integrity of or errors in the Communication, computer virus, data corruption, interference or delay arising from or in respect of the Communication."

UOG IFB B21-17 (Purchasing of HVAC Equipment)

UOG Procurement Bids <uog.bids@triton.uog.edu>

Tue 10/26/2021 10:45 AM

To: alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>

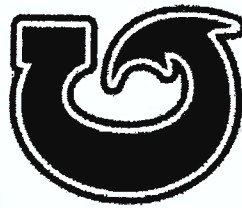
Cc: Procurement Office <procurementoffice@triton.uog.edu>

Håfa Adai & Good Morning,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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RE: UOG IFB B21-17 (Purchasing of HVAC Equipment)

Arthur C. Adriano <arthur.adriano@medpharmusa.net>

Mon 10/25/2021 5:19 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Ramil Ilagan <ramil.ilagan@medpharmusa.net>; Shiela Duay <shiela.duay@medpharmusa.net>; Joshua Soto <joshua.soto@medpharmusa.net>; Jon Bigornia <jon.bigornia@medpharmusa.net>; Mychael Sheen Peralta <mychael.peralta@medpharmusa.net>; Ruth Feril <ruth.feril@medpharmusa.net>; Jose Marimla <jose.marimla@medpharmusa.net>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear UOG Procurement,

Thank you for providing the copy of the subject IFB.

With Best Regards,

Arthur C. Adriano | Medical Equipment Sales Specialist | **MedPharm Group of Companies** |

138 Kayen Chando St., Dededo, Guam 96929 USA | **Mailing:** P.O. Box 11864, Tamuning, Guam 96931 USA | **Tel:** +1 671.632.6000 **ext. 710** | **Fax:** +1 671.632.9000 | **E-mail:** arthur.adriano@medpharmusa.net | **Website:** <http://www.medpharmusa.net/>

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, October 25, 2021 8:19 AM

To: Arthur C. Adriano <arthur.adriano@medpharmusa.net>

Cc: Ramil Ilagan <ramil.ilagan@medpharmusa.net>; Shiela Duay <shiela.duay@medpharmusa.net>; Joshua Soto <joshua.soto@medpharmusa.net>; Jon Bigornia <jon.bigornia@medpharmusa.net>; Mychael Sheen Peralta <mychael.peralta@medpharmusa.net>; Ruth Feril <ruth.feril@medpharmusa.net>; Jose Marimla <jose.marimla@medpharmusa.net>; Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 (Purchasing of HVAC Equipment)

Háfa Adai & Good Morning,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Arthur C. Adriano <arthur.adriano@medpharmusa.net>

Sent: Monday, October 25, 2021 9:30 AM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: Ramil Ilagan <ramil.ilagan@medpharmusa.net>; Shiela Duay <shiela.duay@medpharmusa.net>; Joshua Soto <joshua.soto@medpharmusa.net>; Jon Bigornia <jon.bigornia@medpharmusa.net>; Mychael Sheen Peralta <mychael.peralta@medpharmusa.net>; Ruth Feril <ruth.feril@medpharmusa.net>; Jose Marimla

<jose.marimla@medpharmusa.net>; Procurement Office <procurementoffice@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: RE: UOG IFB B21-17 (Purchasing of HVAC Equipment)

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear Emily,

I was able to send in my request and got the attached response. Hoping to get the PDF file the earliest so we can evaluate and make a determination to participate and pay the Non-Refundable Fee. Thank you, keep safe.

With Best Regards,

Arthur C. Adriano | Medical Equipment Sales Specialist | **MedPharm Group of Companies** |
138 Kayen Chando St., Dededo, Guam 96929 USA | **Mailing:** P.O. Box 11864, Tamuning, Guam 96931 USA | **Tel:** +1 671.632.6000 **ext. 710** | **Fax:** +1
671.632.9000 | **E-mail:** arthur.adriano@medpharmusa.net | **Website:** <http://www.medpharmusa.net/>

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From: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Sent: Monday, October 25, 2021 7:18 AM
To: Arthur C. Adriano <arthur.adriano@medpharmusa.net>
Cc: Ramil Ilagan <ramil.ilagan@medpharmusa.net>; Shiela Duay <shiela.duay@medpharmusa.net>; Joshua Soto <joshua.soto@medpharmusa.net>; Jon Bigornia <jon.bigornia@medpharmusa.net>; Mychael Sheen Peralta <mymichael.peralta@medpharmusa.net>; Ruth Feril <ruth.feril@medpharmusa.net>; Jose Marimla <jose.marimla@medpharmusa.net>; Procurement Office <procurementoffice@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: RE: UOG IFB B21-17 (Purchasing of HVAC Equipment)

Háfa Adai & Good Morning,

Please click on GREEN button that states [Click here to request for OPEN IFB/RFP Documents] (see screenshot), right below "Important Notes" on our website to request for bid package. Thank you!

Procurement Office

Bids & RFPS

Awarded

Resources

Contact

Business Office

The University of Guam Procurement Office purchases most goods and services in its course of business that support educational, research, and organizational requirements for our students, faculty and staff. UOG references methods of procurement in accordance with all applicable Government of Guam Procurement laws & UOG Regulations. The office is responsible in preparing Invitation for Bids, Request for Proposals, and Request for Quotations.

Below is the list of the bids and proposals issued for the University as advertised in PON and/or POST. Interested parties may request to obtain an IFB/RFP package by clicking button below to request for IFB/RFP documents.

Important Notes:

- A non-refundable fee of \$25.00 is required ONLY if you wish to submit a bid or proposal. This fee may be paid at the Cashier Services located at the UOG Administration Building Mon-Fri from 8 am - 4 pm. Pay by phone is also available by calling 735-2923/45/46, please reference Bid number and Bid title when making payment.
- Requesting an IFB/RFP package automatically registers your information with the UOG Procurement Office. Please ensure your information entered on form is accurate so ALL notices regarding any changes or updates to the IFB/RFP is received. UOG will not be liable for failure to provide notice to any party whose information was not entered accurately on form.
- All correspondences regarding any IFB/RFP should be addressed to uog.bids@triton.uog.edu.

[Click here to request for OPEN IFB/RFP Documents](#)

Bidding Number	Title	Date Posted	Submission Deadline	Status
UOG IFB B21-17	PURCHASING OF HVAC EQUIPMENT	October 22, 2021	November 22, 2021	OPEN
UOG RFP NO. P21-07	INTERIM CHIEF INFORMATION OFFICER SERVICES ---Amendment No. 1--- ---Amendment No. 2---	September 24, 2021	October 22, 2021	OPEN
UOG RFP NO. P21-06	COMPENSATION STUDY FOR PTEEF EMPLOYEE CLASS	September 22, 2021	October 13, 2021	CLOSED
UOG RFP NO. P21-01	ARCHITECTURAL & ENGINEERING (BASIC) SERVICES ---Amendment No. 1--- ---Amendment No. 2---	September 3, 2021	November 5, 2021	OPEN
UOG RFP NO. P21-05	PACIFIC ISLANDS SMALL BUSINESS DEVELOPMENT CENTER NETWORKS (PISBDGN) PROFESSIONAL SERVICES	July 30, 2021	August 13, 2021	CLOSED

Si Yu'os ma'ase' & Have a nice day!

Respectfully,
Emily G. Gumataotao
 SUPPLY MANAGEMENT ADMINISTRATOR
 PROCUREMENT | ADMIN & FINANCE
 Office: 671-735-2925
 Fax: 671-735-3010
eggumataotao@triton.uog.edu
Procurementoffice@triton.uog.edu

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From: Arthur C. Adriano [mailto:arthur.adriano@medpharmusa.net]
Sent: Monday, October 25, 2021 9:06 AM
To: Procurement Office <procurementoffice@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Ramil Ilagan <ramil.ilagan@medpharmusa.net>; Shiela Duay <shiela.duay@medpharmusa.net>; Joshua Soto <joshua.soto@medpharmusa.net>; Jon Bigornia <jon.bigornia@medpharmusa.net>; Mychael Sheen Peralta <mychael.peralta@medpharmusa.net>; Ruth Feril <ruth.feril@medpharmusa.net>; Jose Marimla <jose.marimla@medpharmusa.net>
Subject: UOG IFB B21-17 (Purchasing of HVAC Equipment)

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear UOG Procurement Office,

This is to request access to download PDF File of the subject IFB. I visited your web site and was able to find only the attached bid ads.

Looking forward to your earliest response. Thank you, keep safe.

With Best Regards,

Arthur C. Adriano | Medical Equipment Sales Specialist | MedPharm Group of Companies |
138 Kayen Chando St., Dededo, Guam 96929 USA | **Mailing:** P.O. Box 11864, Tamuning, Guam 96931 USA | **Tel:** +1 671.632.6000 **ext. 710 | Fax:** +1 671.632.9000 | **E-mail:** arthur.adriano@medpharmusa.net | **Website:** <http://www.medpharmusa.net/>

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Re: UOG Bid No. B21-17

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Tue 10/26/2021 1:52 PM

To: Anthony Scragg <anthony@jwsguam.com>

Cc: rogerj@jwsguam.com <rogerj@jwsguam.com>; Gumataotao, Emily <eggumataotao@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Håfa Adai Mr. Scragg,

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From: Anthony Scragg <anthony@jwsguam.com>

Sent: Tuesday, October 26, 2021 1:45 PM

To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: rogerj@jwsguam.com <rogerj@jwsguam.com>

Subject: UOG Bid No. B21-17

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I would greatly appreciate getting in touch with someone by phone or email this week, so our team can began working on our bid submission asap for you guys. Looking forward to hearing back soon.

Regards,

Anthony R. Scragg
Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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RE: Site visit / pre bid

Gumataotao, Emily <eggumataotao@triton.uog.edu>

Wed 10/27/2021 9:43 AM

To: Anthony Scragg <anthony@jwsguam.com>

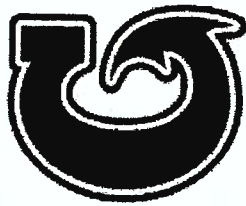
Cc: rogerj@jwsguam.com <rogerj@jwsguam.com>; UOG Procurement Bids <uog.bids@triton.uog.edu>

Háfa Adai & Good Morning,

There will be an amendment issued today to all bidders before COB today.

Also, do not forget to address all questions/request for information to the bids email at uog.bids@triton.uog.edu. You may include me, but all correspondence for active bids should be sent directly to the UOG bids email. Thank you!

Si Yu'os ma'áse' & Have a nice day!,



UNIVERSITY OF
GUAM
UNIBETSÉDÁT GUÁHAN

Respectfully,

Emily G. Gumataotao

SUPPLY MANAGEMENT ADMINISTRATOR

PROCUREMENT | ADMIN & FINANCE

Office: 671-735-2925

Fax: 671-735-3010

eggumataotao@triton.uog.edu

[mailto:gumataotaoemilyg@triton.uog.edu%0dProcurementoffice@triton.uog.edu]Procurementoffice@triton.uog.edu

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From: Anthony Scragg [mailto:anthony@jwsguam.com]

Sent: Wednesday, October 27, 2021 8:46 AM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: rogerj@jwsguam.com
Subject: Site visit / pre bid

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good morning Ms. Emily Gumataotao,

I was wondering if there would be a pre bid and/or site visit for the recent HVAC equipment Bid put out, i.e. UOG Bid No. B21-17.

If so could you please provide me with a time/date prior, so our team at JWS can schedule accordingly. Thank you.

Sincerely,

Anthony R. Scragg
Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Joeann Pangelinan <joeann@mjmetc.com>

Fri 10/29/2021 5:36 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; Caroline Delos Reyes <caroline@mjmetc.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Kindly see attached, thanks!

Stay safe.

On Fri, Oct 29, 2021 at 2:28 PM Joeann Pangelinan <joeann@mjmetc.com> wrote:
Received notice of Amendment.

Thank you

On Fri, Oct 29, 2021 at 10:57 AM UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Håfa Adaj & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 1**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'åse' & Have a nice day!,

 Signature
Logo

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010
uog.bids@triton.uog.edu

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--

Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

Tamuning, Guam 96913

joeann@mjmctc.com

--

Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

Tamuning, Guam 96913

joeann@mjmctc.com

UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 10/29/2021 10:57 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmoderntech.com>; Anthony Scragg <anthonys@jwsguam.com>; Teddy Garcia <teddygarcia@jmggu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@njmetc.com <joeann@njmetc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>

Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 1.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!.



**UNIVERSITY OF
GUAM**
UNIBETSĒDĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 9:41 AM

Mail - UOG Procurement Bids - Outlook

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

GPE INC <guampacific@gmail.com>

Fri 10/29/2021 11:11 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Acknowledged.

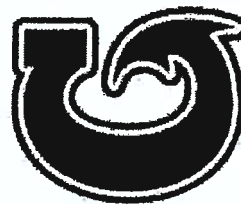
On Fri, 29 Oct 2021 at 10:57, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 1**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBETSĒDĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Tel: (671) 649-6994/7/8



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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Teddy Garcia <teddygarcia@jrngu.com>

Fri 10/29/2021 11:34 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Cc: info@jrngu.com <info@jrngu.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Hafa Adai!

Attached please find receipt of amendment #1, for your file & reference.

Si Yu 'us ma 'dse 'and best regards,

Teddy Glenn Roman Garcia

Project Mechanical Engineer / HVACR Technical & Estimation Department

JRN Air Conditioning & Refrigeration

Company E-mail : info@jrngu.com

Personal E-mail : teddygarcia@jrngu.com

Tel # : (671) 649-8120/21

Fax# : (671) 649-5737

Mobile #: 671-898-4486

From: UOG Procurement Bids [mailto:uog.bids@triton.uog.edu]

Sent: Friday, October 29, 2021 10:58 AM

To: Procurement Office

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Háfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 1.

Please acknowledge receipt.

Thank you & Stay safe!

12/16/21, 9:45 AM

Mail - UOG Procurement Bids - Outlook

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu



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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Anthony Scragg <anthony@jwsguam.com>

Fri 10/29/2021 11:56 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Cc: rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Acknowledgement receipt of Amendment 1 for UOG IFB B21-17. Please see signed attachment.

Regards,

Anthony R. Scragg
Service Department
JWS Refrigeration & A/C Ltd.
Email: anthony@jwsguam.com
Cell Line: 671-864-8554
Direct Line : 671-588-5981
Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Friday, October 29, 2021 10:58 AM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 1.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 9:46 AM

Mail - UOG Procurement Bids - Outlook

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Deo Lagman <DLagman@jbmmoderntech.com>

Fri 10/29/2021 2:24 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa Adai,

Confirming receipt form J&B Modern Tech.
Kindly see attached file.

Regards,
Deo Lagman

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, October 29, 2021 10:58 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Hāfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 1.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!.

Respectfully,

UOG Procurement

Signature
Logo

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@info.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Joeann Pangelinan <joeann@mjmetc.com>

Fri 10/29/2021 2:28 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Received notice of Amendment.

Thank you

On Fri, Oct 29, 2021 at 10:57 AM UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Håfa Adaj & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 1**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!.

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 9:47 AM

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--

Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

Tamuning, Guam 96913

joeann@mjmetc.com

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 1

Joeann Pangelinan <joeann@mjmetc.com>

Fri 10/29/2021 5:36 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; Caroline Delos Reyes <caroline@mjmetc.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Kindly see attached, thanks!

Stay safe.

On Fri, Oct 29, 2021 at 2:28 PM Joeann Pangelinan <joeann@mjmetc.com> wrote:
Received notice of Amendment.

Thank you

On Fri, Oct 29, 2021 at 10:57 AM UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Hāfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 1.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'āse' & Have a nice day!,

 Signature
Logo

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010
uog_bids@triton.uog.edu

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--
Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

Tamuning, Guam 96913

joeann@mjmetc.com

--
Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

Tamuning, Guam 96913

joeann@mjmetc.com

UOG IFB B21-17 : Purchasing of HVAC Equipment

UOG Procurement Bids <uog.bids@triton.uog.edu>

Tue 10/26/2021 3:57 PM

To: GPE INC <guampacific@gmail.com>

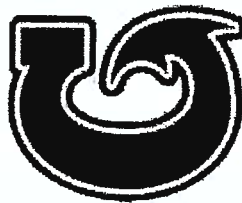
Cc: Procurement Office <procurementoffice@triton.uog.edu>

Håfa Adai & Good Afternoon,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'os ma'åse' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBESDÁT GAÑAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment

GPE INC <guampacific@gmail.com>

Tue 10/26/2021 4:06 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Well received with thanks.

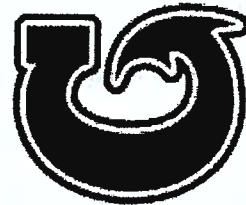
On Tue, 26 Oct 2021 at 15:57, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Håfa Adai & Good Afternoon,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'os ma'åse' & Have a nice day!



**UNIVERSITY OF
GUAM**
UNIBETSEDAT GUÅHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 9:48 AM

Mail - UOG Procurement Bids - Outlook

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UOG IFB B21-17 : Purchasing of HVAC Equipment

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 10/29/2021 10:51 AM

To: joeann@mjmetc.com <joeann@mjmetc.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Háfa Adai & Good Morning,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!.



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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UOG IFB B21-17 : Purchasing of HVAC Equipment

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 10/29/2021 10:52 AM

To: arnel.francisco@carrier.com <arnel.francisco@carrier.com>

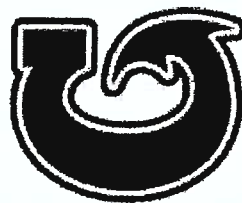
Cc: Procurement Office <procurementoffice@triton.uog.edu>

Håfa Adai & Good Morning,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment

Joeann Pangelinan <joeann@mjmetc.com>

Fri 10/29/2021 2:28 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Received with thanks!

Stay safe

On Fri, Oct 29, 2021 at 10:51 AM UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Háfa Adai & Good Morning,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'tos ma'áse' & Have a nice day!,

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 10:01 AM

Mail - UOG Procurement Bids - Outlook

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--

Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

Tamuning, Guam 96913

joeann@mjmetc.com

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment

Joeann Pangelinan <joeann@mjmetc.com>

Fri 10/29/2021 5:48 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; Caroline Delos Reyes <caroline@mjmetc.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hello,

May I please get more information for the attached? Kindly clarify if it is the ton per unit and column (ton) is the total tonnage.

Thank you

On Fri, Oct 29, 2021 at 2:27 PM Joeann Pangelinan <joeann@mjmetc.com> wrote:
Received with thanks!

Stay safe

On Fri, Oct 29, 2021 at 10:51 AM UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Háfa Adai & Good Morning,

As requested, see attached bid package.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!,

|

Signature
Logo

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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--

Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

Tamuning, Guam 96913

joeann@mjmetc.com

--

Respectfully,

Joeann Pangelinan

MJM International Corporation

181 E. Harmon Industrial Park Rd. STE C

12/16/21, 10:01 AM

Tamuning, Guam 96913

joeann@mjmetc.com

Mail - UOG Procurement Bids - Outlook

12/16/21, 10:02 AM

Mail - UOG Procurement Bids - Outlook

UOG IFB No. B21-17

Caroline Delos Reyes <caroline@mjmetc.com>

Mon 11/1/2021 4:20 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hello,

Please see attached to acknowledge receipt of Amendment 1 and Amendment 2 for UOG IFB No. B21-17.

Thank you.

Caroline Delos Reyes

MJM (Guam) International Corporation

181 E. Harmon Industrial Park Rd Suite C

Tamuning, GU 96913

Office: (671) 646-4394 | Fax: (671) 649-5638

Email: caroline@mjmetc.com

JWS Signed Amendment 2 and Updated Distribution Registry Form

Anthony Scragg <anthony@jwsquam.com>

Tue 11/2/2021 12:24 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: rogerj@jwsquam.com <rogerj@jwsquam.com>; Answer James <ajames@jwsquam.com>; 'Louise J' <louisej@jwsquam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good Afternoon,

Just wanted to confirm receipt of Amendment #2 for Bid No. B21-17. Attached is a signed form acknowledging the amendment and it's details.

In addition to this I also attached a newly filled out UOG Bidders Distribution form UOG bid No. B21-17. Please confirm receipt of this updated form as it includes new contact information from JWS Refrigeration and A/C Ltd.

Best Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsquam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 10/29/2021 4:45 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jryan@me.com>; Deo Lagman <DLagman@jbmoderntech.com>; Anthony Scragg <anthonys@jwsguam.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmetc.com <joeann@mjmetc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>

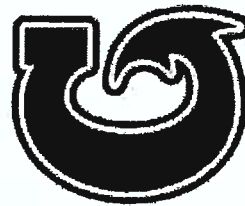
Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 2.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,



**UNIVERSITY OF
GUAM**
LUNIBETSĒDĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 10:04 AM

Mail - UOG Procurement Bids - Outlook

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

GPE INC <guampacific@gmail.com>

Fri 10/29/2021 4:59 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Received, thank you.

On Fri, 29 Oct 2021 at 16:45, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Häfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 2.**

Please acknowledge receipt.

Thank you & Stay safe!

Si Yulos ma'äse! & Have a nice day!

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu



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Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/7/8



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12/16/21, 10:06 AM

Mail - UOG Procurement Bids - Outlook

RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

Deo Lagman <Dlagman@jbmoderntechn.com>

Fri 10/29/2021 5:02 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa Adai,

Confirming receipt form J&B Modern Tech.

Kindly see attached file.

Regards,
Deo Lagman

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, October 29, 2021 4:45 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

Hafa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 2.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@tition.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

John Ryan <jtryan@me.com>

Fri 10/29/2021 6:09 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank Emily.

Sent from my iPhone

On Oct 29, 2021, at 4:45 PM, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 2**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ässe' & Have a nice day!,

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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<B21-17_AMEND 2.pdf>

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

John Ryan <jtryan@me.com>

Fri 10/29/2021 6:10 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank you

Sent from my iPhone

On Oct 29, 2021, at 6:09 PM, John Ryan <jtryan@me.com> wrote:

Thank Emily.

Sent from my iPhone

On Oct 29, 2021, at 4:45 PM, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Hāfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 2**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Y'ios ma'āse' & Have a nice day!;

Respectfully,



UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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<B21-17_AMEND 2.pdf>

RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

Teddy Garcia <teddygarcia@jingu.com>

Thu 11/4/2021 9:15 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Cc: info@jingu.com <info@jingu.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa adai,

Please find attached Payment receipt for the Bid Packet and the receipt of the amendment #2, for your file and reference.
Payment Receipt #196671

Si Yu us ma'ase and best regards,

Teddy Glenn Roman Garcia

Project Mechanical Engineer / HVACR Technical & Estimation Department



JRN Air Conditioning & Refrigeration

Company E-mail : info@jingu.com

Personal E-mail : teddygarcia@jingu.com

Tel # : (671) 649-8120/21

Fax# : (671) 649-5737

Mobile #:671-898-4486

From: UOG Procurement Bids [mailto:uog.bids@triton.uog.edu]

Sent: Friday, October 29, 2021 4:45 PM

To: Procurement Office

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 2

Hafa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 2**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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RE: UOG BID NO B21-17

Gumataotao, Emily <eggumataotao@triton.uog.edu>

Thu 11/4/2021 5:03 PM

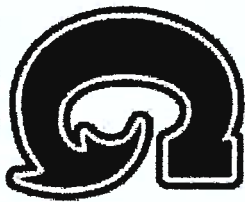
To: Chuck Sanchez <chuck.deesoniis@gmail.com>

Cc: John Leon Guerrero <johnlg@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Hi Chuck,

As discussed, please request info on our procurement site and send email to uog.bids@triton.uog.edu.

Si Yulos ma'ase' & Have a nice day!



UNIVERSITY OF GUAM
UNIBERTSEBÁT GUÅHAN

Respectfully,

Emily G. Gumataotao

SUPPLY MANAGEMENT ADMINISTRATOR

PROCUREMENT | ADMIN & FINANCE

Office: 671-735-2925

Fax: 671-735-3010

eggumataotao@triton.uog.edu

gumataotaoemilyg@triton.uog.edu | Procurementoffice@triton.uog.edu

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From: Chuck Sanchez [mailto:chuck.deesoniis@gmail.com]

Sent: Thursday, November 4, 2021 12:55 PM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: John Leon Guerrero <johnlg@triton.uog.edu>

Subject: Re: UOG BID NO B21-17

12/16/21, 10:08 AM

Mail - UOG Procurement Bids - Outlook

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Buenas yan Hafa Adai,

Hope all is well with familia. We are requesting to have our Hvac Tech and Electrician schedule a final walk thru next week 11/10 10-11am target eta.

Please kindly advise as well as any added fees for packets from yesterdays pre bid meeting

Thank you for your time and consideration.

Be well and safe.

Godspeed8.

On Thu, Nov 4, 2021, 10:27 AM Chuck Sanchez <chuck.deesonis@gmail.com> wrote:

Buenas yan Hafa Adai,

Hope all is well with familia. Is a fee implemented for bid packets? II attended this morning's walk through and signed in.

Please kindly advise.

Thank you for your time. Be well and safe.

Godspeed8.

Chuck Sanchez

Sales and Marketing Manager

DESONIS
Air Conditioners and Home Appliances
www.deesonis.com

220 E. Harmon Industrial Park Road, #B1, C

Tamuning, GU 96913

C: (671) 747-1139

T: (671) 647-3736

F : (671) 648-6666

W : www.deesonis.com

 **dso_Deesonii's new ACs (60s).mp4**

<https://youtu.be/Nsm1Zcd-MLY>

<https://youtu.be/xCI9hsiz7Bq>

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12/16/21, 10:09 AM

Mail - UOG Procurement Bids - Outlook

RFI UOG BID No. B21-17

Camille Zapanta <camille@abilitysolutionsllc.biz>

Wed 11/10/2021 10:02 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa Adai,

May I inquire when the deadline is to deliver the equipments?

Camille Zapanta

Tel: (671) 989-3630

Email: camille@abilitysolutionsllc.biz



Re: RFI UOG B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Wed 11/10/2021 10:20 AM

To: Camille Zapanta <camille@abilitysolutionsllc.biz>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Hello Camille,

Was there a reason another request is needed for the bid package? Nacia had requested and we sent the bid package as of 11/3/21.

As stated at the Pre-Bid conference, last day for questions/clarifications is on November 12, 2021.

We are in receipt of your questions and will respond accordingly.

Thank you for your patience!

Si Yu'os ma'äse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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12/16/21, 10:11 AM

Mail - UOG Procurement Bids - Outlook

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From: Camille Zapanta <camille@abilitysolutionsllc.biz>

Sent: Tuesday, November 9, 2021 3:14 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Subject: RFI UOG B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Hafa Adai,

Kindly see the following inquires regarding UOG IFB No. B21-17.

1. When is the deadline to submit RFIs?
2. Can you provide a copy of the transcript for the sign-in on inspection day?

Regards,

Camille Zapanta

Ability Solutions LLC

Tel: (671) 989-3630

Email: camille@abilitysolutionsllc.biz

IFB No. B21-17

GPE INC <guampacific@gmail.com>

Thu 11/11/2021 4:59 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hi Ms. Emily,

Please see attached acknowledgement.

Thank you,

Sedfrey M. Linsangan

Guam Pacific Enterprise, Inc.

Tel: (671) 649-6994/7/8



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Re: B21-17 : RFI/RFC Last day today

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 11/15/2021 4:43 PM

To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>

Hi John/Glenn,

Any update on responses so I can send out? Thanks!

Si Yu'os ma'áse' & Have a nice day!;

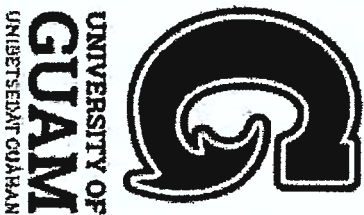
Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu



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12/16/21, 10:14 AM

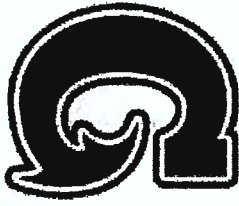
Mail - UOG Procurement Bids - Outlook

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, November 15, 2021 10:12 AM
To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>
Subject: Re: B21-17 : RFI/RFI Last day today

Hi Guys,

See attached for the questions & answers I will send out by COB today. If you want you can plug into respective sections, otherwise you can forward me the responses and I will input. Thanks!

Si Yu'os ma'åse' & Have a nice day!



UNIVERSITY OF
GUAM
UNIBETSEDAT GUAHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 10:14 AM

Mail - UOG Procurement Bids - Outlook

From: John Leon Guerrero <johnlg@triton.uog.edu>

Sent: Saturday, November 13, 2021 2:25 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Subject: Re: B21-17 : RFI/RFC Last day today

Noted...

Get Outlook for Android

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, November 12, 2021 3:00:21 PM

To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Subject: B21-17 : RFI/RFC Last day today

Hi John/Glenn,

Last day for questions today. Can I get the responses please. Thank you!

Si Yu'os ma'äse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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<https://outlook.office365.com/mail/id/AADKAGQZNMEXNWEALTfMOTYINDK4MY04ZDhILWZKZDK1ZDVIZmY4MwAAQAK75yA7sDsNPMaJ2EPW%2FIZ4%3D>

12/16/21, 10:14 AM

Mail - UOG Procurement Bids - Outlook

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<https://outlook.office365.com/mail/d/AAQKAQZNMENWFE4LTFmOTYINDk4My04ZDhLWZkZDK1ZDVIZmY4MwAQAK75YA7SDsNPmAj2EPW%2FIZ4%3D>

Re: Follow up on RFI for UOG Bid B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Tue 11/16/2021 9:32 AM

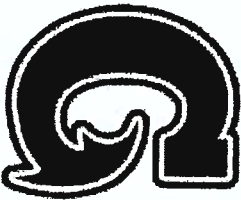
To: Anthony Scragg <anthony@s@jwsquam.com>

Cc: Gumataotao, Emily <egumataotao@triton.uog.edu>; rogerj@jwsquam.com <rogerj@jwsquam.com>; Louise J' <louisej@jwsquam.com>; Answer James <ajames@jwsquam.com>

Håia Adai & Good Morning Anthony,

We appreciate your patience as we work with key personnel to answer all RFI's/RFC's submitted as of Friday November 12, 2021. There were several from multiple vendors, once completed we will issue an amendment, most likely before COB today. Thank you!

Si Yulos malåse' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBERTSEDAŦ CUÅHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 10:14 AM

Mail - UOG Procurement Bids - Outlook

B21-1784

From: Anthony Scragg <anthony@jwsquam.com>
Sent: Tuesday, November 16, 2021 7:38 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; rogerj@jwsquam.com <rogerj@jwsquam.com>; 'Louise J' <louisej@jwsquam.com>; Answer James <ajames@jwsquam.com>
Subject: Follow up on RFI for UOG Bid B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good Morning,

I just wanted to follow up on the RFIs submitted last week. Still haven't heard any feedback regarding the RFIs and just wanted to see if perhaps the bid was going to be extended? I know the current bid submission date is Nov. 22nd, which is a little less than a week away. Please let me know the current status of the bid and if there is any information regarding feedback to the RFIs. Looking forward to hearing back.

Sincerely,

Anthony R. Scragg
Service Department
JWS Refrigeration & A/C Ltd.
Email: anthony@jwsquam.com
Cell Line: 671-864-8554
Direct Line : 671-588-5981
Fax: 671-649-0053

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RE: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT - Carrier Guam request for information RFI

Llarenas, Bernard <Bernard.Llarenas2@carrier.com>

Thu 11/18/2021 7:47 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; Francisco, Arnel <Arnel.Francisco@Carrier.com>; Aguiqui, Leonard <Leonard.Aguiqui@Carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Viray, Armando <Armando.Viray@Carrier.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear UOG Procurement,

Further questions please –

- Will amendment RFI responses be emailed to each individual party who attended the Nov.3 pre-bid/site visit? If emailing the amendment RFI responses, kindly please add me to the list as a recipient.
- Please advise approximate posting of amendment RFI responses, as scheduled bidding is soon, November 22; will need some time to prepare equipment selections and proposal based on the RFI responses.

Sincerest Thank You.
BERNARD LLARENAS
Carrier Guam Inc.
P.O.Box 23847
Barrigada, Guam 96921
Tel: (671) 647-9288
Cell: (671) 898-1918
Fax: (671) 646-0965
Bernard.Llarenas2@carrier.com



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Thursday, November 18, 2021 12:32 AM

12/16/21, 10:16 AM

Mail - UOG Procurement Bids - Outlook

To: Llarenas, Bernard <Bernard.Llarenas2@carrier.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; Francisco, Arnel <Arnel.Francisco@Carrier.com>; Aguiñui, Leonard <Leonard.Aguigui@Carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Viray, Armando <Armando.Viray@Carrier.com>

Subject: Re: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT - Carrier Guam request for information RFI

Håfa Adai Bernard,

Unfortunately the last day for questions/clarifications was Friday, November 12, 2021. However, we are still in the process of issuing an amendment for all questions asked by said date. I believe the responses on the amendment will be able to answer most of your questions if not all. In the event the deadline is extended we will accept and answer future questions/clarifications. Thank you!

Si Yu'os ma'ásé' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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From: Llarenas, Bernard <Bernard.Llarenas2@carrier.com>
Sent: Wednesday, November 17, 2021 3:54 PM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>; Francisco, Arnel <Arnel.Francisco@Carrier.com>; Aguiqui, Leonard <Leonard.Aguigui@Carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Viray, Armando <Armando.Viray@Carrier.com>
Subject: RE: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT - Carrier Guam request for information RFI

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear UOG Procurement,

Kind request for information RFI please regarding UOG IFB B21-17 Purchasing of HVAC Equipment...

RFI please:

1. Please provide list of Contractors and their contact information who attended the November 3, 10AM PRE-BID conference and site visit.
2. Please provide complete equipment schedule containing criteria (cooling capacity/tonnage, supply air flow, external static pressure, voltage/phase, designated area served/location name, etc.) of equipment to replace.
3. Please confirm Bid Price Form (picture below) containing "CONDENSING UNITS" to replace, and clarify "TVX 2 EA" as listed.

Table 1.0 Bid Price Form

No.	CONDENSING UNITS - ITEM DESCRIPTION	BID Price																																																																																					
1	<table border="1"> <thead> <tr> <th>LOCATION</th> <th>UNIT</th> <th>TONS</th> <th>VOLTAGE</th> <th>TYPE</th> </tr> </thead> <tbody> <tr> <td>RFR BUILDING SECOND FLOOR</td> <td>1</td> <td>50</td> <td>208 / 230</td> <td>2 EA - 25</td> </tr> <tr> <td>RFR BUILDING FIRST FLOOR</td> <td>1</td> <td>40</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>ZORFK BUILDING FIRST FLOOR</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MAINT ENTRANCE</td> <td>1</td> <td>15</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>7.3ORFK BUILDING FIRST FLOOR</td> <td>1</td> <td>15</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>AV ROOM</td> <td>1</td> <td>15</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>7.5ORFK BUILDING FIRST FLOOR</td> <td>1</td> <td>20</td> <td>208 / 230</td> <td>2 EA - 10</td> </tr> <tr> <td>OFFICES</td> <td>1</td> <td>20</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>PP-FILE SECOND FLOOR</td> <td>1</td> <td>20</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>18SCIENCE BUILDING FIRST FLOOR</td> <td>1</td> <td>40</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>SCIENCE BUILDING</td> <td>1</td> <td>40</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>SECOND FLOOR</td> <td>1</td> <td>40</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>SCIENCE BUILDING</td> <td>1</td> <td>20</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>OFFICE</td> <td>1</td> <td>20</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>FISH COMMUNICATIONS CLASSROOM</td> <td>1</td> <td>30</td> <td>208 / 230</td> <td>2 EA -</td> </tr> <tr> <td>WATER CENTER QIT</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	LOCATION	UNIT	TONS	VOLTAGE	TYPE	RFR BUILDING SECOND FLOOR	1	50	208 / 230	2 EA - 25	RFR BUILDING FIRST FLOOR	1	40	208 / 230	2 EA -	ZORFK BUILDING FIRST FLOOR					MAINT ENTRANCE	1	15	208 / 230	2 EA -	7.3ORFK BUILDING FIRST FLOOR	1	15	208 / 230	2 EA -	AV ROOM	1	15	208 / 230	2 EA -	7.5ORFK BUILDING FIRST FLOOR	1	20	208 / 230	2 EA - 10	OFFICES	1	20	208 / 230	2 EA -	PP-FILE SECOND FLOOR	1	20	208 / 230	2 EA -	18SCIENCE BUILDING FIRST FLOOR	1	40	208 / 230	2 EA -	SCIENCE BUILDING	1	40	208 / 230	2 EA -	SECOND FLOOR	1	40	208 / 230	2 EA -	SCIENCE BUILDING	1	20	208 / 230	2 EA -	OFFICE	1	20	208 / 230	2 EA -	FISH COMMUNICATIONS CLASSROOM	1	30	208 / 230	2 EA -	WATER CENTER QIT					621 P 8 3 e
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7 PURCHASING OF HVAC EQUIPMENT FOR THE UNIVERSITY OF GUAM

FLOOR	UNIT	TONS	VOLTAGE	TYPE
1	50	277 / 480	2 EA - 25	
2	20	277 / 480	2 EA - 10	
2	10	208 / 230	2 EA - 5	
2	30	277 / 480	2 EA - 25	
1	30	277 / 480	2 EA - 15	

After receipt of purchase order

4. Please provide drawings of existing outdoor condensing units installed (and indoor air handling unit if required to replace).
5. If indoor air handling units are to be replaced, please provide configuration (horizontal or vertical) of each involved AHU.
7. If indoor air handling units are to be replaced, please verify if AHU coil requires coating. Is aluminum fin/copper tube coil acceptable, or copper fin/copper tube coil?
8. Per Price Bid Form and drawings, confirm locations bulleted below are separated/written properly.
 - RFR BUILDING SECOND FLOOR
 - RFR BUILDING FIRST FLOOR
 - ZORFK BUILDING FIRST FLOOR MAIN ENTRANCE

- 7.5RFK BUILDING FIRST FLOOR AV ROOM
 - 7.5RFK BUILDING FIRST FLOOR OFFICES
 - PIP (GLE) SECOND FLOOR
 - 10SCIENCE BUILDING FIRST FLOOR
 - 20SCIENCE BUILDING SECOND FLOOR
 - 20SCIENCE BUILDING THIRD FLOOR
 - 10EGLISH COMMUNICATION BUILDING CLASSROOM
 - 15COMPUTER CENTER OIT BUILDING FIRST FLOOR
 - LECTURE HALL AUDITORIUM
 - MARINE LAB FIRST FLOOR
 - MARINE LAB SECOND FLOOR
 - HSS BUILDING
 - HSS BUILDING.
9. Regarding Marine Lab equipment replacement, please confirm existing equipment to be Variable Refrigerant Flow (VRF) type. If VRF systems to be replaced at Marine Lab, please provide equipment schedule, capacities of indoor and outdoor units, drawings/layout, etc.
 10. Regarding Marine Lab, please verify if VRF replacement equipment must be Buy-American Act compliant.
 11. Please verify the existing quantities and tonnage of equipment to replace located at Lecture Hall Auditorium.
 12. Please verify the existing quantities and tonnage of equipment to replace located at HSS Building.
 13. Please verify if bid date of November 22, 2021 has been extended or remains unchanged.

Hoping for RFI response soonest.

Sincerest Thank You.
BERNARD LLARENAS
 Sales Engineer
Carrier Guam Inc.
 P.O.Box 23847
 Barrigada, Guam 96921
 Tel: (671) 647-9288
 Cell: (671) 898-1918
 Fax: (671) 646-0965
Bernard.Llarenas2@carrier.com



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12/16/21, 10:16 AM

Mail - UOG Procurement Bids - Outlook

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From: Llarenas, Bernard

Sent: Tuesday, November 16, 2021 7:58 AM

To: UOG Procurement Bids <uog_bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Subject: RE: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT

Dear UOG Procurement,

Bid package and amendments received.

Thank You.

BERNARD LLARENAS

Sales Engineer

Carrier Guam Inc.

P.O.Box 23847

Barrigada, Guam 96921

Tel: (671) 647-9288

Cell: (671) 898-1918

Fax: (671) 646-0965

Bernard.Llarenas2@carrier.com



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From: UOG Procurement Bids <uog_bids@triton.uog.edu>

Sent: Monday, November 15, 2021 10:18 AM

To: Llarenas, Bernard <Bernard.Llarenas2@carrier.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Subject: [External]UOG IFB B21-17: PURCHASING OF HVAC EQUIPMENT

Háfa Adai & Good Morning,

As requested, see attached bid package and amendments.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@tition.uog.edu

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12/16/21, 10:29 AM

Mail - UOG Procurement Bids - Outlook

RFIs for Bid No. B21-17

Anthony Scragg <anthony@jwsquam.com>

Sun 11/7/2021 12:00 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gumatao, Emily <egumatao@triton.uog.edu>; rogerj@jwsquam.com <rogerj@jwsquam.com>; 'Louise J' <louisej@jwsquam.com>; Answer James <ajames@jwsquam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good afternoon,

Attached is a document with a list of RFI questions JWS has regarding University of Guam's current bid opening, No. B21-17.

Please confirm receipt of this attachment.

Looking forward to hearing back soon.

Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsquam.com

Cell Line: 671-864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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Re: RFIs for Bid No. B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 11/8/2021 10:04 AM

To: Anthony Scragg <anthony@jwsquam.com>

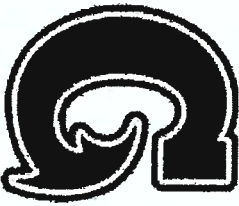
Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; rogerj@jwsquam.com <rogerj@jwsquam.com>; 'Louise J' <louisej@jwsquam.com>; Answer James <ajames@jwsquam.com>

Hāfa Adai & Good Morning Mr. Scragg,

Acknowledging receipt of your email. We will issue a response accordingly.

Thank you!

Si Yulos ma'āse' & Have a nice day!,



UNIVERSITY OF
GUAM
UNIBETSEDAT GUÅHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Fw: RFIs for Bid No. B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 11/8/2021 11:47 AM

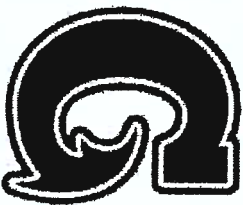
To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>

Cc: Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Håfa Adai & Good Morning,

See questions from bidder attached. Response will be issued in Amendment.

Si Yulos matåse' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBETSEDAT GUAHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 10:42 AM

Mail - UOG Procurement Bids - Outlook

R21-1795

From: Anthony Scragg <anthony@jwsguam.com>
Sent: Sunday, November 7, 2021 11:59 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>; Answer James <ajames@jwsguam.com>
Subject: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good afternoon,

Attached is a document with a list of RFI questions JWS has regarding University of Guam's current bid opening, No. B21-17.

Please confirm receipt of this attachment.

Looking forward to hearing back soon.

Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671-864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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Re: RFIs for Bid No. B21-17

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Mon 11/8/2021 11:50 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>

Cc: Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
John,

Please prepare responses. Please use AMORIENT when needed

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, November 8, 2021 11:47 AM

To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>

Cc: Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Subject: Fw: RFIs for Bid No. B21-17

Háfa Adai & Good Morning,

See questions from bidder attached. Response will be issued in Amendment.

Si Yu'os ma'áse' & Have a nice day!;

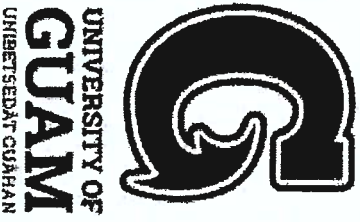
Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



12/16/21, 10:48 AM

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From: Anthony Scragg <anthony@jwsguam.com>
Sent: Sunday, November 7, 2021 11:59 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>; Answer James <ajames@jwsguam.com>
Subject: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good afternoon,

Attached is a document with a list of RFI questions JWS has regarding University of Guam's current bid opening, No. B21-17.

Please confirm receipt of this attachment.

Looking forward to hearing back soon.

Regards,

Anthony R. Scragg
Service Department
JWS Refrigeration & A/C Ltd.
Email: anthony@jwsguam.com
Cell Line: 671-864-8554
Direct Line : 671-588-5981
Fax: 671-649-0053

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12/16/21, 10:48 AM

Mail - UOG Procurement Bids - Outlook

<https://outlook.office365.com/mail/id/AAQKAGQZmEXNWE4LTFmOTYINDk4Mj04ZDhlWkZkZk1ZDVlZmY4MmWAQAAG51K1TAYgkXQjumdCzaiqGK%3D>

Re: RFIs for Bid No. B21-17

John Leon Guerrero <johnlg@triton.uog.edu>

Mon 11/8/2021 12:15 PM

To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Ok, will do.

From: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Sent: Monday, November 8, 2021 11:50 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>

Cc: Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Subject: Re: RFIs for Bid No. B21-17

John,

Please prepare responses. Please use AMORIENT when needed

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

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Subject: Fw: RFIs for Bid No. B21-17

Hafia Adai & Good Morning,

See questions from bidder attached. Response will be issued in Amendment.

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,



UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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From: Anthony Scragg <anthony.s@jwsguam.com>
Sent: Sunday, November 7, 2021 11:59 AM
To: UOG Procurement Bids <uog_bids@triton.uog.edu>
Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>; Answer James <ajames@jwsguam.com>
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Mail - UOG Procurement Bids - Outlook

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthonyr@jwsguam.com

Cell Line: 671-864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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Tue 11/16/2021 7:38 AM

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Subject: RE: RFIs for Bid No. B21-17

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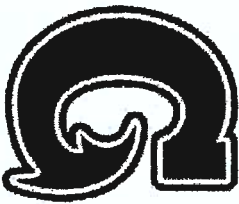
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GUAM
UNIBETSEÑAF GUÅRAN

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Re: RFIs for Bid No. B21-17

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Tue 11/16/2021 4:08 PM

To: John Leon Guerrero <johnlg@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>

Hafa adai Emily,

Here are the answers to the JWS questions. Please disregard JJ comments as sent by John.

1. It was mentioned that you want to use only one manufacturer for the complete project, but you have Daikin condensers at the Marine Lab. It also is our understanding that many of the indoor units connected to these Daikin condensers also do not operate. These are VRF systems, which means they communicate with each other so you cannot use different manufacturers. Please clarify your intentions on this system. **Answer: We will remove the Marine Lab condensers from the list.**
2. On the Science building 3 rd floor you have two 10-ton condensers which you want to remove and replace with a single 20 ton, do those two-line sets go to one AHU with two circuits? **Answer: Yes they both connect to one (1) AHU. Again, only requesting for condensing units not installation.**
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Sent: Tuesday, November 16, 2021 7:37 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Subject: Fw: RFIs for Bid No. B21-17

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Sent: Tuesday, November 9, 2021 1:59 PM
To: John Leon Guerrero <johnlg@triton.uog.edu>
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Cc: Sandra Mary McAuliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
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Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

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Re: RFIs for Bid No. B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Tue 11/16/2021 4:44 PM

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Answer: UOG confirms

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Answer: UOG confirms

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Answer: UOG confirms

Question 4: The RFQ does not state efficiency requirements (EER rating)

Answer: UOG confirms

Question 5: Are you asking for direct replacements for the units in each of the buildings?

Answer: UOG confirms

Question 6: The RFQ mentions Storage, some about installation, & providing specs 5 weeks in advance of purchases. However, the Scope states it purchase only.

Answer: UOG confirms

Question 7: Does the bidder need to supply storage?

Answer: UOG confirms

Question 1: May I inquire when the deadline is to deliver the equipment's?

Answer: UOG confirms

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Sent: Tuesday, November 16, 2021 4:08 PM
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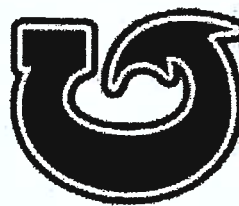
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Wed 11/17/2021 4:21 AM

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Said he answered and sent to you. Let me revisit with John again.

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Sent: Tuesday, November 16, 2021 4:44 PM

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UOG Procurement Bids <uog.bids@triton.uog.edu>

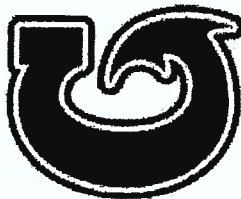
Thu 11/18/2021 12:19 AM

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Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/14/2021 10:56 AM

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Sent: Wednesday, November 17, 2021 4:20 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Re: Request for Bid No. B21-17

John,
Said he answered and sent you. Let me revisit with John again.

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Cc: Procurement Office <procurementoffice@triton.uog.edu>
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Subject: Re: RFIs for Bid No. B21-17

Hafa adai Emily,

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1. It was mentioned that you want to use only one manufacturer for the complete project, but you have Daikin condensers at the Marine Lab. It also is our understanding that many of the indoor units connected to these Daikin condensers also do not operate. These are VRF systems, which means they communicate with each other so you cannot use different manufacturers. Please clarify your intentions on this system. **Answer: We will remove the Marine Lab condensers from the list.**
2. On the Science building 3 rd floor you have two 10-ton condensers which you want to remove and replace with a single 20 ton, do those two-line sets go to one AHU with two circuits? **Answer: Yes they both connect to one (1) AHU. Again, only requesting for condensing units not installation.**
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5. In the specs Page 28 2.2.1.3 it says you want a "208 volt control circuit". Will 115 volts be acceptable? **Answer: No.**
6. In Exhibit B page 63 Table 2.0 options No. 1 refers to "Service for maintenance and upkeep". Can you please clarify the meaning of that? **Answer: Although, UOG is only soliciting for condenser units, we would like to understand what the maintenance and upkeep**

cost for your units. This will give us an idea of the overall cost of your unit.

7. In Exhibit B page 63 Table 2.0 options No. 3 refers to "Replacement/trade in program". Can you please clarify the meaning of that? **Answer: Although, UOG is only soliciting for condenser units, we would like to understand what the maintenance and upkeep cost for your units. This will give us an idea of the overall cost of your unit.**
8. Does this contract include installation of purchased equipment? At the site visit, it was stated that the contract did not include installation. However, in the bid packet Exhibit B: 2a. it says: "Any additional cost not stated in this bid but are required to complete the delivery and installation must be included in the bidders price" Please clarify. **Answer: Installation is not included.**

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Sent: Tuesday, November 16, 2021 7:37 AM
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Subject: Fw: RFIs for Bid No. B21-17

Hafa Adai Emily

Please see attached answers below from JJ Javellana(Amorient).

From: Jonathan Javellana <jonathan.javellana@amorient.com>
Sent: Tuesday, November 9, 2021 1:59 PM
To: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: RE: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
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I updated the specs based on and to clarify some of the contractors questions. Revised spec's text is reflected in red. See my response below for JWS's RFI.

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2. UOG maintenance to verify if existing condensers serve separate air handling equipment. If so, manufacturer will need to verify if new condenser can serve multiple air handling equipment. There are condensing units available to service multiple air handling units (within a limited capacity variance). Indoor air handlers will need to be equipped with refrigerant control kit if this approach is used.
3. See comment on item #2
4. As requested by UOG, copper tube and copper fins to be used. Additional coating to be included (e.g. e-coating)
5. The power supply for each unit varies, so 208V may not be applicable to all equipment. New equipment to have electrical supply similar to existing equipment to be replaced. Contractor to verify with UOG staff on power supply available for each unit to be replaced. See attached updated specs revising the 208V requirement.

12/16/21, 10:56 AM

Mail - UOG Procurement Bids - Outlook

6. UOG team to verify.
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8. UOG team to verify. If installation and storage is not included in this bid, Amorient can revise specs to remove/revise sections 1.3 & 1.6 "Delivery, Storage, and Handling"

Regards,

JJ

From: John Leon Guerrero <johnlg@triton.uog.edu>
Sent: Monday, November 8, 2021 3:01 PM
To: Jonathan Javellana <jonathan.javellana@amorient.com>
Subject: Fw: RFIs for Bid No. B21-17

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Háfa Aðai & Good Morning,

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Si Yu'os ma'áse' & Have a nice day!

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UOG Procurement

Office: 671-735-2925



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UNIBETSĒDĀT GUĀHAN

Fax: 671-735-3010
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From: Anthony Scragg <anthony@s@jwsguam.com>
Sent: Sunday, November 7, 2021 11:59 AM
To: UOG Procurement Bids <uog_bids@triton.uog.edu>
Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>; Answer James <ajames@jwsguam.com>
Subject: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good afternoon,

Attached is a document with a list of RFI questions JWS has regarding University of Guam's current bid opening, No. B21-17.

Please confirm receipt of this attachment.

Looking forward to hearing back soon.

Regards,

Anthony R. Scragg

12/16/21, 10:56 AM

Mail - UOG Procurement Bids - Outlook

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

"This e-mail and any attachments to it (the "Communication") is, unless otherwise stated, confidential, may contain copyright material and is for the use only of the intended recipient. If you receive the Communication in error, please notify the sender immediately by return e-mail, delete the Communication and the return e-mail, and do not read, copy, retransmit or otherwise deal with it. Any views expressed in the Communication are those of the individual sender only. JWS (company) does not accept liability in connection with the integrity of or errors in the Communication, computer virus, data corruption, interference or delay arising from or in respect of the Communication."

Re: RFIs for Bid No. B21-17

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Thu 11/18/2021 3:30 AM

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Office: 671-735-2925

12/16/21, 10:57 AM

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Mail - UOG Procurement Bids - Outlook

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From: Anthony Scragg <anthony@jwsguam.com>
Sent: Sunday, November 7, 2021 11:59 AM

mailto://unitedstatesaffairs.com/mail/fil/DAONLACONMmFvMWF4lTFmNTYINRk4AMvA7DhHlW7k7Dk17DVl7mY4MwA0AG51KTAYvLXQiumfC7aInGk%3D

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Please use the attached as the answers to all questions (JWS, GESI, Ability)asked.

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3. On the Lecture hall Auditorium you have the exact same issue you have two 10 ton condensers and you want to replace with a single 20 ton, do those two line sets go to one AHU with two circuits. **Answer:** Yes they both connect to one (1) AHU. Again, only requesting for condensing units not installation.
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12/16/21, 10:58 AM

Mail - UOG Procurement Bids - Outlook

From: John Leon Guerrero <johnlg@triton.uog.edu>
Sent: Tuesday, November 16, 2021 7:37 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Subject: Fw: RFIs for Bid No. B21-17

Hafa Adai Emily

Please see attached answers below from JJ Javellana(Amorient).

From: Jonathan Javellana <jonathan.javellana@amorient.com>
Sent: Tuesday, November 9, 2021 1:59 PM
To: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: RE: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
John,

I updated the specs based on and to clarify some of the contractors questions. Revised spec's text is reflected in red. See my response below for JWS's RFI.

1. New VRF equipment will require indoor and outdoor equipment replacement if new brand is selected. Indoor and outdoor VRF equipment must be compatible from same manufacturer.
2. UOG maintenance to verify if existing condensers serve separate air handling equipment. If so, manufacturer will need to verify if new condenser can serve multiple air handling equipment. There are condensing units available to service multiple air handling units (within a limited capacity variance). Indoor air handlers will need to be equipped with refrigerant control kit if this approach is used.
3. See comment on item #2
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6. UOG team to verify.
7. UOG team to verify.
8. UOG team to verify. If installation and storage is not included in this bid, Amorient can revise specs to remove/revise sections 1.3 & 1.6 "Delivery, Storage, and Handling"

Regards,

JJ

Re: RFIs for Bid No. B21-17

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Thu 11/18/2021 8:48 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: John Leon Guerrero <johnlg@triton.uog.edu>

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Cc: John Leon Guerrero <johnlg@triton.uog.edu>

Subject: Re: RFIs for Bid No. B21-17

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To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: John Leon Guerrero <johnlg@triton.uog.edu>

Subject: Re: RFIs for Bid No. B21-17

Please send Abilities questions

From: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Sent: Thursday, November 18, 2021 3:30 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: John Leon Guerrero <johnlg@triton.uog.edu>

Subject: Re: RFIs for Bid No. B21-17

Will do

12/16/21, 11:00 AM

Mail - UOG Procurement Bids - Outlook

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Thursday, November 18, 2021 12:19 AM
To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

Hi Glenn,

I could not find the email with responses. Unless I missed it. Please have john resend response for the other questions asked. I need to send out amendment by today and would like to send before lunch. The vendors are following up again. I'm thinking they will ask for an extension, are you willing to extend another week? Advise. Thanks!

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Sent: Wednesday, November 17, 2021 4:20 AM

<https://outlook.office365.com/mail/id/AAQKAGQzNmExNWE4TFmOTYtNDk4My04ZDhlWzkZDk1ZDVZmY4MwAQAG51KTAYckXOjumdCzalgGk%3D>

12/16/21, 11:00 AM

Mail - UOG Procurement Bids - Outlook

To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

John,
Said he answered and sent to you. Let me revisit with John again.

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Tuesday, November 16, 2021 4:44 PM
To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

Hi Glenn,

Thank you for this. Was the other questions answered from GESI & Ability?

Question 1: Is the purchase funded by Federal Cares Act funds? If so, do the units need to be BAA compliant?

Answer: UOG confirms

Question 2: The RFQ Equipment specifications refer to VFR /VRV Units. It does not go into detail on the units being requested.

Answer: UOG confirms

Question 3: Of the units requested, the RFQ does not state whether they are Packaged Units, or Ducted Split Units that require Air Handling Units.

Answer: UOG confirms

Question 4: The RFQ does not state efficiency requirements (EER rating)

Answer: UOG confirms

Question 5: Are you asking for direct replacements for the units in each of the buildings?

Answer: UOG confirms

Question 6: The RFQ mentions Storage, some about installation, & providing specs 5 weeks in advance of purchases. However, the Scope states it purchase only.

Answer: UOG confirms

Re: RFIs for Bid No. B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Thu 11/18/2021 9:10 AM

To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: John Leon Guerrero <johnlg@triton.uog.edu>

Hi Glenn,

Thank you for this and yes, I will provide the sign-in sheet.

Si Yu'os ma'áse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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From: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Sent: Thursday, November 18, 2021 8:48 AM

12/16/21, 11:00 AM

Mail - UOG Procurement Bids - Outlook

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

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Sent: Thursday, November 18, 2021 8:44 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

Hafa adai Emily,

Please use the attached as the answers to all questions (JWS, GESI, Ability)asked.

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Cc: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

Please send Abilities questions

From: Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Sent: Thursday, November 18, 2021 3:30 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

Will do

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Thursday, November 18, 2021 12:19 AM

John,
Said he answered and sent to you. Let me revisit with John again.

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Sent: Tuesday, November 16, 2021 4:44 PM
To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

Hi Glenn,
Thank you for this. Was the other questions answered from GESI & Ability?

Question 1: Is the purchase funded by Federal Cares Act funds? If so, do the units need to be BAA compliant?

Answer: UOG confirms

Question 2: The RFQ Equipment specifications refer to VFR /VRV Units. It does not go into detail on the units being requested.

Answer: UOG confirms

Question 3: Of the units requested, the RFQ does not state whether they are Packaged Units, or Ducted Split Units that require Air Handling Units.

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Question 5: Are you asking for direct replacements for the units in each of the buildings?

Answer: UOG confirms

Question 6: The RFQ mentions Storage, some about installation, & providing specs 5 weeks in advance of purchases. However, the Scope states it purchase only.

Answer: UOG confirms

Question 7: Does the bidder need to supply storage?

Answer: UOG confirms

Question 1: May I inquire when the deadline is to deliver the equipment's?

Answer: UOG confirms

From: Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Sent: Tuesday, November 16, 2021 4:08 PM
To: John Leon Guerrero <johnlg@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Re: RFIs for Bid No. B21-17

Hafa adai Emily,
Here are the answers to the JWS questions. Please disregard JJ comments as sent by John.

1. It was mentioned that you want to use only one manufacturer for the complete project, but you have Daikin condensers at the Marine Lab. It also is our understanding that many of the indoor units connected to these Daikin condensers also do not operate. These are VRF systems, which means they communicate with each other so you cannot use different manufacturers. Please clarify your intentions on this system. **Answer: We will remove the Marine Lab condensers from the list.**
2. On the Science building 3 rd floor you have two 10-ton condensers which you want to remove and replace with a single 20 ton, do those two-line sets go to one AHU with two circuits? **Answer: Yes they both connect to one (1) AHU. Again, only requesting for condensing units not installation.**
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Re: RFIs for Bid No. B21-17

Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Thu 11/18/2021 9:45 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>

Thank you Emily. 👍

Sent from my iPhone

On Nov 18, 2021, at 9:10 AM, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Hi Glenn,

Thank you for this and yes, I will provide the sign-in sheet.

Si Yu'os ma'ase' & Have a nice day!,



UNIVERSITY OF
GUAM
UNIBETSĒDĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
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Please send Abilities questions

12/16/21, 11:02 AM

Mail - UOG Procurement Bids - Outlook

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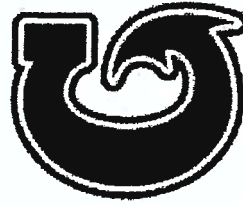
Will do

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Fax: 671-735-3010

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Sent: Tuesday, November 16, 2021 7:37 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Subject: Fw: RFIs for Bid No. B21-17

Hafa Adai Emily
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From: Jonathan Javellana <jonathan.javellana@amorient.com>
Sent: Tuesday, November 9, 2021 1:59 PM
To: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: RE: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
 John,

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Regards,

JJ

From: John Leon Guerrero <johnlg@triton.uog.edu>
Sent: Monday, November 8, 2021 3:01 PM
To: Jonathan Javellana <jonathan.javellana@amorient.com>
Subject: Fw: RFIs for Bid No. B21-17

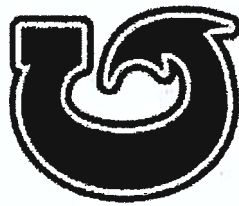
Sir
see attached questions below regarding BID NO. B21-17.

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, November 8, 2021 11:47 AM
To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>
Cc: Sandra Mary McAuliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Subject: Fw: RFIs for Bid No. B21-17

Háfa Aday & Good Morning,

See questions from bidder attached. Response will be issued in Amendment.

Si Yu'os ma'áse' & Have a nice day!.



UNIVERSITY OF
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UNIBETSĊĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Anthony Scragg <anthonyys@jwsguam.com>

Sent: Sunday, November 7, 2021 11:59 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gumatao, Emily <eggumatao@triton.uog.edu>; Rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>; Answer James <ajames@jwsguam.com>

Subject: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good afternoon,

Attached is a document with a list of RFI questions JWS has regarding University of Guam's current bid opening, No. B21-17.

Please confirm receipt of this attachment.

Looking forward to hearing back soon.

Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthonyr@jwsguam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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Re: RFIs for Bid No. B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Thu 11/18/2021 3:53 PM

To: John Leon Guerrero <johnlg@triton.uog.edu>

Cc: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Hi John,

Please answer one last one that was missed. Thanks!

May I please get more information for the attached? Kindly clarify if it is the ton per unit and column (ton) is the total tonnage.

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 11:03 AM

Mail - UOG Procurement Bids - Outlook

Re: RFIs for Bid No. B21-17

John Leon Guerrero <johnlg@triton.uog.edu>

Thu 11/18/2021 4:14 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Hafa Adai Emily

Ton Is the Total Tonnage...

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Thursday, November 18, 2021 3:53 PM

To: John Leon Guerrero <johnlg@triton.uog.edu>

Cc: Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Subject: Re: RFIs for Bid No. B21-17

Hi John,

Please answer one last one that was missed. Thanks!

May I please get more information for the attached? Kindly clarify if it is the ton per unit and column (ton) is the total tonnage.

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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From: John Leon Guerrero <johnlg@triton.uog.edu>
Sent: Tuesday, November 16, 2021 7:37 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Subject: Fw: RFIs for Bid No. B21-17

Hafa Adai Emily
 Please see attached answers below from JJ Javellana(Amorient).

From: Jonathan Javellana <jonathan.javellana@amorient.com>
Sent: Tuesday, November 9, 2021 1:59 PM
To: John Leon Guerrero <johnlg@triton.uog.edu>
Subject: RE: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
 John,

I updated the specs based on and to clarify some of the contractors questions. Revised spec's text is reflected in red. See my response below for JWS's RFI.

1. New VRF equipment will require indoor and outdoor equipment replacement if new brand is selected. Indoor and outdoor VRF equipment must be compatible from same manufacturer.
2. UOG maintenance to verify if existing condensers serve separate air handling equipment. If so, manufacturer will need to verify if new condenser can serve multiple air handling equipment. There are condensing units available to service multiple air handling units (within a limited capacity variance). Indoor air handlers will need to be equipped with refrigerant control kit if this approach is used.
3. See comment on item #2
4. As requested by UOG, copper tube and copper fins to be used. Additional coating to be included (e.g. e-coating)
5. The power supply for each unit varies, so 208V may not be applicable to all equipment. New equipment to have electrical supply similar to existing equipment to be replaced. Contractor to verify with UOG staff on power supply available for each unit to be replaced. See attached updated specs revising the 208V requirement.
6. UOG team to verify.
7. UOG team to verify.
8. UOG team to verify. If installation and storage is not included in this bid, Amorient can revise specs to remove/revise sections 1.3 & 1.6 "Delivery, Storage, and Handling"

Regards,

JJ

From: John Leon Guerrero <johnlg@triton.uog.edu>
Sent: Monday, November 8, 2021 3:01 PM
To: Jonathan Javellana <jonathan.javellana@amorient.com>
Subject: Fw: RFIs for Bid No. B21-17

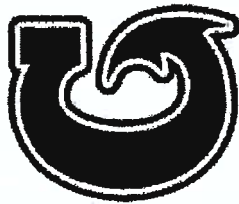
Sir
see attached questions below regarding BID NO. B21-17.

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, November 8, 2021 11:47 AM
To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>, John Leon Guerrero <johnlg@triton.uog.edu>
Cc: Sandra Mary McAuliffe <smcauliffe@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Subject: Fw: RFIs for Bid No. B21-17

Háfa Adai & Good Morning,

See questions from bidder attached. Response will be issued in Amendment.

Si Yu'os ma'áse' & Have a nice day!.



UNIVERSITY OF
GUAM
UNIBETSEDAT GUAHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Anthony Scragg <anthony@jwsguam.com>

Sent: Sunday, November 7, 2021 11:59 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gumatao, Emily <eggumatao@triton.uog.edu>; rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>; Answer James <ajames@jwsguam.com>

Subject: RFIs for Bid No. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good afternoon,

Attached is a document with a list of RFI questions JWS has regarding University of Guam's current bid opening, No. B21-17.

Please confirm receipt of this attachment.

Looking forward to hearing back soon.

Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthonyr@jwsguam.com

Cell Line: 671-864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 11/19/2021 4:20 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <Dlagman@jbmodernrtech.com>; Anthony Scragg <anthony@jwsguam.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmetc.com <joeann@mjmetc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glenn@gesiworl.com>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary McAuliffe <smcauliffe@triton.uog.edu>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesonis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>

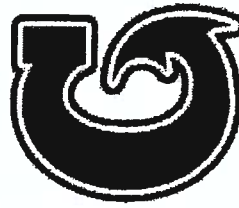
Håfa Adai & Good Afternoon,

Please see corrected attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3.**

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'åse' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBETSĒĀT GUĀBAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Please see corrected attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3**.

Please acknowledge receipt.

Thank you & Stay safe!

Si-Yutes ma'ase' & Have a nice day!

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 11:06 AM

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)

Lynn Scott <lynn@gesiworld.com>

Fri 11/19/2021 4:30 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Please provide GESI Amendment #1 & #2

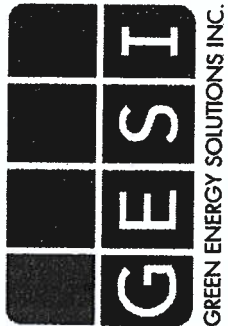
Lynn Scott
President & CEO
Green Energy Solutions, Inc.

Office: 671-647-8111 ext. 1078

Mobile: 671-686-5557

Email: lynn@gesiworld.com

Website: www.gesiguam.com



From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, November 19, 2021 4:21 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)

Hāfa Adai & Good Afternoon,

Please see corrected attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 3.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

Signature
Logo

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12/16/21, 11:07 AM

Mail - UOG Procurement BUS - Outlook

12/16/21, 11:10 AM

Mail - UOG Procurement Bids - Outlook

RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)

Deo Lagman <DLagman@jbmoderntech.com>

Fri 11/19/2021 4:55 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gene Bangayan <GeneBangayan@jbmoderntech.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa Adai,

Confirming receipt of Amendment 3 from J&B Modern Tech.

Can we also request for the Amendment 1 and 2?

J&B Modern Tech did not receive copy of the previous Amendments.

Regards,

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, November 19, 2021 4:21 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3 (Corrected)

Háfa Adai & Good Afternoon,

Please see corrected attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3.**

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!.,

Respectfully,

UOG Procurement

 Signature
Logo

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@inton.uog.edu

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Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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<https://outlook.office365.com/mail/rc/AAQkAGQzNmExNWE4LTFmOTYtNDk4My04ZDhlLWZkZk1ZDVZmY4MwAQACuFn2%2BiPzdAgI5SNJrbNtY%3D>

12/16/21, 11:10 AM

Mail - UOG Procurement Bids - Outlook

UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 11/19/2021 9:36 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmodernotech.com>; Anthony Scragg <anthony@jwsguam.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmetc.com <joeann@mjmetc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glenn@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Lynn Scott <lynn@gesiworld.com>; Chuck Sanchez <chuck.deesonis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>

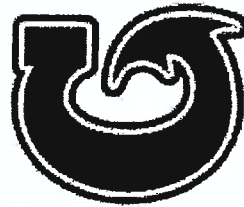
Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 3.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'åse' & Have a nice day!,



UNIVERSITY OF
GUAM
UNIBETSADAT GUARAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 11:11 AM

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RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Camacho, Rochelle <rochelle.camacho2@carrier.com>

Fri 11/19/2021 10:04 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa Adai,

Please find attach acknowledgement.

Thank you & Stay Safe!

Si Yu'us Ma'ase

Chelle C. Camacho

Carrier Commercial Sales & Service

Tel: 671-647-9290/6671-888-1969/188 Tun Joaquin Flores Road, Tamuning GU 96913

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, November 19, 2021 9:37 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 3.

Please acknowledge receipt.

12/16/21, 11:12 AM

Mail - UOG Procurement Bids - Outlook

Thank you & Stay safe!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Llarenas, Bernard <Bernard.Llarenas2@carrier.com>

Fri 11/19/2021 10:52 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear UOG Procurement,

Amendment #3 received.

Thank You.
BERNARD LLARENAS
Sales Engineer
Carrier Guam Inc.
P.O.Box 23847
Barrigada, Guam 96921
Tel: (671) 647-9288
Cell: (671) 898-1918
Fax: (671) 646-0965
Bernard.Llarenas2@carrier.com



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Friday, November 19, 2021 9:37 AM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Håfa Adai & Good Morning,

12/16/21, 11:13 AM

Mail - UOG Procurement Bids - Outlook

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yutes ma'ase & Have a nice day!

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 11:13 AM

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Lynn Scott <lynn@gesiworld.com >

Fri 11/19/2021 11:06 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

GESI Acknowledges receipt

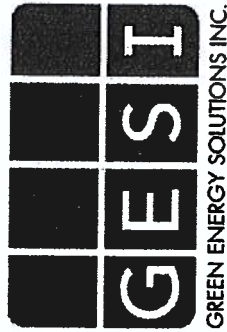
Lynn Scott
President & CEO
Green Energy Solutions, Inc.

Office: 671-647-8111 ext. 1078

Mobile: 671-686-5557

Email: lynn@gesiworld.com

Website: www.gesiguam.com



From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, November 19, 2021 9:37 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3.**

12/16/21, 11:13 AM

Mail - UOG Procurement Bids - Outlook

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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<https://outlook.office365.com/mail/id/AAQKAGQzNmEXNWWE4LTFmOTYINDk4My04ZDhlWZkZDk1ZDVZmY4MwAQAIhBDurcl.%2FIBh1af-dVgYrKc%3D>

12/16/21, 11:13 AM

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Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/778



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12/16/21, 11:13 AM

Mail - UOG Procurement Bids - Outlook

RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Anthony Scragg <anthony@jwsguam.com>

Fri 11/19/2021 2:10 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Cc: 'Louise J' <louisej@jwsguam.com>; rogerj@jwsguam.com <rogerj@jwsguam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Acknowledged. Please see attached signed amendment.

Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671-864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, November 19, 2021 9:37 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

Hâfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3.**

<https://outlook.office365.com/mail/id/AAQKAGQzNmExNWE4LTJmOTYhNDk4My04ZDhlLWZkZk1ZDVZmY4MmwwAQAIhBDurcl.%2FIRh1aFrdVnYkR-%3D>

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 11:13 AM

Mail - UOG Procurement Bids - Outlook

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12/16/21, 11:14 AM

Mail - UOG Procurement Bids - Outlook

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 11/19/2021 4:22 PM

To: GPE INC <guampacific@gmail.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Hi Sed,

Apologize for that oversight; corrected version re-sent to all bidders. Thanks!

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 11:14 AM

Mail - UOG Procurement Bids - Outlook

From: GPE INC <guampacific@gmail.com>
Sent: Friday, November 19, 2021 11:14 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
My concern is my questions were not answered and not included. Please advise why ? Thank you.



Virus-free. www.avg.com

On Fri, 19 Nov 2021 at 09:37, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

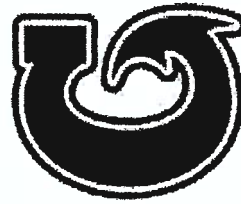
Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'åse' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBETSEDAT GUAHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

12/16/21, 11:14 AM

Mail - UOG Procurement Bids - Outlook

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Tel: (671) 649-6994/778



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12/16/21, 11:19 AM

Mail - UOG Procurement Bids - Outlook

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

GPE INC <guampacific@gmail.com>

Fri 11/19/2021 6:21 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank you, have a nice week end

Sent from my iPhone

On Nov 19, 2021, at 4:22 PM, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Hi Sed,

Apologize for that oversight; corrected version re-sent to all bidders. Thanks!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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From: GPE INC <guampacific@gmail.com>
Sent: Friday, November 19, 2021 11:14 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

My concern is my questions were not answered and not included. Please advise why ? Thank you.



Virus-free. www.avg.com

On Fri, 19 Nov 2021 at 09:37, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Håfa Adai & Good Morning,

12/16/21, 11:19 AM

Mail - UOG Procurement Bids - Outlook

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 3**.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@irriton.uog.edu

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Tel: (671) 649-6994/7/8

12/16/21, 11:19 AM

Mail - UOG Procurement Bids - Outlook



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12/16/21, 11:21 AM

Mail - UOG Procurement Bids - Outlook

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

GPE INC <guampacific@gmail.com>

Sun 11/21/2021 10:50 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

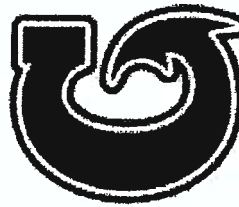
There is no attachments, please send it again. Thank you

On Fri, 19 Nov 2021 at 16:22, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Hi Sed,

Apologize for that oversight; corrected version re-sent to all bidders. Thanks!

Si Yu'os ma'ase' & Have a nice day!,



UNIVERSITY OF
GUAM
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Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: GPE INC <guampacific@gmail.com>
Sent: Friday, November 19, 2021 11:14 AM
To: UOG Procurement Bids <uog_bids@triton.uog.edu>
Subject: Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 3

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

My concern is my questions were not answered and not included. Please advise why ? Thank you.



Virus-free. www.avg.com

On Fri, 19 Nov 2021 at 09:37, UOG Procurement Bids <uog_bids@triton.uog.edu> wrote:

Håfa Adai & Good Morning,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 3.

Please acknowledge receipt.

Thank you & Stay safe!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

12/16/21, 11:21 AM

Mail - UOG Procurement Bids - Outlook

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RE: UOG IFB B21-17

Gumataotao, Emily <eggumataotao@triton.uog.edu>

Mon 11/22/2021 3:48 PM

To: GPE INC <guampacific@gmail.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Good Afternoon,

Apologize for that oversight once more. Hence, why it is critical that any questions/inquiries for any active bids for the university be sent to the Bids email (uog_bids@triton.uog.edu). We created this email specifically for that purpose and to ensure as much as possible no questions are missed as this email is monitored daily and throughout the day.

You may CC my personal and procurement office email, however it is still at an influx with our continued shortage of personnel.

We will issue another amendment to address your questions accordingly. Thank you for your patience!

Si Yu'os ma'áse' & Have a nice day!



Respectfully,

Emily G. Gumataotao

SUPPLY MANAGEMENT ADMINISTRATOR

PROCUREMENT | ADMIN & FINANCE

Office: 671-735-2925

Fax: 671-735-3010

eggumataotao@triton.uog.edu

[mailto:gumataotaoemilyg@triton.uog.edu]; Procurementoffice@triton.uog.edu]; Procurementoffice@triton.uog.edu

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From: GPE INC [mailto:guampacific@gmail.com]
Sent: Monday, November 22, 2021 11:35 AM
To: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Subject: Re: UOG IFB B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear Purchasing,

Thank you for your email but my other sets of questions were not answered that were raised by my supplier . Please respond and also my question on waiving the bid bond since the funds to be used is federal financial assistance awards. U.S bases here , both Airforce and Navy does not require bid bonds on supply bids same in the U.S. MAINLAND.

Guam Pacific Enterprise, Inc.

Tel: (671) 649-6994/7/8



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UOG IFB No. B21-17, Signed Amendment 4

Anthony Scragg <anthony@jwsguam.com>

Tue 11/23/2021 11:09 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gumatao, Emily <eggumatao@triton.uog.edu>; rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Acknowledging receipt for amendment 4. Please see attached pdf

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671-864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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RE: UOG IFB NO. B21-17

Gene Bangayan <GeneBangayan@jbmoderntech.com>

Wed 11/24/2021 4:05 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Emily, thank on your response. Have a nice day and Happy Thanksgiving.

Senseramante'

Gene

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Wednesday, November 24, 2021 3:24 PM

To: Gene Bangayan <GeneBangayan@jbmoderntech.com>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Subject: Re: UOG IFB NO. B21-17

Hello Gene,

B21-17 is still an active open bid. If a company requests' online as advised on the ad solicitation, they will receive a response.

~Happy Thanksgiving~

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,



UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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From: Gene Bangayan <GeneBangayan@jbmoderntechnology.com>
Sent: Wednesday, November 24, 2021 2:23 PM
To: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: UOG Procurement Bids <uog_bids@triton.uog.edu>
Subject: FW: UOG IFB NO. B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Emily, I gladly appreciate your answer our email below. My wife Nelia's company is All Business Enterprises Corporation; This is all woman corporation. Please advise us if our company is qualified to bid.

Thank you.
Gene

12/16/21, 11:24 AM

Mail - UOG Procurement Bids - Outlook

From: Gene Bangayan
Sent: Tuesday, November 23, 2021 5:19 PM
To: Gumatao, Emily <eggumatao@triton.uog.edu>
Cc: UOG Procurement Bids <uog_bids@triton.uog.edu>
Subject: UOG IFB NO. B21-17

Hi, Emily, the bis bid submittal is on 11-29-2021 at 2:00 PM. MY inquiry, since the Pre Bid Conference and Site visit was not mandatory, We have a company, All Woman Corporation, can we participate on the bid, even we didn't attend the pre-bid and site visit? We really appreciate your immediate advice on this matter.

Thank you.

Nelia Bangayan
President
All Business Enterprises Corporation
(All Woman corporation)

UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 11/22/2021 5:00 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmoderntech.com>; Anthony Scragg <anthony@jwsguam.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmetc.com <joeann@mjmetc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary McAuliffe <smcauliffe@triton.uog.edu>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesonis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 4**.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'ase' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBESĎĀT GUÅHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

Llarenas, Bernard <Bernard.Llarenas2@carrier.com>

Mon 11/22/2021 5:20 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear UOG Procurement,

Amendment #4 received.

Thank You.

BERNARD LLARENAS

Carrier Guam Inc.

P.O.Box 23847

Barrigada, Guam 96921

Tel: (671) 647-9288

Cell: (671) 898-1918

Fax: (671) 646-0965

Bernard.Llarenas2@carrier.com



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, November 22, 2021 5:00 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

Háfa Adai & Good Afternoon,

RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

Lynn Scott <lynn@gesiworl.com >

Mon 11/22/2021 5:52 PM

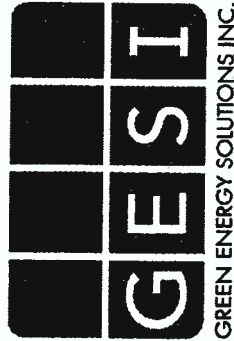
To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

GESI confirms Receipt

Lynn Scott
President & CEO
Green Energy Solutions, Inc.

Office: 671-647-8111 ext. 1078
Mobile: 671-686-5557
Email: lynn@gesiworl.com
Website: www.gesiguam.com



From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, November 22, 2021 5:00 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 4.**

12/16/21, 11:25 AM

Mail - UOG Procurement Bids - Outlook

[REDACTED] and contains information which is privileged and confidential and is solely for the use of the intended recipient. If you have received this transmission in error, please destroy immediately.

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

GPE INC <guampacific@gmail.com>

Tue 11/23/2021 11:25 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Appreciate your Amendment 4 however my question regarding 15% Bid bond should not be required since it only applies to local funds not federal funds. Gov. Guam cannot implement local laws which is inconsistent with the intentions and purpose of Buy American Act or Made in American Act. because Federal law supersedes Guam law.

The purpose of the Buy American Act is to help manufacturers, small business owners and American workers without imposing local laws that are unduly restrictive. Please advise.

On Mon, 22 Nov 2021 at 17:00, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 4**.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'åse' & Have a nice day!

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

GPE INC <guampacific@gmail.com>

Tue 11/23/2021 12:37 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Please take note that UOG had not addressed my concern on the elimination of bid bond since the funds to be used is not local funds but federal funds.

On Tue, 23 Nov 2021 at 11:25, GPE INC <guampacific@gmail.com> wrote:

Appreciate your Amendment 4 however my question regarding 15% Bid bond should not be required since it only applies to local funds not federal funds. Gov. Guam cannot implement local laws which is inconsistent with the intentions and purpose of Buy American Act or Made in American Act. because Federal law supersedes Guam law.

The purpose of the Buy American Act is to help manufacturers, small business owners and American workers without imposing local laws that are unduly restrictive. Please advise.

On Mon, 22 Nov 2021 at 17:00, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 4**.

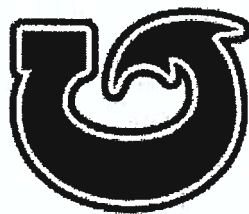
Please acknowledge receipt.

Thank you & Stay safe!

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Si Yu'os ma'áse & Have a nice day!,

Respectfully,



UNIVERSITY OF
GUAM
UNIBETS DAT GUAHAN

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

UOG Procurement Bids <uog.bids@triton.uog.edu>

Wed 11/24/2021 9:05 AM

To: GPE INC <guampacific@gmail.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

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Will address your concern and respond accordingly.

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From: GPE INC <guampacific@gmail.com>

Sent: Tuesday, November 23, 2021 12:36 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Subject: Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

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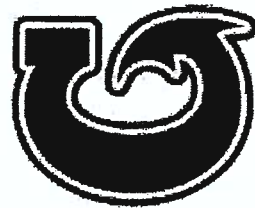
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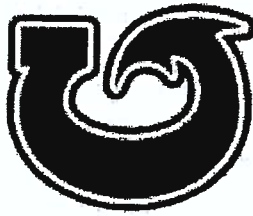
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12/16/21, 12:54 PM

Mail - UOG Procurement Bids - Outlook

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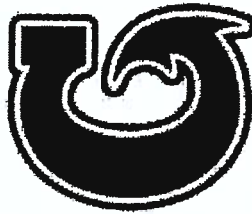
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Fw: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

UOG Procurement Bids <uog.bids@triton.uog.edu>

Wed 11/24/2021 9:18 AM

To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>

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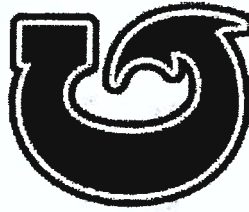
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Please take note that UOG had not addressed my concern on the elimination of bid bond since the funds to be used is not local funds but federal funds.

On Tue, 23 Nov 2021 at 11:25, GPE INC <guampacific@gmail.com> wrote:

Appreciate your Amendment 4 however my question regarding 15% Bid bond should not be required since it only applies to local funds not federal funds. Gov. Guam cannot implement local laws which is inconsistent with the intentions and purpose of Buy American Act or Made in American Act. because Federal law supersedes Guam law.

The purpose of the Buy American Act is to help manufacturers, small business owners and American workers without imposing local laws that are unduly restrictive. Please advise.

On Mon, 22 Nov 2021 at 17:00, UOG Procurement Bids <uog_bids@triton.uog.edu> wrote:

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 4**.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'åse' & Have a nice day!;



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/7/8



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RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

Camacho, Rochelle <rochelle.camacho2@carrier.com >

Wed 11/24/2021 4:28 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good afternoon,

Acknowledging receipt of Amendment 4.

Thank you & Stay Safe!

Si Yu'us Ma'ase

Chelle C. Camacho

Carrier Commercial Sales & Service

Tel: 671-647-9290/©671-888-1969/188 Tun Joaquin Flores Road, Tamuning GU 96913

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, November 22, 2021 5:00 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 4.**

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Camacho, Rochelle <rochelle.camacho2@carrier.com>

Wed 11/24/2021 4:28 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good afternoon,

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Thank you & Stay Safe!

Si Yu'us Ma'ase

Chelle C. Camacho

Carrier Commercial Sales & Service

Tel: 671-647-9290/©671-888-1969/188 Tun Joaquin Flores Road, Tamuning GU 96913

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, November 22, 2021 5:00 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 4

Håfa Adai & Good Afternoon,

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Si Yu'os ma'ase' & Have a nice day!

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

UOG Procurement Bids <uog.bids@triton.uog.edu>

Wed 11/24/2021 3:35 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmmodermtch.com>; Anthony Scragg <anthony@jwsguam.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmctc.com <joeann@mjmctc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesonis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Liarenas, Bernard <Bernard.Liarenas2@carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 5.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'ase' & Have a nice day!,



UNIVERSITY OF
GUAM
UNIBETSEDAT GUÅHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 11:34 AM

Mail - UOG Procurement Bids - Outlook

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Lynn Scott <lynn@gesiworl.com >

Wed 11/24/2021 3:38 PM

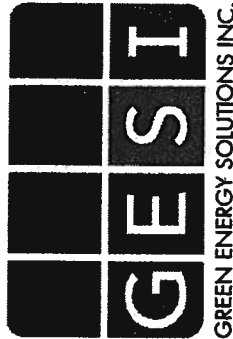
To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

GESI is Confirming Receipt

Lynn Scott
President & CEO
Green Energy Solutions, Inc.

Office: 671-647-8111 ext. 1078
Mobile: 671-686-5557
Email: lynn@gesiworl.com
Website: www.gesiguam.com



From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Wednesday, November 24, 2021 3:36 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 5.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'åse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

Signature
Logo

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Mail - UOG Procurement Bids - Outlook

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

GPE INC <guampacific@gmail.com>

Wed 11/24/2021 3:43 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Received, thank you.

On Wed, 24 Nov 2021 at 15:35, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Háfa Adai & Good Afternoon,

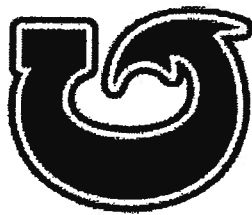
Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 5**.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'áse' & Have a nice day!.



**UNIVERSITY OF
GUAM**
UNIBETSĒDĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Llarenas, Bernard <Bernard.Llarenas2@carrier.com>

Wed 11/24/2021 4:06 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Dear UOG Procurement,

Amendment #5 received.

Thank You.

BERNARD LLARENAS

Sales Engineer

Carrier Guam Inc.

P.O.Box 23847

Barrigada, Guam 96921

Tel: (671) 647-9288

Cell: (671) 898-1918

Fax: (671) 646-0965

Bernard.Llarenas2@carrier.com



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Wednesday, November 24, 2021 3:36 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 5.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Sí Yá los ma'ase & Have a nice day!

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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12/16/21, 11:35 AM

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Deo Lagman <DLagman@jbmoderntech.com>

Wed 11/24/2021 4:15 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gene Bangayan <GeneBangayan@jbmoderntech.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa Adai,

Confirming receipt from J&B Modern Tech.

Kindly also see attached acknowledgement receipt of amendment 3,4 and 5.

Regards,
Deo

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Wednesday, November 24, 2021 3:36 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Hafa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 5.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

 Signature
Logo

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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RE: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Camacho, Rochelle <rochelle.camacho2@carrier.com>

Wed 11/24/2021 4:29 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good Afternoon,

Acknowledging receipt of Amendment 5.

Have a wonderful and safe Thanksgiving!

Thank you & Stay Safe!

Si Yu'us Ma'ase

Chelle C. Camacho

Carrier Commercial Sales & Service

Tel: 671-647-9290/©671-888-1969/188 Tun Joaquin Flores Road, Tamuning GU 96913

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Wednesday, November 24, 2021 3:36 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: [External]UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 5.**

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Anthony Scragg <anthony@jwsguam.com>

Wed 11/24/2021 4:40 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Cc: Gumatao, Emily <eggumatao@triton.uog.edu>; rogerj@jwsguam.com <rogerj@jwsguam.com>; 'Louise J' <louisej@jwsguam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Acknowledging receipt for amendment 5. Please see attached pdf.

Regards,

Anthony R. Scragg
Service Department
JWS Refrigeration & A/C Ltd.
Email: anthony@jwsguam.com
Cell Line: 671- 864-8554
Direct Line : 671-588-5981
Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Wednesday, November 24, 2021 3:36 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - AMENDMENT 5.

Please acknowledge receipt.

Thank you & Stay safe!

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Siyu's ma'ase' & Have a nice day!

Respectfully,

UOG Procurement

Signature
Logo

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 11:36 AM

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Alexandra Pearson <alex.pearson@onepacgrp.com>

Mon 11/29/2021 7:44 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Received and Thank you.

Alexandra Pearson

Assistant Sales Manager, Guam



DBA: One Pacific Group - Pacific Guam and One Pacific Distributors

237 Miamis Street

Tamuning, Guam 96913

Ph: 671-646-8744/45/46 & 671-647-8742 Fax: 671-646-8748

Whatsapp: +1671-797-8733

<https://www.onepacificgroup.com>

From: UOG Procurement Bids [mailto:uog.bids@triton.uog.edu]

Sent: Wednesday, November 24, 2021 3:36 PM

To: Procurement Office

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 5

Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 5.**

Please acknowledge receipt.

Thank you & Stay safe!

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Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Amedment 6

Nel Bangayan <NBangayan@jbmmoderntech.com>

Fri 12/3/2021 5:34 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

December 3, 2021

Please see attached acknowledgement of IFB B21-17 amendment 6.

Thank you.

Nelia Bangayan
All Business Enterprises Corp.

UOG IFB B21-17: Amendment 3 , 4, 5 & 6

Caroline Delos Reyes <caroline@mjmetc.com>

Sat 12/4/2021 9:48 AM

To: Procurement Office <procurementoffice@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hello,

Please see attached to acknowledge receipt of Amendment 3, 4, 5 & 6 for UOG IFB No. B21-17.

Thank you.

Caroline Delos Reyes

MJM (Guam) International Corporation

181 E. Harmon Industrial Park Rd Suite C

Tamuning, GU 96913

Office: (671) 646-4394 | Fax: (671) 649-5638

Email: caroline@mjmetc.com

UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 12/3/2021 4:39 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmoderntech.com>; Anthony Scragg <anthony@jwsguam.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmetc.com <joeann@mjmetc.com>; amel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesonis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Gene Bangayan <GeneBangayan@jbmoderntech.com>; Nel Bangayan <NBangayan@jbmoderntech.com>

Hâfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 6**.

All conditions of the bid remain the same.

Kind reminder, your original bid security should be received by our procurement office NLT bid submission deadline, Monday December 6, 2021 by 2pm.

The link for bid opening and link to upload bid submissions to our electronic share folder will also be provided on Monday December 6, 2021. Please submit 1 PDF file.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

12/16/21, 11:42 AM

Mail - UOG Procurement Bids - Outlook



UNIVERSITY OF
GUAM
UNIBETS DAT GUAHAN

Fax: 671-735-3010
uog.bids@triton.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6

GPE INC <guampacific@gmail.com>

Fri 12/3/2021 4:47 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Received, thank you.

On Fri, 3 Dec 2021 at 16:39, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Háfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 6**.

All conditions of the bid remain the same.

Kind reminder, your original bid security should be receipted by our procurement office NLT bid submission deadline, Monday December 6, 2021 by 2pm.

The link for bid opening and link to upload bid submissions to our electronic share folder will also be provided on Monday December 6, 2021. Please submit 1 PDF file.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yuos ma'ase & Have a nice day!

Respectfully,

UOG Procurement

 Signature
Logo

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 11:44 AM

Mail - UOG Procurement Bids - Outlook

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6

Anthony Scragg <anthony@jwsuam.com>

Mon 12/6/2021 8:08 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Cc: "Louise J" <louisej@jwsuam.com>; rogerj@jwsuam.com <rogerj@jwsuam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Please see attached acknowledgement of receipt.

Regards

Anthony R. Scragg
Service Department
JWS Refrigeration & A/C Ltd.
Email: anthony@jwsuam.com
Cell Line: 671- 864-8554
Direct Line : 671-588-5981
Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Friday, December 3, 2021 4:39 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6

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Si Yu'os ma'ase' & Have a nice day!,

 Signature
Logo

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Anthony Scragg uploaded new files to your request for B21-17 BID SUBMISSION

SharePoint Online <no-reply@sharepointonline.com>

Mon 12/6/2021 10:48 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

<p>New files were uploaded to your request for "B21-17 BID SUBMISSION"</p>
<p>Anthony_Scragg_UOG BID No. B21-17_JWS .pdf</p>
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>See new files</p> </div>

[Privacy Statement](#) | [Notification Settings](#)

Re: Nelia Bangayan uploaded new files to your request for B21-17 BID SUBMISSION

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 1:25 PM

To: Nel Bangayan <NBangayan@jbmoderntech.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Håfa Adai & Good Afternoon,

Confirming receipt of bid submission. Thank you!

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Re: Mike Ecalnea uploaded new files to your request for B21-17 BID SUBMISSION

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 1:26 PM

To: Michael Ecalnea <mike@tonysworkshop.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Háfa Adai & Good Afternoon,

Confirming receipt of bid submission. Thank you!

Si Yu'os ma'áse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

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From: SharePoint Online <no-reply@sharepointonline.com>

Sent: Monday, December 6, 2021 1:21 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Subject: Mike Ecalnea uploaded new files to your request for B21-17 BID SUBMISSION

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]



New files were uploaded to your request for "B21-17 BID SUBMISSION"



Mike_Ecalnea_Tony's Workshop Bid Package UOG B21-17.pdf

See new files



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Re: Anthony Scragg uploaded new files to your request for B21-17 BID SUBMISSION

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 1:27 PM

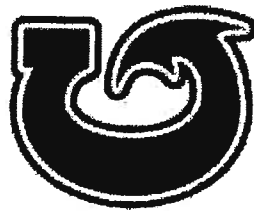
To: Anthony Scragg <anthony@jwsguam.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Háfa Adai & Good Afternoon,

Confirming receipt of submission. Thank you!

Si Yu'os ma'ase' & Have a nice day!,



**UNIVERSITY OF
GUAM**
UNIBETSEDAT GUABAN

Respectfully,

UOG Procurement

Office: 671-735-2925

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From: SharePoint Online <no-reply@sharepointonline.com>
Sent: Monday, December 6, 2021 11:33 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Anthony Scragg uploaded new files to your request for B21-17 BID SUBMISSION

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]



New files were uploaded to your request for "B21-17 BID SUBMISSION"



Anthony_Scragg_UOG BID No. B21-17_JWS.pdf

See new files



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UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 8:18 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <Dlagman@jbmoderntechnology.com>; Anthony Scragg <anthony@jwsguam.com>; Teddy Garcia <teddygarcia@jngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmetc.com <joeann@mjmetc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesoniis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Larenas, Bernard <Bernard.Llarenas2@carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Gene Bangayan <GeneBangayan@jbmoderntechnology.com>; Nel Bangayan <NBangayan@jbmoderntechnology.com>

Håfa Adai & Good Morning,

Please utilize the link below to drop your bid submission into our share folder.

https://luguamliveuog-my.sharepoint.com/:f/g/personal/uog_bids_triton_uog_edu/ErgOSJyK8BOmMLgZZ_Mik0BcEgLn2iS9bKcQWpKJ-CDg

Kind reminders:

1. Submit one (1) PDF file into share folder.
2. Ensure your original bid security has been received by procurement office before bid deadline today at 2pm. A copy of your bid security should be enclosed in your bid submission packet. Please give us a call before heading over to drop-off your bid security. There is a bin outside the procurement office door. Instructions are visible above the tray where you will place your bid security.
3. Amendment 1-6 has been issued for this bid; copies of all amendments are posted on UOG procurement website for your reference.
4. All correspondence, questions, & concerns regarding any IFB/RFPs for the University of Guam shall be emailed directly to uog.bids@triton.uog.edu.

Bid Opening will be conducted @ 3:15pm this afternoon, via ZOOM link below:

<https://zoom.us/j/92050190340>

Please let me know if you have any issues.

Good Luck & Stay Safe!

Si Yu'os ma'áse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

Anthony Scragg <anthony@jwsguam.com>

Mon 12/6/2021 11:02 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: robertp@jwsguam.com <robertp@jwsguam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good Morning,

Earlier today, JWS, uploaded our PDF file for UOG IFB B21-17 However, we now have to make a correction to an incorrect document within our electronic submission.

We are preparing our revised submission , but I just wanted to let UOG Procurement know that we will be uploading a second PDF to the drop box. Please use this second file with the later upload timestamp as JWS' final bid submission.

Please let me know if there is any issue with uploading a revised submission. I will shoot an email after uploading the new PDF, to confirm that it has been received.

Be in touch soon.

Sincerely,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 8:18 AM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

Håfa Adai & Good Morning,

Please utilize the link below to drop your bid submission into our share folder.

https://ugualiveuog-my.sharepoint.com/:f/g/personal/uog_bids_triton_uog_edu/ErgOSJyjk8BOmMLg7Z_Mik0BcEgLdN2tS9bKcQWpkKJ-CDg

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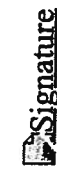
<https://zoom.us/j/92050190340>

Please let me know if you have any issues.

Good Luck & Stay Safe!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 11:07 AM

To: Anthony Scragg <anthony@jwsguam.com>

Cc: robertp@jwsguam.com <robertp@jwsguam.com>

Háfa Adai & Good Morning,

Noted. Please be advised I will delete the current file uploaded.

You may upload your final submission before deadline at 2pm. Thank you!

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From: Anthony Scragg <anthony@jwsguam.com>
Sent: Monday, December 6, 2021 11:01 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: robertp@jwsguam.com <robertp@jwsguam.com>
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

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Be in touch soon.

Sincerely,

Anthony R. Scragg
Service Department
JWS Refrigeration & A/C Ltd.
Email: anthony@jwsguam.com
Cell Line: 671- 864-8554
Direct Line : 671-588-5981
Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 8:18 AM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

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https://ugualiveuog-my.sharepoint.com/:f/g/personal/uog_bids_triton_uog_edu/ErgOSJyK8BOMMLgZZ_Mik0BcEgLn2tS9bKcQWpKJ-CDg

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Please let me know if you have any issues.

Good Luck & Stay Safe!

Si Yu'os ma'åse' & Have a nice day!,

Respectfully,



UNIVERSITY OF
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UNISETSEDAT GUAHAN

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link**Anthony Scragg <anthony@jwsguam.com>**

Mon 12/6/2021 11:19 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: robertp@jwsguam.com <robertp@jwsguam.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank you. The new PDF has just been uploaded. Please confirm receipt of new PDF file.

I am also going to head over to turn in the Bid security.

Appreciate all the help!

Regards,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsguam.com

Cell Line: 671-864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>**Sent:** Monday, December 6, 2021 11:07 AM**To:** Anthony Scragg <anthony@jwsguam.com>**Cc:** robertp@jwsguam.com**Subject:** Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

Háfa Adai & Good Morning,

Noted. Please be advised I will delete the current file uploaded.

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UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

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 **Signature
Logo**

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Cc: robertp@jwsguam.com <robertp@jwsguam.com>
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

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12/16/21, 11:47 AM

Mail - UOG Procurement Bids - Outlook

Be in touch soon.

Sincerely,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthonyr@jwsguam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, December 6, 2021 8:18 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

Håfa Adai & Good Morning,

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- 2.
3. Ensure your original bid security has been received by procurement office before bid deadline today at 2pm. A copy of your bid security should be enclosed in your bid submission packet. Please give us a call before heading over to drop-off your bid security. There is a bin outside the procurement office door. Instructions are visible above the tray where you will place your bid security.
3. Amendment 1-6 has been issued for this bid; copies of all amendments are posted on UOG procurement website for your reference.
- 4.
5. All correspondence, questions, & concerns regarding any IFB/RFPs for the University of Guam shall be emailed directly to uog.bids@triton.uog.edu.

Bid Opening will be conducted @ 3:15pm this afternoon, via ZOOM link below:

<https://zoom.us/j/92050190340>

Please let me know if you have any issues.

Good Luck & Stay Safe!

Si Yu'os ma'ase' & Have a nice day!

Respectfully,



UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

Nel Bangayan <NBangayan@jbmoderntech.com>

Mon 12/6/2021 12:18 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

We just uploaded the bid submit tap of ALL BUSINESS ENTERPRISES CORPORATION, I Would like to know if went thru or you received it. Your advise is great appreciated.

Thank you.

Nelia Bangayan
President

671-483-8810

nbangayan@jbmoderntech.com

Sent from my iPhone

On Dec 6, 2021, at 8:18 AM, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Hāfa Adai & Good Morning,

Please utilize the link below to drop your bid submission into our share folder.

https://ugualiveuog-my.sharepoint.com/:f/g/personal/uog_bids_triton_uog_edu/ErgOSJyjK8BOmMLg7Z_Mik0BcEgLn2iS9bKcQWpKJ-CDg

Kind reminders:

1. Submit one (1) PDF file into share folder.

2. Ensure your original bid security has been received by procurement office before bid deadline today at 2pm. A copy of your bid security should be enclosed in your bid submission packet. Please give us a call before heading over to drop-off your bid security. There is a bin outside the procurement office door. Instructions are visible above the tray where you will place your bid security.
3. Amendment 1-6 has been issued for this bid; copies of all amendments are posted on UOG procurement website for your reference.
4. All correspondence, questions, & concerns regarding any IFB/RFPs for the University of Guam shall be emailed directly to uog.bids@triton.uog.edu.

Bid Opening will be conducted @ 3:15pm this afternoon, via ZOOM link below:

<https://zoom.us/j/92050190340>

Please let me know if you have any issues.

Good Luck & Stay Safe!

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

Michael Ecalnea <mike@tonysworkshop.com>

Mon 12/6/2021 12:26 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Cc: tonysworkshop@teleguam.net <tonysworkshop@teleguam.net>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Confirmed receipt of amendment #6.

Thanks,

Mike

P.O. Box 23066 GMF
Barrigada, Guam 96921-3066
Mobile: (671) 888-3159
Tel: (671) 637-3060
Fax: (671) 637-3139
Website: www.tonysworkshop.com

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, December 6, 2021 8:18 AM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - Bid Opening & Bid Submission Link

Håfa Adai & Good Morning,

Please utilize the link below to drop your bid submission into our share folder.

https://guamliveuog-my.sharepoint.com/:f/g/personal/uog_bids_triton_uog_edu/ErgOSJyk8BOMMLg7Z_Mik0BcEgLn2tS9bKcQWpKJ-CDg

Kind reminders:

1. Submit one (1) PDF file into share folder.
- 2.
3. Ensure your original bid security has been received by procurement office before bid deadline today at 2pm. A copy of your bid security should be enclosed in your bid submission packet. Please give us a call before heading over to drop-off your bid security. There is a bin outside the procurement office door. Instructions are visible above the tray where you will place your bid security.
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- 4.
5. All correspondence, questions, & concerns regarding any IFB/RFPs for the University of Guam shall be emailed directly to uog_bids@triton.uog.edu.

Bid Opening will be conducted @ 3:15pm this afternoon, via ZOOM link below:

<https://zoom.us/j/92050190340>

Please let me know if you have any issues.

Good Luck & Stay Safe!

Si Yu'os ma'åse' & Have a nice day!

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@trilon.uog.edu

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Nelia Bangayan uploaded new files to your request for B21-17 BID SUBMISSION

SharePoint Online <no-reply@sharepointonline.com>

Mon 12/6/2021 2:29 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

<p>New files were uploaded to your request for "B21-17 BID SUBMISSION"</p>
<p>Nelia_Bangayan_UOG BID No. B21-17 All Business Enterprises Corporation.pdf</p>
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>See new files</p> </div>

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Nelia Bangayan uploaded new files to your request for B21-17 BID SUBMISSION

SharePoint Online <no-reply@sharepointonline.com>

Mon 12/6/2021 2:30 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

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<p>New files were uploaded to your request for "B21-17 BID SUBMISSION"</p>
<p>Nelia_Bangayan_UOG BID NO 1. B21-17 ALL BUSINESS ENTERPRISES CORPORATION</p>
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>See new files</p> </div>

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UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 4:12 PM

To: John Leon Guerrero <johnlg@triton.uog.edu>



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Anthony_Scragg_UOG BID No. B21-17_JWS



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UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 4:12 PM

To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>



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Mike_Ecalnea_Tony's Workshop Bid Package UOG B21-17

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12/16/21, 11:52 AM

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UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 4:13 PM

To: Leon Guerrero, Glenn <glennlg@triton.uog.edu>



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John Leon Guerrero successfully used the link to "Anthony_Scragg_UOG BID No. B21-17_JWS"

SharePoint Online <no-reply@sharepointonline.com>

Mon 12/6/2021 4:14 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

John Leon Guerrero <johnlg@triton.uog.edu > has opened the link you sent to "Anthony_Scragg_UOG BID No. B21-17_JWS"!

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Anthony_Scragg_UOG BID No. B21-17_JWS

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[Notification Settings](#)

Bid Status

Jessiree A. Patao <alvarezjm@triton.uog.edu>

Tue 12/7/2021 11:14 AM

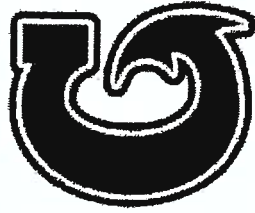
To: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: Kaimana Kalei Terlaje <aquinok6970@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>

Hi Em,

As requested, please see attached Bid Status for JWS referencing B21-17.

Si Yu'os ma'åse',



**UNIVERSITY OF
GUAM**
UNIBETSĀT GUÅEEAN

Jessiree A. Patao

Buyer II

Procurement

Office: +1 (671) 735-2925

alvarezjm@triton.uog.edu

<https://www.uog.edu/procurement>

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - ANALYSIS MEMO TO PRESIDENT

Abigail Martin <martinarp@triton.uog.edu>

Tue 12/7/2021 5:29 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Hi Em,

To reiterate our conversation, table 2.0 is optional and is not part of the bid determination. See attached for the signed copy.

Thanks,
Abby

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Tuesday, December 7, 2021 4:28 PM

To: Abigail Martin <martinarp@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - ANALYSIS MEMO TO PRESIDENT

Hi Abby,

Kindly requesting your urgent review and approval. Thank you!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

12/16/21, 11:54 AM

Mail - UOG Procurement Bids - Outlook



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Office: 671-735-2925

Fax: 671-735-3010

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UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 5:03 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Bcc: John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmoderotech.com>; Anthony Scragg <anthomys@jwsguam.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; joeann@mjmetc.com <joeann@mjmetc.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesoniis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Gene Bangayan <GeneBangayan@jbmoderotech.com>; Nel Bangayan <NBangayan@jbmoderotech.com>

Håfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!



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Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Lynn Scott <lynn@gesiworld.com>

Mon 12/6/2021 6:08 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Please confirm the each of these units conform to the By American Act & are copper coil with copper fin spec'd

Thank you

Lynn Scott
President & CEO
Green Energy Solutions, Inc.

Office: 671-647-8111 ext. 1078
Mobile: 671-686-5557
Email: lynn@gesiworld.com
Website: www.gesiguam.com

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 5:03 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Háfa Aday & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

GPE INC <guampacific@gmail.com>

Tue 12/7/2021 7:28 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Received , thank you

Sent from my iPhone

On Dec 6, 2021, at 5:03 PM, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Håfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'åse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Michael Ecalnea <mike@tonysworkshop.com>

Tue 12/7/2021 7:38 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Cc: tonysworkshop@teleguam.net <tonysworkshop@teleguam.net>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Confirmed receipt of notice of intent of award.

Thanks,

Mike

P.O. Box 23066 GMF
Barrigada, Guam 96921-3066
Mobile: (671) 888-3159
Tel: (671) 637-3060
Fax: (671) 637-3139
Website: www.tonysworkshop.com

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 5:03 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Háfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

Signature
Logo

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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Julie Sugatan <tonysworkshop@teleguam.net>

Tue 12/7/2021 9:57 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Cc: mike@tonysworkshop.com <mike@tonysworkshop.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good morning,

Please see attached license and equipment submittals.

Thanks,
Julie



P.O. Box 23066 GMF
Barrigada, Guam 96921-3066
TEL: (671) 637-3060
FAX: (671) 637-3139
Website: www.tonysworkshop.com

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From: Michael Ecalnea <mike@tonysworkshop.com>
Sent: Tuesday, December 7, 2021 7:37 AM
To: 'UOG Procurement Bids' <uog.bids@triton.uog.edu>; 'Procurement Office' <procurementoffice@triton.uog.edu>
Cc: tonysworkshop@teleguam.net
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Confirmed receipt of notice of intent of award.

Thanks,

Mike

P.O. Box 23066 GMF
Barrigada, Guam 96921-3066
Mobile: (671) 888-3159
Tel: (671) 637-3060
Fax: (671) 637-3139
Website: www.tonysworkshop.com



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 5:03 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Hāfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

 Signature
Logo

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Fw: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

UOG Procurement Bids <uog.bids@triton.uog.edu>

Tue 12/7/2021 10:08 AM

To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Hi John,

Please review ASAP and let me know; need to issue award at soonest. Thanks!

Si Yu'os ma'áse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Julie Sugatan <tonysworkshop@teleguam.net>

Sent: Tuesday, December 7, 2021 9:56 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

GPE INC <guampacific@gmail.com>

Tue 12/7/2021 10:11 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

This is to inform your office that an Appeal to the OPA will be filed today or tomorrow in this IFB Bid 21-17. Thank you.



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On Mon, 6 Dec 2021 at 17:03, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Háfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!,



UNIVERSITY OF
GUAM
UNIBETSEDAT GUÁRAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/7/8



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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

John Leon Guerrero <johnlg@triton.uog.edu>

Tue 12/7/2021 10:57 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Hafa Adai Emily

I would recommend to proceed.

Regards,
John LG

From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Tuesday, December 7, 2021 10:08 AM

To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Subject: Fw: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Hi John,

Please review ASAP and let me know; need to issue award at soonest. Thanks!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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Julie Sugatan <tonysworkshop@teleguam.net>
Friday, December 7, 2021 9:56 AM

Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
<@tonysworkshop.com <mike@tonysworkshop.com>

Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good morning,

Please see attached license and equipment submittals.

Thanks,
Julie



P.O. Box 23066 GMF
 Barrigada, Guam 96921-3066
 TEL: (671) 637-3060
 FAX: (671) 637-3139
 Website: www.tonysworkshop.com

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From: Michael Ecalnea <mike@tonysworkshop.com>
Sent: Tuesday, December 7, 2021 7:37 AM
To: 'UOG Procurement Bids' <uog.bids@triton.uog.edu>; 'Procurement Office' <procurementoffice@triton.uog.edu>
Cc: tonysworkshop@teleguam.net
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Confirmed receipt of notice of intent of award.

Thanks,

Mike

P.O. Box 23066 GMF
 Barrigada, Guam 96921-3066
 Mobile: (671) 888-3159
 Tel: (671) 637-3060
 Fax: (671) 637-3139
 Website: www.tonysworkshop.com



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 5:03 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG-IEB-B21-17 - Purchasing of HVAC Equipment - **BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD**

Håfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

UOG Procurement Bids <uog.bids@triton.uog.edu>

Tue 12/7/2021 10:59 AM

To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Noted, with Thanks!

I will issue award.

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: John Leon Guerrero <johnlg@triton.uog.edu>

Sent: Tuesday, December 7, 2021 10:57 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>
Subject: Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Hafa Adai Emily

I would recommend to proceed.

Regards,
John LG

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Tuesday, December 7, 2021 10:08 AM
To: John Leon Guerrero <johnlg@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>
Subject: Fw: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

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Fax: 671-735-3010

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From: Julie Sugatan <tonysworkshop@teleguam.net>
Sent: Tuesday, December 7, 2021 9:56 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Cc: mike@tonysworkshop.com <mike@tonysworkshop.com>
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Good morning,

Please see attached license and equipment submittals.

Thanks,
Julie



P.O. Box 23066 GMF
Barrigada, Guam 96921-3066
TEL: (671) 637-3060
FAX: (671) 637-3139
Website: www.tonysworkshop.com

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From: Michael Ecalnea <mike@tonysworkshop.com>
Sent: Tuesday, December 7, 2021 7:37 AM
To: 'UOG Procurement Bids' <uog.bids@triton.uog.edu>; 'Procurement Office' <procurementoffice@triton.uog.edu>
Cc: tonysworkshop@teleguam.net
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Confirmed receipt of notice of intent of award.

Thanks,

Mike

P.O. Box 23066 GMF
Barrigada, Guam 96921-3066
Mobile: (671) 888-3159
Tel: (671) 637-3060
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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 5:03 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Håfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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www.avast.com

RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Anthony Scragg <anthony@jwsuam.com>

Tue 12/7/2021 11:29 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Cc: robertp@jwsuam.com <robertp@jwsuam.com>; rogerj@jwsuam.com <rogerj@jwsuam.com>; John Scragg <johnscragg9@aol.com>; 'Louise J' <louisej@jwsuam.com>; Gumatao, Emily <eggumatao@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Good afternoon,

Confirming receipt of attached documents "B21-17 Abstract Analysis" & "B21-17_Notice of Intent to Award". In addition to this I have attached finalized Data Submittals for the Dunham Bush equipment being offered, as well as a copy of JWS Guam Business License. Please confirm receipt of this email and supporting documents. Let me know if you have any questions regarding either attachments.

Sincerely,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

Email: anthony@jwsuam.com

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, December 6, 2021 5:03 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Háfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,

 Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@irriton.uog.edu

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Freedom of Information Act Request for Documents - UOG Invitation for Bid No. B21-17: Purchase HVAC Equipment Award dated December 7, 2021

chrisap@pacificlawyers.law <chrisap@pacificlawyers.law>

Wed 12/8/2021 12:19 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: djberman@pacificlawyers.law <djberman@pacificlawyers.law>

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To Whom It May Concern:

Please see attached Freedom of Information Act Request from Attorney Daniel J. Berman dated December 8, 2021.

The original will follow by Certified Mail, Return Receipt Requested.

Regards,

Christine A. Pangelinan, Secretary to Daniel J. Berman, Esq.

Berman Law Firm

111 W Chalan Santo Papa Ste 503

Hagatna, Guam 96910

Tel: (671) 477-2778

Fax: (671) 477-4366

Email: chrisap@pacificlawyers.law

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Berman Law Firm

111 W Chalan Santo Papa Ste 503

Hagatna GU 96910

12/16/21, 12:12 PM

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(671) 477-2778 (Office)

(671) 477-4366 (Fax)

Guam@PacificLawyers.law

Member, Pacific Lawyers www.pacificlawyers.law

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Fw: Freedom of Information Act Request for Documents - UOG Invitation for Bid No. B21-17: Purchase HVAC Equipment Award dated December 7, 2021

UOG Procurement Bids <uog.bids@triton.uog.edu>

Thu 12/9/2021 2:34 PM

To: Jonas Macapinlac <jmac@triton.uog.edu>

Hi Jonas,

See FOIA received earlier today.

Si Yu'os ma'áse' & Have a nice day!.



**UNIVERSITY OF
GUAM**
UNIBETSĒDĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: chrisap@pacifclawyers.law <chrisap@pacifclawyers.law>

Sent: Wednesday, December 8, 2021 12:18 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: djberman@pacificlawyers.law <djberman@pacificlawyers.law>

Subject: Freedom of Information Act Request for Documents - UOG Invitation for Bid No. B21-17: Purchase HVAC Equipment Award dated December 7, 2021

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
To Whom It May Concern:

Please see attached Freedom of Information Act Request from Attorney Daniel J. Berman dated December 8, 2021.

The original will follow by Certified Mail, Return Receipt Requested.

Regards,

Christine A. Pangelinan, Secretary to Daniel J. Berman, Esq.

Berman Law Firm

111 W Chalan Santo Papa Ste 503

Hagatna, Guam 96910

Tel: (671) 477-2778

Fax: (671) 477-4366

Email: chrisap@pacificlawyers.law

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111 W Chalan Santo Papa Ste 503

Hagatna GU 96910

(671) 477-2778 (Office)

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Guam@PacificLawyers.law

Member, Pacific Lawyers www.pacificlawyers.law

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Re: Freedom of Information Act Request for Documents - UOG Invitation for Bid No. B21-17: Purchase HVAC Equipment Award dated December 7, 2021

Jonas Macapinlac <jmac@triton.uog.edu>

Thu 12/9/2021 3:05 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Received. Thank you.

--

JONAS D. MACAPINLAC
Chief Marketing & Communications Officer

Office of the President

Tel: +1 (671) 735-2944

jmac@triton.uog.edu

<https://www.uog.edu>



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Thursday, December 9, 2021 2:34 PM

To: Jonas Macapinlac <jmac@triton.uog.edu>

Subject: Fw: Freedom of Information Act Request for Documents - UOG Invitation for Bid No. B21-17: Purchase HVAC Equipment Award dated December 7, 2021

Hi Jonas,

See FOIA received earlier today.

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: chrisap@pacificlawyers.law <chrisap@pacificlawyers.law>

Sent: Wednesday, December 8, 2021 12:18 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: djberman@pacificlawyers.law <djberman@pacificlawyers.law>

Subject: Freedom of Information Act Request for Documents - UOG Invitation for Bid No. B21-17: Purchase HVAC Equipment Award dated December 7, 2021

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Hagatna, Guam 96910

Tel: (671) 477-2778

Fax: (671) 477-4366

Email: chrisap@pacificlawyers.law

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Hagatna GU 96910

(671) 477-2778 (Office)

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Guam@PacificLawyers.law

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UOG IFB B21-17 : Purchasing of HVAC Equipment - BID STATUS & NOTICE OF AWARD

UOG Procurement Bids <uog.bids@triton.uog.edu>

Tue 12/7/2021 11:18 AM

To: Anthony Scragg <anthony@jwsguam.com>; Nel Bangayan <NBangayan@jbmoderntech.com>; Michael Ecalnea <mike@tonysworkshop.com>; tonyworkshop@teleguam.net <tonyworkshop@teleguam.net>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmoderntech.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; GPE INC <guampacific@gmail.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; joeann@mjmetc.com <joeann@mjmetc.com>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesoniis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Gene Bangayan <GeneBangayan@jbmoderntech.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Engineer Surface Solutions <engineersurfacesolutions@gmail.com>

Bcc: John Leon Guerrero <johnlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>

Háfa Adai & Good Morning,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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12/16/21, 12:15 PM

Mail - UOG Procurement Bids - Outlook

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Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID STATUS & NOTICE OF AWARD

GPE INC <guampacific@gmail.com>

Tue 12/7/2021 11:46 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Anthony Scragg <anthony@jwsquam.com>; Nel Bangayan <NBangayan@jbmmoderntech.com>; Michael Ecalnea <mike@tonysworkshop.com>; tonyworkshop@teleguam.net <tonyworkshop@teleguam.net>; Procurement Office <procurementoffice@triton.uog.edu>; John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmmoderntech.com>; Teddy Garcia <teddygarcia@jrngu.com>; Nacia Atalig <nacia@abiliysolutionsllc.biz>; arthur.adriano@medpahrmusa.net <arthur.adriano@medpahrmusa.net>; alex.pearson@onepacgrp.com <alex.pearson@onepacgrp.com>; arnel.francisco@carrier.com <arnel.francisco@carrier.com>; joeann@mjmetc.com <joeann@mjmetc.com>; Lynn Scott <lynn@gesiworl.com>; Chuck Sanchez <chuck.deesoniis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Gene Bangayan <GeneBangayan@jbmmoderntech.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Engineer Surface Solutions <engineers.surfacesolutions@gmail.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Received, thank you.



Virus-free. www.avg.com

On Tue, 7 Dec 2021 at 11:18, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Hâfa Adai & Good Morning,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu



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GUAM
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Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/778



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RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID STATUS & NOTICE OF AWARD

Michael Ecalnea <mike@tonysworkshop.com>

Tue 12/7/2021 12:11 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: tonysworkshop@teleguam.net <tonysworkshop@teleguam.net>; 'Tony Mendoza' <tony@tonysworkshop.com>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Attached signed notice of award.

Thanks,

Mike

P.O. Box 23066 GMF
Barrigada, Guam 96921-3066
Mobile: (671) 888-3159
Tel: (671) 637-3060
Fax: (671) 637-3139
Website: www.tonysworkshop.com

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Tuesday, December 7, 2021 11:18 AM

To: Anthony Scragg <anthony@jwsguam.com>; Nel Bangayan <NBangayan@jbmoderntech.com>; Michael Ecalnea <mike@tonysworkshop.com>; tonysworkshop@teleguam.net

Cc: Procurement Office <procurementoffice@triton.uog.edu>; John Ryan <jtryan@me.com>; Deo Lagman <DLagman@jbmoderntech.com>; Teddy Garcia

12/16/21, 12:16 PM

Mail - UOG Procurement Bids - Outlook

<teddygarcia@jrngu.com>; Nacia Atalig <nacia@abilitysolutionsllc.biz>; arthur.adriano@medpahrmusa.net; alex.pearson@onepacgrp.com; GPE INC <guampacific@gmail.com>; arnel.francisco@carrier.com; joeann@mjmetc.com; Lynn Scott <lynn@gesiworld.com>; Chuck Sanchez <chuck.deesonis@gmail.com>; Camille Zapanta <camille@abilitysolutionsllc.biz>; Llarenas, Bernard <Bernard.Llarenas2@carrier.com>; Gene Bangayan <GeneBangayan@jbmoderntech.com>; Camacho, Rochelle <rochelle.camacho2@carrier.com>; Engineer Surface Solutions <engineers.surfacesolutions@gmail.com>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID STATUS & NOTICE OF AWARD

Háfa Adai & Good Morning,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!.

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

 **Signature
Logo**

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This email has been checked for viruses by Avast antivirus software.
www.avast.com

Re: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID STATUS & NOTICE OF AWARD

Engineer Surface Solutions <engineers.surface.solutions@gmail.com>

Thu 12/9/2021 4:05 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Acknowledge receipt. Thank you.

Emer Ocampo

On Tue, Dec 7, 2021 at 11:18 AM UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Håfa Adai & Good Morning,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'åse' & Have a nice day!.

Respectfully,

Signature
Logo

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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--

Surface Solutions

928 N Marine Corps Dr, Suite 101, Tamuning GU 96913
(671) 482-6555

engineers.surfaceolutions@gmail.com

RE: BID IFB B21-17

Gumataotao, Emily <eggumataotao@triton.uog.edu>

Fri 12/10/2021 9:46 AM

To: Gene Bangayan <GeneBangayan@jmodernrtech.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>

Háfa Adai & Good Morning Mr. Bangayan,

Pursuant to bid requirements as well as continuous reminders on emails, all information pertaining to UOG IFB/RFPs, which include bid B21-17 must be emailed to uog_bids@triton.uog.edu.

I did not receive any of your emails prior to today as it was directed into my junk folder,(see attachment; it may be something with your domain that the computer recognizes), hence the reason we require all communication/correspondence to be sent to our bids email to ensure it is not missed and it is addressed accordingly as the bid email is frequently monitored throughout each work day by all our personnel. You may cc my personal and procurement office email. I have also identified your email address to safe, so hopefully future emails go straight to my inbox. Also, just to be sure we have received your email you may follow-up with a courtesy call.

Please forward and send your requests' to our bids email at soonest and we will respond accordingly. Thank you!

~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'áse' & Have a nice day!,



Respectfully,

Emily G. Gumataotao

SUPPLY MANAGEMENT ADMINISTRATOR
PROCUREMENT | ADMIN & FINANCE

Office: 671-735-2925

Fax: 671-735-3010

eggumataotao@triton.uog.edu

[mailto:gumataotaoemilyg@triton.uog.edu%0dProcurementoffice@triton.uog.edu]Procurementoffice@triton.uog.edu

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From: Gene Bangayan [mailto:GeneBangayan@jbmoderntech.com]
Sent: Thursday, December 9, 2021 3:19 PM
To: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>
Subject: FW: BID IFB B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Ms. Emily, this to follow if your received our email below, dated 12-7-21. This follow up serve as our legal and final protest and we hope you will response on our FOIA on Tony's Work Shop submittal and its brochures material data and same with JWS too. We appreciate your immediate response on this matter.
Thank you.

Gene M. Bangayan

CC: Corporate Lawyer.

From: Gene Bangayan
Sent: Tuesday, December 7, 2021 4:55 PM
To: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>
Subject: BID IFB B21-17

EMILY, on behalf of wife and her company, All business Enterprises Corporation I just consulted our corporate adviser of All Business Enterprises Corporation with regards on my wife email to you on the Sunshine Act, " FOIA" and according to the advice the request serve as a protect and that you can't award until you satisfy the Sunshine Act, " FOIA ". My wife emailed you requesting Tony's work Shop submittal and the brochures that you had asked to Tony' Work Shop and also the JWS submittal. We appreciate your advice on the matter.
Thank you.
Gene M. Bangayan

RE: UOG Bid Result - IFB B21-17

Gumataotao, Emily <eggumataotao@triton.uog.edu>

Fri 12/10/2021 10:19 AM

To: Nel Bangayan <NBangayan@jbmoderntechnology.com>

Cc: Procurement Office <procurementoffice@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>
Håfa Adai & Good Morning Nel,

As addressed to your husband's email, Mr. Gene Bangayan, pursuant to bid requirements as well as continuous reminders on emails, all information pertaining to UOG IFB/RFPs, which include bid B21-17 must be emailed to uog.bids@triton.uog.edu.

I did not receive any of your emails prior to today as it was directed into my junk folder,(see attachment; it may be something with your domain that the computer recognizes), hence the reason we require all communication/correspondence to be sent to our bids email to ensure it is not missed and it is addressed accordingly as the bid email is frequently monitored throughout each work day by all our personnel. You may cc my personal and procurement office email. I have also identified your email address to safe, so hopefully future emails go straight to my inbox. Also, just to be sure we have received your email you may follow-up with a courtesy call.

Please forward and send your requests' to our bids email at soonest and we will respond accordingly. Thank you!

~ *Merry Christmas & Happy Holidays* ~

Si Yu'os ma'åse' & Have a nice day!



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Respectfully,

Emily G. Gumataotao

SUPPLY MANAGEMENT ADMINISTRATOR

PROCUREMENT | ADMIN & FINANCE

Office: 671-735-2925

Fax: 671-735-3010

eggumataotao@triton.uog.edu

[mailto:gumataotaoemilyg@triton.uog.edu%0dProcurementoffice@triton.uog.edu]Procurementoffice@triton.uog.edu

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12/16/21, 12:17 PM

Mail - UOG Procurement Bids - Outlook

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From: Nel Bangayan [mailto:NBangayan@jbmoderntech.com]
Sent: Monday, December 6, 2021 6:23 PM
To: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG Bid Result - IFB B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

December 6, 2021

Hi Emily, the bid had just finished this afternoon. I was surprise how fast the Intent to Award was issued. I would like to request thru Sunshine Act FOIA the submittal copy of Tony's Workshop and JWS including the ACCU Unit Brochures. I appreciate your advice when it is available for pick up.
Thank you.

Nelia Bangayan
All Business Enterprises Corp
Mobile: 671 483-8310

Re: EMAIL FOIA : BID IFB B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 12/10/2021 11:11 AM

To: Gene Bangayan <GeneBangayan@jbmoderntech.com>

Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Håfa Adai & Good Morning Gene,

Confirming receipt. Thank you!

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Gene Bangayan <GeneBangayan@jbmoderntech.com>
Sent: Friday, December 10, 2021 10:59 AM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Subject: FW: EMAIL FOIA : BID IFB B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Ms. Emily, re-forward due to undelivered.

-----Original Message-----

From: Gene Bangayan
Sent: Friday, December 10, 2021 10:54 AM
To: uog.bids@triton.guam.edu
Cc: Procurement Office <procurementoffice@triton.uog.edu>, Gumataotao, Emily <eggumataotao@triton.uog.edu>
Subject: FW: EMAIL FOIA : BID IFB B21-17

Hi Emily, please see the attachment on the above subject matter for your perusal.
 Kindly advice upon received.. stay safe.
 Thank you.
 Gene

-----Original Message-----

From: xerox@moderntech.com <xerox@moderntech.com>
Sent: Friday, December 10, 2021 10:42 AM
To: Gene Bangayan <GeneBangayan@jbmoderntech.com>
Subject: Scanned from a Xerox Multifunction Printer

Please open the attached document. It was sent to you using a Xerox multifunction printer.

Attachment File Type: pdf, Multi-Page

Multifunction Printer Location:
 Multifunction Printer Name: XRX9C934E975380

For more information on Xerox products and solutions, please visit <https://nam04.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.xerox.com%2F&data=04%7C01%7CUog.bids%40triton.uog.edu%7Cc303d361d8924554a9b108d9bb785ca2%7C2a652fdf10c34e4f9e94369090abfd04%7C0%7C637746947959632294%7CUknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTil6k1haWwiLCJXVCi6Mn0%3D%7C0&data=JJobRK9G3o%2BxY9Ea0Oayuu5sQxrZP19HM3oTr2KDM%3D&reserveid=0>

Fw: EMAIL FOIA : BID IFB B21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 12/10/2021 11:21 AM

To: Jonas Macapinlac <jmac@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Hi Jonas,

Another FOIA received. See below and email attached.

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Gene Bangayan <GeneBangayan@jbmoderntech.com>

Sent: Friday, December 10, 2021 10:59 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Subject: FW: EMAIL FOIA : BID IFB B21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Ms. Emily, re-forward due to undelivered.

-----Original Message-----

From: Gene Bangayan
Sent: Friday, December 10, 2021 10:54 AM
To: uog.bids@triton.guam.edu
Cc: Procurement Office <procurementoffice@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
Subject: FW: EMAIL FOIA : BID IFB B21-17

Hi Emily, please see the attachment on the above subject matter for your perusal.

Kindly advice upon received.. stay safe.

Thank you.

Gene

-----Original Message-----

From: xerox@moderntech.com <xerox@moderntech.com>
Sent: Friday, December 10, 2021 10:42 AM
To: Gene Bangayan <GeneBangayan@jbmoderntech.com>
Subject: Scanned from a Xerox Multifunction Printer

Please open the attached document. It was sent to you using a Xerox multifunction printer.

Attachment File Type: pdf, Multi-Page

Multifunction Printer Location:

Multifunction Printer Name: XRX9C934E9753B0

url=http%3A%2F%2Fwww.xerox.com%2F&data=04%7C01%7Cuog.bids%40triton.uog.edu%7Cc303d361d8924554a9b108d9bb785ca2%7C2a652fdf10c34e4f9e94369090abfd04%7C0%7C637746947959632294%7CUnknown%7CTWFpbGZsb3d8eyJWljoImFC4wLjAwMDAiLCJQIjoiV2luMzliLClB7IiwiLCJXVCi6Im0%3D%7C0&data=JJobRK9G3o%2BxY9Ea0Oayuuufi5sQxrZP19HM3oTr2KDM%3D&reserveid=0

JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

Robert Perez <robertp@jwsguam.com>

Tue 12/7/2021 1:20 PM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: 'John Scragg' <johnscragg9@aol.com>; UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Ms. Gumataotao,

Please see attached letter of protest.

Kindly acknowledge receipt.

Thank you.

Sincerely,

Roberto Perez

JWS Refrigeration & Air Conditioning, Ltd

290 Tun Jose Salas Street Ste A. Tamuning Guam 96913

email:robertp@jwsguam.com

Direct Line:588-5979

Office:671-646-7662, Cell Phone:671-988-7733,Fax: 671-649-0053



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From: Anthony Scragg <anthony@jwsguam.com>

Sent: Tuesday, December 7, 2021 11:28 AM

To: 'UOG Procurement Bids' <uog.bids@triton.uog.edu>; 'Procurement Office' <procurementoffice@triton.uog.edu>

Cc: robertp@jwsguam.com; rogerj@jwsguam.com; John Scragg <johnscragg9@aol.com>; 'Louise J' <louisej@jwsguam.com>;

12/16/21, 12:22 PM

Mail - UOG Procurement Bids - Outlook

eggumatao@triton.uog.edu

Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Good afternoon,

Confirming receipt of attached documents "B21-17 Abstract Analysis" & "B21-17_Notice of Intent to Award". In addition to this I have attached finalized Data Submittals for the Dunham Bush equipment being offered, as well as a copy of JWS Guam Business License. Please confirm receipt of this email and supporting documents. Let me know if you have any questions regarding either attachments.

Sincerely,

Anthony R. Scragg

Service Department

JWS Refrigeration & A/C Ltd.

~~Email: anthony@jws-guam.com~~

Cell Line: 671- 864-8554

Direct Line : 671-588-5981

Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Monday, December 6, 2021 5:03 PM

To: Procurement Office <procurementoffice@triton.uog.edu>

Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Håfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!.

Respectfully,

UOG Procurement

 Signature
Logo

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

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Re: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

UOG Procurement Bids <uog.bids@triton.uog.edu>

Fri 12/10/2021 8:47 AM

To: robertp@jwsuam.com <robertp@jwsuam.com>
 Cc: 'John Scragg' <johnscragg9@aol.com>; Procurement Office <procurementoffice@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
 Háfa Adai & Good Morning Mr. Perez,

Please comply with the requirements of Section 9.2.3.1 and Section 9.2.3.3, UOG Procurement Regulations if you desire to file a protest concerning the UOG's award for UOG-IFB-B21-17 (Purchasing of HVAC Equipment). Until you do so, UOG will treat this matter as a complaint and not a Protest. Accordingly, and pursuant to Section 9.2.2, UOG Procurement Regulations, UOG finds no merit to your complaint because Tony's Workshop's bid submitted in response to UOG-IFB-B21-17 complied with the IFB's specifications. Please see Tony's Workshop's Bid submitted in response to UOG-IFB-B21-17 (Purchasing of HVAC Equipment), and the brochure for the equipment bid by Tony's Workshop which you requested, and which are attached herein. As a courtesy I have also attached to this email an excerpt from UOG's Procurement Regulations containing Section 9.2.3.1 and Section 9.2.3.3.

Thank you & Stay safe!

~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'ase' & Have a nice day!,



**UNIVERSITY OF
GUAM**
LHIBETSĒDĀT GUĀHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Robert Perez <robertp@jwsguam.com>

Sent: Tuesday, December 7, 2021 1:19 PM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: 'John Scragg' <johnscragg9@aol.com>; UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Subject: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
Ms. Gumataotao,

Please see attached letter of protest.

Kindly acknowledge receipt.

Thank you.

Sincerely,

Roberto Perez

JWS Refrigeration & Air Conditioning, Ltd

290 Tun Jose Salas Street Ste A. Tamuning Guam 96913

email:robertp@jwsguam.com

Direct Line:588-5979

Office:671-646-7662, Cell Phone:671-988-7733,Fax: 671-649-0053



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From: Anthony Scragg <anthony@jwsguam.com>

Sent: Tuesday, December 7, 2021 11:28 AM

To: 'UOG Procurement Bids' <uog.bids@triton.uog.edu>; 'Procurement Office' <procurementoffice@triton.uog.edu>
Cc: robertp@jwsguam.com; rogerj@jwsguam.com; John Scragg <johnscragg9@aol.com>; 'Louise J' <louisej@jwsguam.com>;
 eggumatao@triton.uog.edu
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Good afternoon,

Confirming receipt of attached documents "B21-17 Abstract Analysis" & "B21-17 Notice of Intent to Award". In addition to this I have attached finalized Data Submittals for the Dunham Bush equipment being offered, as well as a copy of JWS Guam Business License. Please confirm receipt of this email and supporting documents. Let me know if you have any questions regarding either attachments.

Sincerely,

Anthony R. Scragg
 Service Department
 JWS Refrigeration & A/C Ltd.
 Email: anthonyr@jwsguam.com
 Cell Line: 671- 864-8554
 Direct Line : 671-588-5981
 Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 5:03 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Håfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'ase' & Have a nice day!.



UNIVERSITY OF
GUAM
UNIBETSEDAT GUAHAN

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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RE: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

Robert Perez <robertp@jwsguam.com>

Fri 12/10/2021 4:39 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: 'John Scragg' <johnscragg9@aol.com>; Procurement Office <procurementoffice@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Hafa Adai and Good Afternoon,

Please refer to the attached letter which you will find self-explanatory.

Thank you.

Sincerely,

Roberto Perez

JWS Refrigeration & Air Conditioning, Ltd

290 Tun Jose Salas Street Ste A. Tamuning Guam 96913

email:robertp@jwsguam.com

Direct Line:588-5979

Office:671-646-7662, Cell Phone:671-988-7733,Fax: 671-649-0053



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From: UOG Procurement Bids <uog.bids@triton.uog.edu>

Sent: Friday, December 10, 2021 8:47 AM

To: robertp@jwsguam.com

Cc: 'John Scragg' <johnscragg9@aol.com>; Procurement Office <procurementoffice@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>

Subject: Re: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

Hâfa Adai & Good Morning Mr. Perez,

Please comply with the requirements of Section 9.2.3.1 and Section 9.2.3.3, UOG Procurement Regulations if you desire to file a protest concerning the UOG's award for UOG-IFB-B21-17 (Purchasing of HVAC Equipment). Until you do so, UOG will treat this matter as a complaint and not a Protest. Accordingly, and pursuant to Section 9.2.2, UOG Procurement Regulations, UOG finds no merit to your complaint because Tony's Workshop's bid submitted in response to UOG-IFB-B21-17 complied with the IFB's specifications. Please see Tony's Workshop's Bid submitted in response to UOG-IFB-B21-17 (Purchasing of HVAC Equipment), and the brochure for the equipment bid by Tony's Workshop which you requested, and which are attached herein. As a courtesy I have also attached to this email an excerpt from UOG's Procurement Regulations containing Section 9.2.3.1 and Section 9.2.3.3.

Thank you & Stay safe!

~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'ase' & Have a nice day!,

Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog_bids@triton.uog.edu

Signature
Logo

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From: Robert Perez <robertp@jwsguam.com>
Sent: Tuesday, December 7, 2021 1:19 PM
To: Gumataotao, Emily <eggumataotao@triton.uog.edu>
Cc: 'John Scragg' <johnscragg9@aol.com>; UOG Procurement Bids <uog.bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Subject: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Ms. Gumataotao,

Please see attached letter of protest.

Kindly acknowledge receipt.

Thank you.

Sincerely,

Roberto Perez

JWS Refrigeration & Air Conditioning, Ltd

290 Tun Jose Salas Street Ste A. Tamuning Guam 96913

email:robertp@jwsguam.com

Direct Line:588-5979

Office:671-646-7662, Cell Phone:671-988-7733,Fax: 671-649-0053



Re: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/13/2021 9:09 AM

To: robertp@jwsguam.com <robertp@jwsguam.com>

Cc: 'John Scragg' <johnscragg9@aol.com>; Procurement Office <procurementoffice@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
Háfa Adai & Good Morning Mr. Perez,

Acknowledging receipt of your email.

Thank you & Stay safe!

~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'áse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Cc: 'John Scragg' <johnscragg9@aol.com>; Procurement Office <procurementoffice@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
Subject: RE: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
 Hafa Adai and Good Afternoon,

Please refer to the attached letter which you will find self- explanatory.

Thank you.
 Sincerely,
Roberto Perez
JWS Refrigeration & Air Conditioning, Ltd
 290 Tun Jose Salas Street Ste A. Tamuning Guam 96913
 email:robertp@jwsguam.com
 Direct Line:588-5979
 Office:671-646-7662, Cell Phone:671-988-7733,Fax: 671-649-0053



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Sent: Friday, December 10, 2021 8:47 AM
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Cc: 'John Scragg' <johnscragg9@aol.com>; Procurement Office <procurementoffice@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>
Subject: Re: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

Háfa Adai & Good Morning Mr. Perez,

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Thank you & Stay safe!

~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'ase' & Have a nice day!



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Robert Perez <robertp@jwsguam.com>
Sent: Tuesday, December 7, 2021 1:19 PM
To: Gumatao, Emily <eggumatao@triton.uog.edu>
Cc: 'John Scragg' <johnscragg9@aol.com>; UOG Procurement Bids <uog_bids@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>
Subject: JWS Refrigeration & Air Conditioning Ltd - Protest For UOG IFB B21-17 : Purchasing of HVAC Equipment

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Ms. Gumatao,

Please see attached letter of protest.

Kindly acknowledge receipt.

Thank you.
 Sincerely,

Roberto Perez

JWS Refrigeration & Air Conditioning, Ltd
 290 Tun Jose Salas Street Ste A. Tamuning Guam 96913
 email:robertp@jwsguam.com
 Direct Line:588-5979
 Office:671-646-7662, Cell Phone:671-988-7733,Fax: 671-649-0053



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Sent: Tuesday, December 7, 2021 11:28 AM
To: 'UOG Procurement Bids' <uog_bids@triton.uog.edu>; 'Procurement Office' <procurementoffice@triton.uog.edu>
Cc: robertp@jwsguam.com; rogerj@jwsguam.com; John Scragg <johnscragg9@aol.com>; 'Louise J' <louisej@jwsguam.com>; eggumatao@triton.uog.edu
Subject: RE: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Good afternoon,

B21-17 Abstract Analysis" & "B21-17_Notice of Intent to Award". In addition to this I have attached finalized Data Submittals being offered, as well as a copy of JWS Guam Business License. Please confirm receipt of this email and supporting documents. Let me know if you have any questions regarding either attachments.

Sincerely,

Anthony R. Scragg
Service Department
JWS Refrigeration & A/C Ltd.
Email: anthony@jwsguam.com
Cell Line: 671-864-8554
Direct Line : 671-588-5981
Fax: 671-649-0053

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From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Monday, December 6, 2021 5:03 PM
To: Procurement Office <procurementoffice@triton.uog.edu>
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - BID ABSTRACT ANALYSIS & NOTICE OF INTENT TO AWARD

Háfa Adai & Good Afternoon,

See attached for your reference.

Please confirm receipt. Thank you!

Si Yu'os ma'áse' & Have a nice day!,

Respectfully,



UNIVERSITY OF
GUAM
UNIBETSEDAT GUAHAN

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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Fw: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG - DON

UOG Procurement Bids <uog.bids@triton.uog.edu>

Thu 12/16/2021 8:20 AM

To: Cynthia Guerrero <cguerrero@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

Cyn,

This is the email Carm sent to all with copy of determination of need.

Si Yu'os ma'ase' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: Carmelita Blas <cgblas@triton.uog.edu>

Sent: Tuesday, September 21, 2021 1:44 PM

To: Christine Mabayag <ckamm@triton.uog.edu>; Gumataotao, Emily <eggumataotao@triton.uog.edu>; Dr. Anita Enriquez <abe@triton.uog.edu>; Randall V. Wiegand <wiegandr@triton.uog.edu>; Leon Guerrero, Glenn <glennlg@triton.uog.edu>; Sandra Mary Mcauliffe <smcauliffe@triton.uog.edu>;

Rachel F. Cubacub <rachelfc@triton.uog.edu>; Cynthia Guerrero <cguerrero@triton.uog.edu>; Leah Aquino <leah@triton.uog.edu>; MERLITA AZICATE <mazicate@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>; June Calvo <jcalvo@triton.uog.edu>
Subject: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Thank you, Chris!! Forwarding to all parties involved for your records and further processing at Procurement.

Carm

From: Christine Mabayag <ckamm@triton.uog.edu>
Sent: Tuesday, September 21, 2021 11:37 AM
To: Carmelita Blas <cgblas@triton.uog.edu>
Subject: Re: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Attached is the fully executed RFP.

Si Yu'os ma'áse',

Chris Kamminga Mabayag
Executive Secretary

Office of the President
Tel: (671) 735-2990/1
Fax: (671) 734-2296
ckamm@triton.uog.edu
<https://www.uog.edu>



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12/16/21, 12:23 PM

Mail - UOG Procurement Bids - Outlook

this message in error, please destroy all copies of the original message (including attachments) and notify me immediately by email or phone. Thank you.

From: Carmelita Blas <cgbblas@triton.uog.edu>
Sent: Monday, September 20, 2021 05:15 PM
To: Christine Mabayag <ckamm@triton.uog.edu>
Subject: UOG RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Hi Chris,

Please forward to the BOR Chair and Treasurer for approval signatures on this RFP bid valued at \$647,574 and send back to me for distribution to all parties involved.

Thank you,
Carm

--
Si Yu'os ma'åse',



CARMELITA BLAS
Administrative Officer

ADMINISTRATION AND FINANCE
Office: +1 (671) 735-2900
cgbblas@triton.uog.edu
<https://www.uog.edu/administration/administration-finance/>

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12/16/21, 12:23 PM

Mail - UOG Procurement Bids - Outlook



IFB Bid Packet





RFP / BID ROUTING SLIP

Date: June 2, 2021
From: Emily G. Gumataotao, SMA – UOG Procurement Office
Subject: UOG BID NO. B21-17: Purchasing of HVAC Units for the University of Guam
Unit: Administration and Finance
Estimate: \$647,574

G/L Account Number: 63-2J-363049-T-5

Budget Verified by:

VIRGILIA AQUINO  MERLITA AZICATE 
Print | Signature


Liza J. Provide, Chairperson
UOG Board of Regents


Liza Provide (Sep 21, 2021 11:34 GMT+10) Sep 20, 2021
Signature Date

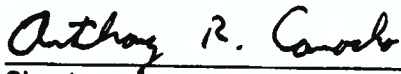
Mike W. Naholowaa, Treasurer
UOG Board of Regents


Mike Naholowaa (Sep 21, 2021 10:57 GMT+10) Sep 20, 2021
Signature Date


Thomas W. Krise, Ph.D., President
Review: (Estimate over \$100 K)


Thomas Krise (Sep 20, 2021 11:14 GMT+10) Sep 20, 2021
Signature Date

Approved to form:
Anthony R. Camacho, General Counsel

 9/26/21
Signature Date

Randall V. Wiegand, Vice President
Administration and Finance


Sep 20, 2021
Signature Date

Dr. Anita B. Enriquez
Senior Vice President & Provost


Anita Borja Enriquez (Sep 20, 2021 10:30 GMT+10) Sep 20, 2021
Signature Date

Abigail Martin, Interim Comptroller
Review: (Budget & Procurement)


Sep 20, 2021
Signature Date

RETURN TO PROCUREMENT FOR PROCESSING

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu
Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913
The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges
Senior College and University Commission and is an equal opportunity provider and employer.

September 15, 2021

RE: Written Determination of need for HVAC Equipment.

Greetings,

This determination is made to comply with 5 G.C.A. §5249(e) and Section 3.27.3.5, UOG Procurement Regulations. The University of Guam's Facilities Management & Services has determined that the purchasing of new HVAC equipment for UOG's RFK Library, PIP/GIE Building, Science Building, English Communication Building, the Computer Center, the Lectur Hall Auditorium, Marine Lab, and the HSS Building are required to replace old and worn out units that require greater maintenance to operate, and to maintain a healthy climate in those buildings.

SUBMITTED this 15th day of September, 2021 by:



GLENN A. LEON GUERRERO, MBA.
Director, UOG Facilities Management & Services

September 15, 2021

RE: Written Determination to solicit for and use a Multi-Term Contract for UOG-IFB-B21-17 (Purchasing of HVAC Units for UOG)

Greetings,

This determination is made to comply with Section 3.21.4, UOG Procurement Regulations. Prior to the issuance of the UOG-IFB-B21-17 (Purchasing of HVAC Units for UOG), the undersigned hereby determined the following:

1. The furnishing of long-term optional services for the HVAC Units, such as services for maintenance and upkeep of the new HVAC Units, services for their disposal, and a replacement or trade in program are required to meet the University's need for new HVAC Units.
2. A multi-term contract will serve the best interest of the University by promoting economies in the University's procurement because a change of the vendor providing the optional services stated above from one fiscal year to the next involves phase-in and phase-out costs during transition periods.
3. The cost and burden of contract solicitation, award, and administration of procuring contractors to perform the optional services described above may be reduced with a multi-term contract.

SUBMITTED this 15th day of September, 2021 by:



EMILY G. GUMATAOTAO
Supply Management Administrator




ADMINISTRATION & FINANCE
Consolidated Procurement Office

Date: June 2, 2021
TO: Pacific Daily News (PDN) / Guam Daily Post (POST)
FROM: Emily Gumataotao, SMA UOG Procurement Office (uog.bids@triton.uog.edu)

Please charge attached print advertisement to our purchase order _____.

Advertisement for: B21-17
HVAC Units for the University of Guam
FMS


Glenn Leon Guerrero, Director FMS
Departmental Approval

Dates to run

 
VIRGILIA AQUINO Sep 20, 2021 08:40 GMT+10!

Certified by

3x4

63-2J-363049-T-5201035 / FMS
Account No. / Department

Sizes

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu
Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913
The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges Senior College and University Commission and is an equal opportunity provider and employer.



**INVITATION FOR BID (IFB)
UOG BID NO. B21-17**

**The University of Guam is soliciting sealed bids for the
PURCHASING OF HVAC EQUIPMENT
For The University of Guam**

Copies of the Bid Package and Instructions and Information may be obtained from:

OFFICE: UOG Procurement Office
TELEPHONE: (671) 735-2925
FAX NO.: (671) 735-3010
LOCATION: UOG Administration Building (ANNEX BUILDING) Mangilao, Guam
E-MAIL: uog.bids@triton.uog.edu

A non-refundable fee of \$25.00 is required to obtain a bid package. Payment may be made via cash, check or credit card at the UOG Business Office, Cashier Services located at the UOG Administration Building Mon-Fri from 8 am - 4 pm by appointment only. Pay by phone is available from 8 am - 4 pm. You may schedule an appointment with our cashier services at 735-2923/45/46, please reference Bid number and title when making payment. Send proof of receipt to the Procurement Office.

In accordance with 5 G.C.A. §5220(a), a digital copy of this solicitation shall be posted on UOG's website at uog.bids@triton.uog.edu. No fees shall be assessed to potential bidders or other parties for accessing or downloading a copy of this solicitation from UOG's website. Potential bidders who access or download a copy of this solicitation from UOG's website must register their contact information with UOG to ensure that they receive any notices regarding any changes or updates to this solicitation. In accordance with 5 G.C.A. §5220(b), UOG shall not be liable for failure to provide notice to any party who accesses or downloads a copy of this solicitation from UOG's website and who fails to register their contact information with UOG as required herein. Please have subject line reference as indicated the *UOG Bid number, Bid Title, and your Company or Requestor's Name to register for UOG's Bid Distribution Registry.*

Deadline for Submission of Bid Packages is on _____, _____, 2021 on or before 2:00 P.M. via electronic submission to electronic Bid Share folder provided by UOG Procurement Office.

*/s/ Thomas W. Krise, Ph.D.
President*

University of Guam is an equal opportunity employer and provider.
This Advertisement is paid for by University of Guam Funds.

AUTHORIZED FOR ANNOUNCEMENT

Thomas W. Krise, Ph.D. President



ADMINISTRATION & FINANCE
Consolidated Procurement Office

**UOG BIDDERS DISTRIBUTION REGISTRY FORM
FOR UOG BID NO. B21-017**

**INFORMATION ON INTERESTED BIDDER FOR BID REGISTRY ENTRY MUST BE RECEIVED BY
UOG'S PROCUREMENT OFFICE PRIOR TO RECEIVING ANY DISTRIBUTED COPY SET OF THIS IFB
(WITH OR WITHOUT THE BID FEE)**

NOTICE:

**ALL DISTRIBUTIONS OF THIS BID PACKET MUST BE RECORDED IN THE BID'S REGISTRY (LOG) AT UOG'S
CONSOLIDATED PROCUREMENT OFFICE.**

**THE BID REGISTRY ALSO PROVIDES THE NECESSARY CONTACT INFORMATION NEEDED TO DISTRIBUTE
FUTURE AMENDMENTS, ADDENDUMS, AND CLARIFICATIONS FOR THIS BID PACKET.**

UOG PAYMENT RECEIPT NO. _____ DATE: ___/___/___ TIME: _____

PAYMENT METHOD: [] CASH [] CHECK NO. _____ [] CREDIT CARD _____

NAME OF COMPANY: _____

PHYSICAL ADDRESS: _____

MAILING ADDRESS: _____

CONTACT PERSON & TITLE: _____

CONTACT NUMBERS: TELEPHONE _____ FAX _____ CELLULAR _____

E-MAIL ADDRESS: _____

**OTHER CONTACT
INFORMATION OR
HELPFUL INSTRUCTIONS
FOR UOG WHEN FORWARDING
FUTURE UPDATES:**

UNIVERSITY OF GUAM - CONSOLIDATED PROCUREMENT OFFICE
UOG Station, Mangilao, Guam 96923 Tel. (671) 735.2925 Fax. (671) 735.3010
A U.S. LAND GRANT INSTITUTION ACCREDITED BY THE WESTERN ASSOCIATION OF SCHOOLS & COLLEGES
THE UNIVERSITY OF GUAM IS AN EQUAL OPPORTUNITY EMPLOYER AND PROVIDER

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UNIVERSITY OF GUAM
INVITATION FOR BID UOG BID NO. B21-17
PURCHASING OF HVAC EQUIPMENT FOR THE UNIVERSITY OF
GUAM

DATE ISSUED: JUNE 1, 2021

UOG SECTION: FACILITIES MANAGEMENT & SERVICES (FMS),
ADMINISTRATION & FINANCE

ISSUED BY: UOG CONSOLIDATED PROCUREMENT OFFICE
TELEPHONE NO.: (671) 735-2925 FAX NO.: (671) 735-3010
E-MAIL: uog.bids@triton.uog.edu

INSTRUCTIONS TO BIDDERS

1. RECEIPT AND OPENING OF BIDS: Sealed bids for UOG B21-17 PURCHASING OF HVAC EQUIPMENT FOR THE UNIVERSITY OF GUAM (UOG) must be received by the Procurement Office no later than:

TIME: 2:00 P.M. DATE: _____, _____, 2021

Bids submitted after the time and date specified above shall be rejected. Bid opening will be conducted electronically via Zoom Link at 4:00 pm; link will be provided through email to all registered offerors.

Attention is called to the fact that bidders not only offer to assume the obligations and liabilities imposed upon the contractor in the form of a contract, but are expressly made certain of the representations and warrants made herein. No effort is made to emphasize any particular provision of the contract, but bidders must familiarize themselves with every provision and its effect. This Bid is subject to **General Terms and Conditions of the Invitation for Sealed Bids (Attachment A)** and the **Special General Provisions (Attachment B)**.

In consideration of the expense of the University of Guam of opening, tabulating, and evaluating this and other bids, and other considerations, the undersigned agrees that this bid shall remain firm and irrevocable within sixty (60) calendar days from the date of opening to supply any or all of items for which prices are quoted.

2. BIDDER QUALIFICATIONS (Attachment C): The University of Guam may require bidders to present satisfactory evidence that they have sufficient experience and that they are fully prepared, thus it is required that the bidder completely fill out the Bidder's Qualifications Form.
3. NON-COLLUSION AFFIDAVIT (Attachment D): Each person submitting a bid for any portion of the work covered by the bidding documents shall execute an affidavit, in the form provided with the Bid to the effect that he has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the proposal.

4. **MAJOR SHAREHOLDERS AFFIDAVIT (Attachment E):** As a condition to submitting of bids or proposals, any partnership, sole proprietorship or corporation doing business with the University of Guam shall submit an affidavit that lists the name and address of any person who has held more than ten percent (10) of outstanding shares in said partnership, sole proprietorship or corporation at any time during the twelve (12) month period immediately preceding submission of a proposal. The affidavit shall contain the number of shares or the percentage of all assets of such partnership, sole proprietorship or corporation which have been held by each person during the twelve (12) month period. In addition, the affidavit shall contain the name and address of any person who has received or is entitled to receive a commission, gratuity or other compensation for the procuring or assisting in obtaining business related to the bid or proposal for the Offeror and shall contain the amounts of any shall commission, gratuity or other compensation. The affidavit shall be open and available for inspection and copying.
5. **AFFIDAVIT RE GRATUITIES, KICKBACKS AND FAVORS (Attachment G):** The bidder, offeror or contractor represents that it will not violate the prohibition against gratuities and kickbacks and favors set forth (Gratuities and Kickbacks) in 5 GCA, Chapter 5, Article 11, Ethics in Public Contracting and Section 11.7 (Gratuities and Kickbacks and Favors) of the UOG Procurement Manual.
6. **AFFIDAVIT RE ETHICAL STANDARDS (Attachment H):** The bidder, offeror, or contractor represents that it has not knowingly influenced and promises that it will not knowingly influence a government employee to breach any of the ethical standards set forth in 5 GCA, Chapter 5, Article 11, and in Chapter 11 (Ethics in Public Contracting) of the UOG Procurement Manual.
7. **COVENANT AGAINST CONTINGENT FEES (Attachment I):** The prospective contractor represents as part of such contractor's bid or proposal that such contractor has/has not (Circle applicable word or words) retained any person or agency on a percentage, commission, or other contingent arrangement, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business.
8. **DECLARATION RE COMPLIANCE WITH U.S. DEPARTMENT OF LABOR WAGE DETERMINATION (Attachment J):** In accordance with 5 GCA §§ 5801 and 5802, as may be applicable, each bidder certifies that any of its employees whose purpose, in whole or in part, is the direct delivery of service contracted by the University shall be paid in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the University, including health and other similar benefits. The updated wage rate with the most current revision shall be included in the bid submission.
9. **RIGHT TO ACCEPT AND REJECT BIDS:** The President of the University of Guam reserves the unqualified right, in his sole and absolute discretion, to reject any and all bids, or to accept that bid or combination of bids, if any, which in his sole and absolute judgment will under all circumstances best serve the interests of the University of Guam. In the event that the successful bidder fails to execute the contract upon his part or to furnish a satisfactory performance and payment bond, the University, after declaring the security deposit of such bidder forfeited, reserves the option to accept the bid of any other bidder within ten (10) days from such default, in which case such acceptance shall have the same effect as to such bidder as though he was the originally successful bidder.
10. **MODIFICATIONS PRIOR TO DATE SET FOR OPENING BIDS:** The University reserves the right to revise or amend the specifications prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Invitation for Bids and shall be identified as such. It is required that the bidders acknowledge in writing receipt of all amendments issued and such acknowledgment must be included in the bid. The

amendment shall refer to the portions of the Invitation for Bids it amends. Amendments shall be sent to all prospective Bidders known to have received an Invitation for Bids. Amendments shall be distributed within a reasonable time to allow prospective Bidders to consider the amendment in preparing their Bids. If the time and date set for receipt of bids will not permit such preparation, such time shall be increased to the extent possible in the amendment or, if necessary, by email or telephone and confirmed in the amendment.

11. **CANCELLATION OF SOLICITATION:** Prior to the date set for opening bids, a solicitation may be cancelled in whole or in part when the President or his designee determines in writing that the cancellation of the solicitation is in the University's best interest, in accordance with the University's Procurement Rules and Regulations.
12. **METHOD OF AWARD:** Bid shall be awarded to the [x] lowest, [] highest, responsible and responsive bidder whose bid meets the requirements and criteria set forth in the Invitation for Bids. A responsible bidder is one who has the capability in all respects to perform fully the contract requirements, and the integrity and reliability which will assure good faith performance. A responsive bidder is one who has submitted a bid which conforms in all material respects to the Invitation for Bids. The University reserves the right to waive any minor information of irregularity in Bids received. The President shall have the authority to award or reject Bids, in whole or in part for any one or more items if he determines it is in the public interest.

Award issued to the [x] lowest, [] highest, responsible and responsive bidder within the specified time for acceptance as indicated in the Bid, results in a binding contract without further action by either party provided the successful bidder executes a formal contract with the University. In case of any error in the extension of prices, unit price will govern. It is the policy of the Government of Guam to award Bids to qualified local vendors.

13. **SUBMISSION OF BIDS:**

- a. Bids and modifications thereof shall be submitted through electronic submission to the Share folder that UOG procurement office provides and addressed to the office specified in the Solicitation. The electronic file submission will show the hour and date of submission as specified in the Solicitation for receipt. The file should identify the Solicitation number, and the name of the bidder.
- b. Bids may be modified or withdrawn by written or telegraphic notice, provided such notice is received prior to the hour and date specified for receipt (see paragraph 9 of these instructions).
- c. Samples of items, when required, must be submitted within the time specified, unless otherwise specified by the University, at no expense to the University. If not destroyed by testing, samples will be returned at bidder's request and expense, unless otherwise specified by the Solicitation.
- d. Samples or descriptive literature should not be submitted unless it is required on this Solicitation. Regardless of any attempt by a bidder to condition the bid, unsolicited samples or descriptive literature will not be examined or tested at the bidder's risk, and will not be deemed to vary any of the provisions of this Solicitation.

- 14. FAILURE TO SUBMIT BID:** If no bid is to be submitted, do not return the Solicitation unless otherwise specified. A letter or postcard shall be sent to the issuing office advising whether future Solicitations for the type of supplies or services covered by this Solicitation is desired.
- 15. PRE-BID CONFERENCES.** Pre-Bid conferences will be permitted any time prior to the date established herein for submission of bid. The conferences will be conducted only to explain the procurement requirements for this Request for Proposal. The Authority will notify all Bidders of any substantive clarification provided in response to any inquiry. The Authority will extend the due date if such information significantly amends the solicitation or makes compliance with the original proposed due date impractical.
- 16. BID PACKET.** The prospective bidder is required to read each and every page of the Bid Packet and by the act of submitting a proposal shall be deemed to have accepted all conditions contained therein. In no case will failure to inspect constitute grounds for claim or for the withdrawal of a bid after opening. Bid submission shall be sent electronically. Erasures or other changes in a bid must be explained or noted over the signature of the offeror. Bid submission containing any conditions, omissions, unexplained erasure or alterations or items not called for in the Bid packet, or irregularities of any kind may be rejected by the University as being incomplete.
- 17. BID PACKET FORM.** A non-refundable fee of **\$25.00 (U.S.)** shall be charged for each hard copy or CD ROM bid packet. All payments shall be made by cash, certified check or money order to the University of Guam. Cashier services are located at the UOG Administration Building Mon-Fri from 8am-4pm by appointment only. Pay by phone is also available from 8am-4pm at 735-2923/45/46.
- 18. NOTICE OF AWARD.** UOG will notify all bidders the status of the Bid and Notice of Award. Written notice of award will be public information and made a part of the contract file.
- 19. LOCAL PROCUREMENT PREFERENCE:** "All procurement of supplies and services shall be made from among businesses licensed to do business on Guam in accordance with Guam Code Annotated Title 5 Chapter 5 Section 5008 and Section 3.9.14.5, UOG Procurement Regulation."
- 20. BIODEGRADABLE, REUSEABLE, RECYCLABLE MATERIALS:** Section 1.5, UOG Procurement Regulations. UOG's President or his designee, whenever possible, shall procure products that are biodegradable, reusable, recyclable, or made of recycled material, or any of these in any combination. The cost (prior to any adjustments for local vendors) of appropriate biodegradable, reusable, recyclable, or recycled products may be as much as ten percent (10%) greater than the cost of the non-biodegradable, non-reusable, non-recyclable, or non-recycled products they are replacing.
- 21. SERVICE-DISABLED VETERAN PREFERENCE:** UOG will award the contract for this solicitation to bidders that are business concerns that are at least fifty-one-percent (51%) owned by a service-disabled veteran(s) who served in the active U.S. military: (1) Who was discharged or released under honorable conditions and whose disability is service-connected as demonstrated by a DD Form 214, and certified by an award letter from the U.S. Department of Veterans Affairs; (2) That submitted the DD Form 214 and Disability award letter from the U.S. Department of Veterans Affairs with their bid submitted in response to this solicitation; (3) The service-disabled veteran(s) owner of the business concern has filed individual tax returns on Guam for a period of at least three (3) consecutive years; (4) The business concern is licensed to do business on Guam; (5) The business concern maintains its headquarters on Guam; (6) the supply or service offered by the business concern is available within the period required by UOG; and (7) The price for the supply or service does not exceed one-hundred-five-percent (105%) of the lowest price bidder. The Service-Disabled Veteran Preference is given in addition to any other procurement benefit the service-disabled veteran owned business may qualify for under Guam law.

22. WOMEN OWNED BUSINESS PREFERENCE: UOG will award the contract for this solicitation to bidders that are business concerns that are at least fifty-one-percent (51%) owned by women, who manage day-to-day operations and make long-term decisions, and: (1) The owner(s) of the business concern has filed individual tax returns on Guam for a period of at least three (3) consecutive years; (2) The business concern is licensed to do business on Guam; (3) The business concern maintains its headquarters on Guam; (4) the supply or service offered by the business concern is available within the period required by UOG; (5) The business concern is certified as a Women-Owned Small business (WOSB) or an Economically Disadvantaged Women-Owned Small Business (EDWOSB) by the U.S. Small Business Administration; and (6) The price for the supply or service does not exceed one-hundred-five-percent (105%) of the lowest price bidder. The Women Owned Business Preference is given in addition to any other procurement benefit the women owned business may qualify for under Guam law.

23. DETERMINING LOWEST PRICE IF BIDDERS CLAIM PREFERENCES. In accordance with 5 G.C.A. §5013(a), UOG shall determine the lowest price in the case of more than one (1) women-owned business, or a women-owned business and a service-disabled veteran owned business, who are competing for the same government contract.

24. MULTIPLE OR ALTERNATIVE BIDS. UOG shall not accept any multiple or alternative bid and shall reject any multiple or alternate bids its received. However, if a bidder clearly indicates a base bid, such base bid shall be considered for award as though it were the only bid submitted by the bidder. If UOG is not able to distinguish which bid is the base bid, it will reject all the multiple or alternative bids submitted by the bidder.

25. MULTI-TERM CONTRACT. If a multi-term contract is awarded for this solicitation, the amount of supplies or services stated on the bid price form of this solicitation shall be the amount of supplies or services required for the proposed contract period and the unit prices given by the bidder awarded the contract shall be the same throughout the multi-term contract period, except to the extent that price adjustments may be provided in this solicitation and the resulting contract, and UOG may cancel, after giving timely notice to the contractor, the multi-term contract if funds are not appropriated or otherwise made available to support continuation of performance in any fiscal period succeeding the first. However, this will not effect either UOG's rights or the contractor's rights under any termination clause in the contract. If the contract is canceled, the contractor will be reimbursed the unamortized, reasonably incurred, nonrecurring costs.

ATTACHMENT A

GENERAL TERMS AND CONDITIONS FOR THE INVITATION FOR BIDS

1. **COMPLIANCE WITH SPECIFICATIONS:** Bidder should comply with specifications outlined.
2. **LATE BIDS, LATE WITHDRAWALS, AND LATE MODIFICATIONS:**
Any bid received after the time and date set for receipt of bids is late. Any withdrawal or modification of a bid received after the time and date set for opening of bids at the place designated for opening is late. (Section 3.9.11.1, University of Guam Procurement Manual).
3. **DETERMINATION OF LOWEST RESPONSIBLE BIDDERS:** In determining lowest responsible bidder, the University shall be guided by the following:
 - (a) Price of bid items.
 - (b) The ability, capacity, and skill of the bidder to perform.
 - (c) Whether the bidder can perform promptly or within the specified time.
 - (d) The character, integrity, reputation, judgment, experience, and efficiency of the bidder.
 - (e) The quality of performance of the bidder with regards to awards previously made to him.
 - (f) The previous and existing compliance by the bidder with laws and regulations relative to procurement.
 - (g) The sufficiency of the financial resources and ability of the bidder to perform.
 - (h) The quality, availability, and adaptability of the supplies for the use of the subject of the award.
 - (i) The ability of the bidder to provide future maintenance and services for the use of the subject of the award.
 - (j) The number and scope of the conditions attached to the bid.
4. **LOW TIE BIDS:** Low tie bids are low responsive bids from responsible bidders that are identical in price and which meet all the requirements and criteria set forth in the Invitation for Bids. Award shall not be made by drawing lots, except as set forth UOG Procurement Regulations Section 3.9.15, or by dividing business among identical bidders.
5. **TAXES:** Bidders are cautioned that they are subject to Guam Business Privilege Taxes, including 4% Gross Receipt Tax and Guam Income Taxes on Guam Transactions. Specific information of taxes may be obtained from the Director of Revenue and Taxation.
6. **LICENSING:** Bidders are cautioned that the University will not consider for award any Bid Offer submitted by a bidder who has not complied with Guam Licensing Law. Specific information on licenses may be obtained from the Director of Revenue and Taxation.
7. **EQUAL EMPLOYMENT OPPORTUNITY:** Section 3.01(1) of the President Executive Order No. 10935 dated March 7, 1965, requires the bidder not to discriminate against any employee or applicant for employment because of race, creed, color or national origin. The bidder will take affirmative action to

ensure that applicants are employed and the employees are treated equally during employment without regard to their race, creed, color or national origin.

8. **DETERMINATION OF RESPONSIBILITY OF BIDDER:** The University reserves the right for securing from bidders information necessary to determine whether or not they are responsible and to determine the responsibility in accordance with Section 3 of the General Terms and Conditions.

9. **JUSTIFICATION OF DELAY:** Vendors who are awarded items under the Bid guarantee that the goods will be delivered to their destination within the time specified. If the vendor is not able to meet the specified delivery date, he is required to notify the purchasing agent of such delay. Notification shall be in writing and should be received by the agent at least twenty-four (24) hours before the specified delivery date. Notification of delay shall include an explanation of the causes and reasons for the delay including statement(s) from supplier or shipping company causing the delay. The University of Guam reserves the right to reject delay justification if in the opinion of the President such justification is not adequate.

10. **EQUAL OPPORTUNITY EMPLOYER AND PROVIDER:** It is the policy of the University of Guam to provide equal opportunity in its higher educational mission and as employer. The University complies with all federal and local statutes, rules and regulations which prohibit discrimination in its policies and practices and direct affirmative action, including but not limited to Titles VII and IX of the Civil Rights Act of 1964 (as amended), Executive Order 11246, and the Equal Pay act of 1963 (as amended). The University shall promote a full realization of equal opportunity through a positive, continuing program, including a requirement that those doing business with the University also are equal opportunity employers.

11. **EMPLOYMENT RESTRICTION:** If a contract for services is awarded to the bidder or offeror, then the service provider must warrant that no person in its employment who has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 of the Guam Code Annotated or of an offense defined in Article 2 of Chapter 28 of Title 9 of the Guam Code Annotated, or who has been convicted in any other jurisdiction of an offense with the same elements as heretofore define, or who is listed on the Sex Offender Registry, shall provide services on behalf of the service provider while on University of Guam property, with the exception of public highways. If any employee of a service provider is providing services on University property and is convicted subsequent to an award of a contract, then the service provider warrants that it will notify the University of the Conviction, within twenty-four hours of the conviction, and will immediately remove such convicted person from providing services on University property. If the service provider is found to be in violation of any of the provisions of this paragraph, then the University will give notice to the service provider to take corrective action. The service provider shall take corrective action within twenty-four hours of notice from the University, and the service provider shall notify the University when action has been taken. If the service provider fails to take corrective steps within twenty-four hours of notice from the University, then the University in its sole discretion may suspend temporarily any contract for services until corrective action has been taken.

12. (Required if checked) **BID SECURITY REQUIREMENT (Attachment D):** Bidder is required to submit a Bid Security or standby irrevocable Letter of Credit or Certified Check or Cashier's Check or other security supplied in a form satisfactory to the University in the same bid envelope to be held by the University of Guam (UOG). A bidder should contact the University for Pre-approval of the bid security requirement before the deadline for submission of bid packages if it is proposing security in a form not specifically listed above. The bid security required under any applicable invitation for Bid shall not be released upon award of the bid, but instead shall continue in full force and effect until delivery of the supplies or services required by any contract awarded to contractor under the associated Invitation for Bid

is completed. The Bid Security, Letter of Credit, Certified Check or Cashier's Check must be issued by any local surety or banking institution licensed to do business on Guam and made payable to the University of Guam in the amount of fifteen percent (15%) of the total amount bid. The Original Bid Security must be submitted to the UOG Procurement office on or before bid submission deadline. Personal Checks will not be accepted as Bid Security.

If a successful Bidder (contractor) withdraws from the bid or fails to enter into contract within the prescribed time, such Bid guarantee will be forfeited to the University of Guam. Bids will be disqualified if not accompanied by Bid Security, Letter of Credit, Certified Check or Cashier's Check. Bidder must include in his/her bid, valid copies of a Power of Attorney from the Surety and a Certificate of Authority from the Government of Guam to show proof that the surety company named on the bond instrument is authorized by the Government of Guam and qualified to do business on Guam. For detailed information on bonding matters, contact the Department of Revenue and Taxation. Failure to submit a valid Power of Attorney and Certificate of Authority on the surety is cause for rejection of bid. (Pursuant to Public Law 27-127, all competitive sealed bidding for the procurement of supplies or services, exceeding \$25,000.00, a 15% Bid Security of the total bid price must accompany the bid package.) When the Invitation for Bids requires bid security, non-compliance requires that the bid be rejected unless, pursuant to Policy Office regulations, it is determined that the bid fails to comply in a non-substantial manner with the security requirements.

13. INDEPENDENT CONTRACTOR: Contractor shall operate its business as an independent contractor and shall discharge all of its duties as such. No act performed or representation made, whether oral or written by Contractor with respect to third parties shall be binding on UOG.

14. INDEMNITY: Contractor agrees to indemnify and hold harmless UOG and its officers and employees from any claim, damage, liability, injury, expense or loss, including defense costs and attorney's fees, arising out of Contractor's duties under this agreement resulting from Contractor's negligence, save and except those caused by the negligence on the part of UOG.

ATTACHMENT B

**SPECIAL GENERAL
PROVISIONS**

1. **GENERAL INTENTION:** It is the declared and acknowledged intention and meaning of this Special General Provision for the Bidder to provide the University of Guam with materials, supplies, or equipment completely assembled, and ready for use.

2. **COMPETENCY OF BIDDERS:** Bids will be considered only from such bidders who, in the opinion of the University, can show evidence of their ability, experience, and facilities to render satisfactory service.

3. **CONTACT FOR CONTRACT ADMINISTRATION:** If your firm receives a contract as a result of this invitation, please designate a person whom we may contact for prompt administration.

NAME: _____ TITLE: _____

NAME OF COMPANY: _____ ADDRESS: _____

TEL: _____ FAX: _____ E-Mail Address: _____

4. **INSPECTION:** All supplies, materials, or equipment delivered under this contract shall be subject to the inspection and test conducted by the University at destination. If, in any case, the supplies, materials, or equipment are found to be defective in material, workmanship, performance or otherwise does not conform to the specifications, the University shall have the right to reject the items or require that they be corrected. The number of days required for correction will be determined by the University of Guam.

6. **BID ELECTRONIC FILE:** Bid file shall be marked with the bidder's name, bid invitation number, and bid title.

NOTE: UNDER NO CIRCUMSTANCES WILL LATE BIDS BE ACCEPTED BY THIS OFFICE.

7. **RECEIPT, OPENING AND RECORDING OF BIDS:** Bids and modifications shall be publicly opened in the presence of one or more witnesses, at the time, date, and place designated in the Invitation for Bid. The name of each bidder, the bid price, and such other information as is deemed appropriate by the Procurement Officer, shall be read aloud and recorded, or otherwise made available. The names and addresses of required witnesses shall be recorded at the opening. The opened bids shall be available for public inspection except to the extent the bidder designates trade secrets or other proprietary data to be confidential as set forth in accordance with Section 8, below. Materials so designated shall accompany the bid and shall be readily separable from the bid in order to facilitate public inspection of the non-confidential portion of the bid. Prices, makes and models or catalogue numbers of the items offered, deliveries, and terms of payment shall be publicly available at the time of bid opening regardless of any designation to the contrary.

8. **CONFIDENTIAL DATA:** The Procurement Officer shall examine the bids to determine the validity of any requests for nondisclosure of trade secrets and other proprietary data identified in writing. If the parties do not agree as to the disclosure of data, the Procurement Officer shall inform the bidders in writing what portions of the bid will be disclosed and that, unless the bidders protest under Chapter 9 of UOG Procurement Regulations, the bids will be so disclosed. The bids shall be opened to public inspection subject to any continuing prohibition on the disclosure of confidential data.

9. **INQUIRIES:** All inquiries or questions and concerns must be submitted to the President of the University of Guam in writing through the procurement office at uog.bids@triton.uog.edu. Oral communications will not be considered.

ATTACHMENT C

BIDDER'S QUALIFICATIONS

To be submitted in accordance with the provisions set forth in the INSTRUCTIONS TO BIDDERS contained in the bidding documents for the project.

The undersigned Bidder makes the following representations relating to its proposal to the UNIVERSITY OF GUAM.

The word "it", used herein by way of reference to the undersigned, shall be deemed to mean "he or she" if the Bidder is an individual and "they" if the Bidder is a partnership

1. It maintains a permanent place of business at

2. **STANDARD FOR DETERMINATION OF QUALIFIED BIDDER:** In order to qualify as responsible, a prospective bidder must meet the following standards as they relate to the particular procurement under consideration:

- (a) Has adequate financial resources for performance, or has the ability to obtain such resources as required during performance.
- (b) Has the necessary experience, organization, technical qualifications, skills, and facilities, or has the ability to obtain them.
- (c) Is able to comply with the proposed or required performance schedule.
- (d) Has a satisfactory record of integrity, judgment, and performance.
- (e) Must be able to conform to the requirements of the Equal Employment Opportunity Act.

3. It hereby represents and warrants that all statements set forth herein are true and correct. (If the Bidder is a partnership, the partnership name must be signed, followed by the signature of at least one of the partners. If the Bidder is a corporation, the corporate name must be signed, followed by the signature of a duly authorized officer and the corporate seal affixed. A typewritten copy of all such names and signatures shall be appended. No alterations, erasures, corrections or interlineations will be permitted).

NAME OF BIDDER

ATTACHMENT D
BID SECURITY

BID BOND
NO. B21-17

KNOW ALL MEN BY THESE PRESENTS that _____, as Principal, hereinafter called the "Principal", and _____ (Bonding Company), _____, a duly admitted insurer under the laws of the Territory of Guam, as Surety, hereinafter called the "Surety", are held firmly bound unto the University of Guam for the sum of _____ Dollars (\$_____), for payment of which sum will and truly to be made, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal has submitted a bid for (identify project by number and brief description)

NOW, THEREFORE, if the University of Guam shall accept the bid of the Principal, the Principal shall enter into a Contract with the University of Guam in accordance with the terms of such bid, and give such bond or bonds as may be specified in bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof. In the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the University of Guam the difference not to exceed the penalty hereof between the amounts specified in said bid and such larger amount for which the University of Guam may in good faith contract with another party to perform work covered by said bid or an appropriate liquidated amount as specified in the Invitation for Bid, then this obligation shall be null and void, but otherwise will remain in full force and effect.

Signed and sealed this _____ day of _____, 20_____

(PRINCIPAL) (SEAL)

(WITNESS)

(TITLE)

(MAJOR OFFICER OF SURETY)

(TITLE)

(MAJOR OFFICER OF SURETY)

(TITLE)

(RESIDENT GENERAL AGENT)

**ATTACHMENT E
 MAJOR SHAREHOLDER DISCLOSURE AFFIDAVIT**

CITY OF _____)
) ss.
 ISLAND OF GUAM)

A. I, the undersigned, being first duly sworn depose and say that I am an authorized representative of the offeror and that (please check only one):

() The offeror is an individual or sole proprietor and owns the entire (100%) interest in the offering

business. () The offeror is a corporation, partnership, joint venture, or association known as

_____ (please state name of offeror company), and the persons, companies, partners, or joint ventures who have held more than 10% of the shares or interest in the offering business during the 365 days immediately preceding the submission date of the proposal are as follows (if none, please so state):

<u>NAME</u>	<u>ADDRESS</u>	<u>% of Interest</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

B. Further, I say that the persons who have received or are entitled to receive a commission, gratuity or other compensation for procuring or assisting in obtaining business related to the bid or proposal for which affidavits submitted are as follows (if none, please so state):

<u>NAME</u>	<u>ADDRESS</u>	<u>Compensation</u>
_____	_____	_____

C. If the ownership of the offering business should change between the time this affidavit is made and the time an award is made or a contract is entered into, then I promise personally to update the disclosure required by 5 GCA § 5233 by delivering another affidavit to the government.

 Signature of one of the following:
 Offeror, if the offeror is an individual; Partner, if the offeror is a partnership; Officer, if the offeror is a corporation

Subscribed and sworn to before

me This ____ day of _____, 20__

NOTARY PUBLIC

My commission expires _____, _____

(AG Procurement Form 002 (Rev. Nov 17, 2005))

ATTACHMENT F
AFFIDAVIT re NON-
COLLUSION

CITY OF _____)
) ss.
ISLAND OF GUAM)

_____ (state name of affiant signing below), being first
dulysworn deposes and says that:

1. The name of the offering company or individual is (state name of company)

2. The proposal for the solicitation identified above is genuine and not collusive or a sham. The offeror has not colluded, conspired, connived or agreed, directly or indirectly, with any other offeror or person, to put in a sham proposal or to refrain from making an offer. The offeror has not in any manner, directly or indirectly, sought by an agreement or collusion, or communication or conference, with any person to fix the proposal price of offeror or of any other offeror, or to fix any overhead, profit or cost element of said proposal price, or of that of any other offeror, or to secure any advantage against the government of Guam or any person interested in the proposed contract. All statements in this affidavit and in the proposal are true to the best of the knowledge of the undersigned. This statement is made pursuant to 2 GAR Division 4 § 3126(b).

3. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.

Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror is a
partnership; Officer, if the offeror is a
corporation

Subscribed and sworn to before me

This _____ day of _____, 20__

NOTARY PUBLIC

My commission expires _____

(AG Procurement Form 003 (Jul. 12, 2010)

ATTACHMENT G
AFFIDAVIT re GRATUITIES, KICKBACKS AND FAVORS

CITY OF _____)
) ss.
ISLAND OF GUAM)

_____ (state name of affiant signing below), being first duly sworn, deposes and says that:

- 1. The name of the offering firm or individual is (state name of offeror company) _____ = Affiant is _____ (state one of the following: the offeror, a partner of the offeror, and officer of the offeror) making the foregoing identified bid or proposal.
- 2. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents subcontractors, or employees have violated, are violating the prohibition against gratuities, kickbacks and favors set forth in UOG Procurement Manual Section 11.7. Further, affiant promises, on behalf of offeror, not to violate the prohibition against gratuities, kickbacks and favors as set forth in UOG Procurement Manual Section 11.7.
- 3. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents, subcontractors, or employees have offered, given or agreed to give, any government of Guam employee or former government employee, any payment, gift, kickback, gratuity or offer of employment in connection with the offeror's proposal.
- 4. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.

Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror is a
partnership; Officer, if the offeror is a
corporation

Subscribed and sworn to before me

This _____ day of _____, 20__

NOTARY PUBLIC _____

My commission expires _____, _____

(AG Procurement Form 004 (Jul. 12, 2010))

ATTACHMENT H
AFFIDAVIT RE ETHICAL
STANDARDS

CITY OF _____)
) ss.
 ISLAND OF GUAM)

_____ (state name of affiant signing below), being first duly sworn,
 deposes and says that:

The affiant is _____ (state one of the following: the offeror, a partner of the offeror, an officer of the offeror) making the foregoing identified bid or proposal. To the best of affiant's knowledge, neither affiant nor any officers, representatives, agents, subcontractors or employees of offeror have knowingly influenced any government of Guam employee to breach any of the ethical standards set forth in 5 GCA Chapter 5, Article 11. Further, affiant promises that neither he or she, nor any officer, reprehensive, agent, subcontractor, or employee of offeror will knowingly influence any government of Guam employee to breach any ethical standards set forth in 5 GCA Chapter 5, Article 11. These statements are made pursuant to UOG Procurement Manual Section 11.3.3.

 Signature of one of the following:
 Offeror, if the offeror is an individual;
 Partner, if the offeror a partnership;
 Officer, if the offeror is a corporation.

Subscribed and sworn to before me

This _____ day of _____, 20__

 NOTARY PUBLIC

My commission expires _____.

(AG Procurement Form 005 (Jul. 12, 2010))

ATTACHMENT I

DECLARATION re COMPLIANCE WITH U.S. DOL WAGE DETERMINATIONS

Procurement No.: UOG BID B21-17

Name of Offeror Company: _____

I, _____ hereby certify under penalty of perjury:

(1) That I am _____ (please select one: *the offeror, a partner of the offeror, an officer of the offeror*) making the bid or proposal in the foregoing identified procurement;

(2) That I have read and understand the provisions of 5 GCA § 5801 and 5802 which read:

§ 5801. Wage Determination Established.

In such cases where the government of Guam enters into contractual arrangements with a sole proprietorship, a partnership or a corporation ("contractor") for the provision of a service to the government of Guam, and in such cases where the contractor employs a person(s) whose purpose, in whole or in part, is the direct delivery of service contracted by the government of Guam, then the contractor shall pay such employee(s) in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the government of Guam.

The Wage Determination most recently issued by the U.S. Department of Labor at the time a contract is awarded to a contractor by the government of Guam shall be used to determine wages, which shall be paid to employees pursuant to this Article. Should any contract contain a renewal clause, then at the time of renewal adjustments, there shall be made stipulations contained in the contract for applying the Wage Determination, as required by this Article, so the Wage Determination promulgated by the U.S. Department of Labor on a date most recent to the renewal date shall apply.

§ 5802. Benefits.

In addition to the Wage Determination detailed in this Article, any contract to which this Article applies shall also contain provisions mandating health and similar benefits for employees covered by this Article, such benefits having a minimum value as detailed in the Wage Determination issued and promulgated by the U.S. Department of Labor, and shall contain provisions guaranteeing a minimum of ten (10) paid holidays per annum per employees.

(3) That the offeror is in full compliance with 5 GCA § 5801 and § 5802, as may be applicable to the procurement referenced herein;

(4) That I have attached the most recent wage determination applicable to Guam issued by the U.S. Department of Labor. **(INSTRUCTIONS – Please attach most updated version to bid package)**

(AG Procurement Form 006 (Feb 16, 2010))

Signature

"REGISTER OF WAGE DETERMINATIONS UNDER
THE SERVICE CONTRACT ACT
By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

Daniel W. Simms
Director

Division of
Wage Determinations

Wage Determination No.: 2015-5693
Revision No.: 13
Date Of Last Revision: 08/04/2021

Note: Under Executive Order (EO) 13658 an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2015. If this contract is covered by the EO the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination if it is higher) for all hours spent performing on the contract in calendar year 2021. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

States: Guam Northern Marianas Wake Island

Area: Guam Statewide

Northern Marianas Statewide

Wake Island Statewide

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.57
01012 - Accounting Clerk II		15.23
01013 - Accounting Clerk III		17.04
01020 - Administrative Assistant		21.43
01035 - Court Reporter		17.40
01041 - Customer Service Representative I		11.51
01042 - Customer Service Representative II		12.94
01043 - Customer Service Representative III		14.12
01051 - Data Entry Operator I		12.15
01052 - Data Entry Operator II		13.25
01060 - Dispatcher Motor Vehicle		17.39
01070 - Document Preparation Clerk		13.85
01090 - Duplicating Machine Operator		13.85
01111 - General Clerk I		10.35
01112 - General Clerk II		11.29
01113 - General Clerk III		12.68
01120 - Housing Referral Assistant		19.39
01141 - Messenger Courier		11.37
01191 - Order Clerk I		12.57
01192 - Order Clerk II		13.71
01261 - Personnel Assistant (Employment) I		15.95
01262 - Personnel Assistant (Employment) II		17.85
01263 - Personnel Assistant (Employment) III		19.89
01270 - Production Control Clerk		21.78
01290 - Rental Clerk		11.10

01300 - Scheduler Maintenance	15.55
01311 - Secretary I	15.55
01312 - Secretary II	17.40
01313 - Secretary III	19.39
01320 - Service Order Dispatcher	15.40
01410 - Supply Technician	21.43
01420 - Survey Worker	16.96
01460 - Switchboard Operator/Receptionist	10.36
01531 - Travel Clerk I	13.01
01532 - Travel Clerk II	14.12
01533 - Travel Clerk III	15.09
01611 - Word Processor I	14.53
01612 - Word Processor II	16.31
01613 - Word Processor III	18.26
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer Fiberglass	15.46
05010 - Automotive Electrician	14.52
05040 - Automotive Glass Installer	13.58
05070 - Automotive Worker	13.58
05110 - Mobile Equipment Servicer	11.65
05130 - Motor Equipment Metal Mechanic	15.46
05160 - Motor Equipment Metal Worker	13.58
05190 - Motor Vehicle Mechanic	15.46
05220 - Motor Vehicle Mechanic Helper	10.66
05250 - Motor Vehicle Upholstery Worker	12.64
05280 - Motor Vehicle Wrecker	13.58
05310 - Painter Automotive	14.52
05340 - Radiator Repair Specialist	13.58
05370 - Tire Repairer	12.67
05400 - Transmission Repair Specialist	15.46
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.47
07041 - Cook I	13.26
07042 - Cook II	15.46
07070 - Dishwasher	9.31
07130 - Food Service Worker	9.45
07210 - Meat Cutter	12.13
07260 - Waiter/Waitress	9.27
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	18.04
09040 - Furniture Handler	10.95
09080 - Furniture Refinisher	18.04
09090 - Furniture Refinisher Helper	13.27
09110 - Furniture Repairer Minor	15.70
09130 - Upholsterer	18.04
11000 - General Services And Support Occupations	
11030 - Cleaner Vehicles	9.35
11060 - Elevator Operator	9.54
11090 - Gardener	13.00
11122 - Housekeeping Aide	9.54
11150 - Janitor	9.54
11210 - Laborer Grounds Maintenance	9.82
11240 - Maid or Houseman	9.32
11260 - Pruner	8.79
11270 - Tractor Operator	11.90
11330 - Trail Maintenance Worker	9.82
11360 - Window Cleaner	10.66
12000 - Health Occupations	
12010 - Ambulance Driver	18.23
12011 - Breath Alcohol Technician	18.23
12012 - Certified Occupational Therapist Assistant	25.01
12015 - Certified Physical Therapist Assistant	25.01
12020 - Dental Assistant	16.32
12025 - Dental Hygienist	36.12
12030 - EKG Technician	25.99

12035 - Electroneurodiagnostic Technologist	25.99
12040 - Emergency Medical Technician	18.23
12071 - Licensed Practical Nurse I	16.30
12072 - Licensed Practical Nurse II	18.23
12073 - Licensed Practical Nurse III	20.32
12100 - Medical Assistant	12.26
12130 - Medical Laboratory Technician	18.82
12160 - Medical Record Clerk	13.61
12190 - Medical Record Technician	17.77
12195 - Medical Transcriptionist	16.30
12210 - Nuclear Medicine Technologist	40.06
12221 - Nursing Assistant I	11.34
12222 - Nursing Assistant II	12.75
12223 - Nursing Assistant III	13.91
12224 - Nursing Assistant IV	15.61
12235 - Optical Dispenser	18.23
12236 - Optical Technician	16.30
12250 - Pharmacy Technician	15.49
12280 - Phlebotomist	16.30
12305 - Radiologic Technologist	25.33
12311 - Registered Nurse I	23.18
12312 - Registered Nurse II	28.36
12313 - Registered Nurse II Specialist	28.36
12314 - Registered Nurse III	34.32
12315 - Registered Nurse III Anesthetist	34.32
12316 - Registered Nurse IV	41.13
12317 - Scheduler (Drug and Alcohol Testing)	22.58
12320 - Substance Abuse Treatment Counselor	22.58
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	21.20
13012 - Exhibits Specialist II	26.27
13013 - Exhibits Specialist III	32.13
13041 - Illustrator I	21.20
13042 - Illustrator II	26.27
13043 - Illustrator III	32.13
13047 - Librarian	29.09
13050 - Library Aide/Clerk	16.88
13054 - Library Information Technology Systems Administrator	26.27
13058 - Library Technician	16.64
13061 - Media Specialist I	18.96
13062 - Media Specialist II	21.20
13063 - Media Specialist III	23.63
13071 - Photographer I	18.96
13072 - Photographer II	21.20
13073 - Photographer III	26.27
13074 - Photographer IV	32.13
13075 - Photographer V	38.88
13090 - Technical Order Library Clerk	21.20
13110 - Video Teleconference Technician	18.96
14000 - Information Technology Occupations	
14041 - Computer Operator I	15.71
14042 - Computer Operator II	17.22
14043 - Computer Operator III	19.19
14044 - Computer Operator IV	21.33
14045 - Computer Operator V	23.62
14071 - Computer Programmer I	(see 1) 15.73
14072 - Computer Programmer II	(see 1) 19.50
14073 - Computer Programmer III	(see 1) 23.84
14074 - Computer Programmer IV	(see 1)
14101 - Computer Systems Analyst I	(see 1) 24.23
14102 - Computer Systems Analyst II	(see 1)
14103 - Computer Systems Analyst III	(see 1)
14150 - Peripheral Equipment Operator	15.71
14160 - Personal Computer Support Technician	21.33

14170 - System Support Specialist	21.24
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	24.23
15020 - Aircrew Training Devices Instructor (Rated)	29.32
15030 - Air Crew Training Devices Instructor (Pilot)	34.91
15050 - Computer Based Training Specialist / Instructor	24.23
15060 - Educational Technologist	27.61
15070 - Flight Instructor (Pilot)	34.91
15080 - Graphic Artist	20.47
15085 - Maintenance Test Pilot Fixed Jet/Prop	34.91
15086 - Maintenance Test Pilot Rotary Wing	34.91
15088 - Non-Maintenance Test/Co-Pilot	34.91
15090 - Technical Instructor	17.67
15095 - Technical Instructor/Course Developer	23.78
15110 - Test Proctor	15.70
15120 - Tutor	15.70
16000 - Laundry Dry-Cleaning Pressing And Related Occupations	
16010 - Assembler	10.12
16030 - Counter Attendant	10.12
16040 - Dry Cleaner	11.56
16070 - Finisher Flatwork Machine	10.12
16090 - Presser Hand	10.12
16110 - Presser Machine Drycleaning	10.12
16130 - Presser Machine Shirts	10.12
16160 - Presser Machine Wearing Apparel Laundry	10.12
16190 - Sewing Machine Operator	12.04
16220 - Tailor	12.52
16250 - Washer Machine	10.60
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	19.46
19040 - Tool And Die Maker	24.46
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	13.96
21030 - Material Coordinator	21.78
21040 - Material Expediter	21.78
21050 - Material Handling Laborer	11.37
21071 - Order Filler	9.76
21080 - Production Line Worker (Food Processing)	13.96
21110 - Shipping Packer	17.12
21130 - Shipping/Receiving Clerk	17.12
21140 - Store Worker I	15.22
21150 - Stock Clerk	21.40
21210 - Tools And Parts Attendant	13.96
21410 - Warehouse Specialist	13.96
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	25.04
23019 - Aircraft Logs and Records Technician	19.47
23021 - Aircraft Mechanic I	23.84
23022 - Aircraft Mechanic II	25.04
23023 - Aircraft Mechanic III	26.30
23040 - Aircraft Mechanic Helper	16.58
23050 - Aircraft Painter	22.39
23060 - Aircraft Servicer	19.47
23070 - Aircraft Survival Flight Equipment Technician	22.39
23080 - Aircraft Worker	21.03
23091 - Aircrew Life Support Equipment (ALSE) Mechanic I	21.03
23092 - Aircrew Life Support Equipment (ALSE) Mechanic II	23.84
23110 - Appliance Mechanic	19.46
23120 - Bicycle Repairer	15.61
23125 - Cable Splicer	19.59
23130 - Carpenter Maintenance	16.07
23140 - Carpet Layer	18.20
23160 - Electrician Maintenance	18.05

23181 - Electronics Technician Maintenance I	18.20
23182 - Electronics Technician Maintenance II	19.46
23183 - Electronics Technician Maintenance III	20.72
23260 - Fabric Worker	16.94
23290 - Fire Alarm System Mechanic	16.77
23310 - Fire Extinguisher Repairer	15.61
23311 - Fuel Distribution System Mechanic	20.72
23312 - Fuel Distribution System Operator	15.61
23370 - General Maintenance Worker	12.01
23380 - Ground Support Equipment Mechanic	23.84
23381 - Ground Support Equipment Servicer	19.47
23382 - Ground Support Equipment Worker	21.03
23391 - Gunsmith I	15.61
23392 - Gunsmith II	18.20
23393 - Gunsmith III	20.72
23410 - Heating Ventilation And Air-Conditioning Mechanic	17.50
23411 - Heating Ventilation And Air Contidioning Mechanic (Research Facility)	18.61
23430 - Heavy Equipment Mechanic	19.27
23440 - Heavy Equipment Operator	17.76
23460 - Instrument Mechanic	20.72
23465 - Laboratory/Shelter Mechanic	19.46
23470 - Laborer	11.37
23510 - Locksmith	19.46
23530 - Machinery Maintenance Mechanic	23.13
23550 - Machinist Maintenance	20.72
23580 - Maintenance Trades Helper	10.67
23591 - Metrology Technician I	20.72
23592 - Metrology Technician II	22.03
23593 - Metrology Technician III	23.33
23640 - Millwright	20.72
23710 - Office Appliance Repairer	19.46
23760 - Painter Maintenance	14.08
23790 - Pipefitter Maintenance	18.39
23810 - Plumber Maintenance	17.27
23820 - Pneudraulic Systems Mechanic	20.72
23850 - Rigger	20.72
23870 - Scale Mechanic	18.20
23890 - Sheet-Metal Worker Maintenance	17.35
23910 - Small Engine Mechanic	18.20
23931 - Telecommunications Mechanic I	19.76
23932 - Telecommunications Mechanic II	21.01
23950 - Telephone Lineman	18.24
23960 - Welder Combination Maintenance	18.31
23965 - Well Driller	21.13
23970 - Woodcraft Worker	20.71
23980 - Woodworker	15.61
24000 - Personal Needs Occupations	
24550 - Case Manager	15.01
24570 - Child Care Attendant	10.09
24580 - Child Care Center Clerk	13.25
24610 - Chore Aide	12.78
24620 - Family Readiness And Support Services Coordinator	15.01
24630 - Homemaker	16.12
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	20.72
25040 - Sewage Plant Operator	21.59
25070 - Stationary Engineer	20.72
25190 - Ventilation Equipment Tender	14.29
25210 - Water Treatment Plant Operator	21.59
27000 - Protective Service Occupations	
27004 - Alarm Monitor	10.90
27007 - Baggage Inspector	9.48

27008 - Corrections Officer	12.05
27010 - Court Security Officer	12.05
27030 - Detection Dog Handler	10.90
27040 - Detention Officer	12.05
27070 - Firefighter	12.05
27101 - Guard I	9.48
27102 - Guard II	10.90
27131 - Police Officer I	12.05
27132 - Police Officer II	13.40
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	13.24
28042 - Carnival Equipment Repairer	14.46
28043 - Carnival Worker	9.78
28210 - Gate Attendant/Gate Tender	13.18
28310 - Lifeguard	11.01
28350 - Park Attendant (Aide)	14.74
28510 - Recreation Aide/Health Facility Attendant	11.84
28515 - Recreation Specialist	18.26
28630 - Sports Official	11.74
28690 - Swimming Pool Operator	17.71
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	25.98
29020 - Hatch Tender	25.98
29030 - Line Handler	25.98
29041 - Stevedore I	24.18
29042 - Stevedore II	27.79
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist Center (HFO) (see 2)	40.29
30011 - Air Traffic Control Specialist Station (HFO) (see 2)	27.78
30012 - Air Traffic Control Specialist Terminal (HFO) (see 2)	30.59
30021 - Archeological Technician I	17.49
30022 - Archeological Technician II	19.56
30023 - Archeological Technician III	24.21
30030 - Cartographic Technician	23.18
30040 - Civil Engineering Technician	23.08
30051 - Cryogenic Technician I	25.57
30052 - Cryogenic Technician II	28.24
30061 - Drafter/CAD Operator I	17.49
30062 - Drafter/CAD Operator II	19.56
30063 - Drafter/CAD Operator III	20.77
30064 - Drafter/CAD Operator IV	25.57
30081 - Engineering Technician I	14.84
30082 - Engineering Technician II	16.66
30083 - Engineering Technician III	18.64
30084 - Engineering Technician IV	23.08
30085 - Engineering Technician V	28.24
30086 - Engineering Technician VI	34.16
30090 - Environmental Technician	23.08
30095 - Evidence Control Specialist	23.08
30210 - Laboratory Technician	20.77
30221 - Latent Fingerprint Technician I	25.57
30222 - Latent Fingerprint Technician II	28.24
30240 - Mathematical Technician	23.34
30361 - Paralegal/Legal Assistant I	19.54
30362 - Paralegal/Legal Assistant II	24.21
30363 - Paralegal/Legal Assistant III	29.61
30364 - Paralegal/Legal Assistant IV	35.83
30375 - Petroleum Supply Specialist	28.24
30390 - Photo-Optics Technician	21.93
30395 - Radiation Control Technician	28.24
30461 - Technical Writer I	23.08
30462 - Technical Writer II	28.24
30463 - Technical Writer III	34.16
30491 - Unexploded Ordnance (UXO) Technician I	25.60
30492 - Unexploded Ordnance (UXO) Technician II	30.98

30493 - Unexploded Ordnance (UXO) Technician III	37.13
30494 - Unexploded (UXO) Safety Escort	25.60
30495 - Unexploded (UXO) Sweep Personnel	25.60
30501 - Weather Forecaster I	25.57
30502 - Weather Forecaster II	31.09
30620 - Weather Observer Combined Upper Air Or	(see 2) 20.77
Surface Programs	
30621 - Weather Observer Senior	(see 2) 23.08
31000 - Transportation/Mobile Equipment Operation Occupations	
31010 - Airplane Pilot	30.98
31020 - Bus Aide	8.15
31030 - Bus Driver	10.66
31043 - Driver Courier	9.69
31260 - Parking and Lot Attendant	9.91
31290 - Shuttle Bus Driver	11.65
31310 - Taxi Driver	11.41
31361 - Truckdriver Light	10.59
31362 - Truckdriver Medium	11.61
31363 - Truckdriver Heavy	14.64
31364 - Truckdriver Tractor-Trailer	14.64
99000 - Miscellaneous Occupations	
99020 - Cabin Safety Specialist	15.10
99030 - Cashier	9.63
99050 - Desk Clerk	9.70
99095 - Embalmer	25.60
99130 - Flight Follower	25.60
99251 - Laboratory Animal Caretaker I	23.38
99252 - Laboratory Animal Caretaker II	25.54
99260 - Marketing Analyst	21.54
99310 - Mortician	25.60
99410 - Pest Controller	14.61
99510 - Photofinishing Worker	13.45
99710 - Recycling Laborer	17.32
99711 - Recycling Specialist	23.38
99730 - Refuse Collector	16.40
99810 - Sales Clerk	9.87
99820 - School Crossing Guard	17.27
99830 - Survey Party Chief	23.01
99831 - Surveying Aide	13.08
99832 - Surveying Technician	17.00
99840 - Vending Machine Attendant	23.38
99841 - Vending Machine Repairer	29.78
99842 - Vending Machine Repairer Helper	23.38

Note: Executive Order (EO) 13706 Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2017. If this contract is covered by the EO the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness injury or other health-related needs including preventive care; to assist a family member (or person who is like family to the employee) who is ill injured or has other health-related needs including preventive care; or for reasons resulting from or to assist a family member (or person who is like family to the employee) who is the victim of domestic violence sexual assault or stalking. Additional information on contractor requirements and worker protections

under the EO is available at www.dol.gov/whd/govcontracts.

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$4.60 per hour up to 40 hours per week or \$184.00 per week or \$797.33 per month

HEALTH & WELFARE EO 13706: \$4.23 per hour up to 40 hours per week or \$169.20 per week or \$733.20 per month*

*This rate is to be used only when compensating employees for performance on an SCA-covered contract also covered by EO 13706 Establishing Paid Sick Leave for Federal Contractors. A contractor may not receive credit toward its SCA obligations for any paid sick leave provided pursuant to EO 13706.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; and 4 weeks after 3 years. Length of service includes the whole span of continuous service with the present contractor or successor wherever employed and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day Martin Luther King Jr.'s Birthday Washington's Birthday Memorial Day Independence Day Labor Day Columbus Day Veterans' Day Thanksgiving Day and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE NUMBERED FOOTNOTES IN PARENTHESES RECEIVE THE FOLLOWING:

1) COMPUTER EMPLOYEES: Under the SCA at section 8(b) this wage determination does not apply to any employee who individually qualifies as a bona fide executive administrative or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than \$27.63 (or on a salary or fee basis at a rate not less than \$455 per week) an hour would likely qualify as exempt computer professionals (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds \$27.63 per hour conformances may be necessary for certain nonexempt employees. For example if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage

determination.

Additionally because job titles vary widely and change quickly in the computer industry job titles are not determinative of the application of the computer professional exemption. Therefore the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures including consulting with users to determine hardware software or system functional specifications;

(2) The design development documentation analysis creation testing or modification of computer systems or programs including prototypes based on and related to user or system design specifications;

(3) The design documentation testing creation or modification of computer programs related to machine operating systems; or

(4) A combination of the aforementioned duties the performance of which requires the same level of skills. (29 C.F.R. 541.400).

2) AIR TRAFFIC CONTROLLERS AND WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** HAZARDOUS PAY DIFFERENTIAL ****

An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance explosives and incendiary materials. This includes work such as screening blending dying mixing and pressing of sensitive ordnance explosives and pyrotechnic compositions such as lead azide black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization modification renovation demolition and maintenance operations on sensitive ordnance explosives and incendiary materials. All operations involving re-grading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with or in close proximity to ordnance (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands face or arms of the employee engaged in the operation irritation of the skin minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving unloading storage and hauling of ordnance explosive and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance explosives and incendiary material differential pay.

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract by the employer by the state or local law etc.) the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition where uniform cleaning and maintenance is made the responsibility of the employee all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount or the furnishing of contrary affirmative proof as to the actual cost) reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However in those instances where the uniforms furnished are made of "wash and wear" materials may be routinely washed and dried with other personal garments and do not require any special treatment such as dry cleaning daily washing or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract by the contractor by law or by the nature of the work there is no requirement that employees be reimbursed for uniform maintenance costs.

**** SERVICE CONTRACT ACT DIRECTORY OF OCCUPATIONS ****

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations" Fifth Edition (Revision 1) dated September 2015 unless otherwise indicated.

**** REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE Standard Form 1444 (SF-1444) ****

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e. the work to be performed is not performed by any classification listed in the wage determination) be classified by the contractor so as to provide a reasonable relationship (i.e. appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination (See 29 CFR 4.6(b)(2)(i)). Such conforming procedures shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees (See 29 CFR 4.6(b)(2)(ii)). The Wage and Hour Division shall make a final determination of conformed classification wage rate and/or fringe benefits which shall be paid to all employees performing in the classification from the first day of work on which contract work is performed by them in the classification. Failure to pay such unlisted employees the compensation agreed upon by the interested

parties and/or fully determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract. (See 29 CFR 4.6(b)(2)(v)). When multiple wage determinations are included in a contract a separate SF-1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award the contractor prepares a written report listing in order the proposed classification title(s) a Federal grade equivalency (FGE) for each proposed classification(s) job description(s) and rationale for proposed wage rate(s) including information regarding the agreement or disagreement of the authorized representative of the employees involved or where there is no authorized representative the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.
- 3) The contracting officer reviews the proposed action and promptly submits a report of the action together with the agency's recommendations and pertinent information including the position of the contractor and the employees to the U.S. Department of Labor Wage and Hour Division for review (See 29 CFR 4.6(b)(2)(ii)).
- 4) Within 30 days of receipt the Wage and Hour Division approves modifies or disapproves the action via transmittal to the agency contracting officer or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour Division's decision to the contractor.
- 6) Each affected employee shall be furnished by the contractor with a written copy of such determination or it shall be posted as a part of the wage determination (See 29 CFR 4.6(b)(2)(iii)).

Information required by the Regulations must be submitted on SF-1444 or bond paper.

When preparing a conformance request the "Service Contract Act Directory of Occupations" should be used to compare job definitions to ensure that duties requested are not performed by a classification already listed in the wage determination. Remember it is not the job title but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split combine or subdivide classifications listed in the wage determination (See 29 CFR 4.152(c)(1))."

**ATTACHMENT J
AFFIDAVIT re CONTINGENT
FEES**

CITY OF _____)
) ss.
 ISLAND OF GUAM)

_____ (state name of affiant signing below), being first duly sworn,
 deposes and says that:

1. The name of the offering company or individual is (state name of company)

2. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained any person or agency on a percentage, commission, or other contingent arrangement to secure this contract. This statement is made pursuant to UOG Procurement Manual Section 11.8.2
3. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained a person to solicit or secure a contract with the government of Guam upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. This statement is made pursuant to UOG Procurement Manual Section 11.8.1.
4. I make these statements on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.

 Signature of one of the following:
 Offeror, if the offeror is an individual;
 Partner, if the offeror is a
 partnership; Officer, if the offeror is a
 corporation

Subscribed and sworn to before me

This ____ day of _____, 20 ____

 NOTARY PUBLIC

My commission expires _____

(AG Procurement Form 007 (Jul. 15, 2010))

EXHIBIT B
UOG BID NO. B21-

17

PURCHASING OF HVAC EQUIPMENT OF THE UNIVERSITY OF GUAM

Scope of Work

1. Scope of the Work

This bid is to select and award a contract for the purchasing of multiple Air Conditioning units for the University of Guam.

2. Bid Submittals

a) Bid prices shall be submitted on Bid Price Form. All prices shall include shipping, delivery, and manufacturer's warranty. Any additional cost not stated in this bid but are required to complete the delivery and installation must be included in the bidder's price.

b) Bidder shall submit an electronic copy to the Share folder that UOG procurement office provides.

Contractor is required to submit prices for Table 1.0.

Bid award to be based on the required items in Table 1.0 and to be based on price, compliance to the specification, services, delivery and any requirements in the BID package, BID NO. B21-17.

Table 1.0 Bid Price Form

No.	ITEM DESCRIPTION					BID Price
1	LOCATION	UNIT	TONS	VOLTAGE	TVX	
	RFK BUILDING SECOND FLOOR	1	50	208 / 230	2 EA. - 25	
	RFK BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	
	20RFK BUILDING FIRST FLOOR					
	MAIN ENTRANCE	1	15	208 / 230	2 EA. -	
	7.5RFK BUILDING FIRST FLOOR					
	AV ROOM	1	15	208 / 230	2 EA. -	
	7.5RFK BUILDING FIRST FLOOR					
	OFFICES	1	20	208 / 230	2 EA. - 10	
	PIP (GLE) SECOND FLOOR	1	20	208 / 230	2 EA. -	
	10SCIENCE BUILDING FIRST					
	FLOOR	1	40	208 / 230	2 EA. -	
	20SCIENCE BUILDING					
	SECOND FLOOR	1	40	208 / 230	2 EA. -	
	20SCIENCE BUILDING					
	THIRD FLOOR	1	20	208 / 230	2 EA. -	
	10ENGLISH COMMUNICATION					
	BUILDING CLASSROO	1	30	208 / 230	2 EA. -	
	15COMPUTER CENTER OIT					

	BUILDING FIRST FLOOR	1	50	277 / 460	2 EA. - 25	
	LECTURE HALL AUDITORIUM	1	20	277 / 460	2 EA. - 10	
	MARINE LAB FIRST FLOOR	2	10	208 / 230	2 EA. - 5	
	MARINE LAB SECOND FLOOR	2	10	208 / 230	2 EA. - 5	
	HSS BUILDING	2	50	277 / 460	2 EA. - 25	
	HSS BUILDING	1	30	277 / 460	2 EA. - 15	
Grand Total						
Delivery: _____ weeks after receipt of purchase order						

OPTIONS

For Table 2.0 Options, the bidder's price will not be included as part of the total price evaluation for this bid award. UOG reserves the right to exercise any or part of the options requested. Insert any additional options recommended.

Table 2.0 Options

No.	Item Description	Price
1	Services for Maintenance and upkeep.	
2	Services for disposal.	
3	Replacement/trade in program	

OTHER NOTES:

1. These specifications have been written to describe minimum equipment and performance requirements to be supplied by the equipment manufacturer bidding. Reasonable tests may be conducted upon delivery before acceptance.
2. The University reserves the right to accept and/or reject any and all bids, to waive any defects, irregularities, or specification discrepancies and to award the bid deemed to be in the best interest of the University.

NOTE: Name and title of author of specifications:

University of Guam

Glenn Leon Guerrero, Director, Facilities Management & Services, Email: glennlg@triton.uog.edu

Emily Gumataotao, Supply Management Administrator, Email: eggumataotao@triton.uog.edu



EXHIBIT A
University of Guam
BID SPECIFICATIONS
OR EQUIVALENT

BID NO. B21-17

JR0529 UOG HVAC EQUIPMENT PURCHASE
4/27/2021

Prepared by:

AMORIENT

Prepared for:

UNIVERSITY OF GUAM

**SECTION 23 81 00
DECENTRALIZED UNITARY HVAC EQUIPMENT**

PART 1

GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. (AMCA)

- AMCA 500-D (2018) Laboratory Methods of Testing Dampers for Rating
- AMCA 500-L (2015) Laboratory Methods of Testing Louvers for Rating

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

- AHRI 540 (2015) Performance Rating Of Positive Displacement Refrigerant Compressors And Compressor Units
- AHRI 700 (2016) Specifications for Fluorocarbon Refrigerants
- ANSI/AHRI 210/240 (2008; Add 1 2011; Add 2 2012) Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment
- ANSI/AHRI 270 (2008) Sound Rating of Outdoor Unitary Equipment
- ANSI/AHRI 460 (2005) Performance Rating of Remote Mechanical-Draft Air-Cooled Refrigerant Condensers

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

- ANSI/ASHRAE 15 & 34 (2013) ANSI/ASHRAE Standard 15 Safety Standard for refrigeration systems and ANSI/ASHRAE Standard 34-Designation and Safety Classification of Refrigerants
- ASHRAE 15 & 34 (2013) ASHRAE Standard 34-2016 Safety Standard for Refrigeration Systems/ASHRAE Standard 34-2016 Designation and Safety Classification of Refrigerants-ASHRAE Standard 34-2016
- ASHRAE 52.2 (2012) Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size
- ASHRAE 55 (2010) Thermal Environmental Conditions for Human Occupancy
- ASHRAE 62.1 (2010) Ventilation for Acceptable Indoor Air Quality
- ASHRAE 64 (2011) Methods of Testing Remote Mechanical-Draft Evaporative Refrigerant Condensers
- ASHRAE 90.1 - IP (2013) Energy Standard for Buildings Except Low-Rise Residential Buildings
- ASHRAE 90.1 - SI (2013) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASTM INTERNATIONAL (ASTM)

ASTM A307	(2014; E 2017) Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength
ASTM B117	(2019) Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM C1071	(2019) Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material)
ASTM D520	(2000; R 2011) Zinc Dust Pigment
ASTM E84	(2020) Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM F104	(2011; R 2020) Standard Classification System for nonmetallic Gasket Materials

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS 6	(1993; R 2016) Industrial Control and Systems: Enclosures
NEMA MG 1	(2018) Motors and Generators
NEMA MG 2	(2014) Safety Standard for Construction and Guide for Selection, Installation and Use of Electric Motors and Generators

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2020; ERTA 20-1 2020; ERTA 20-2 2020; TIA 20-1; TIA 20-2; TIA 20-3; TIA 20-4) National Electrical Code
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UNDERWRITERS LABORATORIES (UL)

UL 586	(2009; Reprint Dec 2017) UL Standard for Safety High-Efficiency Particulate, Air Filter Units
UL 900	(2015) Standard for Air Filter Units
UL 1995	(2015) UL Standard for Safety Heating and Cooling Equipment

1.2 SUBMITTALS

SD-03 Product Data Spare Parts

Posted Instructions

Coil Corrosion Protection System Performance Tests Training

Inventory

Environmental Data

Supplied Products

SD-06 Test Reports

Refrigerant Tests, Charging, and Start-Up

System Performance Tests

SD-07 Certificates Service

Organizations

SD-10 Operation and Maintenance Data

Operation and Maintenance Manuals

1.3 DELIVERY, STORAGE, AND HANDLING

Protect stored items from the weather, humidity and temperature variations, dirt and dust, or other contaminants. Properly protect and care for all material both before and during installation. Submit an inventory of all the stored items. Replace any materials found to be damaged, at no additional cost to the Government. During installation, cap piping and similar openings capped to keep out dirt and other foreign matter.

1.4 ENVIRONMENTAL REQUIREMENTS

For proper Indoor Environmental Quality, maintain pressure within the building as indicated. Ventilation must meet or exceed ASHRAE 62.1 and all published addenda. Meet or exceed filter media efficiency as tested in accordance with ASHRAE 52.2. Thermal comfort must meet or exceed ASHRAE 55.

1.5 WARRANTY

Provide equipment with the 1 year manufacturer's warranty

PART 2 PRODUCTS

2.1 MATERIALS

Provide Manufacturer's standard catalog data, at least 5 weeks prior to the purchase or installation of a particular component, highlighted to show material, size, options, performance charts and curves, etc. in adequate detail to demonstrate compliance with contract requirements. Data includes manufacturer's recommended installation instructions and procedures. If vibration isolation is specified for a unit, include vibration isolator literature

containing catalog cuts and certification that the isolation characteristics of the isolators provided meet the manufacturer's recommendations. Submit data for each specified component. Minimum efficiency requirements must be in accordance with ASHRAE 90.1.

2.1.1 Standard Products

Provide materials and equipment that are standard products of a manufacturer regularly engaged in the manufacturing of such products, which are of a similar material, design and workmanship. The standard products must have been in satisfactory commercial or industrial use for 2 years prior to bid opening. The 2 year use includes applications of equipment and materials under similar circumstances and of similar size. The 2 years' experience must be satisfactorily completed by a product which has been sold or is offered for sale on the commercial market through advertisements, manufacturer's catalogs, or brochures. Products having less than a 2 year field service record will be acceptable if a certified record of satisfactory field operation, for not less than 6000 hours exclusive of the manufacturer's factory tests, can be shown. Products must be supported by a service organization. Ensure system components are environmentally suitable for the indicated geographic locations.

2.1.2 Product Sustainability Criteria

2.1.2.1 Energy Efficient Equipment

Provide equipment meeting the minimum efficiency requirement as required by ASHRAE 90.1.

2.1.2.2 Electrical Equipment / Motors

Electrical motor driven equipment specified must be provided complete with motors, motor starters, and controls. Electrical characteristics must be as shown, and unless otherwise indicated, all motors of 1 horsepower and above with open, drip proof, totally enclosed, or explosion proof fan cooled enclosures, must be the premium efficiency type in accordance with NEMA MG 1. Field wiring must be in accordance with manufacturer's instructions. Each motor must conform to NEMA MG 1 and NEMA MG 2 and be of sufficient size to drive the equipment at the specified capacity without exceeding the nameplate rating of the motor. Motors must be continuous duty with the enclosure specified. Motor starters must be provided complete with thermal overload protection and other appurtenances necessary for the motor control indicated. Motors must be furnished with a magnetic across-the-line or reduced voltage type starter as required by the manufacturer. Motor duty requirements must allow for maximum frequency start-stop operation and minimum encountered interval between start and stop. Motors must be sized for the applicable loads. Motor torque must be capable of accelerating the connected load within 20 seconds with 80 percent of the rated voltage maintained at motor terminals during one starting period. Motor bearings must be fitted with grease supply fittings and grease relief to outside of enclosure. Manual or automatic control and protective or signal devices required for the operation specified and any control wiring required for controls and devices specified, but not shown, must be provided.

2.1.2.3 Ozone Depleting Substances

Unitary air conditioning equipment must not use CFC-based refrigerants. Refrigerant shall be R-410A or may be an approved alternative refrigerant in accordance with EPA's Significant New Alternative Policy (SNAP) listing.

2.1.3 Nameplates

Major equipment including compressors, condensers, receivers, heat exchanges, fans, and motors must have the manufacturer's name, address, type or style, model or serial number, and catalog number on a plate secured to the item of equipment. Plates must be durable and legible throughout equipment life and made of stainless steel. Fix plates in prominent locations with nonferrous screws or bolts.

2.1.4 Safety Devices

Exposed moving parts, parts that produce high operating temperature, parts which may be electrically energized, and parts that may be a hazard to operating personnel must be insulated, fully enclosed, guarded, or fitted with other types of safety devices. Safety devices must be installed so that proper operation of equipment is not impaired. Welding and cutting safety requirements must be in accordance with AWS Z49.1.

2.2 EQUIPMENT

2.2.1 Large-Capacity Split-System Air Conditioners (Greater Than 65,000 Btu/h)

Provide an air-cooled, split system which employs a remote condensing unit, a separate indoor unit, and interconnecting refrigerant piping. Provide the air conditioning type unit conforming to applicable Underwriters Laboratories (UL) standards including UL 1995. Unit must be rated in accordance with ANSI/AHRI 210/240. Provide unit with necessary fans, air filters, and cabinet construction as specified in paragraph UNITARY EQUIPMENT ACCESSORIES. Provide double-width, double inlet, forward curved centrifugal scroll type evaporator or supply fans. Provide the manufacturer's standard for the unit specified and may be centrifugal scroll type condenser or outdoorfans. Enclose fan condenser motors in totally enclosed enclosures and permanently lubricate ball bearings. Air Conditioners must have a minimum energy efficiency ratio (EER) of 12.

2.2.1.1 Air-To-Refrigerant Coil

Provide coils with copper tubes of 3/8 inch minimum diameter with copper fins that are mechanically bonded or soldered to the tubes. Provide casing of galvanized steel. Avoid contact of dissimilar metals. Test coils in accordance with ASHRAE 15 & 34 at the factory and ensure suitability for the working pressure of the installed system. Dehydrate and seal each coil testing and prior to evaluation and charging. Provide each unit with a factory operating charge of refrigerant and oil. Field charge unit shipped with a holding charge with refrigerant and oil. Provide separate expansion devices for each compressor circuit. Condenser coil must have special coating for corrosion resistance. Condenser coil must be copper finned. Coat condenser and evaporator coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Apply coating at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation and be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.2.1.2 Refrigeration Circuit

Refrigerant-containing components must comply with ASHRAE 15 & 34 and be factory tested, cleaned, dehydrated, charged, and sealed. Provide refrigerant charging valves and connections, and pumpdown valves for each circuit.

2.2.1.3 Unit Controls

Provide unit internally prewired with a 208 volt control circuit powered by an internal transformer. Provide terminal blocks for power wiring and external control wiring. Unit must have cutoffs high and low pressure, and low oil pressure for compressors with positive displacement oil pumps, supply fan failure, and safety interlocks on all service panels. Stage multiple compressors by means of a time delay. Internally protect unit by a circuit breaker in accordance with UL 1995.

2.2.1.4 Condensing Unit

Fit each remote condenser coil with a manual isolation valve and an access valve on the coil side. Saturated refrigerant condensing temperature must not exceed 120 degrees F at 95 degrees F ambient. Fan and condenser motors must have totally enclosed enclosures.

2.2.1.4.1 Air-Cooled Condenser

Provide unit rated in accordance with ANSI/AHRI 460 and conform to the requirements of UL 1995. Provide factory fabricated, tested, packaged, and self-contained unit. Unit must be complete with casing, propeller or centrifugal type fans, heat rejection coils, connecting piping and wiring, and all necessary appurtenances.

- a. Provide interconnecting refrigeration piping, electrical power, and control wiring between the condensing unit and the indoor unit as required and as indicated. Provide electrical and refrigeration piping terminal connections between condensing unit and evaporator units.
- b. Low ambient control for multi-circuited units serving more than one evaporator coil must provide independent condenser pressure controls for each refrigerant circuit. Set controls to produce a minimum of 95 degrees F saturated refrigerant condensing temperature. Provide unit with a liquid subcooling circuit that ensures proper liquid refrigerant flow to the expansion device over the specified application range of the condenser. Unit must be provided with manufacturer's standard liquid subcooling. Liquid seal the subcooling circuit.
- c. Coils must have copper tubes of 3/8 inch minimum diameter with copper fins that are mechanically bonded or soldered to the tubes. Protect coil in accordance with paragraph COIL CORROSION PROTECTION. Casing must be galvanized steel or aluminum. Avoid contact of dissimilar metals. Test coils in accordance with ASHRAE 15 & 34 at the factory and ensure suitability for the working pressure of the installed system. Dehydrate and seal each coil after testing and prior to evaluation and charging. Provide each unit with a factory operating charge of refrigerant and oil or a holding charge. Field charge unit shipped with a holding charge. Provide separate expansion devices for each compressor circuit.
- d. Provide a complete control system with required accessories for regulating condenser pressure by fan cycling, solid-state variable fan speed, modulating condenser coil or fan dampers, flooding the condenser, or a combination of the above. Construct unit mounted control panels or enclosures in accordance with applicable requirements of NFPA 70 and house in NEMA ICS 6, Class 1 or 3A enclosures. Controls must include overload protective devices, interface with local and remote components, and intercomponent wiring to terminal block points.

2.2.1.4.2 Compressors

Provide compressor rated in accordance with AHRI 540. Provide direct drive, semi-hermetic or hermetic reciprocating, or scroll type compressor capable of operating at partial load conditions. Compressor must be capable of continuous operation down to the lowest step of unloading as specified. Provide units 120,000 Btuh and larger with capacity reduction devices to produce automatic capacity reduction of at least 50 percent. If standard with the manufacturer, two or more compressors may be used in lieu of a single compressor with unloading capabilities, in which case the compressors operate in sequence, and each compressor must have an independent refrigeration circuit through the condenser and evaporator. Each compressor must start in the unloaded position. Provide each compressor with vibration isolators, crankcase heater, lubrication pump, thermal overloads, and high and low pressure safety cutoffs and protection against short cycling.

2.2.1.5 Filters

Provide filters of the sectional or panel type, capable of filtering the entire air supply. Mount filter(s) integral within the unit and make accessible by hinged access panel(s). Factory supply 2.0 inch, MERV 13, throwaway filters. Filters must have an average dust spot efficiency of 90-95 percent and an average arrestance of 90 percent when tested in accordance with ASHRAE 52.2. Provide UL Class 1 filters.

2.4 COMPONENTS

2.4.1 Refrigerant and Oil

The air-conditioning system shall use R410A. Refrigerants must have number designations and safety classifications in accordance with ASHRAE 15 & 34. Refrigerants must meet the requirements of AHR1 700 as a minimum. Provide a complete charge of refrigerant for the installed system as recommended by the manufacturer. Lubricating oil must be of a type and grade recommended by the manufacturer for each compressor. Where color leak indicator dye is incorporated, charge must be in accordance with manufacturer's recommendation.

2.4.2 Fans

Fan wheel shafts must be supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Unit fans must be selected to produce the cfm required at the fan total pressure. Motor starters, if applicable, must be magnetic across-the-line type with a totally enclosed enclosure. Thermal overload protection must be of the manual or automatic-reset type. Fan wheels or propellers must be constructed of aluminum or galvanized steel. Centrifugal fan wheel housings must be of galvanized steel, and both centrifugal and propeller fan casings must be constructed of aluminum or galvanized steel. Steel elements of fans, except fan shafts, must be hot-dipped galvanized after fabrication or fabricated of mill galvanized steel. Mill-galvanized steel surfaces and edges damaged or cut during fabrication by forming, punching, drilling, welding, or cutting must be recoated with an approved zinc-rich compound. Fan wheels or propellers must be statically and dynamically balanced. Centrifugal scroll-type fans must be provided with streamlined orifice inlet and V-belt drive. Each drive will be independent of any other drive. Propeller fans must be V-belt drive type with fixed pitch blades. V-belt driven fans must be mounted on a corrosion protected drive shaft supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Each drive will be independent of any other drive. Drive bearings must be protected with water slingers or shields. V-belt drives must be fitted with guards where exposed to contact by personnel and fixed pitch sheaves.

2.4.3 Air Filters

Provide filters to filter outside air and return air and locate inside combination air filter mixing box. Provide replaceable (throw-away) high efficiency type. Filters must conform to UL 900, Class 1. Polyurethane filters cannot be used on units with multiframe filters. Air filters must be listed in accordance with requirements of UL 900, except high efficiency particulate air filters of 99.97 percent efficiency by the DOP Test Method must be as listed under the label service and must meet the requirements of UL 586.

2.4.3.1 High Efficiency Filters

Additional high efficiency particulate air (HEPA) filters shall be provided. Filters must have a MERV of 17 when tested in accordance with ASHRAE 52.2. Filter assembly must include; holding frame and fastener assembly, filter cartridge, mounting frame, and retainer assembly. Reinforce filter media with glass fiber mat. Pressure drop across

clean filter shall not exceed 1 inches of water gage.

2.4.5 Mixing Boxes

Mixing boxes must match the base unit in physical size and must include equally sized openings, each capable of full air flow. Arrangement must be as indicated.

2.4.6 Cabinet Construction

Casings for the specified unitary equipment must be constructed of galvanized steel with a weather and corrosion resistant enamel finish or aluminum sheet metal and galvanized or aluminum structural members. If cabinet is enamel-finished galvanized steel, the cabinet finish shall be tested in accordance with ASTM B-117 salt spray surface scratch test (SST) procedure for a minimum of 1000 hours. Such documentation shall be included in all submittals. Minimum thickness of single wall exterior surfaces must be 18 gauge galvanized steel or 0.071 inch thick aluminum on units with a capacity above 20 tons and 20 gauge galvanized steel or 0.064 inch thick aluminum on units with a capacity less than 20 tons. Casing must be fitted with lifting provisions, access panels or doors, fan vibration isolators, electrical control panel, corrosion-resistant components, structural support members, insulated condensate drip pan and drain, and internal insulation in the cold section of the casing. Where double-wall insulated construction is proposed, minimum exterior galvanized sheet metal thickness must be 20 gauge. Provisions to permit replacement of major unit components must be incorporated. Penetrations of cabinet surfaces, including the floor, must be sealed. Unit must be fitted with a drain pan which extends under all areas where water may accumulate. Drain pan must be fabricated from Type 300 stainless steel, galvanized steel with protective coating as required, or an approved plastic material. Pan insulation must be water impervious. Extent and effectiveness of the insulation of unit air containment surfaces must prevent, within limits of the specified insulation, heat transfer between the unit exterior and ambient air, heat transfer between the two conditioned airstreams, and condensation on surfaces. Insulation must conform to ASTM C1071.

2.4.6.1 Indoor Cabinet

Indoor cabinets must be suitable for the specified indoor service and enclose all unit components.

2.4.6.2 Outdoor Cabinet

Outdoor cabinets must be suitable for outdoor service with a weathertight, insulated and corrosion-protected structure. Cabinets constructed exclusively for indoor service which have been modified for outdoor service are not acceptable.

2.6 FINISHES

2.6.1 Coil Corrosion Protection

Provide coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Submit product data on the type coating selected, the coating thickness, the application process used, the estimated heat transfer loss of the coil, and verification of conformance with the salt spray test requirement. Coating must be applied at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation. Coating must be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.6.2 Equipment and Components Factory Coating

Unless otherwise specified, equipment and component items, when fabricated from ferrous metal, must be factory finished with the manufacturer's standard finish, except that items located outside of buildings must have weather resistant finishes that will withstand 500 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution. Immediately after completion of the test, the specimen must show no signs of blistering, wrinkling, cracking, or loss of adhesion and no sign of rust creepage beyond 1/8 inch on either side of the scratch mark. Cut edges of galvanized surfaces where hot-dip galvanized sheet steel is used must be coated with a zinc-rich coating conforming to ASTM D520, Type I.

Where stipulated in equipment specifications of this section, coat finned tube coils of the affected equipment as specified below. Apply coating at the premises of a company specializing in such work. Degrease and prepare for coating in accordance with the coating applicator's procedures for the type of metals involved. Completed coating must show no evidence of softening, blistering, cracking, crazing, flaking, loss of adhesion, or "bridging" between the fins.

2.6.2.1 Phenolic Coating

Provide a resin base thermosetting phenolic coating. Apply coating by immersion dipping of the entire coil. Provide a minimum of two coats. Bake or heat dry coils following immersions. After final immersion and prior to final baking, spray entire coil with particular emphasis given to building up coating on sheared edges. Total dry film thickness must be 2.5 to 3.0 mils.

2.6.2.2 Chemical Conversion Coating with Polyelastomer Finish Coat

Dip coils in a chemical conversion solution to molecularly deposit a corrosion resistant coating by electrolysis action. Cure conversion coating at a temperature of 110 to 140 degrees F for a minimum of 3 hours. Coat coil surfaces with a complex polymer primer with a dry film thickness of 1 mil. Cure primer coat for a minimum of 1 hour. Using dip tank method, provide three coats of a complex polyelastomer finish coat. After each of the first two finish coats, cure the coils for 1 hour. Following the third coat, spray a fog coat of an inert sealer on the coil surfaces. Total dry film thickness must be 2.5 to 3.0 mils. Cure finish coat for a minimum of 3 hours. Coating materials must have 300 percent flexibility, operate in temperatures of minus 50 to plus 220 degrees F, and protect against atmospheres of a pH range of 1 to 14.

2.6.2.3 Vinyl Coating

Apply coating using an airless fog nozzle. For each coat, make at least two passes with the nozzle. Materials to be applied are as follows:

- a. Total dry film thickness, 6.5 mils maximum
- b. Vinyl Primer, 24 percent solids by volume: One coat 2 mils thick
- c. Vinyl Copolymer, 30 percent solids by volume: One coat 4.5 mils thick

2.6.3 Factory Applied Insulation

Refrigeration equipment must be provided with factory installed insulation on surfaces subject to sweating including the suction line piping. Where motors are the gas-cooled type, factory installed insulation must be provided on the cold-gas inlet connection to the motor in accordance with manufacturer's standard practice. Factory insulated items installed outdoors are not required to be fire-rated. As a minimum, factory insulated items installed indoors must have a flame spread index no higher than 75 and a smoke developed index no higher than 150. Factory insulated items (no jacket) installed indoors and which are located in air plenums, in ceiling spaces, and in attic spaces must have a flame spread index no higher than 25 and a smoke developed index no higher than 50. Flame spread and smoke developed indexes must be determined by ASTM E84.

Insulation must be tested in the same density and installed thickness as the material to be used in the actual construction. Material supplied by a manufacturer with a jacket must be tested as a composite material.

Jackets, facings, and adhesives must have a flame spread index no higher than 25 and a smoke developed index no higher than 50 when tested in accordance with ASTM E84.

2.7 TESTS, INSPECTIONS, AND VERIFICATIONS

All manufactured units must be inspected and tested, and documentation provided to demonstrate that each unit is in compliance with ANSI/AHRI and UL requirements and that the minimum efficiency requirements of ASHRAE 90.1 - IP have been met.

DIVISION 23-HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)
(HVAC) SECTION 23 81 29 VARIABLE
REFRIGERANT FLOW HVAC SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

Provide a complete Air Source, Cooling Only type Variable Refrigerant Flow (VRF) System consisting of one or more outdoor compressor units and multiple indoor fan coil units as specified in this Section and in accordance with the following:

- a. The complete system must be a tested combination in accordance with AHRI 1230.
- b. Provide cooling only control for each zone
- c. For systems which simultaneously heat and cool, the outdoor units must be interconnected to the indoor units through branch selector boxes in accordance with the manufacturer's engineering data detailing each indoor unit. The indoor units and outdoor must be connected to the branch selector boxes utilizing the manufacturer's specified piping joints and headers.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

AHRI 1230	(2010; Addendum 1 2011; Addendum 2 2014) Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment
ANSI/AHRI 270	(2008) Sound Rating of Outdoor Unitary Equipment
ANSI/AHRI 760	(2007) Performance Rating of Solenoid Valves for Use With Volatile Refrigerants

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ANSI/ASHRAE 15 & 34	(2013) ANSI/ASHRAE Standard 15-Safety Standard for Refrigeration Systems and ANSI/ASHRAE Standard 34-Designation and Safety Classification of Refrigerants
ASHRAE 90.1 - IP	(2013) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASTM INTERNATIONAL (ASTM)

ASTM A307	(2014; E 2017) Standard Specification for Carbon Steel Bolts, Studs, and
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ASTM B117	Threaded Rod 60 000 PSI Tensile Strength
ASTM D520	(2019) Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM E84	(2000; R 2011) Zinc Dust Pigment
ASTM F104	(2020) Standard Test Method for Surface Burning Characteristics of Building Materials
	(2011; R 2020) Standard Classification System for Nonmetallic Gasket Materials

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA 250	(2018) Enclosures for Electrical Equipment (1000 Volts Maximum)
NEMA MG 1	(2018) Motors and Generators
NEMA MG 2	(2014) Safety Standard for Construction and Guide for Selection, Installation and Use of Electric Motors and Generators

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star	(1992; R 2006) Energy Star Energy Efficiency Labeling System (FEMP)
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 82	Protection of Stratospheric
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Ozone UNDERWRITERS

LABORATORIES (UL)

UL 207	(2009; Reprint Jan 2020) Refrigerant-Containing Components and Accessories, Nonelectrical
UL 429	(2013; Reprint Jan 2020) Electrically Operated Valves
UL 586	(2009; Reprint Dec 2017) UL Standard for Safety High-Efficiency Particulate, Air Filter Units
UL 900	(2015) Standard for Air Filter Units
UL 1995	(2015) UL Standard for Safety Heating and Cooling Equipment

1.3 SUBMITTALS

SD-01 Preconstruction Submittals

Verification Of Existing
Conditions

SD-02 Shop Drawings

VRF System Contractor Design

Drawings SD-03 Product Data

Spare Parts Data

Coil Corrosion Protection

Manufacturer's Standard Catalog

DataSample Warranty

Refrigerant SDS

SheetsSD-05 Design Data

Manufacturer's Engineering

DataSD-06 Test Reports

System Performance

TestsSD-07 Certificates

Service

Organizations

Warranty

Electronic Refrigerant Leak Detector Calibration

Ozone Depleting Substances Technician

Certification

SD-08 Manufacturer's Instructions Manufacturer's

InstructionsSD-09 Manufacturer's Field Reports

Refrigerant Charging

1.4 QUALITY ASSURANCE

Complete VRF systems must be purchased from a single supplier. The VRF system supplier must be responsible for providing a fully functional VRF system.

Prior to purchase of equipment, shop drawings (e.g. equipment layout, plans and elevations, refrigerant piping system plans, etc.) must be approved by the VRF manufacturers representative. Include approval with name and contact information of VRF manufacturer's representative in the submittal.

1.5 QUALITY CONTROL

1.5.1 Standard Products

Provide materials and equipment that are standard products of a manufacturer regularly engaged in the manufacturing of such products, which are of a similar material, design and workmanship. The standard products must have been in satisfactory commercial or industrial use for 3 years immediately prior to the solicitation of this contract. The 3 year use includes applications of equipment and materials under similar circumstances and of similar size. The 3 years' experience must be satisfactorily completed by a product which has been sold on the commercial market through advertisements, manufacturer's



catalogs, or brochures. Products must be supported by a service organization. Ensure system components are environmentally suitable for the indicated geographic locations.

1.5.2 Manufacturer's Engineering Data

Submit VRF manufacturer's engineering data with the shop drawings under separate cover. **Strike** outirrelevant items and options not to be installed. Provide all input and output reports for all selection procedures required by the manufacturer and as required by this section. Engineering data must include:

- a. Selection Procedures:
 1. Indoor and Outdoor Units
 2. Branch Selector Units
 3. Piping Material and Fittings
 4. Refrigerant Mass for system
 5. Refrigerant Classification

- b. System Efficiency Curves/Data including:
 1. Efficiency correlated with OAT
 2. At least five (5) data points covering full range of operation
 3. Minimum and maximum values over the operational range
 4. Efficiency at Standard AHRI conditions.

1.5.3 Manufacturer's Instructions

Submit VRF manufacturer's instructions with the shop drawings under separate cover. **Strike** outirrelevant items and options not to be installed. Provide with the following:

- a. Installation: Include mechanical, electrical, controls and piping complete installation requirements.
- b. Operation: Include startup, normal operation and shutdown procedures.
- c. Maintenance: Include preventative.

1.6 DELIVERY, STORAGE, AND HANDLING

Protect stored items from the weather, humidity and temperature variations, dirt and dust, or other contaminants. Properly protect and care for all material both before and during installation. Submit an inventory of all the stored items. Replace any materials found to be damaged, at no additional cost to the Government.

During installation, keep piping and similar openings capped to keep out dirt and other foreign matter.

1.7 WARRANTY

Provide VRF manufactured equipment with the Manufacturer's Standard Warranty in addition to the Warranty of Construction. Submit Sample Warranty prior to construction. Compare warranty requirements with the requirements of this contract and identify discrepancies in the submittal that would prevent coverage of warranty by the manufacturer.

PART 2 PRODUCTS

All products used to meet this specification must meet the indicated requirements, but not all products specified here will be required by every project.

2.1 MATERIALS

Provide Manufacturer's standard catalog data, at least 5 weeks prior to the purchase or installation of a particular component, highlighted to show material, size, options, performance charts and curves, in adequate detail to demonstrate compliance with contract requirements. If field installed vibration isolation is specified for a unit, include vibration isolator literature containing catalog cuts and certification that the isolation characteristics of the isolators provided meet the manufacturer's recommendations. Submit data for each specified component.

Minimum efficiency requirements must be in accordance with ASHRAE 90.1 - IP.

2.1.1 Performance Requirements

Provide energy efficiency curve and data of EFFICIENCY vs. OAT. Provide at least five data points over the full range of operation capturing the minimums and maximums.

2.1.1.1 Variable Refrigerant Flow Multi-Split Air Conditioners

Information on Energy Star requirements can be found at https://www.energystar.gov/products/heating_cooling/light_commercial_heating_cooling/light_commercial_hvac_key_product_criteria

2.1.1.2 Electrical Equipment / Motors

Electrical motor driven equipment specified must be provided complete with motors, motor starters, and controls. Electrical characteristics must be as shown, and unless otherwise indicated and field wiring must be in accordance with manufacturer's instructions. All motor(s):

- a. 1 horsepower and above must be the premium efficiency type in accordance with NEMA MG 1.
- b. Conform to NEMA MG 1 and NEMA MG 2 and be of sufficient size to drive the equipment at the specified capacity without exceeding the nameplate rating.
- c. Continuous duty with the enclosure specified.
- d. Starters must be provided complete with thermal overload protection and other appurtenances necessary for the motor control indicated.
- e. Furnished with a magnetic across-the-line or reduced voltage type starter as required by the manufacturer.
- f. Duty requirements must allow for maximum frequency start-stop operation and minimum encountered interval between start and stop.
- g. Must be sized for all applicable loads.
- h. Bearings with grease supply fittings must have grease relief to outside of enclosure.
- i. Automatic control and protective or signal devices required for the operation specified and any control wiring required for controls and devices specified, but not shown, must be provided.

2.1.1.3 Refrigerant

The air-conditioning system shall use R410A.

2.1.2 Safety Devices

Exposed moving parts, parts that produce high operating temperature, parts which may be electrically energized, and parts that may be a hazard to operating personnel must be insulated, fully enclosed, guarded, or fitted with other types of safety devices.

2.2.1 Zone Control

Provide a Space Sensor Module for each fan coil unit unless otherwise indicated in contract drawings and with the following additional requirements:

- a. Displays the current temperature, temperature setpoint, fans status, occupancy status and conditioning mode at the same time. If information is displayed electronically then it must be illuminated.
- b. Temperature setpoint adjustment in one degree increments.
- c. Fans speed control (At least: High-low-Auto).
- d. Occupancy override button which changes the mode of the zone to occupied for one hour per press of occupancy override button with 8 hours maximum at any instance.

2.3 INDOOR FAN COIL

UNITS Provide with the

following:

- a. Factory complete, tested and pre-wired with all necessary electronic and refrigerant controls.
- b. Equipped with auto-restart function and test run capability either via a switch or controller.
- c. Refrigerant: Refrigerant circuits factory-charged with dehydrated inert gas.
- d. Coils: Direct expansion type constructed from copper, aluminum, or copper and aluminum.
- e. Fans: Direct-drive, with statically and dynamically balanced impellers; variable speed ECM unless otherwise indicated; motor thermally protected.
- f. Return Air Filter: Washable long-life net filter with mildew proof resin, or replaceable, unless otherwise indicated.
- g. Condensate Drainage: Built-in condensate drain pan with drain connection.
- h. Dedicated electronic modulating refrigerant expansion and flow control.

- i. Unit must be in accordance with UL 1995 and AHRI 1230.
- j. For units with Built-In Condensate Pumps, provide condensate safety shutoff and alarm. For units without Built-In Condensate Pump, provide built in or field supplied overflow protection.

2.3.1 Concealed-In-Ceiling

Units Provide with the following:

- a. Ducted horizontal discharge and return; galvanized steel cabinet in accordance with Section 23 30 00 HVAC AIR DISTRIBUTION.
- b. Field adjustable external static pressure switch for high efficiency filter operation.
- c. Switch box accessible from side or bottom.

2.3.2 Recessed Ceiling

Units Provide with the

following:

- a. Four-way airflow cassette with central return air grille, for installation in a fixed ceiling, unless otherwise indicated.
- b. Exposed Housing: White, impact resistant, with washable decoration panel.
- c. Supply Airflow Adjustment:
 - (1) Via motorized louvers which can be horizontally and vertically adjusted from 0 to 90 degrees.
 - (2) Field-modifiable to 3-way and 2-way airflow.

2.3.3 Wall Surface-Mounted

Units Provide with the following:

- a. Finished white casing, with removable front grille; sound insulation; wall mounting plate; condensate drain pan.
- b. Airflow Control: Auto-swing louver that closes automatically when unit stops; adjustable discharge angle, set using remote controller; upon restart, discharge angle defaulting to same angle as previous operation.
- c. Fan: Direct-drive cross-flow type.
- d. Condensate Drain Connection: Side (end), not concealed in wall.

2.4 OUTDOOR

COMPRESSOR UNIT

Provide with the following:

- a. The outdoor unit must have one or more variable capacity compressors or alternative method resulting in three or more steps of capacity needed to load match the indoor unit fan coils at alltimes.
- b. The unit must be factory complete, tested and pre-wired with all necessary electronic andrefrigerant controls.
- c. The sound pressure dB(A) at rated conditions must be a value of 58 decibels at 3 feet from thefront of the unit when rated in accordance with ANSI/AHRI 270.
- d. The unit must automatically restart normal operation after a power failure of any durationwithout reprogramming or manual assistance.
- e. Oil recovery cycle must be automatic occurring a minimum of 2 hours after start of operationand then at least every 8 hours of operation.
- f. Each outdoor unit must have it's own dedicated power feed, each with disconnect and mainpower circuit breaker.
- g. The unit must be in compliance with ANSI/ASHRAE 15 & 34, factory tested, cleaned, dehydrated, charged, and sealed. Provide refrigerant charging valves.Filter-drier must be provided in liquid line.
- h. The outdoor units capacity must meet or exceed the scheduled value in the contract drawings.The ratio of the outdoor unit capacity to the total connected indoor capacity must bein accordance with the manufacturer's recommendations for selecting the outdoor unit.
- i. Unit must be in accordance with UL 1995 and AHRI 1230.

2.4.1 Air-Cooled

The unit must must have full design cooling capacity at 95 degrees F dry bulb ambient.

2.4.2 Casing

Construct the unit of zinc coated, heavy-gage (14-gage minimum) galvanized steel. The cabinet finish shall betested in accordance with ASTM B-117 salt spray surface scratch test (SST) procedure for a minimum of 1000 hours. Such documentation shall be included in all submittals. Provide cabinet panels with lifting handles andwater- and air-tight seal. Insulate all exposed vertical panels, top covers and base pan.

2.4.3 Compressor

Each compressor system must have the following:

- a. High pressure safety switch, and internal thermal overload protection.
- b. Factory installed vibration dampeners on all mounting points.
- c. Factory installed crank case heater or other control logic to ensure reliable operation in freezing environments.
- d. Oil separator with an oil balance circuit.

2.5 COMPONENTS

2.5.1 Fans

Fan wheel shafts must be supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Unit fans must be selected to produce the flow rate required at the fan total pressure. Motor starters, if applicable, must be magnetic across-the-line type with a totally enclosed enclosure. Thermal overload protection must be of the manual or automatic-reset type. Fan wheels or propellers must be constructed of aluminum or galvanized steel. Centrifugal fan wheel housings must be of galvanized steel, and both centrifugal and propeller fan casings must be constructed of aluminum or galvanized steel. Steel elements of fans, except fan shafts, must be hot-dipped galvanized after fabrication or fabricated of mill galvanized steel. Mill-galvanized steel surfaces and edges damaged or cut during fabrication by forming, punching, drilling, welding, or cutting must be recoated with an approved zinc-rich compound. Fan wheels or propellers must be statically and dynamically balanced. Direct-drive fan motors must be of the multiple-speed variety. Belt-driven fans must have adjustable sheaves. The sheave size must be selected so that the fan speed at the approximate midpoint of the sheave adjustment will produce the specified air quantity. Centrifugal scroll-type fans must be provided with streamlined orifice inlet and V-belt drive. Each drive will be independent of any other drive.

Propeller fans must be direct-drive type with fixed pitch blades. V-belt driven fans must be mounted on a corrosion protected drive shaft supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Each drive will be independent of any other drive. Drive bearings must be protected with water slingers or shields. V-belt drives must be fitted with guards where exposed to contact by personnel and fixed pitch sheaves. Axial fans may not be used to distribute air through duct systems.

2.5.2 Air Filters

High efficiency particulate air (HEPA) filters shall be provided. Filters must have a MERV of 17 when tested in accordance with ASHRAE 52.2. Filter assembly must include; holding frame and fastener assembly, filter cartridge, mounting frame, and retainer assembly. Reinforce filter media with glass fiber mat. Pressure drop across clean filter shall not exceed 1 inches of water gage.

2.5.3 Internal Dampers

Dampers must be parallel blade type with renewable blade seals and be integral to the unitary unit. Damper provisions must be provided for each outside air intake, exhaust, economizer, and mixing boxes. Dampers must have manual modulation and operate as specified.

2.5.4 Mixing Boxes

Mixing boxes must match the base unit in physical size and must include equally-sized openings, each capable of full air flow. Arrangement must be as indicated.

2.5.5 Refrigerant Solenoid Valves

Solenoid valves must comply with ANSI/AHRI 760 and UL 429, be suitable for continuous duty rated voltage at maximum and minimum encountered pressure and temperature service conditions. Solenoid valves must be direct-acting or pilot-operating type, packless, seal capped. Manual lifting provisions must be furnished. Solenoid coils must comply with NEMA 250 type 4.

Valves must have safe working pressure of 125 percent of maximum working pressure and a maximum operating pressure differential of at least half of the valve maximum working pressure at 85 percent rated voltage. Valves must have an operating pressure differential suitable for the fluid phase and refrigerant used.

2.5.6 Branch Selector Unit

Branch Selector port control must be provided for each connected indoor unit to enable individual heating and cooling selection year round unless otherwise indicated in the contract drawings. The cabinet must be galvanized steel. The branch selector units must be factory assembled, wired, piped and run tested.

2.6 EQUIPMENT ACCESSORIES AND MISCELLANEOUS EQUIPMENT

2.6.1 Refrigerant Leak Detector

Provide continuously-operating, halogen-specific type refrigerant leak detector. Detector must be appropriate for the refrigerant in use.

Detector must be specifically designed for area monitoring and must include a single sampling point installed where indicated. Detector design and construction must be compatible with the temperature, humidity, barometric pressure and voltage fluctuations of the operating area. Detector must have an adjustable sensitivity such that it can detect refrigerant at or above 3 parts per million (ppm). Detector must be supplied factory-calibrated for the appropriate refrigerant(s). Detector must be provided with an alarm relay output which energizes when the detector detects a refrigerant level at or above the TLV-TWA (or toxicity measurement consistent therewith) for the refrigerant in use. The detector's relay must be capable of initiating corresponding alarms and ventilation system as indicated on the drawings. Detector must be provided with a failure relay output that energizes when the monitor detects a fault in its operation.

2.6.2 Refrigerant Signs

Refrigerant signs must be a medium-weight aluminum type with a baked enamel finish. Signs must be suitable for indoor or outdoor service. Signs must have a white background with red letters not less than 0.5 inches in height.

2.6.2.1 Installation Identification

Provide each new refrigeration system with a refrigerant sign which indicates the following as a minimum:

- a. Contractor's name.
- b. Refrigerant number and amount of refrigerant.
- c. The lubricant identity and amount.
- d. Field test pressure applied.

2.6.2.2 Controls and Piping Identification

Provide refrigerant systems containing more than 110 lb of refrigerant with refrigerant signs which designate the following as a minimum:

- a. Valves or switches for controlling the refrigerant flow and the refrigerant compressor.
- b. Pressure limiting device(s).

2.6.3 Gaskets

Provide gaskets conforming to ASTM F104 - classification for compressed sheet with nitrile binder and acrylic fibers for maximum 700 degrees F service.

2.6.4 Bolts and Nuts

Bolts and nuts must be in accordance with ASTM A307. The bolt head must be marked to identify the manufacturer and the standard with which the bolt complies in accordance with ASTM A307.

2.7 FINISHES

2.7.1 Coil Corrosion Protection

Provide coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Submit product data on the type coating selected, the coating thickness, the application process used, the estimated heat transfer loss of the coil, and verification of conformance with the salt spray test requirement. Coating must be applied at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation. Coating must be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.7.2 Equipment and Components Factory Coating

Unless otherwise specified, equipment and component items, when fabricated from ferrous metal, must be factory finished with the manufacturer's standard finish, except that items located outside of buildings must have weather resistant finishes that will withstand 500 hours exposure to the salt spray test specified in ASTM B117. Immediately after completion of the test, the specimen must show no signs of blistering, wrinkling, cracking, or loss of adhesion and no sign of rust creepage beyond 1/8 inch on either side of the scratch mark. Cut edges of galvanized surfaces where hot-dip galvanized sheet steel is used must be coated with a zinc-rich coating conforming to ASTM D520, Type I.

Where stipulated in equipment specifications of this section, coat finned tube coils of the affected equipment as specified below. Apply coating at the premises of a company specializing in such work. Degrease and prepare for coating in accordance with the coating applicator's procedures for the type of metals involved. Completed coating must show no evidence of softening, blistering, cracking, crazing, flaking, loss of adhesion, or "bridging" between the fins.

2.7.2.1 Phenolic Coating

Provide a resin base thermosetting phenolic coating. Apply coating by immersion dipping of the entire coil. Provide a minimum of two coats. Bake or heat dry coils following immersions. After final immersion and prior to final baking, spray entire coil with particular emphasis given to building up coating on sheared edges. Total dry film thickness must be 2.5 to 3.0 mils.

2.7.2.2 Chemical Conversion Coating with Polyelastomer Finish Coat

Dip coils in a chemical conversion solution to molecularly deposit a corrosion resistant coating by electrolysis action. Cure conversion coating at a temperature of 110 to 140 degrees F for a minimum of 3 hours. Coat coil surfaces with a complex polymer primer with a dry film thickness of 1 mil. Cure primer coat for a minimum of 1 hour. Using dip tank method, provide three coats of a complex polyelastomer finish coat. After each of the first two finish coats, cure the coils for 1 hour. Following the third coat, spray a fog coat of an inert sealer on the coil surfaces. Total dry film thickness must be 2.5 to 3.0 mils. Cure finish coat for a minimum of 3 hours. Coating

materials must have 300 percent flexibility, operate in temperatures of minus 50 to plus 220 degrees F, and protect against atmospheres of a pH range of 1 to 14.

2.7.2.3 Vinyl Coating

Apply coating using an airless fog nozzle. For each coat, make at least two passes with the nozzle. Materials to be applied are as follows:

- a. Total dry film thickness, 6.5 mils maximum
- b. Vinyl Primer, 24 percent solids by volume: One coat 2 mils thick
- c. Vinyl Copolymer, 30 percent solids by volume: One coat 4.5 mils thick

2.7.3 Factory Applied Insulation

Refrigeration equipment must be provided with factory installed insulation on surfaces subject to sweating including the suction line piping. Where motors are the gas-cooled type, factory installed insulation must be provided on the cold-gas inlet connection to the motor in accordance with manufacturer's standard practice. Factory insulated items installed outdoors are not required to be fire-rated. As a minimum, factory insulated items installed indoors must have a flame spread index no higher than 75 and a smoke developed index no higher than 150. Factory insulated items (no jacket) installed indoors and which are located in air plenums, in ceiling spaces, and in attic spaces must have a flame spread index no higher than 25 and a smoke developed index no higher than 50. Flame spread and smoke developed indexes must be determined by ASTM E84.

Insulation must be tested in the same density and installed thickness as the material to be used in the actual construction. Material supplied by a manufacturer with a jacket must be tested as a composite material.

Jackets, facings, and adhesives must have a flame spread index no higher than 25 and a smoke developed index no higher than 50 when tested in accordance with ASTM E84.

2.8 TESTS, INSPECTIONS, AND VERIFICATIONS

All manufactured units must be inspected and tested, and documentation provided to demonstrate that each unit is in compliance with applicable ANSI/AHRI and UL requirements and that the minimum efficiency requirements of ASHRAE 90.1 - SI ASHRAE 90.1 - IP have been met.

EXHIBIT B
UOG BID NO. B21-
17

PURCHASING OF HVAC EQUIPMENT OF THE UNIVERSITY OF GUAM

Scope of Work

3. Scope of the Work

This bid is to select and award a contract for the purchasing of multiple Air Conditioning units for the University of Guam.

4. Bid Submittals

a) Bid prices shall be submitted on Bid Price Form. All prices shall include shipping, delivery, and manufacturer's warranty. Any additional cost not stated in this bid but are required to complete the delivery and installation must be included in the bidder's price.

b) Bidder shall submit an electronic copy to the Share folder that UOG procurement office provides.

Contractor is required to submit prices for Table 1.0.

Bid award to be based on the required items in Table 1.0 and to be based on price, compliance to the specification, services, delivery and any requirements in the BID package, BID NO. B21-17.

Table 1.0 Bid Price Form

No.	ITEM DESCRIPTION	BID Price																																																												
1	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">LOCATION</th> <th style="text-align: center;">UNIT</th> <th style="text-align: center;">TONS</th> <th style="text-align: center;">VOLTAGE</th> <th style="text-align: center;">TVX</th> </tr> </thead> <tbody> <tr> <td>RFK BUILDING SECOND FLOOR</td> <td style="text-align: center;">1</td> <td style="text-align: center;">50</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. - 25</td> </tr> <tr> <td>RFK BUILDING FIRST FLOOR</td> <td style="text-align: center;">1</td> <td style="text-align: center;">40</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>20RFK BUILDING FIRST FLOOR MAIN ENTRANCE</td> <td style="text-align: center;">1</td> <td style="text-align: center;">15</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>7.5RFK BUILDING FIRST FLOOR AV ROOM</td> <td style="text-align: center;">1</td> <td style="text-align: center;">15</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>7.5RFK BUILDING FIRST FLOOR OFFICES</td> <td style="text-align: center;">1</td> <td style="text-align: center;">20</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. - 10</td> </tr> <tr> <td>PIP (GLE) SECOND FLOOR</td> <td style="text-align: center;">1</td> <td style="text-align: center;">20</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>10SCIENCE BUILDING FIRST FLOOR</td> <td style="text-align: center;">1</td> <td style="text-align: center;">40</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>20SCIENCE BUILDING SECOND FLOOR</td> <td style="text-align: center;">1</td> <td style="text-align: center;">40</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>20SCIENCE BUILDING THIRD FLOOR</td> <td style="text-align: center;">1</td> <td style="text-align: center;">20</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>10ENGLISH COMMUNICATION BUILDING CLASSROO</td> <td style="text-align: center;">1</td> <td style="text-align: center;">30</td> <td style="text-align: center;">208 / 230</td> <td style="text-align: center;">2 EA. -</td> </tr> <tr> <td>15COMPUTER CENTER OIT</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	LOCATION	UNIT	TONS	VOLTAGE	TVX	RFK BUILDING SECOND FLOOR	1	50	208 / 230	2 EA. - 25	RFK BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	20RFK BUILDING FIRST FLOOR MAIN ENTRANCE	1	15	208 / 230	2 EA. -	7.5RFK BUILDING FIRST FLOOR AV ROOM	1	15	208 / 230	2 EA. -	7.5RFK BUILDING FIRST FLOOR OFFICES	1	20	208 / 230	2 EA. - 10	PIP (GLE) SECOND FLOOR	1	20	208 / 230	2 EA. -	10SCIENCE BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	20SCIENCE BUILDING SECOND FLOOR	1	40	208 / 230	2 EA. -	20SCIENCE BUILDING THIRD FLOOR	1	20	208 / 230	2 EA. -	10ENGLISH COMMUNICATION BUILDING CLASSROO	1	30	208 / 230	2 EA. -	15COMPUTER CENTER OIT					
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BUILDING FIRST FLOOR	1	50	277 / 460	2 EA. - 25
LECTURE HALL AUDITORIUM	1	20	277 / 460	2 EA. - 10
MARINE LAB FIRST FLOOR	2	10	208 / 230	2 EA. - 5
MARINE LAB SECOND FLOOR	2	10	208 / 230	2 EA. - 5
HSS BUILDING	2	50	277 / 460	2 EA. - 25
HSS BUILDING	1	30	277 / 460	2 EA. - 15
Grand Total				
Delivery: _____ weeks after receipt of purchase order				

OPTIONS

Signature of Bidder Date

For Table 2.0 Options, the bidder's price will not be included as part of the total price evaluation for this bid award. UOG reserves the right to exercise any or part of the options requested. Insert any additional options recommended.

Table 2.0 Options

No.	Item Description	Price
1	Services for Maintenance and upkeep.	
2	Services for disposal.	
3	Replacement/trade in program	

OTHER NOTES:

3. These specifications have been written to describe minimum equipment and performance requirements to be supplied by the equipment manufacturer bidding. Reasonable tests may be conducted upon delivery before acceptance.

4. The University reserves the right to accept and/or reject any and all bids, to waive any defects, irregularities, or specification discrepancies and to award the bid deemed to be in the best interest of the University.

NOTE: Name and title of author of specifications:

University of Guam

Glenn Leon Guerrero, Director, Facilities Management & Services, Email: glennlg@triton.uog.edu

Emily Gumataotao, Supply Management Administrator, Email: eggumataotao@triton.uog.edu









RFP Bid No. B21-17 Purchasing HVAC Units for UOG

Final Audit Report

2021-09-21

Created:	2021-09-20
By:	Christine Mababayag (ckamm@triton.uog.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAAzUx-kIK9Deq03XIQUjZkxKXFD19oThSg

"RFP Bid No. B21-17 Purchasing HVAC Units for UOG" History

-  Document created by Christine Mababayag (ckamm@triton.uog.edu)
2021-09-20 - 10:28:42 PM GMT- IP address: 168.123.224.54
-  Document emailed to Mike Naholowaa (naholomw@bankofguam.com) for signature
2021-09-20 - 10:33:08 PM GMT
-  Email viewed by Mike Naholowaa (naholomw@bankofguam.com)
2021-09-21 - 0:53:39 AM GMT- IP address: 64.86.75.253
-  Document e-signed by Mike Naholowaa (naholomw@bankofguam.com)
Signature Date: 2021-09-21 - 0:57:12 AM GMT - Time Source: server- IP address: 64.86.75.253
-  Document emailed to Liza Provideo (ptjarchitects@yahoo.com) for signature
2021-09-21 - 0:57:15 AM GMT
-  Email viewed by Liza Provideo (ptjarchitects@yahoo.com)
2021-09-21 - 1:25:07 AM GMT- IP address: 69.147.90.190
-  Document e-signed by Liza Provideo (ptjarchitects@yahoo.com)
Signature Date: 2021-09-21 - 1:34:09 AM GMT - Time Source: server- IP address: 114.142.234.197
-  Agreement completed.
2021-09-21 - 1:34:09 AM GMT

Submission by Vendors



ADMINISTRATION & FINANCE
Consolidated Procurement Office

AMENDMENT 6

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: December 3, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

1.1 Question & Answer Sheet 3 as set forth in the attached.

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: Tony's Workshop

Michael Ecalnea  12/6/21
Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu
Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913
The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges Senior College and University Commission and is an equal opportunity provider and employer.



AMENDMENT 5

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: November 24, 2021

“PURCHASING HVAC EQUIPMENT”

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 Deadline for submission should read as follows: Monday, December 06, 2021 at 2:00 p.m. (your bid submission must be submitted electronically to the Bid Share folder provided by UOG Procurement Office on or before 2:00 p.m.) Bid opening will take place at 3:15 p.m. via ZOOM link provided by procurement office to all registered offerors.**

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: Tony's Workshop

Michael Ecalnea  11/30/21

Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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AMENDMENT 4

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: November 22, 2021

“PURCHASING HVAC EQUIPMENT”

This is to notify all prospective offerors of the following amendment set forth below:


1.1 Question & Answer Sheet 2 as set forth in the attached.

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: Tony's Workshop

Michael Ecalnea  11/30/21
Print Name/Signature/date

AMENDMENT 3

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: November 19, 2021

“PURCHASING HVAC EQUIPMENT”

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 Question & Answer Sheet 1 as set forth in the attached.
- 1.2 **REPLACE** Exhibit B “Scope of Work & Bid Price Form” with corrected forms as set forth in the attached.
- 1.3 Copy of Pre-bid Conference Sign-In sheet as set forth in the attached.
- 1.4 Deadline for submission should read as follows: Monday, November 29, 2021 at 2:00 p.m. (your bid submission must be submitted electronically to the Bid Share folder provided by UOG Procurement Office on or before 2:00 p.m.) Bid opening will take place at 3:15 p.m. via ZOOM link provided by procurement office to all registered offerors.

All other terms and conditions remain the same.


Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: Tony's Workshop

Michael Ecalnea  11/30/21
Print Name/Signature/date

AMENDMENT 2

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: October 29, 2021

PURCHASING HVAC EQUIPMENT

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 **REPLACE** "Cover Page" with corrected form as set forth in the attached.
- 1.2 **ADD:** after Cover Page, p.2 "Bidders Registry" with corrected form as set forth in the attached.
- 1.3 **REPLACE** "Table of Contents" with corrected form as set forth in the attached.
- 1.4 **REPLACE** "Instructions to Bidders" with corrected forms as set forth in the attached.
- 1.5 **ADD:** after ATTACHMENT I, "Register of Wage Determinations Under The Service Contract Act"
- 1.6 **REPLACE** Exhibit B "Bid Price Form" with corrected forms as set forth in the attached.

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: Tony's Workshop

Michael Ecalnea  11/30/21

Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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ADMINISTRATION & FINANCE
Consolidated Procurement Office

AMENDMENT 1

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: October 29, 2021

PURCHASING OF HVAC EQUIPMENT

This is to notify all prospective offerors of the following amendment:


- 1.1 **PRE-BID Conference and Site visit is scheduled for Wednesday, November 3, 2021 at 10:00am. Meet-up will be at Facilities Maintenance Services, 1st Floor Bay. Please contact 735-2377 for directions.**

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

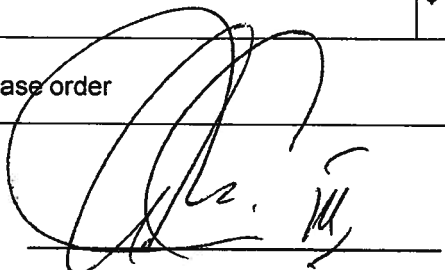
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BUILDING FIRST FLOOR	1	50	277 / 460	2 EA. - 25	\$ 55,372.32
LECTURE HALL AUDITORIUM	1	20	277 / 460	2 EA. - 10	\$ 24,262.45
HSS BUILDING	2	50	277 / 460	2 EA. - 25	\$ 110,134.64
HSS BUILDING	1	30	277 / 460	2 EA. - 15	\$ 36,503.19
Grand Total					\$ 584,926.51
Delivery: <u>24</u> weeks after receipt of purchase order					



SIGNATURE OF BIDDER DATE

OPTIONS

For Table 2.0 Options, the bidder's price will not be included as part of the total price evaluation for this bid award. UOG reserves the right to exercise any or part of the options requested. Insert any additional options recommended.

Table 2.0 Options

No.	Item Description	Price
1	Services for Maintenance and upkeep. Excluded Major Repair	\$ 26,000.00 (Quarterly PMI)
2	Services for disposal.	\$ 54,148.63
3	Replacement/trade in program	\$ 196,766.42 (Install/Trade in Only)

OTHER NOTES:

1. These specifications have been written to describe minimum equipment and performance requirements to be supplied by the equipment manufacturer bidding. Reasonable tests may be conducted upon delivery before acceptance.
2. The University reserves the right to accept and/or reject any and all bids, to waive any defects, irregularities, or specification discrepancies and to award the bid deemed to be in the best interest of the University.

NOTE: Name and title of author of specifications:

University of Guam

Glenn Leon Guerrero, Director, Facilities Management & Services, Email: glennlg@triton.uog.edu

Emily Gumataotao, Supply Management Administrator, Email: eggumataotao@triton.uog.edu

EXHIBIT B

UOG BID NO.B21-17

PURCHASING OF HVAC EQUIPMENT OF THE UNIVERSITY OF GUAM

Scope of Work

1. Scope of the Work

This bid is to select and award a contract for the purchasing of multiple Air Conditioning units for the University of Guam.

2. Bid Submittals

- a) Bid prices shall be submitted on Bid Price Form. All prices shall include shipping, delivery, and manufacturer's warranty. Any additional cost not stated in this bid but are required to complete the delivery must be included in the bidder's price.
- b) Bidder shall submit an electronic copy to the Share folder that UOG procurement office provides.

Contractor is required to submit prices for Table 1.0.

Bid award to be based on the required items in Table 1.0 and to be based on price, compliance to the specification, services, delivery and any requirements in the BID package, BID NO. B21-17.

Table 1.0 Bid Price Form

No.	ITEM DESCRIPTION					BID Price
1	LOCATION	UNIT	TONS	VOLTAGE	TVX	
	RFK BUILDING SECOND FLOOR	1	50	208 / 230	2 EA. - 25	\$ 55,372.32
	RFK BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	\$ 52,856.01
	20RFK BUILDING FIRST FLOOR					
	MAIN ENTRANCE	1	15	208 / 230	2 EA. -	\$ 17,711.51
	7.5RFK BUILDING FIRST FLOOR					
	AV ROOM	1	15	208 / 230	2 EA. -	\$ 17,711.51
	7.5RFK BUILDING FIRST FLOOR					
	OFFICES	1	20	208 / 230	2 EA. - 10	\$ 24,262.45
	PIP (GLE) SECOND FLOOR	1	20	208 / 230	2 EA. -	\$ 24,262.45
	10SCIENCE BUILDING FIRST					
	FLOOR	1	40	208 / 230	2 EA. -	\$ 52,856.01
	20SCIENCE BUILDING					
	SECOND FLOOR	1	40	208 / 230	2 EA. -	\$ 52,856.01
	20SCIENCE BUILDING					
	THIRD FLOOR	1	20	208 / 230	2 EA. -	\$ 24,262.45
	10ENGLISH COMMUNICATION					
	BUILDING CLASSROO	1	30	208 / 230	2 EA. -	\$ 36,503.19
	15COMPUTER CENTER OIT					

Mike Ecalnea uploaded new files to your request for B21-17 BID SUBMISSION

SharePoint Online <no-reply@sharepointonline.com>

Mon 12/6/2021 1:21 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

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request for "B21-17 BID
SUBMISSION"**

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SharePoint Online <no-reply@sharepointonline.com>

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To: UOG Procurement Bids <uog.bids@triton.uog.edu>

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Bid pack
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New files were uploaded to your request for "B21-17 BID SUBMISSION"

Mike_Ecalnea_Tony's Workshop Bid Package UOG B21-17.pdf

See new files

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parties and/or fully determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract. (See 29 CFR 4.6(b)(2)(v)). When multiple wage determinations are included in a contract a separate SF-1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award the contractor prepares a written report listing in order the proposed classification title(s) a Federal grade equivalency (FGE) for each proposed classification(s) job description(s) and rationale for proposed wage rate(s) including information regarding the agreement or disagreement of the authorized representative of the employees involved or where there is no authorized representative the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.
- 3) The contracting officer reviews the proposed action and promptly submits a report of the action together with the agency's recommendations and pertinent information including the position of the contractor and the employees to the U.S. Department of Labor Wage and Hour Division for review (See 29 CFR 4.6(b)(2)(ii)).
- 4) Within 30 days of receipt the Wage and Hour Division approves modifies or disapproves the action via transmittal to the agency contracting officer or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour Division's decision to the contractor.
- 6) Each affected employee shall be furnished by the contractor with a written copy of such determination or it shall be posted as a part of the wage determination (See 29 CFR 4.6(b)(2)(iii)).

Information required by the Regulations must be submitted on SF-1444 or bond paper.

When preparing a conformance request the "Service Contract Act Directory of Occupations" should be used to compare job definitions to ensure that duties requested are not performed by a classification already listed in the wage determination. Remember it is not the job title but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split combine or subdivide classifications listed in the wage determination (See 29 CFR 4.152(c)(1))."

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract by the employer by the state or local law etc.) the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition where uniform cleaning and maintenance is made the responsibility of the employee all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount or the furnishing of contrary affirmative proof as to the actual cost) reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However in those instances where the uniforms furnished are made of "wash and wear" materials may be routinely washed and dried with other personal garments and do not require any special treatment such as dry cleaning daily washing or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract by the contractor by law or by the nature of the work there is no requirement that employees be reimbursed for uniform maintenance costs.

**** SERVICE CONTRACT ACT DIRECTORY OF OCCUPATIONS ****

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations" Fifth Edition (Revision 1) dated September 2015 unless otherwise indicated.

**** REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE Standard Form 1444 (SF-1444) ****

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e. the work to be performed is not performed by any classification listed in the wage determination) be classified by the contractor so as to provide a reasonable relationship (i.e. appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination (See 29 CFR 4.6(b)(2)(i)). Such conforming procedures shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees (See 29 CFR 4.6(b)(2)(ii)). The Wage and Hour Division shall make a final determination of conformed classification wage rate and/or fringe benefits which shall be paid to all employees performing in the classification from the first day of work on which contract work is performed by them in the classification. Failure to pay such unlisted employees the compensation agreed upon by the interested

determination.

Additionally because job titles vary widely and change quickly in the computer industry job titles are not determinative of the application of the computer professional exemption. Therefore the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures including consulting with users to determine hardware software or system functional specifications;

(2) The design development documentation analysis creation testing or modification of computer systems or programs including prototypes based on and related to user or system design specifications;

(3) The design documentation testing creation or modification of computer programs related to machine operating systems; or

(4) A combination of the aforementioned duties the performance of which requires the same level of skills. (29 C.F.R. 541.400).

2) AIR TRAFFIC CONTROLLERS AND WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** HAZARDOUS PAY DIFFERENTIAL ****

An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance explosives and incendiary materials. This includes work such as screening blending dying mixing and pressing of sensitive ordnance explosives and pyrotechnic compositions such as lead azide black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization modification renovation demolition and maintenance operations on sensitive ordnance explosives and incendiary materials. All operations involving re-grading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with or in close proximity to ordnance (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands face or arms of the employee engaged in the operation irritation of the skin minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving unloading storage and hauling of ordnance explosive and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance explosives and incendiary material differential pay.

under the EO is available at www.dol.gov/whd/govcontracts.

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$4.60 per hour up to 40 hours per week or \$184.00 per week or \$797.33 per month

HEALTH & WELFARE EO 13706: \$4.23 per hour up to 40 hours per week or \$169.20 per week or \$733.20 per month*

*This rate is to be used only when compensating employees for performance on an SCA-covered contract also covered by EO 13706 Establishing Paid Sick Leave for Federal Contractors. A contractor may not receive credit toward its SCA obligations for any paid sick leave provided pursuant to EO 13706.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; and 4 weeks after 3 years. Length of service includes the whole span of continuous service with the present contractor or successor wherever employed and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day Martin Luther King Jr.'s Birthday Washington's Birthday Memorial Day Independence Day Labor Day Columbus Day Veterans' Day Thanksgiving Day and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE NUMBERED FOOTNOTES IN PARENTHESES RECEIVE THE FOLLOWING:

1) COMPUTER EMPLOYEES: Under the SCA at section 8(b) this wage determination does not apply to any employee who individually qualifies as a bona fide executive administrative or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than \$27.63 (or on a salary or fee basis at a rate not less than \$455 per week) an hour would likely qualify as exempt computer professionals (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds \$27.63 per hour conformances may be necessary for certain nonexempt employees. For example if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage

30493 - Unexploded Ordnance (UXO) Technician III	37.13
30494 - Unexploded (UXO) Safety Escort	25.60
30495 - Unexploded (UXO) Sweep Personnel	25.60
30501 - Weather Forecaster I	25.57
30502 - Weather Forecaster II	31.09
30620 - Weather Observer Combined Upper Air Or Surface Programs	(see 2) 20.77
30621 - Weather Observer Senior	(see 2) 23.08
31000 - Transportation/Mobile Equipment Operation Occupations	
31010 - Airplane Pilot	30.98
31020 - Bus Aide	8.15
31030 - Bus Driver	10.66
31043 - Driver Courier	9.69
31260 - Parking and Lot Attendant	9.91
31290 - Shuttle Bus Driver	11.65
31310 - Taxi Driver	11.41
31361 - Truckdriver Light	10.59
31362 - Truckdriver Medium	11.61
31363 - Truckdriver Heavy	14.64
31364 - Truckdriver Tractor-Trailer	14.64
99000 - Miscellaneous Occupations	
99020 - Cabin Safety Specialist	15.10
99030 - Cashier	9.63
99050 - Desk Clerk	9.70
99095 - Embalmer	25.60
99130 - Flight Follower	25.60
99251 - Laboratory Animal Caretaker I	23.38
99252 - Laboratory Animal Caretaker II	25.54
99260 - Marketing Analyst	21.54
99310 - Mortician	25.60
99410 - Pest Controller	14.61
99510 - Photofinishing Worker	13.45
99710 - Recycling Laborer	17.32
99711 - Recycling Specialist	23.38
99730 - Refuse Collector	16.40
99810 - Sales Clerk	9.87
99820 - School Crossing Guard	17.27
99830 - Survey Party Chief	23.01
99831 - Surveying Aide	13.08
99832 - Surveying Technician	17.00
99840 - Vending Machine Attendant	23.38
99841 - Vending Machine Repairer	29.78
99842 - Vending Machine Repairer Helper	23.38

Note: Executive Order (EO) 13706 Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2017. If this contract is covered by the EO the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness injury or other health-related needs including preventive care; to assist a family member (or person who is like family to the employee) who is ill injured or has other health-related needs including preventive care; or for reasons resulting from or to assist a family member (or person who is like family to the employee) who is the victim of domestic violence sexual assault or stalking. Additional information on contractor requirements and worker protections

27008	- Corrections Officer	12.05
27010	- Court Security Officer	12.05
27030	- Detection Dog Handler	10.90
27040	- Detention Officer	12.05
27070	- Firefighter	12.05
27101	- Guard I	9.48
27102	- Guard II	10.90
27131	- Police Officer I	12.05
27132	- Police Officer II	13.40
28000	- Recreation Occupations	
28041	- Carnival Equipment Operator	13.24
28042	- Carnival Equipment Repairer	14.46
28043	- Carnival Worker	9.78
28210	- Gate Attendant/Gate Tender	13.18
28310	- Lifeguard	11.01
28350	- Park Attendant (Aide)	14.74
28510	- Recreation Aide/Health Facility Attendant	11.84
28515	- Recreation Specialist	18.26
28630	- Sports Official	11.74
28690	- Swimming Pool Operator	17.71
29000	- Stevedoring/Longshoremen Occupational Services	
29010	- Blocker And Bracer	25.98
29020	- Hatch Tender	25.98
29030	- Line Handler	25.98
29041	- Stevedore I	24.18
29042	- Stevedore II	27.79
30000	- Technical Occupations	
30010	- Air Traffic Control Specialist Center (HFO) (see 2)	40.29
30011	- Air Traffic Control Specialist Station (HFO) (see 2)	27.78
30012	- Air Traffic Control Specialist Terminal (HFO) (see 2)	30.59
30021	- Archeological Technician I	17.49
30022	- Archeological Technician II	19.56
30023	- Archeological Technician III	24.21
30030	- Cartographic Technician	23.18
30040	- Civil Engineering Technician	23.08
30051	- Cryogenic Technician I	25.57
30052	- Cryogenic Technician II	28.24
30061	- Drafter/CAD Operator I	17.49
30062	- Drafter/CAD Operator II	19.56
30063	- Drafter/CAD Operator III	20.77
30064	- Drafter/CAD Operator IV	25.57
30081	- Engineering Technician I	14.84
30082	- Engineering Technician II	16.66
30083	- Engineering Technician III	18.64
30084	- Engineering Technician IV	23.08
30085	- Engineering Technician V	28.24
30086	- Engineering Technician VI	34.16
30090	- Environmental Technician	23.08
30095	- Evidence Control Specialist	23.08
30210	- Laboratory Technician	20.77
30221	- Latent Fingerprint Technician I	25.57
30222	- Latent Fingerprint Technician II	28.24
30240	- Mathematical Technician	23.34
30361	- Paralegal/Legal Assistant I	19.54
30362	- Paralegal/Legal Assistant II	24.21
30363	- Paralegal/Legal Assistant III	29.61
30364	- Paralegal/Legal Assistant IV	35.83
30375	- Petroleum Supply Specialist	28.24
30390	- Photo-Optics Technician	21.93
30395	- Radiation Control Technician	28.24
30461	- Technical Writer I	23.08
30462	- Technical Writer II	28.24
30463	- Technical Writer III	34.16
30491	- Unexploded Ordnance (UXO) Technician I	25.60
30492	- Unexploded Ordnance (UXO) Technician II	30.98

23181 - Electronics Technician Maintenance I	18.20
23182 - Electronics Technician Maintenance II	19.46
23183 - Electronics Technician Maintenance III	20.72
23260 - Fabric Worker	16.94
23290 - Fire Alarm System Mechanic	16.77
23310 - Fire Extinguisher Repairer	15.61
23311 - Fuel Distribution System Mechanic	20.72
23312 - Fuel Distribution System Operator	15.61
23370 - General Maintenance Worker	12.01
23380 - Ground Support Equipment Mechanic	23.84
23381 - Ground Support Equipment Servicer	19.47
23382 - Ground Support Equipment Worker	21.03
23391 - Gunsmith I	15.61
23392 - Gunsmith II	18.20
23393 - Gunsmith III	20.72
23410 - Heating Ventilation And Air-Conditioning Mechanic	17.50
23411 - Heating Ventilation And Air Contidioning Mechanic (Research Facility)	18.61
23430 - Heavy Equipment Mechanic	19.27
23440 - Heavy Equipment Operator	17.76
23460 - Instrument Mechanic	20.72
23465 - Laboratory/Shelter Mechanic	19.46
23470 - Laborer	11.37
23510 - Locksmith	19.46
23530 - Machinery Maintenance Mechanic	23.13
23550 - Machinist Maintenance	20.72
23580 - Maintenance Trades Helper	10.67
23591 - Metrology Technician I	20.72
23592 - Metrology Technician II	22.03
23593 - Metrology Technician III	23.33
23640 - Millwright	20.72
23710 - Office Appliance Repairer	19.46
23760 - Painter Maintenance	14.08
23790 - Pipefitter Maintenance	18.39
23810 - Plumber Maintenance	17.27
23820 - Pneudraulic Systems Mechanic	20.72
23850 - Rigger	20.72
23870 - Scale Mechanic	18.20
23890 - Sheet-Metal Worker Maintenance	17.35
23910 - Small Engine Mechanic	18.20
23931 - Telecommunications Mechanic I	19.76
23932 - Telecommunications Mechanic II	21.01
23950 - Telephone Lineman	18.24
23960 - Welder Combination Maintenance	18.31
23965 - Well Driller	21.13
23970 - Woodcraft Worker	20.71
23980 - Woodworker	15.61
24000 - Personal Needs Occupations	
24550 - Case Manager	15.01
24570 - Child Care Attendant	10.09
24580 - Child Care Center Clerk	13.25
24610 - Chore Aide	12.78
24620 - Family Readiness And Support Services Coordinator	15.01
24630 - Homemaker	16.12
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	20.72
25040 - Sewage Plant Operator	21.59
25070 - Stationary Engineer	20.72
25190 - Ventilation Equipment Tender	14.29
25210 - Water Treatment Plant Operator	21.59
27000 - Protective Service Occupations	
27004 - Alarm Monitor	10.90
27007 - Baggage Inspector	9.48

14170 - System Support Specialist	21.24
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	24.23
15020 - Aircrew Training Devices Instructor (Rated)	29.32
15030 - Air Crew Training Devices Instructor (Pilot)	34.91
15050 - Computer Based Training Specialist / Instructor	24.23
15060 - Educational Technologist	27.61
15070 - Flight Instructor (Pilot)	34.91
15080 - Graphic Artist	20.47
15085 - Maintenance Test Pilot Fixed Jet/Prop	34.91
15086 - Maintenance Test Pilot Rotary Wing	34.91
15088 - Non-Maintenance Test/Co-Pilot	34.91
15090 - Technical Instructor	17.67
15095 - Technical Instructor/Course Developer	23.78
15110 - Test Proctor	15.70
15120 - Tutor	15.70
16000 - Laundry Dry-Cleaning Pressing And Related Occupations	
16010 - Assembler	10.12
16030 - Counter Attendant	10.12
16040 - Dry Cleaner	11.56
16070 - Finisher Flatwork Machine	10.12
16090 - Presser Hand	10.12
16110 - Presser Machine Drycleaning	10.12
16130 - Presser Machine Shirts	10.12
16160 - Presser Machine Wearing Apparel Laundry	10.12
16190 - Sewing Machine Operator	12.04
16220 - Tailor	12.52
16250 - Washer Machine	10.60
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	19.46
19040 - Tool And Die Maker	24.46
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	13.96
21030 - Material Coordinator	21.78
21040 - Material Expediter	21.78
21050 - Material Handling Laborer	11.37
21071 - Order Filler	9.76
21080 - Production Line Worker (Food Processing)	13.96
21110 - Shipping Packer	17.12
21130 - Shipping/Receiving Clerk	17.12
21140 - Store Worker I	15.22
21150 - Stock Clerk	21.40
21210 - Tools And Parts Attendant	13.96
21410 - Warehouse Specialist	13.96
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	25.04
23019 - Aircraft Logs and Records Technician	19.47
23021 - Aircraft Mechanic I	23.84
23022 - Aircraft Mechanic II	25.04
23023 - Aircraft Mechanic III	26.30
23040 - Aircraft Mechanic Helper	16.58
23050 - Aircraft Painter	22.39
23060 - Aircraft Servicer	19.47
23070 - Aircraft Survival Flight Equipment Technician	22.39
23080 - Aircraft Worker	21.03
23091 - Aircrew Life Support Equipment (ALSE) Mechanic I	21.03
23092 - Aircrew Life Support Equipment (ALSE) Mechanic II	23.84
23110 - Appliance Mechanic	19.46
23120 - Bicycle Repairer	15.61
23125 - Cable Splicer	19.59
23130 - Carpenter Maintenance	16.07
23140 - Carpet Layer	18.20
23160 - Electrician Maintenance	18.05

12035 - Electroneurodiagnostic Technologist	25.99
12040 - Emergency Medical Technician	18.23
12071 - Licensed Practical Nurse I	16.30
12072 - Licensed Practical Nurse II	18.23
12073 - Licensed Practical Nurse III	20.32
12100 - Medical Assistant	12.26
12130 - Medical Laboratory Technician	18.82
12160 - Medical Record Clerk	13.61
12190 - Medical Record Technician	17.77
12195 - Medical Transcriptionist	16.30
12210 - Nuclear Medicine Technologist	40.06
12221 - Nursing Assistant I	11.34
12222 - Nursing Assistant II	12.75
12223 - Nursing Assistant III	13.91
12224 - Nursing Assistant IV	15.61
12235 - Optical Dispenser	18.23
12236 - Optical Technician	16.30
12250 - Pharmacy Technician	15.49
12280 - Phlebotomist	16.30
12305 - Radiologic Technologist	25.33
12311 - Registered Nurse I	23.18
12312 - Registered Nurse II	28.36
12313 - Registered Nurse II Specialist	28.36
12314 - Registered Nurse III	34.32
12315 - Registered Nurse III Anesthetist	34.32
12316 - Registered Nurse IV	41.13
12317 - Scheduler (Drug and Alcohol Testing)	22.58
12320 - Substance Abuse Treatment Counselor	22.58
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	21.20
13012 - Exhibits Specialist II	26.27
13013 - Exhibits Specialist III	32.13
13041 - Illustrator I	21.20
13042 - Illustrator II	26.27
13043 - Illustrator III	32.13
13047 - Librarian	29.09
13050 - Library Aide/Clerk	16.88
13054 - Library Information Technology Systems Administrator	26.27
13058 - Library Technician	16.64
13061 - Media Specialist I	18.96
13062 - Media Specialist II	21.20
13063 - Media Specialist III	23.63
13071 - Photographer I	18.96
13072 - Photographer II	21.20
13073 - Photographer III	26.27
13074 - Photographer IV	32.13
13075 - Photographer V	38.88
13090 - Technical Order Library Clerk	21.20
13110 - Video Teleconference Technician	18.96
14000 - Information Technology Occupations	
14041 - Computer Operator I	15.71
14042 - Computer Operator II	17.22
14043 - Computer Operator III	19.19
14044 - Computer Operator IV	21.33
14045 - Computer Operator V	23.62
14071 - Computer Programmer I	(see 1) 15.73
14072 - Computer Programmer II	(see 1) 19.50
14073 - Computer Programmer III	(see 1) 23.84
14074 - Computer Programmer IV	(see 1)
14101 - Computer Systems Analyst I	(see 1) 24.23
14102 - Computer Systems Analyst II	(see 1)
14103 - Computer Systems Analyst III	(see 1)
14150 - Peripheral Equipment Operator	15.71
14160 - Personal Computer Support Technician	21.33

01300 - Scheduler Maintenance	15.55
01311 - Secretary I	15.55
01312 - Secretary II	17.40
01313 - Secretary III	19.39
01320 - Service Order Dispatcher	15.40
01410 - Supply Technician	21.43
01420 - Survey Worker	16.96
01460 - Switchboard Operator/Receptionist	10.36
01531 - Travel Clerk I	13.01
01532 - Travel Clerk II	14.12
01533 - Travel Clerk III	15.09
01611 - Word Processor I	14.53
01612 - Word Processor II	16.31
01613 - Word Processor III	18.26
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer Fiberglass	15.46
05010 - Automotive Electrician	14.52
05040 - Automotive Glass Installer	13.58
05070 - Automotive Worker	13.58
05110 - Mobile Equipment Servicer	11.65
05130 - Motor Equipment Metal Mechanic	15.46
05160 - Motor Equipment Metal Worker	13.58
05190 - Motor Vehicle Mechanic	15.46
05220 - Motor Vehicle Mechanic Helper	10.66
05250 - Motor Vehicle Upholstery Worker	12.64
05280 - Motor Vehicle Wrecker	13.58
05310 - Painter Automotive	14.52
05340 - Radiator Repair Specialist	13.58
05370 - Tire Repairer	12.67
05400 - Transmission Repair Specialist	15.46
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.47
07041 - Cook I	13.26
07042 - Cook II	15.46
07070 - Dishwasher	9.31
07130 - Food Service Worker	9.45
07210 - Meat Cutter	12.13
07260 - Waiter/Waitress	9.27
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	18.04
09040 - Furniture Handler	10.95
09080 - Furniture Refinisher	18.04
09090 - Furniture Refinisher Helper	13.27
09110 - Furniture Repairer Minor	15.70
09130 - Upholsterer	18.04
11000 - General Services And Support Occupations	
11030 - Cleaner Vehicles	9.35
11060 - Elevator Operator	9.54
11090 - Gardener	13.00
11122 - Housekeeping Aide	9.54
11150 - Janitor	9.54
11210 - Laborer Grounds Maintenance	9.82
11240 - Maid or Houseman	9.32
11260 - Pruner	8.79
11270 - Tractor Operator	11.90
11330 - Trail Maintenance Worker	9.82
11360 - Window Cleaner	10.66
12000 - Health Occupations	
12010 - Ambulance Driver	18.23
12011 - Breath Alcohol Technician	18.23
12012 - Certified Occupational Therapist Assistant	25.01
12015 - Certified Physical Therapist Assistant	25.01
12020 - Dental Assistant	16.32
12025 - Dental Hygienist	36.12
12030 - EKG Technician	25.99

"REGISTER OF WAGE DETERMINATIONS UNDER
THE SERVICE CONTRACT ACT
By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

Daniel W. Simms
Director

Division of
Wage Determinations

Wage Determination No.: 2015-5693
Revision No.: 13
Date Of Last Revision: 08/04/2021

Note: Under Executive Order (EO) 13658 an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2015. If this contract is covered by the EO the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination if it is higher) for all hours spent performing on the contract in calendar year 2021. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

States: Guam Northern Marianas Wake Island

Area: Guam Statewide

Northern Marianas Statewide

Wake Island Statewide

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.57
01012 - Accounting Clerk II		15.23
01013 - Accounting Clerk III		17.04
01020 - Administrative Assistant		21.43
01035 - Court Reporter		17.40
01041 - Customer Service Representative I		11.51
01042 - Customer Service Representative II		12.94
01043 - Customer Service Representative III		14.12
01051 - Data Entry Operator I		12.15
01052 - Data Entry Operator II		13.25
01060 - Dispatcher Motor Vehicle		17.39
01070 - Document Preparation Clerk		13.85
01090 - Duplicating Machine Operator		13.85
01111 - General Clerk I		10.35
01112 - General Clerk II		11.29
01113 - General Clerk III		12.68
01120 - Housing Referral Assistant		19.39
01141 - Messenger Courier		11.37
01191 - Order Clerk I		12.57
01192 - Order Clerk II		13.71
01261 - Personnel Assistant (Employment) I		15.95
01262 - Personnel Assistant (Employment) II		17.85
01263 - Personnel Assistant (Employment) III		19.89
01270 - Production Control Clerk		21.78
01290 - Rental Clerk		11.10

ATTACHMENT I
DECLARATION re COMPLIANCE WITH U.S. DOL WAGE DETERMINATIONS

Procurement No.: UOG BID B21-17

Name of Offeror Company: Antonio C. Mendoza III DBA Tony's Workshop

I, Antonio C. Mendoza III hereby certify under penalty of perjury:

- (1) That I am the offeror (please select one: *the offeror, a partner of the offeror, an officer of the offeror*) making the bid or proposal in the foregoing identified procurement;
- (2) That I have read and understand the provisions of 5 GCA § 5801 and 5802 which read:

§ 5801. Wage Determination Established.

In such cases where the government of Guam enters into contractual arrangements with a sole proprietorship, a partnership or a corporation ("contractor") for the provision of a service to the government of Guam, and in such cases where the contractor employs a person(s) whose purpose, in whole or in part, is the direct delivery of service contracted by the government of Guam, then the contractor shall pay such employee(s) in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the government of Guam.

The Wage Determination most recently issued by the U.S. Department of Labor at the time a contract is awarded to a contractor by the government of Guam shall be used to determine wages, which shall be paid to employees pursuant to this Article. Should any contract contain a renewal clause, then at the time of renewal adjustments, there shall be made stipulations contained in the contract for applying the Wage Determination, as required by this Article, so the Wage Determination promulgated by the U.S. Department of Labor on a date most recent to the renewal date shall apply.

§ 5802. Benefits.

In addition to the Wage Determination detailed in this Article, any contract to which this Article applies shall also contain provisions mandating health and similar benefits for employees covered by this Article, such benefits having a minimum value as detailed in the Wage Determination issued and promulgated by the U.S. Department of Labor, and shall contain provisions guaranteeing a minimum of ten (10) paid holidays per annum per employees.

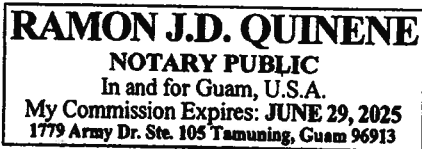
- (3) That the offeror is in full compliance with 5 GCA § 5801 and § 5802, as may be applicable to the procurement referenced herein;
- (4) That I have attached the most recent wage determination applicable to Guam issued by the U.S. Department of Labor. (***INSTRUCTIONS – Please attach most updated version to bid package***) (*AG Procurement Form 006 (Feb. 16, 2010)*)

ATTACHMENT J
AFFIDAVIT re CONTINGENT FEES

CITY OF Tamuning)
) ss.
ISLAND OF GUAM)

Antonio C. Mendoza III (state name of affiant signing below), being first duly sworn, deposes and says that:

1. The name of the offering company or individual is (state name of company)
Antonio C. Mendoza III DBA Tony's Workshop
2. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained any person or agency on a percentage, commission, or other contingent arrangement to secure this contract. This statement is made pursuant to UOG Procurement Manual Section 11.8 .2
3. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained a person to solicit or secure a contract with the government of Guam upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. This statement is made pursuant to UOG Procurement Manual Section 11.8.1.
4. I make these statements on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.




Antonio C. Mendoza III

Signature of one of the following:

Offeror, if the offeror is an individual;
Partner, if the offeror is a partnership;
Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 6th day of December, 2021

Ramon J.D. Quinene
NOTARY PUBLIC

My commission expires June 29, 2025
(AG Procurement Form 007 (Jul. 15, 2010))



19 | Page

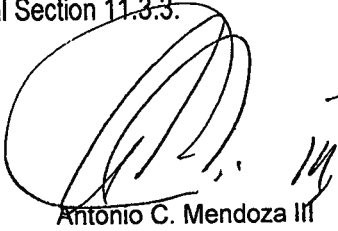
UOG BID NO. B21-17 **PURCHASING OF HVAC EQUIPMENT**

**ATTACHMENT H
AFFIDAVIT RE ETHICAL STANDARDS**

CITY OF Tamuning)
) ss.
ISLAND OF GUAM)

Antonio C. Mendoza III (state name of affiant signing below), being first duly sworn,
deposes and says that:

The affiant is the offeror (state one of the following: the offeror, a partner of the offeror, an officer of the offeror) making the foregoing identified bid or proposal. To the best of affiant's knowledge, neither affiant nor any officers, representatives, agents, subcontractors or employees of offeror have knowingly influenced any government of Guam employee to breach any of the ethical standards set forth in 5 GCA Chapter 5, Article 11. Further, affiant promises that neither he or she, nor any officer, reprehensive, agent, subcontractor, or employee of offeror will knowingly influence any government of Guam employee to breach any ethical standards set forth in 5 GCA Chapter 5, Article 11. These statements are made pursuant to UOG Procurement Manual Section 11.3.3.



Antonio C. Mendoza III

Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror a partnership;
Officer, if the offeror is a corporation.

Subscribed and sworn to before me

This 6th day of December, 2021

[Signature]
NOTARY PUBLIC

My commission expires June 29, 2025.

RAMON J.D. QUINENE
NOTARY PUBLIC
In and for Guam, U.S.A.
My Commission Expires: JUNE 29, 2025
1779 Army Dr. Ste. 105 Tamuning, Guam 96913

(AG Procurement Form 005 (Jul. 12, 2010))

UOG BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT

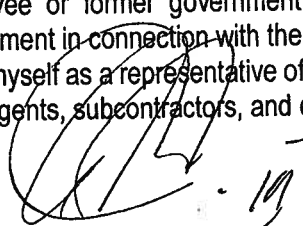


ATTACHMENT G
AFFIDAVIT re GRATUITIES, KICKBACKS AND FAVORS

CITY OF Tamuning)
) ss.
ISLAND OF GUAM)

Antonio C. Mendoza III (state name of affiant signing below), being first duly sworn, deposes and says that:

1. The name of the offering firm or individual is (state name of offeror company) Antonio C. Mendoza III (Tony's Workshop) = Affiant is the offeror (state one of the following: the offeror, a partner of the offeror, and officer of the offeror) making the foregoing identified bid or proposal.
2. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents subcontractors, or employees have violated, are violating the prohibition against gratuities, kickbacks and favors set forth in UOG Procurement Manual Section 11.7 Further, affiant promises, on behalf of offeror, not to violate the prohibition against gratuities, kickbacks and favors as set forth in UOG Procurement Manual Section 11.7.
3. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents, subcontractors, or employees have offered, given or agreed to give, any government of Guam employee or former government employee, any payment, gift, kickback, gratuity or offer of employment in connection with the offeror's proposal.
4. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.



Antonio C. Mendoza III

Signature of one of the following:

- Offeror, if the offeror is an individual;
- Partner, if the offeror is a partnership;
- Officer, if the offeror is a corporation

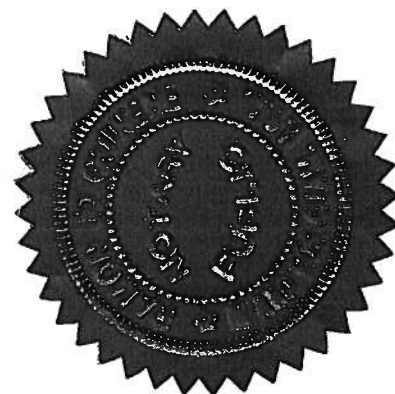
RAMON J.D. QUINENE
NOTARY PUBLIC
In and for Guam, U.S.A.
My Commission Expires: **JUNE 29, 2025**
1779 Army Dr. Ste. 105 Tamuning, Guam 96913

Subscribed and sworn to before me

This 6th day of December 2021

[Signature]
NOTARY PUBLIC

My commission expires June 29, 2025
(AG Procurement Form 004 (Jul. 12, 2010))

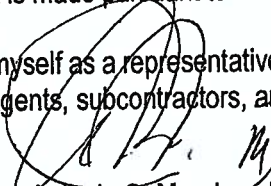


**ATTACHMENT F
AFFIDAVIT re NON-COLLUSION**

CITY OF Tamuning)
) ss.
 ISLAND OF GUAM)

Antonio C. Mendoza III (state name of affiant signing below), being first duly sworn deposes and says that:

1. The name of the offering company or individual is (state name of company)
Antonio C. Mendoza III (Tony's Workshop)
2. The proposal for the solicitation identified above is genuine and not collusive or a sham. The offeror has not colluded, conspired, connived or agreed, directly or indirectly, with any other offeror or person, to put in a sham proposal or to refrain from making an offer. The offeror has not in any manner, directly or indirectly, sought by an agreement or collusion, or communication or conference, with any person to fix the proposal price of offeror or of any other offeror, or to fix any overhead, profit or cost element of said proposal price, or of that of any other offeror, or to secure any advantage against the government of Guam or any person interested in the proposed contract. All statements in this affidavit and in the proposal are true to the best of the knowledge of the undersigned. This statement is made pursuant to 2 GAR Division 4 § 3126(b).
3. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.



Antonio C. Mendoza III

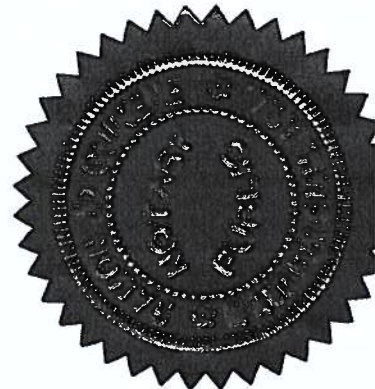
RAMON J.D. QUINENE
NOTARY PUBLIC
 In and for Guam, U.S.A.
 My Commission Expires: **JUNE 29, 2025**
 1779 Army Dr. Ste. 105 Tamuning, Guam 96913

Signature of one of the following:
 Offeror, if the offeror is an individual;
 Partner, if the offeror is a partnership;
 Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 6th day of December, 2021


 NOTARY PUBLIC
 My commission expires June 29, 2025
 (AG Procurement Form 003 (Jul. 12, 2010))



**ATTACHMENT E
MAJOR SHAREHOLDER DISCLOSURE AFFIDAVIT**

CITY OF Tamuning)
) ss.
 ISLAND OF GUAM)

A. I, the undersigned, being first duly sworn depose and say that I am an authorized representative of the offeror and that (please check only one):

(X) The offeror is an individual or sole proprietor and owns the entire (100%) interest in the offering business.

() The offeror is a corporation, partnership, joint venture, or association known as _____ (please state name of offeror company), and the persons, companies, partners, or joint ventures who have held more than 10% of the shares or interest in the offering business during the 365 days immediately preceding the submission date of the proposal are as follows (if none, please so state):

<u>NAME</u>	<u>ADDRESS</u>	<u>% of Interest</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

B. Further, I say that the persons who have received or are entitled to receive a commission, gratuity or other compensation for procuring or assisting in obtaining business related to the bid or proposal for which affidavit is submitted are as follows (if none, please so state):

<u>NAME</u>	<u>ADDRESS</u>	<u>Compensation</u>
_____	_____	_____

C. If the ownership of the offering business should change between the time this affidavit is made and the time an award is made or a contract is entered into, then I promise personally to update the disclosure required by 5 GCA § 5233 by delivering another affidavit to the government.

(Handwritten Signature)

 Antonio C. Mendoza III

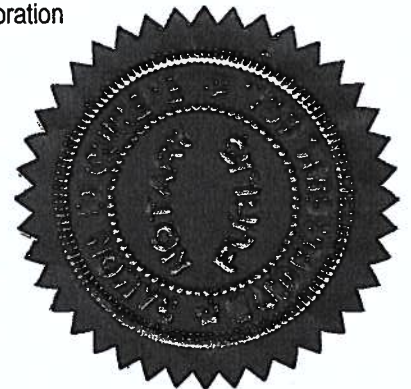
Signature of one of the following:
 Offeror, if the offeror is an individual;
 Partner, if the offeror is a partnership;
 Officer, if the offeror is a corporation

RAMON J.D. QUINENE
NOTARY PUBLIC
 In and for Guam, U.S.A.
 My Commission Expires: **JUNE 29, 2025**
 1779 Army Dr. Ste. 105 Tamuning, Guam 96913

Subscribed and sworn to before me

This 6th day of December, 2021

 NOTARY PUBLIC
 My commission expires June 29, 2025
 (AG Procurement Form 002 (Rev. Nov 17, 2005))



등부 2021 년 제 160 호

Registered No. 2021 - 160

인 증

NOTARIAL CERTIFICATE

위

위임장

에

Chang Soo Lee

Chang Sik Oh

기재된

이 장 수

오 창 식

은

personally appeared before

me and admitted his(her)

본 공증인의 면전에서 위 사서증서에
자기가 기명날인 한 것임을 자인하였다.

subscription to the attached

POWER OF ATTORNEY

2021년 1월 21일

This is hereby attested on

this 21st day of Jan.

이 사무소에서 위 인증한다.

2021 at this office.

서울중앙지방법검찰청소속

BELONG TO SEOUL CENTRAL DISTRICT PROSECUTORS' OFFICE

공증인가 동방종합법무법인

DONG BANG LAW & NOTARY OFFICE INC.

서울특별시 중구 퇴계로 187, 3층

3F.187.Toegye-ro, Jung-gu, Seoul, Korea

(필동1가, 국제빌딩)

공증담당

변호사

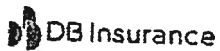
2021 01 21

Chai Lee Sik

Attorney at law(Rep.)

Chai. Lee Sik

This office has been authorized by the Minister of Justice,
the Republic of Korea, to act as Notary Public since
Apr. 26. 1984.under Law No.5



DB Financial Center 432, Teheran-ro, Gangnam-gu, Seoul, Korea 06194
Global Operations Part / Fax: 82-505-181-1023 / Tel: 82-2-3011-5825 / www.idbins.com

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That I, Chang Soo Lee, Executive Vice President of DB Insurance Co., Ltd., a corporation duly organized and existing under and by virtue of the laws of the Republic of Korea, having its principal office at the address of DB Financial Center, 432, Teheran-ro, Gangnam-Gu, Seoul, the Republic of Korea, does hereby nominate, constitute and appoint Yun Jo Choi, Branch Manager of the Company's Guam Branch at 233 Julale Center, 424 West O'Brien Drive, Hagatna, Guam 96910, my true and lawful attorney-in-fact to make, execute, seal and deliver any and all bonds, undertakings, contracts and other writings of suretyship for the Company and in my behalf.

IN WITNESS WHEREOF, DB Insurance Co., Ltd. has caused these presents to be signed by me and the Corporate Secretary, and to be affixed of its corporate seal thereunto on this 1st day of January, 2021.

DB INSURANCE CO., LTD.

C. S. Lee

Chang Soo Lee, Executive Vice President

Chang Sik Oh

Chang Sik Oh, Secretary

공증인가 동방종합법무법인

Registered No. 2021-160

NOTARIAL CERTIFICATE

DONG BANG LAW & NOTARY OFFICE INC.
187, Toegye-ro, Jung-gu, Seoul, Korea



[제42호 서식]

공증인가 동방종합법무법인

(영문사서본인용지)

등부 2021년 제 159호

Registered No. 2021 - 159

인 증

NOTARIAL CERTIFICATE

위

위임장

에

Chang Sik Oh

기제된

오 창 식

은

personally appeared before me and admitted his(her) subscription to the attached

본 공증인의 면전에서 위 사서증서에 자기가 기명날인 한 것임을 자인하였다.

POWER OF ATTORNEY

2021년 1월 21일

This is hereby attested on this 21st day of Jan. 2021 at this office.

이 사무소에서 위 인증한다.

서울중앙지방법검찰청소속
공증인가 동방종합법무법인
서울특별시 중구 퇴계로 187, 3층
(필동1가, 국제빌딩)

BELONG TO SEOUL CENTRAL DISTRICT PROSECUTORS' OFFICE
DONG BANG LAW & NOTARY OFFICE INC.
3F.187, Toegye-ro, Jung-gu, Seoul, Korea

공증담당

변호사

Lee Sik Chai

Attorney at law(Rep.) Chai. Lee Sik

This office has been authorized by the Minister of Justice, the Republic of Korea, to act as Notary Public since Apr. 26, 1984, under Law No.5

등부 2021 년 제 159 호

Registered No. 2021 - 159

인 증

NOTARIAL CERTIFICATE

위 위임장 에
기재된

Tae Yong Kim
attorney - in fact of

디비손해보험(주)
대표이사 김정남

Jeong Nam Kim
President & CEO
DB INSURANCE CO., Ltd

의

appeared

대리인 김태용 은
본 공증인의 면전에서 위 본인이
기명날인 한 것임을 자인하였다.

before me and admitted said
principal's subscription to the
attached

POWER OF ATTORNEY



This is hereby attested on
this 21st day of Jan.

2021년 1월 21일

이 사무소에서 위 인증한다.

2021 at this office.

서울지방검찰청소속

BELONG TO SEOUL CENTRAL DISTRICT PROSECUTORS' OFFICE

공증인가 동방종합법무법인

DONG BANG LAW & NOTARY OFFICE INC.

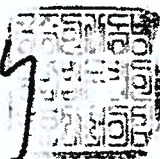
서울특별시 중구 퇴계로 187

187, Toegye-ro, Jung-gu, Seoul, Korea

공증담당

변호사

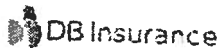
채 이 식



Chai Lee Sik

Attorney at law(Rep.) **Chai. Lee Sik**

This office has been authorized by the Minister of Justice,
the Republic of Korea, to act as Notary Public since
Apr. 26. 1984. under Law No. 5



DB Financial Center 432 Teheran-ro Gangnam-gu Seoul Korea 06194
Global Operations Part / Fax: 82-505-131-1223 / Tel: 82-2-3011-5825 / www.idbins.com

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That I, Jeong Nam Kim, President & CEO of DB Insurance Co., Ltd., a corporation duly organized and existing under and by virtue of the laws of the Republic of Korea, having its principal office at the address of DB Financial Center, 432, Teheran-ro, Gangnam-Gu, Seoul, the Republic of Korea, does hereby nominate, constitute and appoint Yon Jo Choi, Branch Manager of the Company's Guam Branch at 233 Julale Center, 424 West O'Brien Drive, Hagatna, Guam 96910, my true and lawful attorney-in-fact to make, execute, seal and deliver any and all bonds, undertakings, contracts and other writings of suretyship for the Company and in my behalf.

IN WITNESS WHEREOF, DB Insurance Co., Ltd. has caused these presents to be signed by me and the Corporate Secretary, and to be affixed of its corporate seal thereunto on this 1st day of January, 2021.

DB INSURANCE CO., LTD.

Jeong Nam Kim, President & CEO

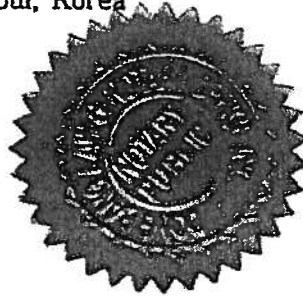
Chang Sik Oh, Secretary

공증인가 동방종합법무법인

Registered No. 2021 - 159

NOTARIAL CERTIFICATE

DONG BANG LAW & NOTARY OFFICE INC.
187, Toegye-ro, Jung-gu, Seoul, Korea



[제12호 서식]

공증인가 동방종합법무법인

(영문사서본인용지)

등부 2021 년 제 98 호

Registered No. 2021 - 98

인 증

NOTARIAL CERTIFICATE

위

위임장
에

Chang Sik Oh,
Chang Soo Lee

기제된

오창식, 이창수

personally appeared before
me and admitted his(her)
subscription to the attached

은

본 공증인의 면전에서 위 사서증서에
자기가 기명날인 한 것임을 자인하였다.

POWER OF ATTORNEY

2021년 1월 15일

This is hereby attested on
this 15th day of Jan.
2021 at this office.

이 사무소에서 위 인증한다.

서울중앙지방법검찰청소속

BELONG TO SEOUL CENTRAL DISTRICT PROSECUTOR'S OFFICE

공증인가 동방종합법무법인

DONG BANG LAW & NOTARY OFFICE INC.

서울특별시 중구 퇴계로 187, 3층
(필동1가, 국제빌딩)

3F, 187, Toegye-ro, Jung-gu, Seoul, Korea

공증담당

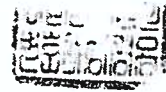
변호사

Chung, Kyung Yong
Chung, Kyung Yong

Attorney at law(Rep.) Chung, Kyung Yong

This office has been authorized by the Minister of Justice,
the Republic of Korea, to act as Notary Public since
Apr. 26, 1984, under Law No.5

POWER OF ATTORNEY



KNOW ALL MEN BY THESE PRESENTS:

That DB Insurance Co., Ltd., a corporation duly organized and existing under and by virtue of the laws of the Republic of Korea, and having its principal office at the address of DB Financial Center, 432, Teheran-ro, Gangnam-Gu, Seoul, the Republic of Korea, does hereby nominate, constitute and appoint Moylan's Insurance Underwriters, Inc., a corporation organized and existing under and by virtue of the laws of the Territory of Guam, having its principal office at the address of 102 Julale Center, 424 West O'Brien Drive, Hagatna, Guam, its true and lawful attorney-in-fact to make, execute, seal and deliver any and all bond, undertakings, contracts and other writings of suretyship for it and on its behalf.

IN WITNESS WHEREOF, DB Insurance Co., Ltd. has caused these presents to be signed by its appropriate officers, and to be affixed of its corporate seal thereunto, on this 1st day of Jan., 2021

DB INSURANCE CO., LTD.

C. S. Lee

Chang Soo Lee, Executive Vice President

Chang Sik Oh

Chang Sik Oh, Secretary

**GOVERNMENT OF GUAM
DEPARTMENT OF REVENUE AND TAXATION
OFFICE OF THE BANKING AND INSURANCE COMMISSIONER
CERTIFICATE OF AUTHORITY**

RENEWAL COA218

Know All Men By These Presents That:

Name DB INSURANCE CO., LTD.

Address 891-10, DAECHEI-DONG,
SEOUL, KOREA, KO

KANGNAM-GU

**Classes of Insurance
Authorized**

Accident & Health
Fidelity & Surety
Fire
Marine
Miscellaneous

Motor Vehicle
Prop. Damage & Liability
Workmens Comp
Reinsurance P & C

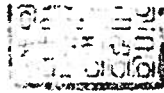
*Having complied with the Insurance Law of Guam, is hereby authorized to transact as an insurer, the above named
Classes of Insurance in Guam from the 1st day of July, 2021 to the 1st day of July, 2022
unless authority is revoked for failure to comply with the law.*

General Agent(s):

MOYLAN'S INSURANCE UNDERWRITERS INC

*In Witness Whereof, I have hereunto subscribed my
name officially and have hereon impressed my Seal of
Office at the City of Hagatña, Guam on this
1st day of July, 2021*

Michelle B. Santos
MICHELE B. SANTOS
Banking & Insurance Commissioner



공증인가 동방종합법무법인

Registered No. 2021 - 98

NOTARIAL CERTIFICATE

DONG BANG LAW & NOTARY OFFICE INC.
3F. 187.Toegye-ro, Jung-gu, Seoul, Korea



**ATTACHMENT D
BID SECURITY**

BOND NO. KIC-15695-B

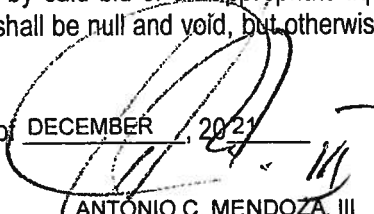
**BID BOND
NO. B21-17**

KNOW ALL MEN BY THESE PRESENTS that ANTONIO C. MENDOZA, III DBA: TONY'S WORKSHOP, as Principal, hereinafter called the "Principal", and (Bonding Company), DB INSURANCE CO., LTD., a duly admitted insurer under the laws of the Territory of Guam, as Surety, hereinafter called the "Surety", are held firmly bound unto the University of Guam for the sum of 15% OF TOTAL BID AMOUNT Dollars (\$ ^{15% OF TOTAL} _{BID AMOUNT}), for payment of which sum will and truly to be made, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

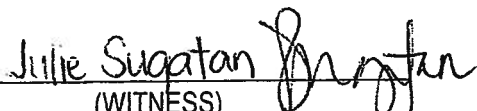
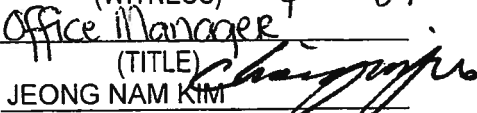
Whereas, the Principal has submitted a bid for (identify project by number and brief description) UOG BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT


NOW, THEREFORE, if the University of Guam shall accept the bid of the Principal, the Principal shall enter into a Contract with the University of Guam in accordance with the terms of such bid, and give such bond or bonds as may be specified in bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof. In the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the University of Guam the difference not to exceed the penalty hereof between the amounts specified in said bid and such larger amount for which the University of Guam may in good faith contract with another party to perform work covered by said bid or an appropriate liquidated amount as specified in the Invitation for Bid, then this obligation shall be null and void, but otherwise will remain in full force and effect.

Signed and sealed this 3RD day of DECEMBER, 2021


ANTONIO C. MENDOZA, III
DBA: TONY'S WORKSHOP

(PRINCIPAL) (SEAL)


(WITNESS)
Office Manager
(TITLE)

JEONG NAM KIM
(MAJOR OFFICER OF SURETY)
PRESIDENT & CEO
(TITLE)


CHANG SOO LEE
(MAJOR OFFICER OF SURETY)
EXECUTIVE VP

(TITLE)
MOYLAN'S INSURANCE UND., INC.
(RESIDENT GENERAL AGENT)


CAROLINA G. SERAFICA
SURETY DIVISION MANAGER

UOG BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT

ATTACHMENT C

BIDDER'S QUALIFICATIONS

To be submitted in accordance with the provisions set forth in the INSTRUCTIONS TO BIDDERS contained in the bidding documents for the project.

The undersigned Bidder makes the following representations relating to its proposal to the UNIVERSITY OF GUAM.

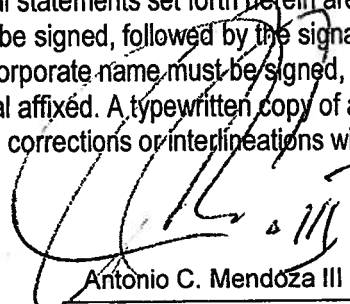
The word "it", used herein by way of reference to the undersigned, shall be deemed to mean "he or she" if the Bidder is an individual and "they" if the Bidder is a partnership

1. It maintains a permanent place of business at
Harmon, Guam

2. STANDARD FOR DETERMINATION OF QUALIFIED BIDDER: In order to qualify as responsible, a prospective bidder must meet the following standards as they relate to the particular procurement under consideration:

- (a) Has adequate financial resources for performance, or has the ability to obtain such resources as required during performance.
- (b) Has the necessary experience, organization, technical qualifications, skills, and facilities, or has the ability to obtain them.
- (c) Is able to comply with the proposed or required performance schedule.
- (d) Has a satisfactory record of integrity, judgment, and performance.
- (e) Must be able to conform to the requirements of the Equal Employment Opportunity Act.

3. It hereby represents and warrants that all statements set forth herein are true and correct. (If the Bidder is a partnership, the partnership name must be signed, followed by the signature of at least one of the partners. If the Bidder is a corporation, the corporate name must be signed, followed by the signature of a duly authorized officer and the corporate seal affixed. A typewritten copy of all such names and signatures shall be appended. No alterations, erasures, corrections or interlineations will be permitted).


Antonio C. Mendóza III

NAME OF BIDDER

9. INQUIRIES: All inquiries or questions and concerns must be submitted to the President of the University of Guam in writing through the procurement office at uog.bids@triton.uog.edu. Oral communications will not be considered.

ATTACHMENT B

SPECIAL GENERAL PROVISIONS

1. **GENERAL INTENTION:** It is the declared and acknowledged intention and meaning of this Special General Provision for the Bidder to provide the University of Guam with materials, supplies, or equipment completely assembled, and ready for use.
2. **COMPETENCY OF BIDDERS:** Bids will be considered only from such bidders who, in the opinion of the University, can show evidence of their ability, experience, and facilities to render satisfactory service.
3. **CONTACT FOR CONTRACT ADMINISTRATION:** If your firm receives a contract as a result of this invitation, please designate a person whom we may contact for prompt administration.

NAME: Michael S.J. Ecalnea TITLE: Project Engineer

NAME OF COMPANY: Tony's Workshop ADDRESS: PO Box 23066 GMF Barrigada, Guam 96921

TEL: (671) 637-3060 FAX: (671) 637-3139 E-Mail Address: mike@tonysworkshop.com
tonysworkshop@teleguam.net

4. **INSPECTION:** All supplies, materials, or equipment delivered under this contract shall be subject to the inspection and test conducted by the University at destination. If, in any case, the supplies, materials, or equipment are found to be defective in material, workmanship, performance or otherwise does not conform to the specifications, the University shall have the right to reject the items or require that they be corrected. The number of days required for correction will be determined by the University of Guam.

6. **BID ELECTRONIC FILE:** Bid file shall be marked with the bidder's name, bid invitation number, and bid title.

NOTE: UNDER NO CIRCUMSTANCES WILL LATE BIDS BE ACCEPTED BY THIS OFFICE.

7. **RECEIPT, OPENING AND RECORDING OF BIDS:** Bids and modifications shall be publicly opened in the presence of one or more witnesses, at the time, date, and place designated in the Invitation for Bid. The name of each bidder, the bid price, and such other information as is deemed appropriate by the Procurement Officer, shall be read aloud and recorded, or otherwise made available. The names and addresses of required witnesses shall be recorded at the opening. The opened bids shall be available for public inspection except to the extent the bidder designates trade secrets or other proprietary data to be confidential as set forth in accordance with Section 8, below. Materials so designated shall accompany the bid and shall be readily separable from the bid in order to facilitate public inspection of the non-confidential portion of the bid. Prices, makes and models or catalogue numbers of the items offered, deliveries, and terms of payment shall be publicly available at the time of bid opening regardless of any designation to the contrary.

8. **CONFIDENTIAL DATA:** The Procurement Officer shall examine the bids to determine the validity of any requests for nondisclosure of trade secrets and other proprietary data identified in writing. If the parties do not agree as to the disclosure of data, the Procurement Officer shall inform the bidders in writing what portions of the bid will be disclosed and that, unless the bidders protest under Chapter 9 of UOG Procurement Regulations, the bids will be so disclosed. The bids shall be opened to public inspection subject to any continuing prohibition on the disclosure of confidential data.

CONTRACTOR'S LICENSE

JOSH TENORIO
Lt. Governor of Guam

LOU LEON GUERRERO
Governor of Guam

Pursuant to the provisions of Chapter VII Title XI of the Government of Guam and the Rules and Regulations of the Contractors License Board, the Executive Director of Contractors hereby issues this license to:

Antonio C. Mendoza III

dba: Tony's Workshop

To engage in the business or act in the capacity of a contractor in the following classifications

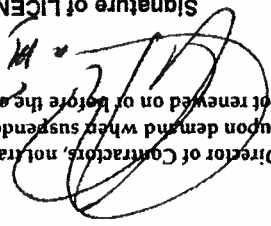
A,B,C40 & C51

This license is the property of the Executive Director of Contractors, not transferable, and shall be returned to the Executive Director upon demand when suspended, revoked, or invalidated for any reason. It becomes void if not renewed on or before the expiration date.

Signature of RME



Signature of LICENSEE



License # 6632


Certificate # C-0621-0440

Expires: June 30, 2022

GRT # 941288

Issued: June 11, 2021

JAMES M. CASALLO
CLB BOARD CHAIRMAN



CECIL "BUDDY" L. ORSINI
EXECUTIVE DIRECTOR



2022

CONTRACTOR'S LICENSE

LOU LEON GUERRERO
Governor of Guam

JOSH TENORIO
Lt. Governor of Guam

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Antonio C. Mendoza III
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Signature of RME
RME #

Signature of LICENSEE
License # 6632

GRT # 941288

Certificate # C-0621-0440

Issued: June 11, 2021

Expires: June 30, 2022

JAMES M. CASALLO
CLB BOARD CHAIRMAN

CECIL "BUDDY" L. ORSINI
EXECUTIVE DIRECTOR



2022



SUBMITTAL

Project

HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

Date

Wednesday, December 1, 2021

Project Number

HA-1702-21-11

Contractor

UNIVERSITY OF GUAM - PROCUREMENT OFFICE

BERNARD LLARENAS
CARRIER GUAM INC.

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RFK BUILDING SECOND FLOOR 112221

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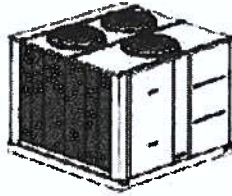
RFK BUILDING SECOND FLOOR 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For RFK BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38APD
 Unit Size:.....50 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 No. of Circuits:.....Two Circuits

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....23, 50, 73, 100
 Std. Min. Outdoor Temp(Cooling):.....25.0 °F
 No. of Outdoor fans:.....3

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 8.1"
 Unit Width:.....7' 4.2"
 Unit Height:.....6' 1.0"
 Unit Operating Weight:.....2120 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD05056-3009J	Base Unit	1
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
33CS2PP2S-03	Thermostat for Outdoor Unit	1
30GT-911---062	Navigator for Outdoor Unit	1

Performance Summary For RFK BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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System: **38APD050**
No. of Stages: **Dual Stage**
System Quantity: **1**
Altitude: **600.0** ft
EER @ ARI Conditions: **11.1**
EER @ Ambient Conditions: **10.2**
IPLV: **14.9**
Capacity Split Percentage (A ckt/B ckt): **48/52** %
Suction Line Loss: **2.0** °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
26 - 50	5/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
51 - 75	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
76 - 100	7/8 (A), 7/8 (B)	1 5/8 (A), 2 1/8 (B)
101 - 125	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
126 - 150	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
151 - 175	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
176 - 200	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 7/8 (B)
51 - 75	7/8 (A), 7/8 (B)
76 - 100	7/8 (A), 7/8 (B)
101 - 125	7/8 (A), 7/8 (B)
126 - 150	7/8 (A), 7/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 3/8 (A), 1 3/8 (B)
26 - 50	1 5/8 (A), 1 5/8 (B)
51 - 75	1 5/8 (A), 1 5/8 (B)
76 - 100	1 5/8 (A), 2 1/8 (B)
101 - 125	2 1/8 (A), 2 1/8 (B)
126 - 150	2 1/8 (A), 2 1/8 (B)
151 - 175	2 1/8 (A), 2 1/8 (B)
176 - 200	2 1/8 (A), 2 1/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity: **1**
PartNumber: **38APD05056-3009J**
Unit Model: **38APD**
Unit Size: **50 Tons**
Voltage: **208-3-60** V-Ph-Hz
Total Clg Cap.(Gross): **576.8** MBH

Performance Summary For RFK BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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SDT:.....127.9 °F
 SDT2:.....131.2 °F
 SCT:.....127.8 °F
 SCT2:.....131.1 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....231.4 Amps
 Unit MOCP:.....250.0 Amps
 Compressor Power:.....52.30 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....254 V
 Compressor RLA:.....48.1/51.3
 Compressor LRA:.....245/300
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Fan Motors Qty:.....3
 Fan Motor FLA:.....NA Amps
 Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Thermostat for Outdoor Unit	1
Navigator for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:.....96.7 dbA

Acoustic Notes:

1. The acoustic center of the unit is located at the geometric center of the unit.
2. All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

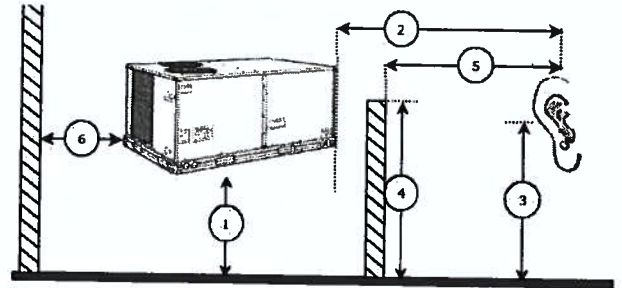
Performance Summary For RFK BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	0
Sound Power Levels at Unit's Acoustic Center (L _w), dB	78	98	95	94	95	92	88	85	82	10
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	39	72	79	86	91	92	90	86	81	9
Sound Press. Levels at Dist. Specified above (L _p), dB	53	73	70	69	69	66	63	60	57	7
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	14	47	54	61	66	66	64	61	56	7

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

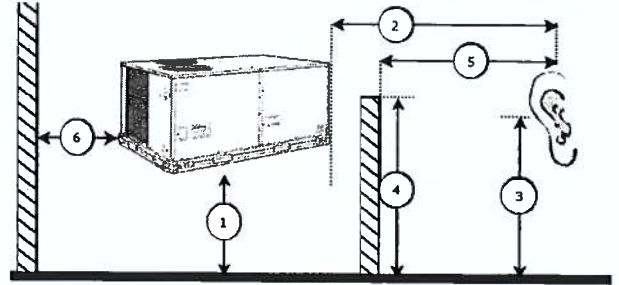
Acoustic Summary For RFK BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

Outdoor Unit Parameters:

Tag Name:RFK BUILDING SECOND FLOOR 112221
 Unit Model:.....38APD
 Unit Size:.....50 Tons
 System Type:.....Dx Cooling Only
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Compressor Type:.....Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal distance from obstruction to receiver:.....0.0 ft
- 6. Horizontal distance from unit to obstruction:.....0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	78	98	95	94	95	92	88	85	82	103
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	39	72	79	86	91	92	90	86	81	97
Sound Press. Levels at Dist. Specified above (Lp), dB	53	73	70	69	69	66	63	60	57	78
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	14	47	54	61	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for RFK BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021
02:16PM

NOTES:

- BE SURE TO USE A WET BAG AND REMOVE ALL VALVE COVERS BEFORE BRASSING FIELD PIPING.
- DO NOT CAP OR OTHERWISE OBSTRUCT THE LIQUID LINE TEMPERATURE RELIEF.
- Ø 3/16 (22.4) PILOT HOLE PROVIDED FOR LOCATING FIELD POWER BRASSING. ACTUAL HOLE DIMENSION DEPENDS ON FIELD WIRE SIZING.
- Ø 8.437 (11.18) HOLE USED FOR MOUNTING UNIT.
- UNIT MUST HAVE CLEARANCES AS FOLLOWS:
 TOP - 60 (1524) MIN RESTRICT.
 COIL SIDE - 48 (1219) FROM SOLID SURFACE.
 PANEL SIDE - 48 (1219) PER REC.
- SEE TABLE COLUMN B: DIMENSION FOR STANDARD AND LOW SOUND WITH STACK FAN OPTION.
- CARRIER DOES NOT RECOMMEND INSTALLATION IN A PIT.
- UNIT CAN BE HANDLED USING THE FORK TRUCK LIFT POCKETS.
- DIMENSIONS SHOWN IN INCHES (MM).
- STEELS 840 AND 850 UNITS HAVE 3 CONDENSER FANS. SIZE 850 UNITS HAVE 4 CONDENSER FANS.
- HEIGHT DOES NOT INCLUDE REFRIGERANT CHARGE.
- FOR BRASS PIPING, REFER TO "CIRCUIT A LIQUID CONNECTION" AND "CIRCUIT A SUCTION CONNECTION" DIMENSIONS SHOWN.

DETAIL A

FRONT VIEW (SINGLE CIRCUIT)

FRONT VIEW (DUAL CIRCUIT)

RIGHT SIDE VIEW

REAR VIEW

UNIT	STD. UNIT WT.		CENTER OF GRAVITY		DRY WEIGHT	SERVICE VALVE CONNECTIONS	
	LBS.	KG.	X	Y		SUCTION	LIQUID
38AP1000	1960	893	35.0 (889)	44.0 (1118)		2-1/2 (54)	7/8 (22)
38AP1000	2290	1039	33.7 (858)	44.1 (1120)		1-5/8 (41)	3/8 (19)
38AP1000	1971	897	34.0 (865)	44.0 (1118)	70.0 (1754)	2-1/2 (54)	7/8 (22)
38AP1050	2120	961	33.4 (848)	44.0 (1118)		1-5/8 (41)	3/8 (19)
38AP1050	2227	1010	34.4 (874)	44.1 (1120)		1-5/8 (41)	3/8 (19)
38AP1050	2057	937	33.0 (843)	44.0 (1118)		2-1/2 (54)	7/8 (22)
38AP1050	2140	974	33.7 (858)	44.0 (1118)		1-5/8 (41)	3/8 (19)
38AP1050	2031	921	34.0 (865)	44.0 (1118)	70.5 (1764)	2-1/2 (54)	7/8 (22)
38AP1050	2174	988	33.4 (848)	44.1 (1120)		1-5/8 (41)	3/8 (19)
38AP1050	2291	1043	34.4 (874)	44.1 (1120)		1-5/8 (41)	3/8 (19)

DATE: 04/09/12

SUPERVISOR: F

38AP1040-060 UNIT ASSY

REV: G

Guide Specification for RFK BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38APD05056-3009J

HVAC Guide Specifications

Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 050

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001:2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association).
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.

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B. Control box access panels shall be hinged for service access.

2.03. Fans:

- A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.
- B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
- C. Shafts shall have inherent corrosion resistance.
- D. Fan blades shall be statically and dynamically balanced.
- E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

- A. Compressors shall be rotary scroll.
- B. Operating oil charge and a crankcase heater control oil dilution.
- C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.
- D. Staging of compressors shall provide unloading capability.
- E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

- A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.
- B. Tubes shall be cleaned, dehydrated, and sealed.
- C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.
- B. Standard line length (0-100 ft)
- C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).
- D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

- A. Unit ComfortLink controls shall include:
 - 1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.
 - 2. Carrier Comfort Network® (CCN) system capability.
 - 3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.
 - 4. Current alarm list and alarm history list on display.
 - 5. Automatic compressor lead/lag control.
 - 6. Service run test capability.
 - 7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).
 - 8. Service diagnostic mode.
 - 9. Self-contained low voltage control circuit.
 - 10. Cycle condenser fans to maintain proper head pressure control.
 - 11. Capacity control with staging compressors.

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12. Alarm relay output to indicate when unit is in alarm condition.

B. Minimum unit safety devices shall include:

1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed ___ Btuh (___ kW) at a suction temperature of ___ F (___ C). The power consumption at full load shall not exceed ___ Btuh (___ kW).
- B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ___ Btuh (___ kW) or greater at conditions of ___ cfm (___ L/s) entering-air temperature at the evaporator at ___ F (___ C) wet bulb and ___ F (___ C) dry bulb, and air entering the condensing unit at ___ F (___ C).
- C. The system shall have an Energy Efficiency Ratio (EER) of ___ Btuh/watt or greater at standard AHRI conditions.

2.09. Electrical Requirements:

- A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.

2.10. Special Features:

A. Optional E-coated copper-fin coils:

1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.

B. Navigator™ Hand Held Display:

1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.
7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
8. Navigator module shall have raised surface buttons with positive tactile response.
9. Navigator module shall be available as field-installed accessory for all units.

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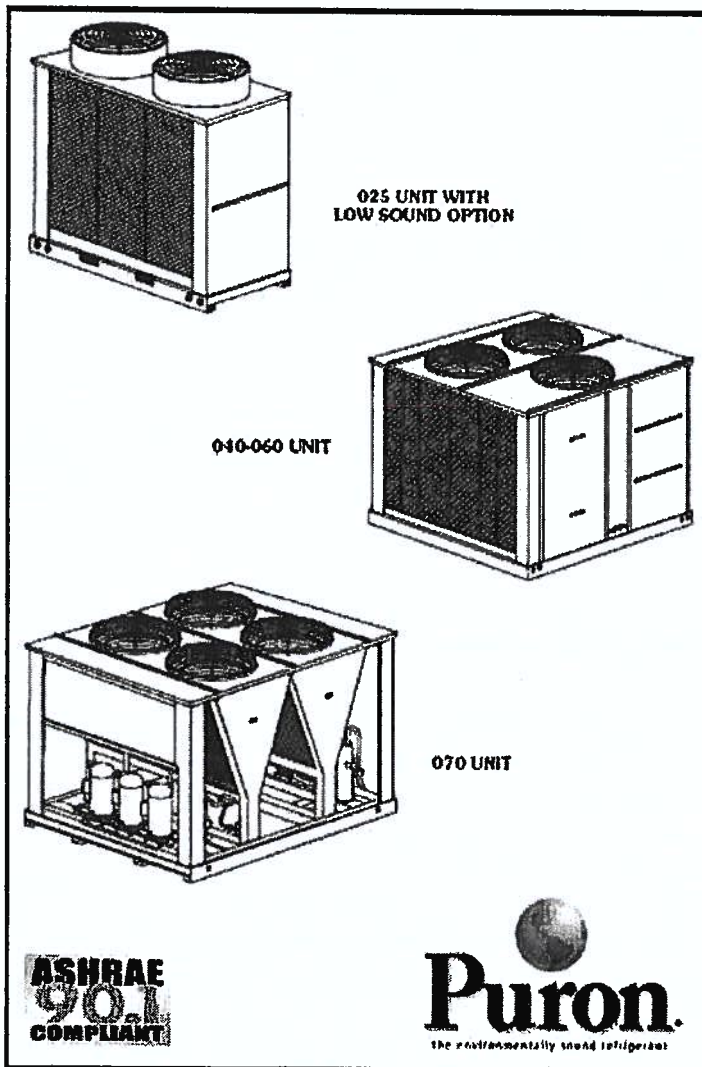
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- C. BACnet Communication Option:
 - 1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.
- D. Energy Management Module (EMM):
 - 1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.



Gemini Select

These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

RFK BUILDING FIRST FLOOR 112221

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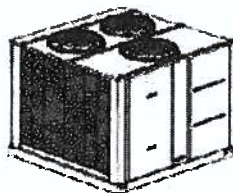
RFK BUILDING FIRST FLOOR 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For RFK BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Outdoor Unit Parameters

Unit Quantity:..... 1
 Unit Model:..... 38APD
 Unit Size:..... 40 Tons
 Voltage:..... 208-3-60 V-Ph-Hz
 No. of Circuits:..... Two Circuits

System Parameter

System Quantity:..... 1
 Refrigerant Type:..... PURON
 Compressor Quantity:..... 2 (Circ A), 2 (Circ B)
 Compressor Type:..... Scroll
 Std. Capacity Steps:..... 23, 50, 73, 100
 Std. Min. Outdoor Temp(Cooling):..... 32.0 °F
 No. of Outdoor fans:..... 3

Outdoor Unit Dimensions and Weight

Unit Length:..... 7' 8.1"
 Unit Width:..... 7' 4.2"
 Unit Height:..... 6' 1.0"
 Unit Operating Weight:..... 2094 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD04056-3009J		1
	Base Unit	
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
30GT-911---062	Navigator for Outdoor Unit	1
33CS2PP2S-03	Thermostat for Outdoor Unit	1

Performance Summary For RFK BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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System: **38APD040**
No. of Stages: **Dual Stage**
System Quantity: **1**
Altitude: **600.0** ft
EER @ ARI Conditions: **11.5**
EER @ Ambient Conditions: **10.7**
IPLV: **15.3**
Capacity Split Percentage (A ckt/B ckt): **54/46** %
Suction Line Loss: **2.0** °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 1/8 (A), 1 1/8 (B)
26 - 50	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
51 - 75	5/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
76 - 100	7/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
101 - 125	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
126 - 150	7/8 (A), 7/8 (B)	2 1/8 (A), 1 5/8 (B)
151 - 175	7/8 (A), 7/8 (B)	2 1/8 (A), 1 5/8 (B)
176 - 200	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 5/8 (B)
51 - 75	5/8 (A), 5/8 (B)
76 - 100	7/8 (A), 5/8 (B)
101 - 125	7/8 (A), 7/8 (B)
126 - 150	7/8 (A), 7/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 1/8 (A), 1 1/8 (B)
26 - 50	1 3/8 (A), 1 3/8 (B)
51 - 75	1 5/8 (A), 1 5/8 (B)
76 - 100	1 5/8 (A), 1 5/8 (B)
101 - 125	1 5/8 (A), 1 5/8 (B)
126 - 150	2 1/8 (A), 1 5/8 (B)
151 - 175	2 1/8 (A), 1 5/8 (B)
176 - 200	2 1/8 (A), 2 1/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity: **1**
Part Number: **38APD04056-3009J**
Unit Model: **38APD**
Unit Size: **40 Tons**
Voltage: **208-3-60** V-Ph-Hz
Total Clg Cap.(Gross): **457.4** MBH

Performance Summary For RFK BUILDING FIRST FLOOR 112221

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SDT:.....124.3 °F
 SDT2:.....120.9 °F
 SCT:.....124.2 °F
 SCT2:.....120.8 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....167.2 Amps
 Unit MOCP:.....200.0 Amps
 Compressor Power:.....38.30 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....254 V
 Compressor RLA:.....35.8/33.4
 Compressor LRA:.....239/225
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Fan Motors Qty:.....3
 Fan Motor FLA:.....NA Amps
 Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Navigator for Outdoor Unit	1
Thermostat for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:.....96.5 dbA

Acoustic Notes:

1. The acoustic center of the unit is located at the geometric center of the unit.
2. All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

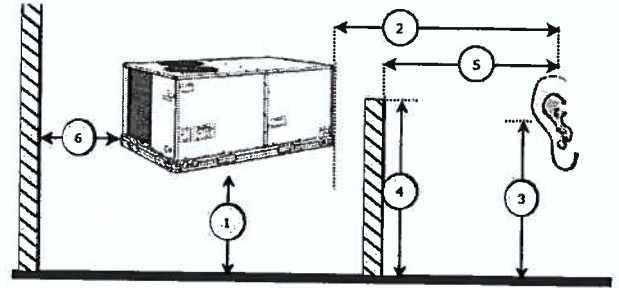
Performance Summary For RFK BUILDING FIRST FLOOR 112221

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Advanced Acoustics Parameters

- 1. Unit height above ground:..... 1.0 ft
- 2. Horizontal distance from unit to receiver:..... 20.0 ft
- 3. Receiver height above ground:..... 5.7 ft
- 4. Height of obstruction:..... 0.0 ft
- 5. Horizontal dist. from obstruction to receiver:..... 0.0 ft
- 6. Horizontal dist. from unit to obstruction:..... 0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	C
Sound Power Levels at Unit's Acoustic Center (L _w), dB	78	98	95	94	95	91	88	85	82	1
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	39	72	79	85	91	91	89	86	81	9
Sound Press. Levels at Dist. Specified above (L _p), dB	53	73	70	69	69	66	63	60	57	7
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	14	47	54	60	66	66	64	61	56	7

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

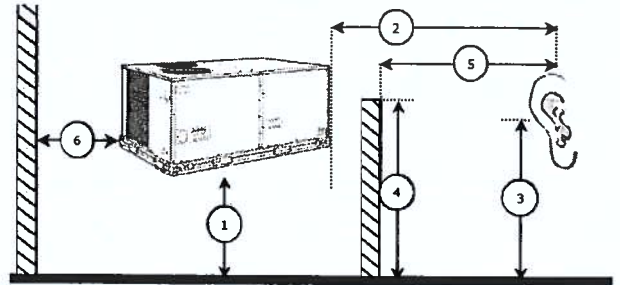
Acoustic Summary For RFK BUILDING FIRST FLOOR 112221

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Outdoor Unit Parameters:

Tag Name: RFK BUILDING FIRST FLOOR 112221
 Unit Model: 38APD
 Unit Size: 40 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 2 (Circ A), 2 (Circ B)
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (L _w), dB	78	98	95	94	95	91	88	85	82	101
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	39	72	79	85	91	91	89	86	81	97
Sound Press. Levels at Dist. Specified above (L _p), dB	53	73	70	69	69	66	63	60	57	77
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	14	47	54	60	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

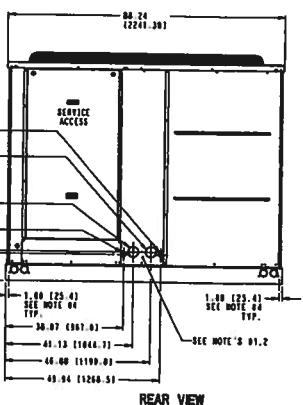
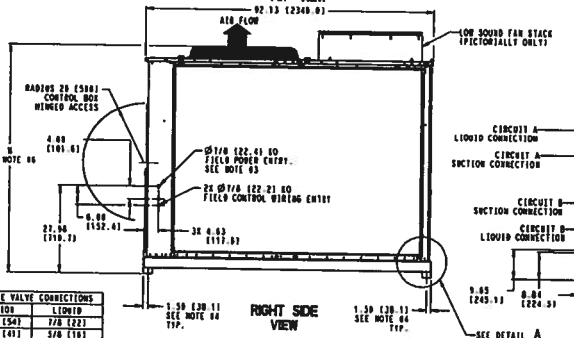
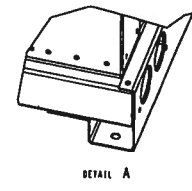
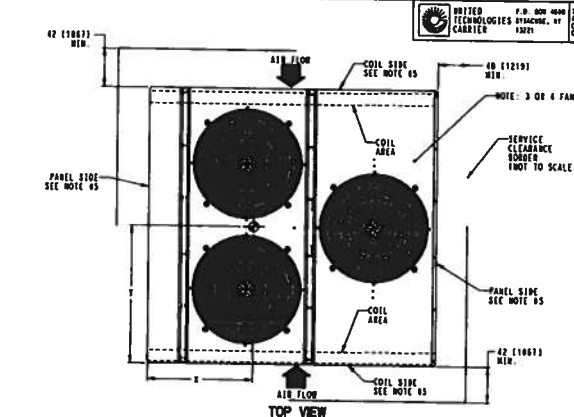
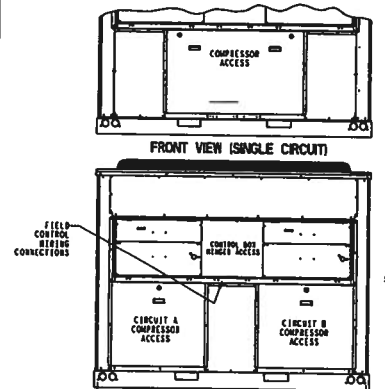
1. Estimated Sound Power levels - dB re: 1 picowatt
2. Estimated Sound Pressure levels - dB re: 20 micropascal
3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.
4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.
5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for RFK BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021
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- NOTES:**
1. BE SURE TO USE A NET BAG AND REMOVE ALL VALVE CORES BEFORE BRAZING FIELD PIPING.
 2. DO NOT CAP OR OTHERWISE OBSTRUCT THE LIQUID LINE TEMPERATURE RELIEF.
 3. Ø17/8 (22.4) PICOIT HOLE PROVIDED FOR LOCATING FIELD POWER WIRING. ACTUAL HOLE REQUIRED DEPENDS ON FIELD WIRE SIZING.
 4. Ø9.437 (11.140) HOLE USED FOR MOUNTING UNIT.
 5. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
 TOP - DO NOT RESTRICT
 COIL END - 48 (11219) FROM SOLID SURFACE.
 PANEL SIDE - 48 (11219) PER REC.
 6. SEE TABLE COLUMN B; DIMENSION FOR STANDARD AND LOW SOUND WITH STACK FAN OPTION.
 7. CARRIER DOES NOT RECOMMEND INSTALLATION IN A PIT.
 8. UNIT CAN BE HANDED USING THE FOUR TRUCK LIFT POCKETS.
 9. DIMENSIONS SHOWN IN INCHES/MM.
 10. SIZES 850 AND 850 UNITS HAVE 3 CONDENSER FANS. SIZE 650 UNITS HAVE 4 CONDENSER FANS.
 11. REFRIG. DOES NOT INCLUDE REFRIGERANT CHARGE.
 12. FOR BRAPS PIPING, REFER TO "CIRCUIT A LIQUID CONNECTION" AND "CIRCUIT A SUCTION CONNECTION" DIMENSIONS SHOWN.



UNIT	SER. UNIT WT.		CENTER OF GRAVITY		UNIT HEIGHT	SERVICE VALVE CONNECTIONS	
	LBS.	KG.	X	Y		SUCTION	LIQUID
38AP040	1940	883	35.0 (883)	44.0 (1118)	73.0 (1854)	2-1/2 (54)	3/8 (12.7)
38AP050	2091	953	35.2 (895)	44.1 (1120)	73.0 (1854)	2-1/2 (54)	3/8 (12.7)
38AP055	1971	891	34.0 (863)	44.0 (1118)	73.0 (1854)	2-1/2 (54)	3/8 (12.7)
38AP060	2129	967	33.4 (868)	44.1 (1120)	73.0 (1854)	2-1/2 (54)	3/8 (12.7)
38AP065	2227	1018	34.4 (878)	44.1 (1120)	73.0 (1854)	2-1/2 (54)	3/8 (12.7)
38AP070	2322	1057	35.0 (883)	44.0 (1118)	73.0 (1854)	2-1/2 (54)	3/8 (12.7)
38AP075	2140	974	33.7 (855)	44.0 (1118)	70.5 (1791)	2-1/2 (54)	3/8 (12.7)
38AP080	2031	921	34.0 (863)	44.0 (1118)	70.5 (1791)	2-1/2 (54)	3/8 (12.7)
38AP085	2171	986	33.4 (868)	44.1 (1120)	70.5 (1791)	2-1/2 (54)	3/8 (12.7)
38AP090	2299	1043	34.4 (878)	44.1 (1120)	70.5 (1791)	2-1/2 (54)	3/8 (12.7)

DATE	DRAWN	DESCRIPTION	UNIT ASSY	REV
04/09/12	F	38AP040-060 UNIT ASSY	38AP55556	G

Guide Specification for RFK BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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GUIDE SPECIFICATIONS – 38APD04056-3009J

HVAC Guide Specifications

Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 040

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001:2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association).
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.

Guide Specification for RFK BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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B. Control box access panels shall be hinged for service access.

2.03. Fans:

- A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.
- B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
- C. Shafts shall have inherent corrosion resistance.
- D. Fan blades shall be statically and dynamically balanced.
- E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

- A. Compressors shall be rotary scroll.
- B. Operating oil charge and a crankcase heater control oil dilution.
- C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.
- D. Staging of compressors shall provide unloading capability.
- E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

- A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.
- B. Tubes shall be cleaned, dehydrated, and sealed.
- C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.
- B. Standard line length (0-100 ft)
- C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).
- D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

A. Unit ComfortLink controls shall include:

- 1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.
- 2. Carrier Comfort Network® (CCN) system capability.
- 3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.
- 4. Current alarm list and alarm history list on display.
- 5. Automatic compressor lead/lag control.
- 6. Service run test capability.
- 7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).
- 8. Service diagnostic mode.
- 9. Self-contained low voltage control circuit.
- 10. Cycle condenser fans to maintain proper head pressure control.
- 11. Capacity control with staging compressors.

Guide Specification for RFK BUILDING FIRST FLOOR 112221

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12. Alarm relay output to indicate when unit is in alarm condition.

B. Minimum unit safety devices shall include:

1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed ___ Btuh (___ kW) at a suction temperature of ___ F (___ C). The power consumption at full load shall not exceed ___ Btuh (___ kW).
- B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ___ Btuh (___ kW) or greater at conditions of ___ cfm (___ L/s) entering-air temperature at the evaporator at ___ F (___ C) wet bulb and ___ F (___ C) dry bulb, and air entering the condensing unit at ___ F (___ C).
- C. The system shall have an Energy Efficiency Ratio (EER) of ___ Btuh/watt or greater at standard AHRI conditions.

2.09. Electrical Requirements:

- A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.

2.10. Special Features:

A. Optional E-coated copper-fin coils:

1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.

B. Navigator™ Hand Held Display:

1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.
7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
8. Navigator module shall have raised surface buttons with positive tactile response.
9. Navigator module shall be available as field-installed accessory for all units.

Guide Specification for RFK BUILDING FIRST FLOOR 112221

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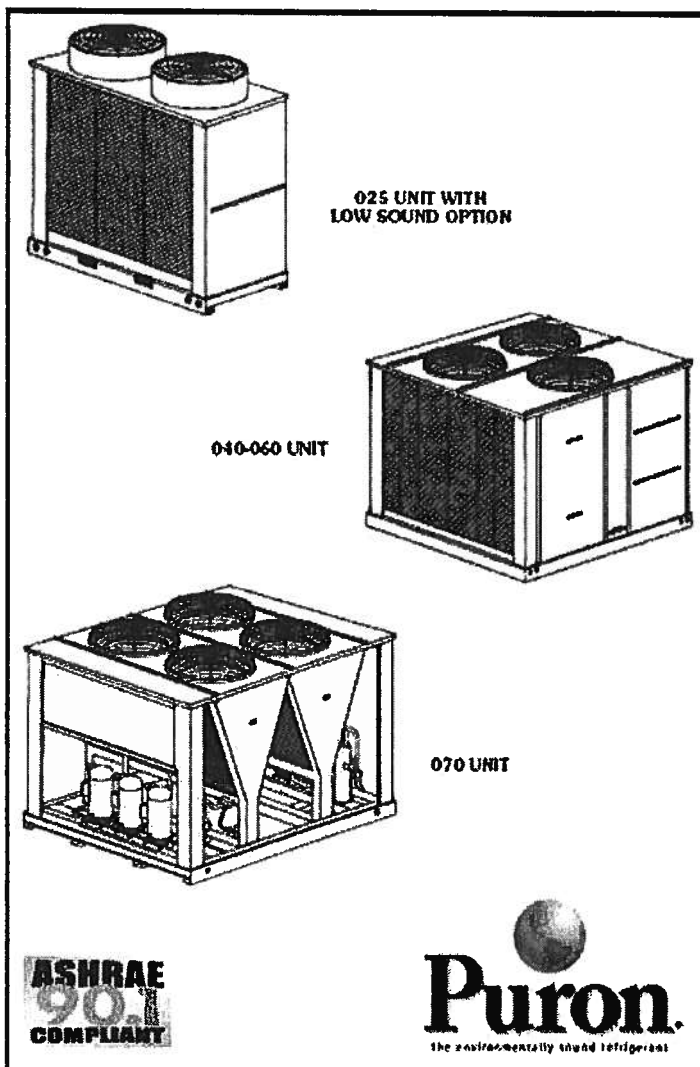
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- C. BACnet Communication Option:
 - 1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.
- D. Energy Management Module (EMM):
 - 1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.




Gemini Select

These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

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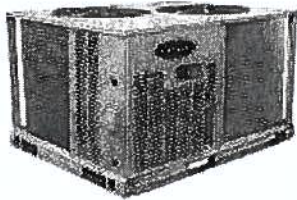
20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Outdoor Unit Parameters

Unit Quantity:..... 1
 Unit Model:..... 38AUD
 Unit Size:..... 15 Tons
 Voltage:..... 208-3-60 V-Ph-Hz
 Condenser Coil:..... Cu/Cu
 No. of Stages:..... Dual Stage

System Parameter

System Quantity:..... 1
 Refrigerant Type:..... PURON
 Compressor Quantity:..... 2
 Compressor Type:..... Scroll
 Std. Capacity Steps:..... 50, 100
 Std. Min. Outdoor Temp(Cooling):..... 35.0 °F
 No. of Outdoor fans:..... 3

Outdoor Unit Dimensions and Weight

Unit Length:..... 7' 2.4"
 Unit Width:..... 3' 7.4"
 Unit Height:..... 4' 2.4"
 Unit Shipping Weight:..... 731 lb
 Unit Operating Weight:..... 731 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38AUDA16A0E5-0A0A0		1
	Base Unit	
	Cu/Cu Condensing Coil	1
	Standard Refrigerant Options	1
	Service Options - None	1
	Electrical Options - None	1
	Packaging Options - Standard	1
	Standard Electrical Mechanical Controls	1
	Refrig Circ/Compressor Staging - Two Circuits/ Dual Stage	1
Accessories		
EF680035	Liquid Line Solenoid Valve for Outdoor Unit	2
EF680037	Liquid Line Solenoid Valve for Outdoor Unit	2

Unit Report For 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

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KM680004	Sight Glass for Outdoor Unit	2
33CS2PP2S-03	Thermostat for Outdoor Unit	1

The 38AUZ/AUD are furnished with filter drier which is factory provided (field installed). Additional filter driers can be purchased separately through RCD (Replacement Components Division). See the Product Library for Replacement Filter Drier Information for more information.

Performance Summary For 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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System:.....38AUD016
No. of Stages:.....Dual Stage
System Quantity:.....1
Altitude:.....600.0 ft
EER @ ARI Conditions:.....13.4
Suction Line Loss:.....1.4 °F

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	3/8	7/8
26 - 50	3/8	1 1/8
51 - 75	1/2	1 1/8
76 - 100	1/2	1 1/8
101 - 125	1/2	1 3/8
126 - 150	5/8	1 3/8
151 - 175	5/8	1 3/8
176 - 200	5/8	1 3/8

Refer to the 38AU installation instructions for installation specific line sizing guidance

Outdoor Unit Parameters

Unit Quantity:.....1
PartNumber:.....38AUDA16A0E5-0A0A0
Unit Model:.....38AUD
Unit Size:.....15 Tons
Condenser Coil:.....Cu/Cu
Voltage:.....208-3-60 V-Ph-Hz
Total Clg Cap.(Gross):.....183.9 MBH
SDT:.....116.5 °F
Clg Ent Air DB:.....95.0 °F
Saturated Suction Temp:.....45.0 °F

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
Unit MCA:.....60.8 Amps
Unit MOCB:.....80.0 Amps
Total Compressor Power of Unit:.....13.00 kW
Voltage Range Min:.....187 V
Voltage Range Max:.....253 V
Compressor RLA:.....25
Compressor LRA:.....164
Compressor Quantity:.....2
Fan Motors Qty:.....3
Fan Motor FLA:.....1.5 Amps

Notice: Outdoor unit elect. data is based on 208-3-60
Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

FIOPS and Accessories Information

FIOPS	Quantity
Accessories	Quantity
Liquid Line Solenoid Valve for Outdoor Unit	2
Liquid Line Solenoid Valve for Outdoor Unit	2
Sight Glass for Outdoor Unit	2

Performance Summary For 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

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Thermostat for Outdoor Unit	1
-----------------------------	---

A-Weighted	Outdoor Unit (dB)	Indoor Unit (dB,Ducted)
Total Level	82.6	NA
63Hz	60.5	NA
125Hz	65.1	NA
250Hz	70.3	NA
500Hz	77.2	NA
1000Hz	78.0	NA
2000Hz	75.4	NA
4000Hz	71.2	NA
8000Hz	63.9	NA
Sound Message	Sound for AUD016	

Acoustic Notes:

1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
2. The acoustic center of the unit is located at the geometric center of the unit.

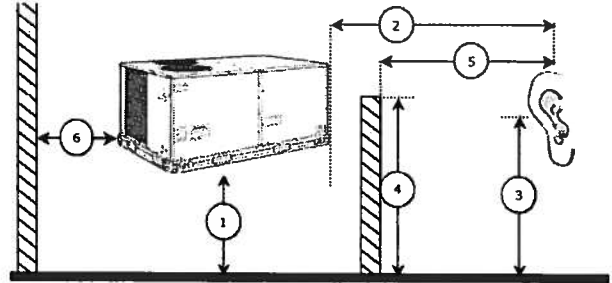
Performance Summary For 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

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Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (L _w), dB	87	81	79	80	78	74	70	65	89
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	61	65	70	77	78	75	71	64	83
Sound Press. Levels at Dist. Specified above (L _p), dB	62	57	55	56	54	50	46	41	65
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	36	41	46	53	54	51	47	40	58

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Summary For 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE

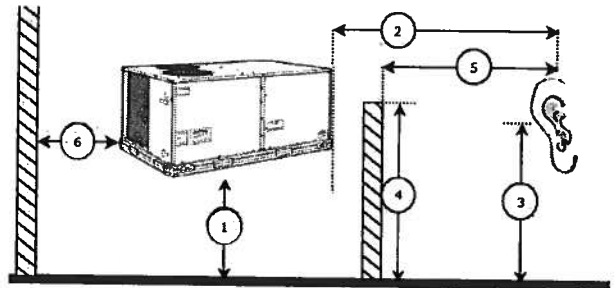
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Outdoor Unit Parameters:

Tag Name: **20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321**
 Unit Model: **38AUD**
 Unit Size: **15 Tons**
 System Type: **Dx Cooling Only**
 Refrigerant Type: **PURON**
 Compressor Quantity: **2**
 Compressor Type: **Scroll**



Advanced Acoustics Parameters

- 1. Unit height above ground: **1.0** ft
- 2. Horizontal distance from unit to receiver: **20.0** ft
- 3. Receiver height above ground: **5.7** ft
- 4. Height of obstruction: **0.0** ft
- 5. Horizontal distance from obstruction to receiver: **0.0** ft
- 6. Horizontal distance from unit to obstruction: **0.0** ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	87	81	79	80	78	74	70	65	89
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	61	65	70	77	78	75	71	64	83
Sound Press. Levels at Dist. Specified above (Lp), dB	62	57	55	56	54	50	46	41	65
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	36	41	46	53	54	51	47	40	58

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Acoustic Note:

- 1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
- 2. The acoustic center of the unit is located at the geometric center of the unit.
- 3. All estimated sound power levels, dB re 1 Picowatt should not be guaranteed or certified as being the actual sound power levels.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate

Acoustic Summary For 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE

112321

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an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021
02:16PM

UNIT	ELECTRICAL CHARACTERISTICS	SEV. UNIT #	CORNER A	CORNER B	CORNER C	CORNER D	CENTRE OF GRAVITY			UNIT HEIGHT			
	LESS 1" R/O	LESS 1" R/O	LESS 1" R/O	LESS 1" R/O	LESS 1" R/O	LESS 1" R/O	X	Y	Z				
38AU216 (RCHN1)	2487230-3-68-480-3-68-375-3-63	633	268	270	108	134	61	135	61.5	38 (2945.2)	16 (482.6)	15 (430.3)	58-378 (1778.2)
38AU216 (RCHN1)	2487230-3-68-480-3-68-375-3-63	633	268	270	108	134	61	135	61.5	38 (2945.2)	16 (482.6)	15 (430.3)	58-378 (1778.2)
38AU216 (RCHN1)	2487230-3-68-480-3-68-375-3-63	633	268	270	108	134	61	135	61.5	38 (2945.2)	16 (482.6)	15 (430.3)	58-378 (1778.2)
38AU216 (RCHN1)	2487230-3-68-480-3-68-375-3-63	633	268	270	108	134	61	135	61.5	38 (2945.2)	16 (482.6)	15 (430.3)	58-378 (1778.2)

LEFT SIDE VIEW FOR 38AUD SYSTEMS

TOP VIEW

NOTES

- MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
 - A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
 - B. OUTDOOR COIL, FOR PAPER AIR FLOW: 36 INCHES.
 - C. ONE SIDE: 12 INCHES; THE OTHER: THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
 - D. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
 - E. BETWEEN UNITS: CONTROL BOX SIDE: 42 INCHES PER REC. CONTROL BOX SIDE: 36 INCHES PER REC.
 - F. BETWEEN UNIT AND BLOC BY CONCRETE WALLS AND OTHER COMBUSTIBLE SURFACES: CONTROL BOX SIDE: 42 INCHES PER REC.
 - G. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL, AS STATED IN NOTE 10, A REMOVABLE PEECE OR BARRICADE REQUIRES NO CLEARANCE.
 - H. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS, WARE HOUSES, OR IN ATTACHED ROOF CEILING MATERIAL.

UNIT	SECTION	QUANTITY
38AU216	1-378 (34.9)	376 (15.9)
38AU216	1-378 (34.9)	172 (12.3)

CENTER OF GRAVITY
 DIRECTION OF AIR FLOW
 DIMENSIONS IN () ARE IN MM

LEFT SIDE VIEW

FRONT VIEW

**DETAIL A
(NOTE POSITION OF CXT 1)**

REV	DATE	DESCRIPTION	BY
11/17/10	08/04/10	38AUZ, 38AUD CONDENSING UNIT	F

Guide Specification for 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE

112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

02:16PM



GUIDE SPECIFICATIONS – 38AUDA16A0E5-0A0A0

Commercial Air-Cooled Condensing Units HVAC Guide Specifications

Size: 16

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

QUALITY ASSURANCE

- 1.01. Unit shall be rated in accordance with AHRI Standard 360.
- 1.02. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- 1.03. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.
- 1.04. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- 1.05. Air-cooled condenser coils for hermetic scroll compressor units (38AUZ) and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.
- 1.06. Unit shall be manufactured in a facility registered to ISO 9001:2000 manufacturing quality standard.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
 - B. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.
- 2.03. Condenser Fans:
 - A. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
 - B. Fan blades shall be balanced.
 - C. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
 - D. Condenser fan and motor shaft shall be corrosion resistant.
- 2.04. Compressor:

Guide Specification for 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE

112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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- A. Compressor shall be of the hermetic scroll type.
- B. Compressor shall be mounted on rubber grommets.
- C. Compressors shall include overload protection.
- D. Compressors shall be equipped with a crankcase heater.
- E. Compressor shall be equipped with internal high pressure and high temperature protection.
- F. 38AUZ*16 and 25 sizes shall use two scroll compressors manifold together.

2.05. Condenser Coils:

- A. Standard Aluminum fin - Copper Tube Coils:
 - 1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - 2. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
 - 3. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
- B. Optional Copper-fin evaporator and condenser coils:
 - 1. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - 2. Galvanized steel tube sheets shall not be acceptable.
 - 3. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

2.07. Controls and Safeties:

- A. Minimum control functions shall include:
 - 1. Control wire terminal blocks.
 - 2. Compressor lockout on auto-reset safety until reset from thermostat.
 - 3. Each unit shall utilize the Comfort Alert Diagnostic Board that provides:
 - a. System Pressure Trip fault code indication
 - b. Short Cycling fault code indication
 - c. Locked Rotor fault code indication
 - d. Open Circuit fault code indication
 - e. Reverse Phase 3 fault code indication
 - f. Welded Contactor fault code indication
 - g. Low Voltage fault code indication
 - h. Anti-short cycle protection
 - i. Phase reversal protection
- B. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
 - 1. High discharge pressure cutout.
 - 2. Low pressure cutout.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____ F. The power consumption at full load shall not exceed _____ kW.
- B. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____ F wet bulb and _____ F dry bulb, and air entering the condensing unit at _____ F.
- C. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
- D. Standard unit shall be capable to operate up to 125_F (52_C) and down to 40_F (4_C)

Guide Specification for 20RFK BUILDING FIRST FLOOR MAIN ENTRANCE

112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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2.09. Electrical Requirements:

- A. Nominal unit electrical characteristics shall be _____ v, 3-ph, 60 Hz. The unit shall be capable of satisfactory operation within voltage limits of _____ v to _____ v.
- B. Unit electrical power shall be single-point connection.
- C. Unit control circuit shall contain a 24-v transformer for unit control.

2.10. Special Features:

- A. Thermostat Controls:
 - 1. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
 - 2. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.

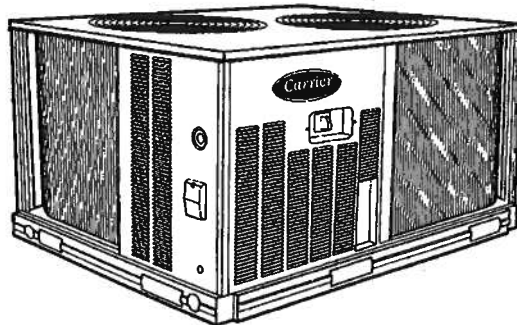
COMMERCIAL SPLIT SYSTEMS

38AUZ 6 to 20 Ton

38AUD 10 to 20 Ton

AIR-COOLED COOLING ONLY CONDENSING UNITS with PURON® REFRIGERANT

These light commercial air-cooled cooling only condensing units are easily connected by refrigerant lines and low voltage control wiring to matching Carrier packaged air-handling units or other suitable evaporator units. They are ideal for new construction or renovation applications where quality and performance are required.



Manufactured in facility registered to
ISO 9001:2008 quality standard

BASE UNIT STANDARD FEATURES:

- Puron® (R-410A) HFC refrigerant partial charge
- Single circuit units (38AUZ) are available in 1 or 2 stage cooling
- Two circuit units (38AUD) are available in 2 stage cooling
- All models utilize round tube plate fin coils.
- Standard one year parts warranty and five year compressor parts warranty. Extended 2-5 year parts and 1-5 labor coverage are available.
- Cooling operating range up to 125°F (52°C) and down to 35°F (2°C) as standard.
- Available Motomaster® I control for cooling operation down to -20°F (-29°C)
- Fully hermetic scroll compressor with crankcase heater
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement. 24-volt 75va control system
- High and low pressure switches.

- Comfort Alert™ Diagnostic Board:
 - LED Go-No-Go and fault code
 - Built in time guard anti-short cycle
 - Phase protection
 - Fault code retention logic
 - Low voltage compressor contactor protector
- UL and UL, Canada apply to standard units; 575-volt units UL, Canada only.
- Full perimeter base rails with built-in rigging adapters and fork truck slots
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Direct drive permanently lubricated condenser fan motors
- All units factory run tested
- Compressors mounted on independent vibration isolators

7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

02:16PM

7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38AUD
 Unit Size:.....15 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 Condenser Coil:.....Cu/Cu
 No. of Stages:.....Dual Stage

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....50, 100
 Std. Min. Outdoor Temp(Cooling):.....35.0 °F
 No. of Outdoor fans:.....3

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 2.4"
 Unit Width:.....3' 7.4"
 Unit Height:.....4' 2.4"
 Unit Shipping Weight:.....731 lb
 Unit Operating Weight:.....731 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38AUDA16A0E5-0A0A0		1
	Base Unit	
	Cu/Cu Condensing Coil	1
	Standard Refrigerant Options	1
	Service Options - None	1
	Electrical Options - None	1
	Packaging Options - Standard	1
	Standard Electrical Mechanical Controls	1
	Refrig Circ/Compressor Staging - Two Circuits/ Dual Stage	1
Accessories		
EF680035	Liquid Line Solenoid Valve for Outdoor Unit	2
EF680037	Liquid Line Solenoid Valve for Outdoor Unit	2

Unit Report For 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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KM680004	Sight Glass for Outdoor Unit	2
33CS2PP2S-03	Thermostat for Outdoor Unit	1

The 38AUZ/AUD are furnished with filter drier which is factory provided (field installed). Additional filter driers can be purchased separately through RCD (Replacement Components Division). See the Product Library for Replacement Filter Drier Information for more information.

Performance Summary For 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

System:..... 38AUD016
No. of Stages:..... Dual Stage
System Quantity:..... 1
Altitude:..... 600.0 ft
EER @ ARI Conditions:..... 13.4
Suction Line Loss:..... 1.4 °F

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	3/8	7/8
26 - 50	3/8	1 1/8
51 - 75	1/2	1 1/8
76 - 100	1/2	1 1/8
101 - 125	1/2	1 3/8
126 - 150	5/8	1 3/8
151 - 175	5/8	1 3/8
176 - 200	5/8	1 3/8

Refer to the 38AU installation instructions for installation specific line sizing guidance

Outdoor Unit Parameters

Unit Quantity:..... 1
PartNumber:..... 38AUDA16A0E5-0A0A0
Unit Model:..... 38AUD
Unit Size:..... 15 Tons
Condenser Coil:..... Cu/Cu
Voltage:..... 208-3-60 V-Ph-Hz
Total Clg Cap.(Gross):..... 183.9 MBH
SDT:..... 116.5 °F
Clg Ent Air DB:..... 95.0 °F
Saturated Suction Temp:..... 45.0 °F

Outdoor Electrical Data

Unit Voltage:..... 208-3-60 V-Ph-Hz
Unit MCA:..... 60.8 Amps
Unit MOCP:..... 80.0 Amps
Total Compressor Power of Unit:..... 13.00 kW
Voltage Range Min:..... 187 V
Voltage Range Max:..... 253 V
Compressor RLA:..... 25
Compressor LRA:..... 164
Compressor Quantity:..... 2
Fan Motors Qty:..... 3
Fan Motor FLA:..... 1.5 Amps

Notice: Outdoor unit elect. data is based on 208-3-60
 Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

FIOPS and Accessories Information

FIOPS	Quantity
Accessories	
Liquid Line Solenoid Valve for Outdoor Unit	2
Liquid Line Solenoid Valve for Outdoor Unit	2
Sight Glass for Outdoor Unit	2
Thermostat for Outdoor Unit	1

Performance Summary For 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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A-Weighted	Outdoor Unit (dB)	Indoor Unit (dB,Ducted)
Total Level	82.6	NA
63Hz	60.5	NA
125Hz	65.1	NA
250Hz	70.3	NA
500Hz	77.2	NA
1000Hz	78.0	NA
2000Hz	75.4	NA
4000Hz	71.2	NA
8000Hz	63.9	NA
Sound Message	Sound for AUD016	

Acoustic Notes:

1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
2. The acoustic center of the unit is located at the geometric center of the unit.

Performance Summary For 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

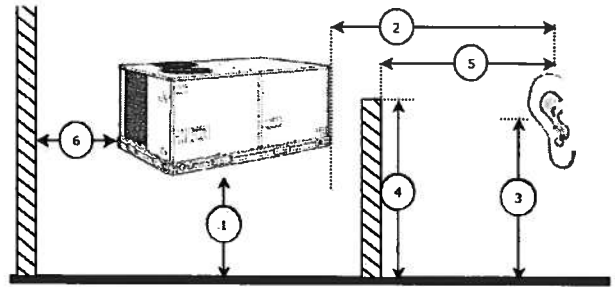
Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

Prepared By: BERNARD LLARENAS

02:16PM

Advanced Acoustics Parameters

- 1. Unit height above ground:..... 1.0 ft
- 2. Horizontal distance from unit to receiver:..... 20.0 ft
- 3. Receiver height above ground:..... 5.7 ft
- 4. Height of obstruction:..... 0.0 ft
- 5. Horizontal dist. from obstruction to receiver:..... 0.0 ft
- 6. Horizontal dist. from unit to obstruction:..... 0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	87	81	79	80	78	74	70	65	89
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	61	65	70	77	78	75	71	64	83
Sound Press. Levels at Dist. Specified above (Lp), dB	62	57	55	56	54	50	46	41	65
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	36	41	46	53	54	51	47	40	58

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

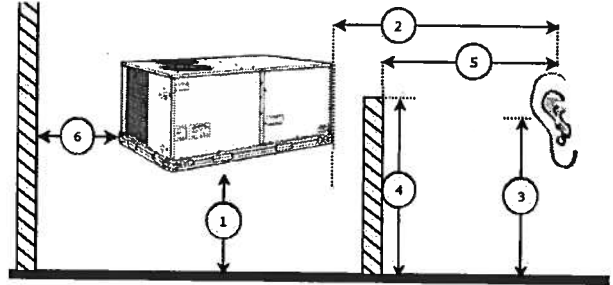
Acoustic Summary For 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

Outdoor Unit Parameters:

Tag Name: 7.5RFK BUILDING FIRST FLOOR AV ROOM
 112321
 Unit Model: 38AUD
 Unit Size: 15 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 2
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
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Sound Press. Levels at Dist. Specified above (Lp), dB	62	57	55	56	54	50	46	41	65
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Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

- 1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
- 2. The acoustic center of the unit is located at the geometric center of the unit.
- 3. All estimated sound power levels, dB re 1 Picowatt should not be guaranteed or certified as being the actual sound power levels.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021
02:16PM

UNIT	ELECTRICAL CHARACTERISTICS	CORNER												CENTER OF GRAVITY			EXIT HEIGHT	
		1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	11TH	12TH	X	Y	Z	H	M
38A2716 (MCH)	243/230-3-10-400-3-60-375-3-60	650	760	720	100	130	61	135	61	5	140	65	5	30 (194.5)	19 (486.6)	15 (381)	54-3/8 (1378.2)	
38A2718 (MCH)	243/230-3-10-400-3-60-375-3-60	650	660	720	100	130	61	135	61	5	140	65	5	30 (194.5)	19 (486.6)	15 (381)	54-3/8 (1378.2)	
38A2719 (RFPF)	243/230-3-10-400-3-60-375-3-60	730	730	730	100	130	61	135	61	5	140	65	5	30 (194.5)	19 (486.6)	15 (381)	54-3/8 (1378.2)	
38A2718 (RFPF)	243/230-3-10-400-3-60-375-3-60	730	730	730	100	130	61	135	61	5	140	65	5	30 (194.5)	19 (486.6)	15 (381)	54-3/8 (1378.2)	

LEFT SIDE VIEW FOR 38AUD SYSTEMS

TOP VIEW

NOTES

- WINDOW CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL)
- BOTTOM TO COMBUSTIBLE SURFACES: 6 INCHES
- OUTDOOR COIL: FOR FRESH AIR FLOW: 24 INCHES ONE SIDE, 32 INCHES THE OTHER. THE SIDE SETTING THE GREATER CLEARANCE IS OPTIONAL.
- OVERHEAD: 48 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
- BETWEEN UNITS: CONTROL BOX SIDE: 42 INCHES PER REC. SIDE: 58 INCHES PER REC.
- BETWEEN UNIT AND BLOCK OF CONCRETE WALLS AND OTHER OBSTACLES: SURFACES: CONTROL BOX SIDE: 47 INCHES PER REC. WITH EXTENSION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 3; A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
- UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

SERVICEL VALVE CONNECTIONS			
UNIT	SECTION	LOWER	UPP
38A2716	1-2/8 (51.8)	3/8 (15.9)	1 EA
38A2718	1-2/8 (51.8)	1/2 (12.7)	2 EA

CENTER OF GRAVITY
 DIRECTION OF AIR FLOW
 DIMENSIONS IN 1/8 ARE 34 MM

LEFT SIDE VIEW

FRONT VIEW

DETAIL A
(NOTE POSITION OF CKT 1)

DATE	REVISION	DESCRIPTION	BY
11/17/10	08/04/10	38AUD, 38AUD CONDENSING UNIT	38AUS00503

Guide Specification for 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

02:16PM



GUIDE SPECIFICATIONS – 38AUDA16A0E5-0A0A0

Commercial Air-Cooled Condensing Units HVAC Guide Specifications

Size: 16

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

QUALITY ASSURANCE

- 1.01. Unit shall be rated in accordance with AHRI Standard 360.
- 1.02. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- 1.03. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.
- 1.04. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- 1.05. Air-cooled condenser coils for hermetic scroll compressor units (38AUZ) and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.
- 1.06. Unit shall be manufactured in a facility registered to ISO 9001:2000 manufacturing quality standard.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2: Products

EQUIPMENT

2.01. General:

- A. Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.

2.02. Unit Cabinet:

- A. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
- B. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

2.03. Condenser Fans:

- A. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
- B. Fan blades shall be balanced.
- C. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
- D. Condenser fan and motor shaft shall be corrosion resistant.

2.04. Compressor:

- A. Compressor shall be of the hermetic scroll type.

Guide Specification for 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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- B. Compressor shall be mounted on rubber grommets.
- C. Compressors shall include overload protection.
- D. Compressors shall be equipped with a crankcase heater.
- E. Compressor shall be equipped with internal high pressure and high temperature protection.
- F. 38AUZ*16 and 25 sizes shall use two scroll compressors manifold together.

2.05. Condenser Coils:

A. Standard Aluminum fin - Copper Tube Coils:

- 1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
- 2. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
- 3. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

B. Optional Copper-fin evaporator and condenser coils:

- 1. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
- 2. Galvanized steel tube sheets shall not be acceptable.
- 3. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

2.07. Controls and Safeties:

A. Minimum control functions shall include:

- 1. Control wire terminal blocks.
- 2. Compressor lockout on auto-reset safety until reset from thermostat.
- 3. Each unit shall utilize the Comfort Alert Diagnostic Board that provides:
 - a. System Pressure Trip fault code indication
 - b. Short Cycling fault code indication
 - c. Locked Rotor fault code indication
 - d. Open Circuit fault code indication
 - e. Reverse Phase 3 fault code indication
 - f. Welded Contactor fault code indication
 - g. Low Voltage fault code indication
 - h. Anti-short cycle protection
 - i. Phase reversal protection

B. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:

- 1. High discharge pressure cutout.
- 2. Low pressure cutout.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____ F. The power consumption at full load shall not exceed _____ kW.
- B. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____ F wet bulb and _____ F dry bulb, and air entering the condensing unit at _____ F.
- C. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
- D. Standard unit shall be capable to operate up to 125_F (52_C) and down to 40_F (4_C)

2.09. Electrical Requirements:

- A. Nominal unit electrical characteristics shall be _____ v, 3-ph, 60 Hz. The unit shall be capable of satisfactory operation

Guide Specification for 7.5RFK BUILDING FIRST FLOOR AV ROOM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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within voltage limits of ____ v to ____ v.

- B. Unit electrical power shall be single-point connection.
- C. Unit control circuit shall contain a 24-v transformer for unit control.

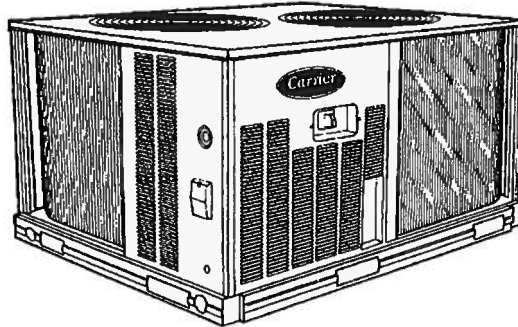
2.10. Special Features:

- A. Thermostat Controls:
 - 1. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
 - 2. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.

**COMMERCIAL SPLIT SYSTEMS
38AUZ 6 to 20 Ton
38AUD 10 to 20 Ton**

AIR-COOLED COOLING ONLY CONDENSING UNITS with PURON® REFRIGERANT

These light commercial air-cooled cooling only condensing units are easily connected by refrigerant lines and low voltage control wiring to matching Carrier packaged air-handling units or other suitable evaporator units. They are ideal for new construction or renovation applications where quality and performance are required.



**Manufactured in facility registered to
ISO 9001:2008 quality standard**

BASE UNIT STANDARD FEATURES:

- Puron® (R-410A) HFC refrigerant partial charge
- Single circuit units (38AUZ) are available in 1 or 2 stage cooling
- Two circuit units (38AUD) are available in 2 stage cooling
- All models utilize round tube plate fin coils.
- Standard one year parts warranty and five year compressor parts warranty. Extended 2-5 year parts and 1-5 labor coverage are available.
- Cooling operating range up to 125°F (52°C) and down to 35°F (2°C) as standard.
- Available Motormaster® I control for cooling operation down to -20°F (-29°C)
- Fully hermetic scroll compressor with crankcase heater
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement. 24-volt 75va control system
- High and low pressure switches.

- Comfort Alert™ Diagnostic Board:
 - LED Go-No-Go and fault code
 - Built in time guard anti-short cycle
 - Phase protection
 - Fault code retention logic
 - Low voltage compressor contactor protector
- UL and UL, Canada apply to standard units; 575-volt units UL, Canada only.
- Full perimeter base rails with built-in rigging adapters and fork truck slots
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Direct drive permanently lubricated condenser fan motors
- All units factory run tested
- Compressors mounted on independent vibration isolators

7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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7.5RFK BUILDING FIRST FLOOR OFFICES 112321

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38AUD
 Unit Size:.....20 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 Condenser Coil:.....Cu/Cu
 No. of Stages:.....Dual Stage

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....50, 100
 Std. Min. Outdoor Temp(Cooling):.....35.0 °F
 No. of Outdoor fans:.....4

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 2.1"
 Unit Width:.....5' 7.1"
 Unit Height:.....4' 2.4"
 Unit Shipping Weight:.....978 lb
 Unit Operating Weight:.....978 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38AUDA25A0E5-0A0A0		1
	Base Unit	
	Cu/Cu Condensing Coil	1
	Standard Refrigerant Options	1
	Service Options - None	1
	Electrical Options - None	1
	Packaging Options - Standard	1
	Standard Electrical Mechanical Controls	1
	Refrig Circ/Compressor Staging - Two Circuits/ Dual Stage	1
Accessories		
EF680035	Liquid Line Solenoid Valve for Outdoor Unit	2
EF680037	Liquid Line Solenoid Valve for Outdoor Unit	2

Unit Report For 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

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KM680004	Sight Glass for Outdoor Unit	2
33CS2PP2S-03	Thermostat for Outdoor Unit	1

The 38AUZ/AUD are furnished with filter drier which is factory provided (field installed). Additional filter driers can be purchased separately through RCD (Replacement Components Division). See the Product Library for Replacement Filter Drier Information for more information.

Performance Summary For 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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System:.....38AUD025
 No. of Stages:.....Dual Stage
 System Quantity:.....1
 Altitude:.....600.0 ft
 EER @ ARI Conditions:.....13.6
 Suction Line Loss:.....1.4 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	3/8	1 1/8
26 - 50	1/2	1 1/8
51 - 75	5/8	1 3/8
76 - 100	5/8	1 3/8
101 - 125	5/8	1 3/8
126 - 150	5/8	1 3/8
151 - 175	5/8	1 3/8
176 - 200	3/4	1 3/8

Refer to the 38AU installation instructions for installation specific line sizing guidance

Outdoor Unit Parameters

Unit Quantity:.....1
 PartNumber:.....38AUDA25A0E5-0A0A0
 Unit Model:.....38AUD
 Unit Size:.....20 Tons
 Condenser Coil:.....Cu/Cu
 Voltage:.....208-3-60 V-Ph-Hz
 Total Clg Cap.(Gross):.....240.0 MBH
 SDT:.....119.2 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....73.7 Amps
 Unit MOCP:.....100.0 Amps
 Total Compressor Power of Unit:.....16.70 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....253 V
 Compressor RLA:.....30.1
 Compressor LRA:.....225
 Compressor Quantity:.....2
 Fan Motors Qty:.....4
 Fan Motor FLA:.....1.5 Amps

Notice: Outdoor unit elect. data is based on 208-3-60
 Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

FIOPS and Accessories Information

FIOPS	Quantity
Accessories	Quantity
Liquid Line Solenoid Valve for Outdoor Unit	2
Liquid Line Solenoid Valve for Outdoor Unit	2
Sight Glass for Outdoor Unit	2

Performance Summary For 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Thermostat for Outdoor Unit	1
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A-Weighted	Outdoor Unit (dB)	Indoor Unit (dB,Ducted)
Total Level	85.2	NA
63Hz	64.8	NA
125Hz	68.9	NA
250Hz	71.4	NA
500Hz	82.8	NA
1000Hz	79.0	NA
2000Hz	74.2	NA
4000Hz	69.0	NA
8000Hz	61.9	NA
Sound Message	Sound for AUD025	

Acoustic Notes:

1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
2. The acoustic center of the unit is located at the geometric center of the unit.

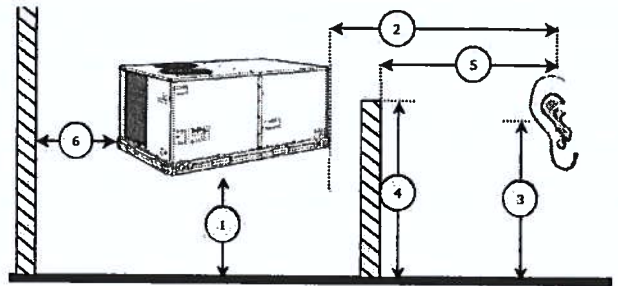
Performance Summary For 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	91	85	80	86	79	73	68	63	93
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	65	69	71	83	79	74	69	62	85
Sound Press. Levels at Dist. Specified above (Lp), dB	66	60	55	61	54	48	43	38	69
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	40	44	47	58	54	50	44	37	61

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

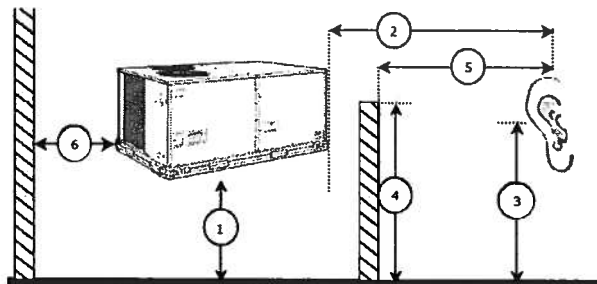
Acoustic Summary For 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Outdoor Unit Parameters:

Tag Name: 7.5RFK BUILDING FIRST FLOOR OFFICES
 112321
 Unit Model: 38AUD
 Unit Size: 20 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 2
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	91	85	80	86	79	73	68	63	93
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Acoustic Note:

- 1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
- 2. The acoustic center of the unit is located at the geometric center of the unit.
- 3. All estimated sound power levels, dB re 1 Picowatt should not be guaranteed or certified as being the actual sound power levels.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

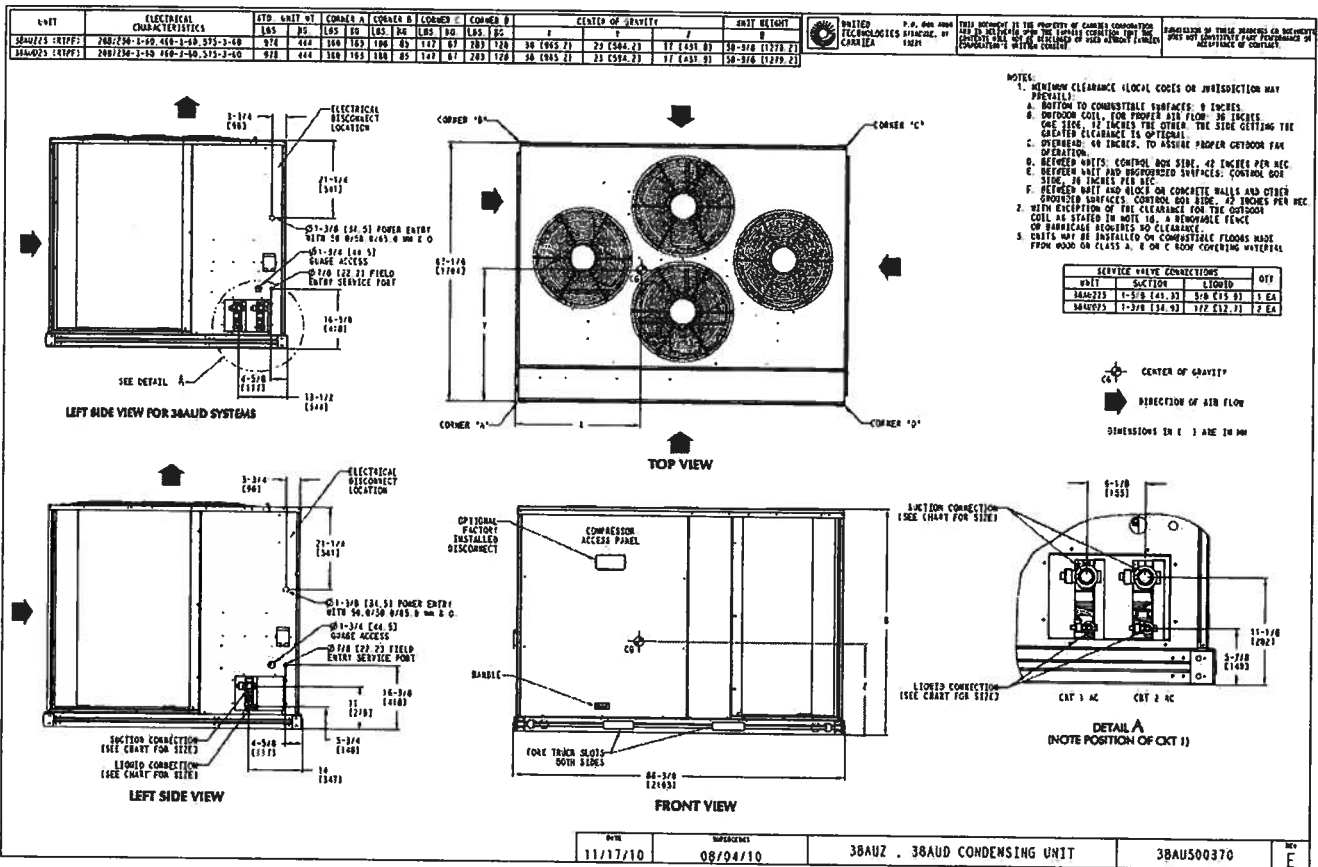
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Certified Drawing for 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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12/01/2021

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Guide Specification for 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

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GUIDE SPECIFICATIONS – 38AUDA25A0E5-0A0A0

Commercial Air-Cooled Condensing Units HVAC Guide Specifications

Size: 25

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

QUALITY ASSURANCE

- 1.01. Unit shall be rated in accordance with AHRI Standard 360.
- 1.02. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- 1.03. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.
- 1.04. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- 1.05. Air-cooled condenser coils for hermetic scroll compressor units (38AUZ) and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.
- 1.06. Unit shall be manufactured in a facility registered to ISO 9001:2000 manufacturing quality standard.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2: Products

EQUIPMENT

2.01. General:

- A. Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.

2.02. Unit Cabinet:

- A. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
- B. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

2.03. Condenser Fans:

- A. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
- B. Fan blades shall be balanced.
- C. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
- D. Condenser fan and motor shaft shall be corrosion resistant.

2.04. Compressor:

- A. Compressor shall be of the hermetic scroll type.

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- B. Compressor shall be mounted on rubber grommets.
- C. Compressors shall include overload protection.
- D. Compressors shall be equipped with a crankcase heater.
- E. Compressor shall be equipped with internal high pressure and high temperature protection.
- F. 38AUZ*16 and 25 sizes shall use two scroll compressors manifold together.

2.05. Condenser Coils:

- A. Standard Aluminum fin - Copper Tube Coils:
 - 1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - 2. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
 - 3. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
- B. Optional Copper-fin evaporator and condenser coils:
 - 1. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - 2. Galvanized steel tube sheets shall not be acceptable.
 - 3. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

2.07. Controls and Safeties:

- A. Minimum control functions shall include:
 - 1. Control wire terminal blocks.
 - 2. Compressor lockout on auto-reset safety until reset from thermostat.
 - 3. Each unit shall utilize the Comfort Alert Diagnostic Board that provides:
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 - e. Reverse Phase 3 fault code indication
 - f. Welded Contactor fault code indication
 - g. Low Voltage fault code indication
 - h. Anti-short cycle protection
 - i. Phase reversal protection
- B. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
 - 1. High discharge pressure cutout.
 - 2. Low pressure cutout.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____ F. The power consumption at full load shall not exceed _____ kW.
- B. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____ F wet bulb and _____ F dry bulb, and air entering the condensing unit at _____ F.
- C. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
- D. Standard unit shall be capable to operate up to 125_F (52_C) and down to 40_F (4_C)

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Guide Specification for 7.5RFK BUILDING FIRST FLOOR OFFICES 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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within voltage limits of ____ v to ____ v.

- B. Unit electrical power shall be single-point connection.
- C. Unit control circuit shall contain a 24-v transformer for unit control.

2.10. Special Features:

A. Thermostat Controls:

1. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
2. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.

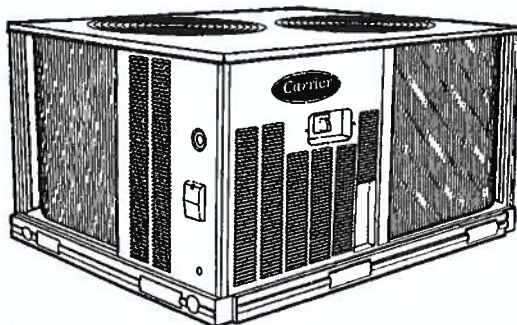
COMMERCIAL SPLIT SYSTEMS

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Manufactured in facility registered to
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- Standard one year parts warranty and five year compressor parts warranty. Extended 2-5 year parts and 1-5 labor coverage are available.
- Cooling operating range up to 125°F (52°C) and down to 35°F (2°C) as standard.
- Available Motormaster® I control for cooling operation down to -20°F (-29°C)
- Fully hermetic scroll compressor with crankcase heater
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement. 24-volt 75va control system
- High and low pressure switches.

- Comfort Alert™ Diagnostic Board:
 - LED Go-No-Go and fault code
 - Built in time guard anti-short cycle
 - Phase protection
 - Fault code retention logic
 - Low voltage compressor contactor protector
- UL and UL, Canada apply to standard units; 575-volt units UL, Canada only.
- Full perimeter base rails with built-in rigging adapters and fork truck slots
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Direct drive permanently lubricated condenser fan motors
- All units factory run tested
- Compressors mounted on independent vibration isolators

PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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PIP (GLE) SECOND FLOOR 112321

**Submittal Cover Sheet
Unit Report
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Feature Sheet**

Unit Report For PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM



Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38AUD
 Unit Size:.....20 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 Condenser Coil:.....Cu/Cu
 No. of Stages:.....Dual Stage

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....50, 100
 Std. Min. Outdoor Temp(Cooling):.....35.0 °F
 No. of Outdoor fans:.....4

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 2.1"
 Unit Width:.....5' 7.1"
 Unit Height:.....4' 2.4"
 Unit Shipping Weight:.....978 lb
 Unit Operating Weight:.....978 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38AUDA25A0E5-0A0A0		1
	Base Unit	
	Cu/Cu Condensing Coil	1
	Standard Refrigerant Options	1
	Service Options - None	1
	Electrical Options - None	1
	Packaging Options - Standard	1
	Standard Electrical Mechanical Controls	1
	Refrig Circ/Compressor Staging - Two Circuits/ Dual Stage	1
Accessories		
EF680035	Liquid Line Solenoid Valve for Outdoor Unit	2
EF680037	Liquid Line Solenoid Valve for Outdoor Unit	2

Unit Report For PIP (GLE) SECOND FLOOR 112321

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KM680004	Sight Glass for Outdoor Unit	2
33CS2PP2S-03	Thermostat for Outdoor Unit	1

The 38AUZ/AUD are furnished with filter drier which is factory provided (field installed). Additional filter driers can be purchased separately through RCD (Replacement Components Division). See the Product Library for Replacement Filter Drier Information for more information.

Performance Summary For PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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System:.....38AUD025
No. of Stages:.....Dual Stage
System Quantity:.....1
Altitude:.....600.0 ft
EER @ ARI Conditions:.....13.6
Suction Line Loss:.....1.4 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	3/8	1 1/8
26 - 50	1/2	1 1/8
51 - 75	5/8	1 3/8
76 - 100	5/8	1 3/8
101 - 125	5/8	1 3/8
126 - 150	5/8	1 3/8
151 - 175	5/8	1 3/8
176 - 200	3/4	1 3/8

Refer to the 38AU installation instructions for installation specific line sizing guidance

Outdoor Unit Parameters

Unit Quantity:.....1
 PartNumber:.....38AUDA25A0E5-0A0A0
 Unit Model:.....38AUD
 Unit Size:.....20 Tons
 Condenser Coil:.....Cu/Cu
 Voltage:.....208-3-60 V-Ph-Hz
 Total Clg Cap.(Gross):.....240.0 MBH
 SDT:.....119.2 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....73.7 Amps
 Unit MOCB:.....100.0 Amps
 Total Compressor Power of Unit:.....16.70 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....253 V
 Compressor RLA:.....30.1
 Compressor LRA:.....225
 Compressor Quantity:.....2
 Fan Motors Qty:.....4
 Fan Motor FLA:.....1.5 Amps

Notice: Outdoor unit elect. data is based on 208-3-60
 Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

FIOPS and Accessories Information

FIOPS	Quantity
Accessories	Quantity
Liquid Line Solenoid Valve for Outdoor Unit	2
Liquid Line Solenoid Valve for Outdoor Unit	2
Sight Glass for Outdoor Unit	2

Performance Summary For PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Thermostat for Outdoor Unit	1
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A-Weighted	Outdoor Unit (dB)	Indoor Unit (dB,Ducted)
Total Level	85.2	NA
63Hz	64.8	NA
125Hz	68.9	NA
250Hz	71.4	NA
500Hz	82.8	NA
1000Hz	79.0	NA
2000Hz	74.2	NA
4000Hz	69.0	NA
8000Hz	61.9	NA
Sound Message	Sound for AUD025	

Acoustic Notes:

1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
2. The acoustic center of the unit is located at the geometric center of the unit.

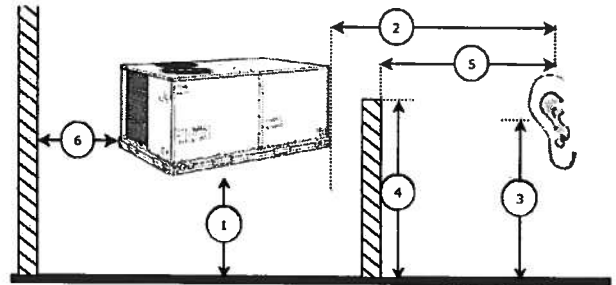
Performance Summary For PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	91	85	80	86	79	73	68	63	93
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	65	69	71	83	79	74	69	62	85
Sound Press. Levels at Dist. Specified above (Lp), dB	66	60	55	61	54	48	43	38	69
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	40	44	47	58	54	50	44	37	61

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

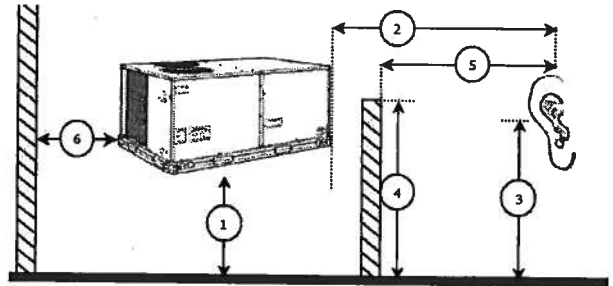
Acoustic Summary For PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters:

Tag Name:.....PIP (GLE) SECOND FLOOR 112321
 Unit Model:.....38AUD
 Unit Size:.....20 Tons
 System Type:.....Dx Cooling Only
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2
 Compressor Type:.....Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal distance from obstruction to receiver:.....0.0 ft
- 6. Horizontal distance from unit to obstruction:.....0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	91	85	80	86	79	73	68	63	93
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A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	40	44	47	58	54	50	44	37	61

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Acoustic Note:

- 1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
- 2. The acoustic center of the unit is located at the geometric center of the unit.
- 3. All estimated sound power levels, dB re 1 Picowatt should not be guaranteed or certified as being the actual sound power levels.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

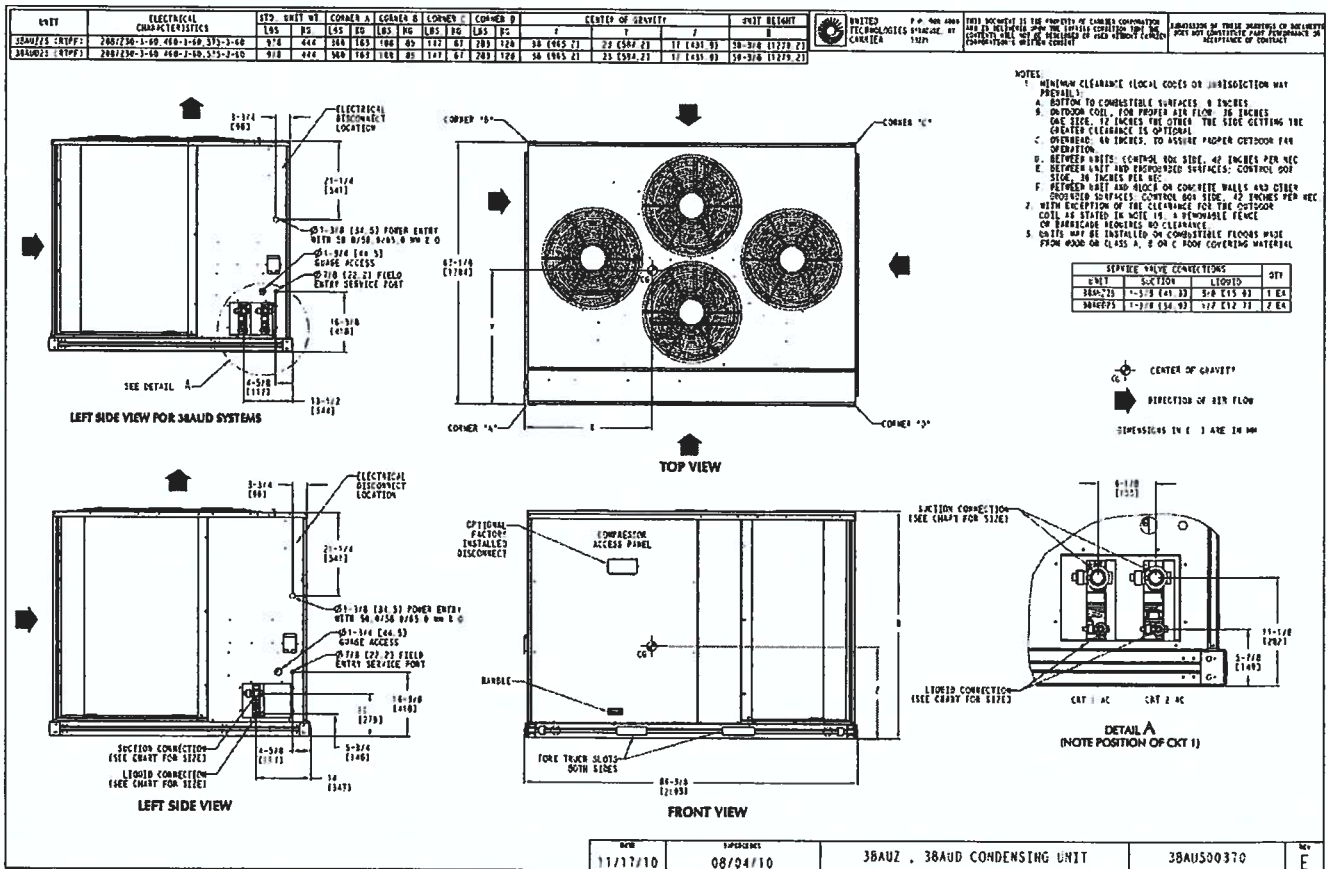
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Certified Drawing for PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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12/01/2021

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Guide Specification for PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38AUDA25A0E5-0A0A0

Commercial Air-Cooled Condensing Units HVAC Guide Specifications

Size: 25

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

QUALITY ASSURANCE

- 1.01. Unit shall be rated in accordance with AHRI Standard 360.
- 1.02. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- 1.03. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.
- 1.04. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- 1.05. Air-cooled condenser coils for hermetic scroll compressor units (38AUZ) and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.
- 1.06. Unit shall be manufactured in a facility registered to ISO 9001:2000 manufacturing quality standard.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
 - B. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.
- 2.03. Condenser Fans:
 - A. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
 - B. Fan blades shall be balanced.
 - C. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
 - D. Condenser fan and motor shaft shall be corrosion resistant.
- 2.04. Compressor:
 - A. Compressor shall be of the hermetic scroll type.

Guide Specification for PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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- B. Compressor shall be mounted on rubber grommets.
- C. Compressors shall include overload protection.
- D. Compressors shall be equipped with a crankcase heater.
- E. Compressor shall be equipped with internal high pressure and high temperature protection.
- F. 38AUZ*16 and 25 sizes shall use two scroll compressors manifold together.

2.05. Condenser Coils:

A. Standard Aluminum fin - Copper Tube Coils:

- 1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
- 2. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
- 3. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

B. Optional Copper-fin evaporator and condenser coils:

- 1. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
- 2. Galvanized steel tube sheets shall not be acceptable.
- 3. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

2.07. Controls and Safeties:

A. Minimum control functions shall include:

- 1. Control wire terminal blocks.
- 2. Compressor lockout on auto-reset safety until reset from thermostat.
- 3. Each unit shall utilize the Comfort Alert Diagnostic Board that provides:
 - a. System Pressure Trip fault code indication
 - b. Short Cycling fault code indication
 - c. Locked Rotor fault code indication
 - d. Open Circuit fault code indication
 - e. Reverse Phase 3 fault code indication
 - f. Welded Contactor fault code indication
 - g. Low Voltage fault code indication
 - h. Anti-short cycle protection
 - i. Phase reversal protection

B. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:

- 1. High discharge pressure cutout.
- 2. Low pressure cutout.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____ F. The power consumption at full load shall not exceed _____ kW.
- B. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____ F wet bulb and _____ F dry bulb, and air entering the condensing unit at _____ F.
- C. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
- D. Standard unit shall be capable to operate up to 125_F (52_C) and down to 40_F (4_C)

2.09. Electrical Requirements:

- A. Nominal unit electrical characteristics shall be _____ v, 3-ph, 60 Hz. The unit shall be capable of satisfactory operation

Guide Specification for PIP (GLE) SECOND FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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within voltage limits of ____ v to ____ v.

- B. Unit electrical power shall be single-point connection.
- C. Unit control circuit shall contain a 24-v transformer for unit control.

2.10. Special Features:

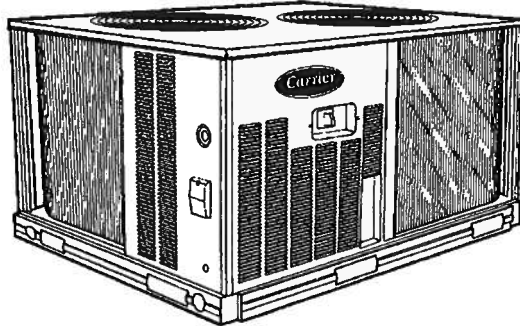
A. Thermostat Controls:

1. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
2. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.

**COMMERCIAL SPLIT SYSTEMS
38AUZ 6 to 20 Ton
38AUD 10 to 20 Ton**

AIR-COOLED COOLING ONLY CONDENSING UNITS with PURON® REFRIGERANT

These light commercial air-cooled cooling only condensing units are easily connected by refrigerant lines and low voltage control wiring to matching Carrier packaged air-handling units or other suitable evaporator units. They are ideal for new construction or renovation applications where quality and performance are required.



**Manufactured in facility registered to
ISO 9001:2008 quality standard**

BASE UNIT STANDARD FEATURES:

- Puron® (R-410A) HFC refrigerant partial charge
- Single circuit units (38AUZ) are available in 1 or 2 stage cooling
- Two circuit units (38AUD) are available in 2 stage cooling
- All models utilize round tube plate fin coils.
- Standard one year parts warranty and five year compressor parts warranty. Extended 2-5 year parts and 1-5 labor coverage are available.
- Cooling operating range up to 125°F (52°C) and down to 35°F (2°C) as standard.
- Available Motormaster® I control for cooling operation down to -20°F (-29°C)
- Fully hermetic scroll compressor with crankcase heater
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement. 24-volt 75va control system
- High and low pressure switches.

- Comfort Alert™ Diagnostic Board:
 - LED Go-No-Go and fault code
 - Built in time guard anti-short cycle
 - Phase protection
 - Fault code retention logic
 - Low voltage compressor contactor protector
- UL and UL, Canada apply to standard units; 575-volt units UL, Canada only.
- Full perimeter base rails with built-in rigging adapters and fork truck slots
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Direct drive permanently lubricated condenser fan motors
- All units factory run tested
- Compressors mounted on independent vibration isolators

10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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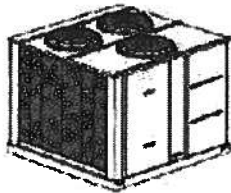
10SCIENCE BUILDING FIRST FLOOR 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38APD
 Unit Size:.....40 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 No. of Circuits:.....Two Circuits

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....23, 50, 73, 100
 Std. Min. Outdoor Temp(Cooling):.....32.0 °F
 No. of Outdoor fans:.....3

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 8.1"
 Unit Width:.....7' 4.2"
 Unit Height:.....6' 1.0"
 Unit Operating Weight:.....2094 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD04056-3009J		1
	Base Unit	
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
30GT-911--062	Navigator for Outdoor Unit	1
33CS2PP2S-03	Thermostat for Outdoor Unit	1

Performance Summary For 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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System:..... 38APD040
 No. of Stages:..... Dual Stage
 System Quantity:..... 1
 Altitude:..... 600.0 ft
 EER @ ARI Conditions:..... 11.5
 EER @ Ambient Conditions:..... 10.7
 IPLV:..... 15.3
 Capacity Split Percentage (A ckt/B ckt):..... 54/46 %
 Suction Line Loss:..... 2.0 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 1/8 (A), 1 1/8 (B)
26 - 50	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
51 - 75	5/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
76 - 100	7/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
101 - 125	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
126 - 150	7/8 (A), 7/8 (B)	2 1/8 (A), 1 5/8 (B)
151 - 175	7/8 (A), 7/8 (B)	2 1/8 (A), 1 5/8 (B)
176 - 200	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 5/8 (B)
51 - 75	5/8 (A), 5/8 (B)
76 - 100	7/8 (A), 5/8 (B)
101 - 125	7/8 (A), 7/8 (B)
126 - 150	7/8 (A), 7/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 1/8 (A), 1 1/8 (B)
26 - 50	1 3/8 (A), 1 3/8 (B)
51 - 75	1 5/8 (A), 1 5/8 (B)
76 - 100	1 5/8 (A), 1 5/8 (B)
101 - 125	1 5/8 (A), 1 5/8 (B)
126 - 150	2 1/8 (A), 1 5/8 (B)
151 - 175	2 1/8 (A), 1 5/8 (B)
176 - 200	2 1/8 (A), 2 1/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity:..... 1
 PartNumber:..... 38APD04056-3009J
 Unit Model:..... 38APD
 Unit Size:..... 40 Tons
 Voltage:..... 208-3-60 V-Ph-Hz
 Total Clg Cap.(Gross):..... 457.4 MBH

Performance Summary For 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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SDT:.....124.3 °F
 SDT2:.....120.9 °F
 SCT:.....124.2 °F
 SCT2:.....120.8 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....167.2 Amps
 Unit MOCP:.....200.0 Amps
 Compressor Power:.....38.30 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....254 V
 Compressor RLA:.....35.8/33.4
 Compressor LRA:.....239/225
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Fan Motors Qty:.....3
 Fan Motor FLA:.....NA Amps
 Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Navigator for Outdoor Unit	1
Thermostat for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:.....96.5 dbA

Acoustic Notes:

- The acoustic center of the unit is located at the geometric center of the unit.
- All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

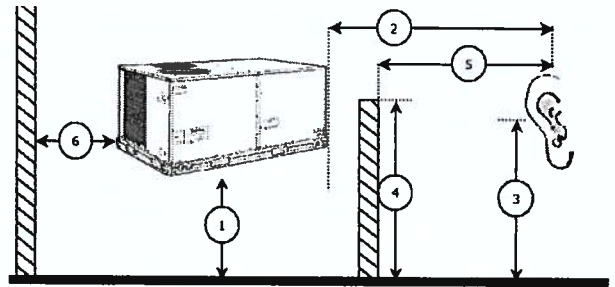
Performance Summary For 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
Sound Power Levels at Unit's Acoustic Center (L _w), dB	78	98	95	94	95	91	88	85	82	102
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	39	72	79	85	91	91	89	86	81	97
Sound Press. Levels at Dist. Specified above (L _p), dB	53	73	70	69	69	66	63	60	57	77
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	14	47	54	60	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

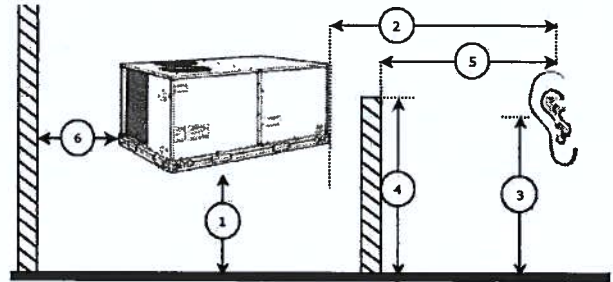
Acoustic Summary For 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters:

Tag Name: 10SCIENCE BUILDING FIRST FLOOR 112221
 Unit Model: 38APD
 Unit Size: 40 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 2 (Circ A), 2 (Circ B)
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
Sound Power Levels at Unit's Acoustic Center (Lw), dB	78	98	95	94	95	91	88	85	82	102
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	39	72	79	85	91	91	89	86	81	97
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Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for 10SCIENCE BUILDING FIRST FLOOR 112221

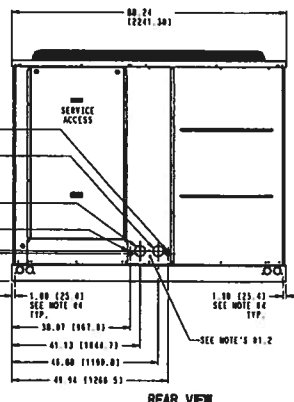
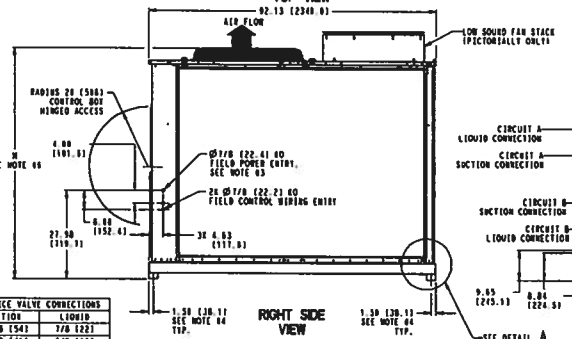
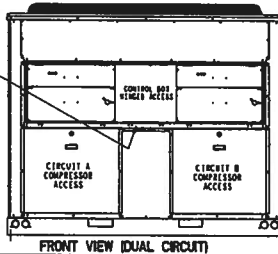
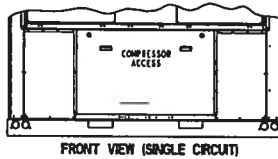
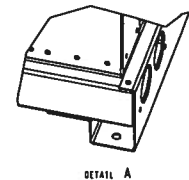
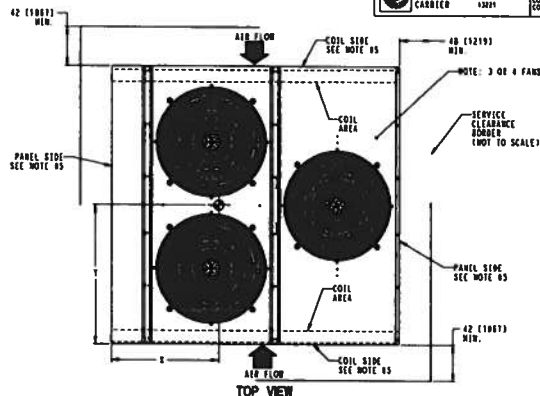
Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021

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- NOTES:**
1. BE SURE TO USE A WET BAG AND REMOVE ALL VALVE CORES BEFORE BRAZING FIELD PIPING.
 2. DO NOT GAP OR OTHERWISE OBSTRUCT THE LIQUID LINE TEMPERATURE RELIEF.
 3. Ø 1/2" (22.4) PILOT HOLE PROVIDED FOR LOCATING FIELD POWER WIRES. ACTUAL HOLE REQUIRED DEPENDS ON FIELD WIRE SIZING.
 4. Ø 1/8" (3.2) PILOT HOLE USED FOR MOUNTING UNIT.
 5. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
 TOP - 60" (1524) MIN. RESTRICTED
 COIL END - 42" (1067) FROM SOLID SURFACE.
 PANEL SIDE - 48" (1219) PER NEC.
 6. SEE TABLE COLUMN B. DIMENSION FOR STANDARD AND LOW SOUND WITH STACK FAN OPTION.
 7. CARRIER DOES NOT RECOMMEND INSTALLATION IN A PIT.
 8. UNIT CAN BE HANDLED USING THE FORK TRUCK LEFT POCKETS.
 9. DIMENSIONS SHOWN IN INCHES(MM).
 10. SIZES 84B AND 85A UNITS HAVE 3 CONDENSER FANS, SIZE 85B UNITS HAVE 4 CONDENSER FANS.
 11. HEIGHT DOES NOT INCLUDE REFRIGERANT CHANGE.
 12. FOR 3/8" PIPING, REFER TO "CIRCUIT A LIQUID CONNECTION" AND "CIRCUIT A SUCTION CONNECTION" DIMENSIONS SHOWN.

UNITED TECHNOLOGIES
 P.O. BOX 4840
 ATHLETIC, VA
 22009
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UNIT	STD. UNIT WT.		CENTER OF GRAVITY		UNIT HEIGHT	SERVICE VALVE CONNECTIONS	
	LBS.	KG.	X	Y		SUCTION	LIQUID
38AP84B	1960	893	35.0	1640	44.0	1-1/2" (54)	3/8" (22)
38AP84D	2092	950	33.7	1635	44.0	1-1/2" (54)	3/8" (22)
38AP85B	1973	897	34.0	1646	44.0	1-1/2" (54)	3/8" (22)
38AP85D	2120	961	33.4	1640	44.0	1-1/2" (54)	3/8" (22)
38AP88B	2227	1010	34.4	1674	44.0	1-1/2" (54)	3/8" (22)
38AP88D	2022	917	35.0	1640	44.0	1-1/2" (54)	3/8" (22)
38AP89B	2140	970	33.7	1635	44.0	1-1/2" (54)	3/8" (22)
38AP89D	2021	921	34.0	1646	44.0	1-1/2" (54)	3/8" (22)
38AP95B	2171	986	33.4	1640	44.0	1-1/2" (54)	3/8" (22)
38AP95D	2250	1023	34.4	1674	44.0	1-1/2" (54)	3/8" (22)

DATE: 04/09/12 ENGINEER: F UNIT ASSY: 38AP840-060 UNIT ASSY PART: 38AP555556 REV: G

Guide Specification for 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38APD04056-3009J

HVAC Guide Specifications Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 040

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001:2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association)..
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.

Guide Specification for 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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B. Control box access panels shall be hinged for service access.

2.03. Fans:

- A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.
- B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
- C. Shafts shall have inherent corrosion resistance.
- D. Fan blades shall be statically and dynamically balanced.
- E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

- A. Compressors shall be rotary scroll.
- B. Operating oil charge and a crankcase heater control oil dilution.
- C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.
- D. Staging of compressors shall provide unloading capability.
- E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

- A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.
- B. Tubes shall be cleaned, dehydrated, and sealed.
- C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.
- B. Standard line length (0-100 ft)
- C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).
- D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

- A. Unit ComfortLink controls shall include:
 - 1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.
 - 2. Carrier Comfort Network® (CCN) system capability.
 - 3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.
 - 4. Current alarm list and alarm history list on display.
 - 5. Automatic compressor lead/lag control.
 - 6. Service run test capability.
 - 7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).
 - 8. Service diagnostic mode.
 - 9. Self-contained low voltage control circuit.
 - 10. Cycle condenser fans to maintain proper head pressure control.
 - 11. Capacity control with staging compressors.

Guide Specification for 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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12. Alarm relay output to indicate when unit is in alarm condition.
- B. Minimum unit safety devices shall include:
 1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.
- 2.08. Operating Characteristics:
 - A. The capacity of the condensing unit shall meet or exceed ___ Btuh (___ kW) at a suction temperature of ___ F (___ C). The power consumption at full load shall not exceed ___ Btuh (___ kW).
 - B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ___ Btuh (___ kW) or greater at conditions of ___ cfm (___ L/s) entering-air temperature at the evaporator at ___ F (___ C) wet bulb and ___ F (___ C) dry bulb, and air entering the condensing unit at ___ F (___ C).
 - C. The system shall have an Energy Efficiency Ratio (EER) of ___ Btuh/watt or greater at standard AHRI conditions.
- 2.09. Electrical Requirements:
 - A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.
- 2.10. Special Features:
 - A. Optional E-coated copper-fin coils:
 1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.
 - B. Navigator™ Hand Held Display:
 1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
 2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
 3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
 4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
 5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
 6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.
 7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
 8. Navigator module shall have raised surface buttons with positive tactile response.
 9. Navigator module shall be available as field-installed accessory for all units.

Guide Specification for 10SCIENCE BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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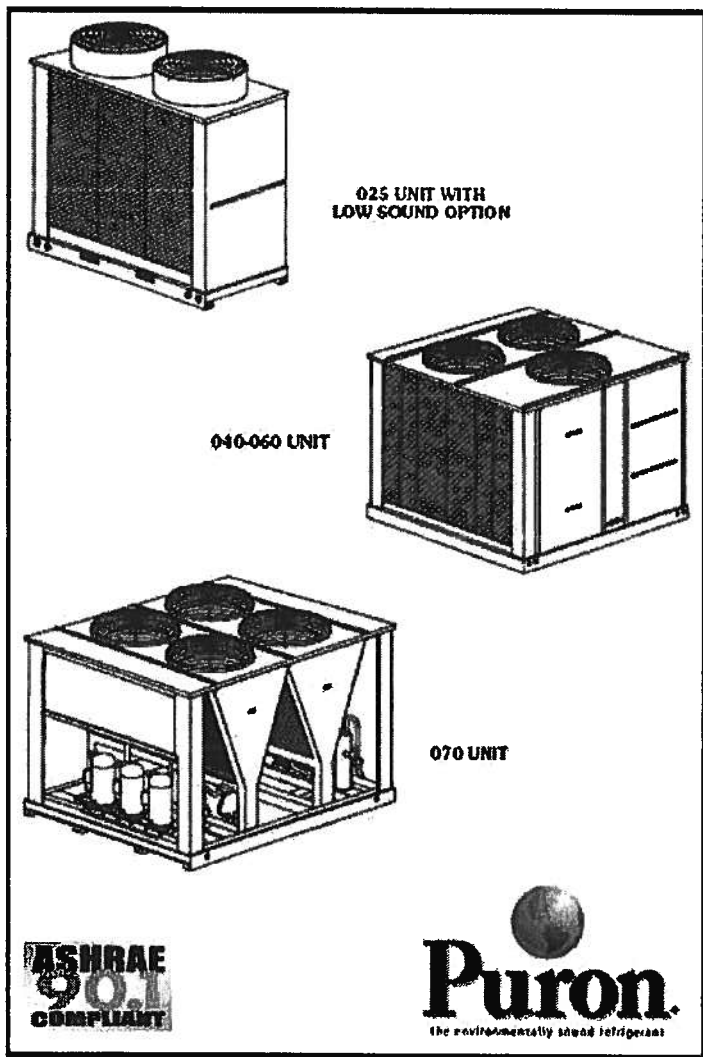
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- C. BACnet Communication Option:
 - 1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.
- D. Energy Management Module (EMM):
 - 1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.



These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

20SCIENCE BUILDING SECOND FLOOR 112221

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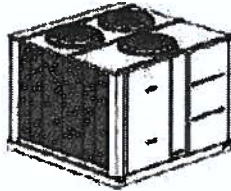
20SCIENCE BUILDING SECOND FLOOR 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 20SCIENCE BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38APD
 Unit Size:.....40 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 No. of Circuits:.....Two Circuits

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....23, 50, 73, 100
 Std. Min. Outdoor Temp(Cooling):.....32.0 °F
 No. of Outdoor fans:.....3

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 8.1"
 Unit Width:.....7' 4.2"
 Unit Height:.....6' 1.0"
 Unit Operating Weight:.....2094 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD04056-3009J		1
	Base Unit	
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
30GT-911--062	Navigator for Outdoor Unit	1
33CS2PP2S-03	Thermostat for Outdoor Unit	1

Performance Summary For 20SCIENCE BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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System: 38APD040
No. of Stages: Dual Stage
System Quantity: 1
Altitude: 600.0 ft
EER @ ARI Conditions: 11.5
EER @ Ambient Conditions: 10.7
IPLV: 15.3
Capacity Split Percentage (A ckt/B ckt): 54/46 %
Suction Line Loss: 2.0 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 1/8 (A), 1 1/8 (B)
26 - 50	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
51 - 75	5/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
76 - 100	7/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
101 - 125	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
126 - 150	7/8 (A), 7/8 (B)	2 1/8 (A), 1 5/8 (B)
151 - 175	7/8 (A), 7/8 (B)	2 1/8 (A), 1 5/8 (B)
176 - 200	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 5/8 (B)
51 - 75	5/8 (A), 5/8 (B)
76 - 100	7/8 (A), 5/8 (B)
101 - 125	7/8 (A), 7/8 (B)
126 - 150	7/8 (A), 7/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 1/8 (A), 1 1/8 (B)
26 - 50	1 3/8 (A), 1 3/8 (B)
51 - 75	1 5/8 (A), 1 5/8 (B)
76 - 100	1 5/8 (A), 1 5/8 (B)
101 - 125	1 5/8 (A), 1 5/8 (B)
126 - 150	2 1/8 (A), 1 5/8 (B)
151 - 175	2 1/8 (A), 1 5/8 (B)
176 - 200	2 1/8 (A), 2 1/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity: 1
PartNumber: 38APD04056-3009J
Unit Model: 38APD
Unit Size: 40 Tons
Voltage: 208-3-60 V-Ph-Hz
Total Clg Cap.(Gross): 457.4 MBH

Performance Summary For 20SCIENCE BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

SDT:.....124.3 °F
 SDT2:.....120.9 °F
 SCT:.....124.2 °F
 SCT2:.....120.8 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....167.2 Amps
 Unit MOCP:.....200.0 Amps
 Compressor Power:.....38.30 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....254 V
 Compressor RLA:.....35.8/33.4
 Compressor LRA:.....239/225
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Fan Motors Qty:.....3
 Fan Motor FLA:.....NA Amps

Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Navigator for Outdoor Unit	1
Thermostat for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:.....96.5 dbA

Acoustic Notes:

1. The acoustic center of the unit is located at the geometric center of the unit.
2. All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

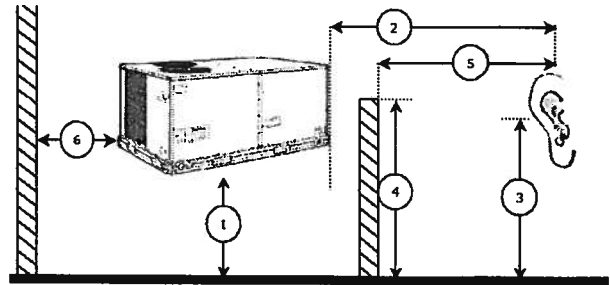
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Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
Sound Power Levels at Unit's Acoustic Center (L _w), dB	78	98	95	94	95	91	88	85	82	102
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	39	72	79	85	91	91	89	86	81	97
Sound Press. Levels at Dist. Specified above (L _p), dB	53	73	70	69	69	66	63	60	57	77
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	14	47	54	60	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

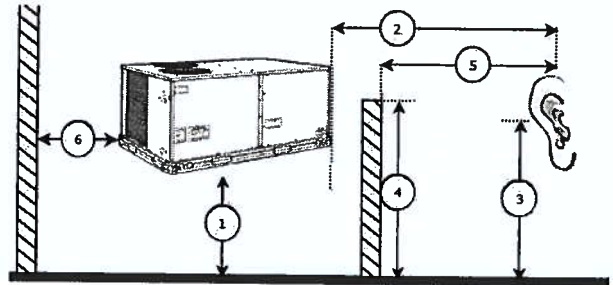
Acoustic Summary For 20SCIENCE BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters:

Tag Name: 20SCIENCE BUILDING SECOND FLOOR 112221
 Unit Model: 38APD
 Unit Size: 40 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 2 (Circ A), 2 (Circ B)
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Ove
Sound Power Levels at Unit's Acoustic Center (Lw), dB	78	98	95	94	95	91	88	85	82	102
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	39	72	79	85	91	91	89	86	81	97
Sound Press. Levels at Dist. Specified above (Lp), dB	53	73	70	69	69	66	63	60	57	77
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	14	47	54	60	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.
- 4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.
- 5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for 20SCIENCE BUILDING SECOND FLOOR 112221

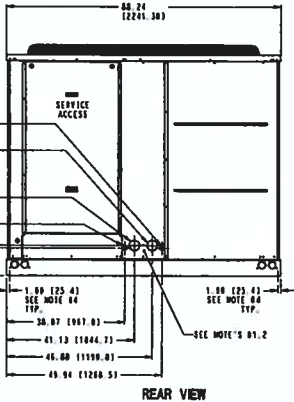
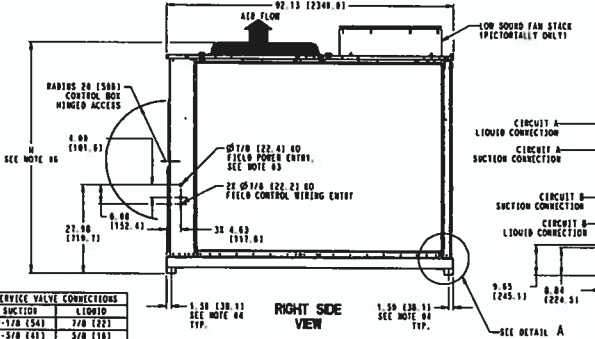
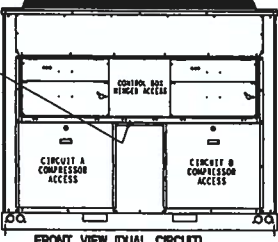
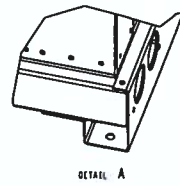
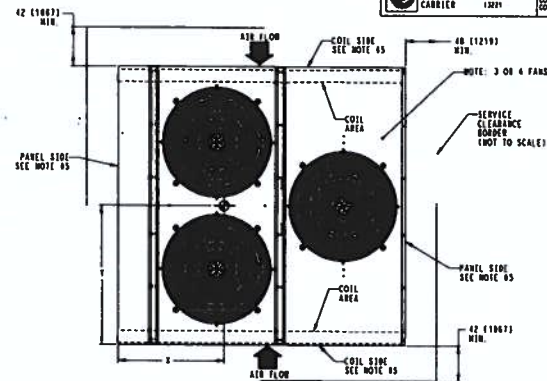
Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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12/01/2021

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1. BE SURE TO USE A NET BAG AND REMOVE ALL VALVE CORES BEFORE BRAZING FIELD PIPING.
2. DO NOT CAP OR OTHERWISE OBSTRUCT THE LIQUID LINE TEMPERATURE RELIEF.
3. Ø5/8 (127.4) PILOT HOLE PROVIDED FOR LOCATING FIELD POWER WIRING. ACTUAL HOLE LOCATED DEPENDS ON FIELD WIRE SIZING.
4. Ø9.437 (11.1) HOLE USED FOR MOUNTING UNIT.
5. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
 TOP - DO NOT RESTRICT
 COIL END - 42 (1067) FROM SOLID SURFACE, PANEL SIDE - 48 (1219) PER REC.
6. SEE TABLE COLUMN H, DIMENSION FOR STANDARD AND LOW SOUND WITH STACK FAN OPTION.
7. CARRIER DOES NOT RECOMMEND INSTALLATION IN A PIT.
8. UNIT CAN BE HANDLED USING THE FORK TRUCK LIFT POCKETS.
9. DIMENSIONS SHOWN IN INCHES(MM).
10. SIZES 800 AND 850 UNITS HAVE 3 CONDENSER FANS, SIZE 850 UNITS HAVE 4 CONDENSER FANS.
11. HEIGHT DOES NOT INCLUDE REFRIGERANT CHARGE.
12. FOR BRAS PIPING, REFER TO "CIRCUIT A LIQUID CONNECTION" AND "CIRCUIT B SUCTION CONNECTION" DIMENSIONS SHOWN.

UNITED TECHNOLOGIES P.O. BOX 4800
 CHARLESTON, SC 29405
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UNIT	STD. UNIT WT.	CENTER OF GRAVITY		UNIT HEIGHT	SERVICE VALVE CONNECTIONS	
		LEN.	CE		SUCTION	LIQUID
38AP800	1940	893	33.0 (843)	64.0 (1626)	2-1/2 (64)	3/8 (22)
38AP840	2094	850	33.7 (861)	64.1 (1628)	2-1/2 (64)	3/8 (22)
38AP850	1977	897	34.0 (863)	64.0 (1626)	2-1/2 (64)	3/8 (22)
38AP850	2120	851	33.4 (850)	64.1 (1628)	1-3/8 (41)	3/8 (22)
38AP850	2227	1010	34.4 (874)	64.2 (1630)	1-3/8 (41)	3/8 (22)
38AP840	2022	917	33.8 (862)	64.0 (1626)	2-1/2 (64)	3/8 (22)
38AP840	2140	916	33.7 (860)	64.1 (1628)	1-3/8 (41)	3/8 (22)
38AP850	2027	921	34.0 (863)	64.0 (1626)	2-1/2 (64)	3/8 (22)
38AP850	2114	864	33.4 (850)	64.1 (1628)	1-3/8 (41)	3/8 (22)
38AP850	2290	1043	34.4 (874)	64.1 (1628)	1-3/8 (41)	3/8 (22)

DATE: 04/09/12 SUPERSEDES: F 38AP040-060 UNIT ASSY 38AP55556 REV: G

Guide Specification for 20SCIENCE BUILDING SECOND FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

02:16PM



GUIDE SPECIFICATIONS – 38APD04056-3009J

HVAC Guide Specifications Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 040

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001:2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association).
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.

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B. Control box access panels shall be hinged for service access.

2.03. Fans:

- A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.
- B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
- C. Shafts shall have inherent corrosion resistance.
- D. Fan blades shall be statically and dynamically balanced.
- E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

- A. Compressors shall be rotary scroll.
- B. Operating oil charge and a crankcase heater control oil dilution.
- C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.
- D. Staging of compressors shall provide unloading capability.
- E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

- A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.
- B. Tubes shall be cleaned, dehydrated, and sealed.
- C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.
- B. Standard line length (0-100 ft)
- C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).
- D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

- A. Unit ComfortLink controls shall include:
 - 1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.
 - 2. Carrier Comfort Network® (CCN) system capability.
 - 3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.
 - 4. Current alarm list and alarm history list on display.
 - 5. Automatic compressor lead/lag control.
 - 6. Service run test capability.
 - 7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).
 - 8. Service diagnostic mode.
 - 9. Self-contained low voltage control circuit.
 - 10. Cycle condenser fans to maintain proper head pressure control.
 - 11. Capacity control with staging compressors.

Guide Specification for 20SCIENCE BUILDING SECOND FLOOR 112221

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12. Alarm relay output to indicate when unit is in alarm condition.
 - B. Minimum unit safety devices shall include:
 1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.
- 2.08. Operating Characteristics:
- A. The capacity of the condensing unit shall meet or exceed ___ Btuh (___ kW) at a suction temperature of ___ F (___ C). The power consumption at full load shall not exceed ___ Btuh (___ kW).
 - B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ___ Btuh (___ kW) or greater at conditions of ___ cfm (___ L/s) entering-air temperature at the evaporator at ___ F (___ C) wet bulb and ___ F (___ C) dry bulb, and air entering the condensing unit at ___ F (___ C).
 - C. The system shall have an Energy Efficiency Ratio (EER) of ___ Btuh/watt or greater at standard AHRI conditions.
- 2.09. Electrical Requirements:
- A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.
- 2.10. Special Features:
- A. Optional E-coated copper-fin coils:
 1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.
 - B. Navigator™ Hand Held Display:
 1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
 2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
 3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
 4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
 5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
 6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.
 7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
 8. Navigator module shall have raised surface buttons with positive tactile response.
 9. Navigator module shall be available as field-installed accessory for all units.

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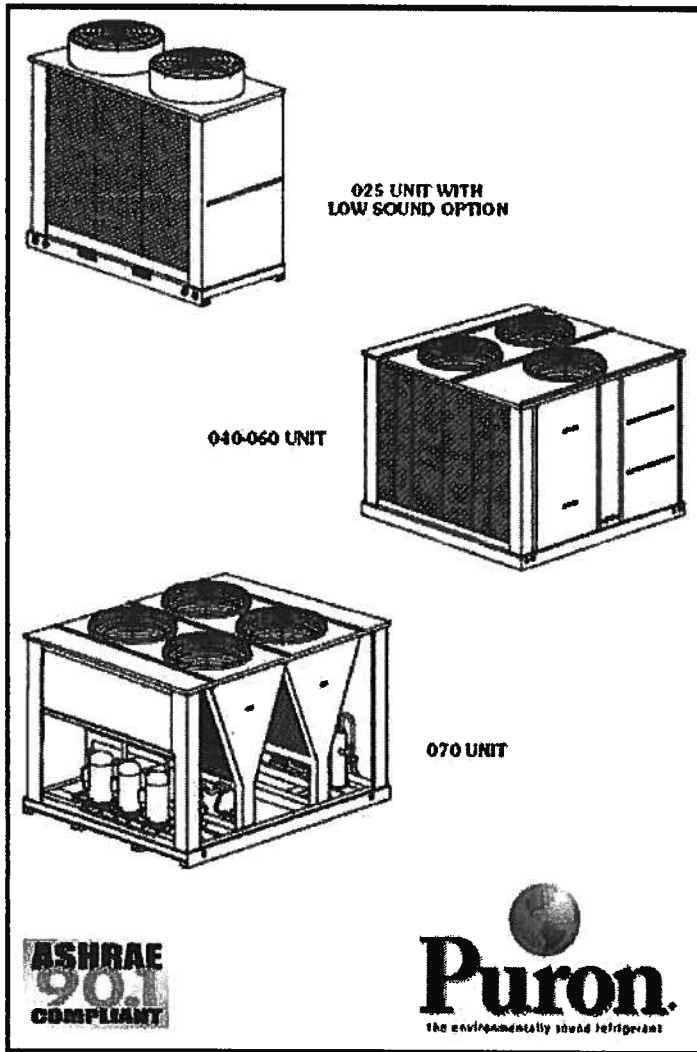
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- C. BACnet Communication Option:
 - 1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.
- D. Energy Management Module (EMM):
 - 1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.



These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

20SCIENCE BUILDING THIRD FLOOR 112321

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20SCIENCE BUILDING THIRD FLOOR 112321

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 20SCIENCE BUILDING THIRD FLOOR 112321

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38AUD
 Unit Size:.....20 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 Condenser Coil:.....Cu/Cu
 No. of Stages:.....Dual Stage

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....50, 100
 Std. Min. Outdoor Temp(Cooling):.....35.0 °F
 No. of Outdoor fans:.....4

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 2.1"
 Unit Width:.....5' 7.1"
 Unit Height:.....4' 2.4"
 Unit Shipping Weight:.....978 lb
 Unit Operating Weight:.....978 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38AUDA25A0E5-0A0A0	Base Unit	1
	Cu/Cu Condensing Coil	1
	Standard Refrigerant Options	1
	Service Options - None	1
	Electrical Options - None	1
	Packaging Options - Standard	1
	Standard Electrical Mechanical Controls	1
	Refrig Circ/Compressor Staging - Two Circuits/ Dual Stage	1
Accessories		
EF680035	Liquid Line Solenoid Valve for Outdoor Unit	2
EF680037	Liquid Line Solenoid Valve for Outdoor Unit	2

Unit Report For 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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KM680004	Sight Glass for Outdoor Unit	2
33CS2PP2S-03	Thermostat for Outdoor Unit	1

The 38AUZ/AUD are furnished with filter drier which is factory provided (field installed). Additional filter driers can be purchased separately through RCD (Replacement Components Division). See the Product Library for Replacement Filter Drier Information for more information.

Performance Summary For 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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System:.....38AUD025
 No. of Stages:.....Dual Stage
 System Quantity:.....1
 Altitude:.....600.0 ft
 EER @ ARI Conditions:.....13.6
 Suction Line Loss:.....1.4 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	3/8	1 1/8
26 - 50	1/2	1 1/8
51 - 75	5/8	1 3/8
76 - 100	5/8	1 3/8
101 - 125	5/8	1 3/8
126 - 150	5/8	1 3/8
151 - 175	5/8	1 3/8
176 - 200	3/4	1 3/8

Refer to the 38AU installation instructions for installation specific line sizing guidance

Outdoor Unit Parameters

Unit Quantity:.....1
 PartNumber:.....38AUDA25A0E5-0A0A0
 Unit Model:.....38AUD
 Unit Size:.....20 Tons
 Condenser Coil:.....Cu/Cu
 Voltage:.....208-3-60 V-Ph-Hz
 Total Clg Cap.(Gross):.....240.0 MBH
 SDT:.....119.2 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....73.7 Amps
 Unit MOCP:.....100.0 Amps
 Total Compressor Power of Unit:.....16.70 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....253 V
 Compressor RLA:.....30.1
 Compressor LRA:.....225
 Compressor Quantity:.....2
 Fan Motors Qty:.....4
 Fan Motor FLA:.....1.5 Amps

Notice: Outdoor unit elect. data is based on 208-3-60
 Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

FIOPS and Accessories Information

FIOPS	Quantity
Accessories	Quantity
Liquid Line Solenoid Valve for Outdoor Unit	2
Liquid Line Solenoid Valve for Outdoor Unit	2
Sight Glass for Outdoor Unit	2

Performance Summary For 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

Prepared By: BERNARD LLARENAS

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Thermostat for Outdoor Unit	1
-----------------------------	---

A-Weighted	Outdoor Unit (dB)	Indoor Unit (dB,Ducted)
Total Level	85.2	NA
63Hz	64.8	NA
125Hz	68.9	NA
250Hz	71.4	NA
500Hz	82.8	NA
1000Hz	79.0	NA
2000Hz	74.2	NA
4000Hz	69.0	NA
8000Hz	61.9	NA
Sound Message	Sound for AUD025	

Acoustic Notes:

1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
2. The acoustic center of the unit is located at the geometric center of the unit.

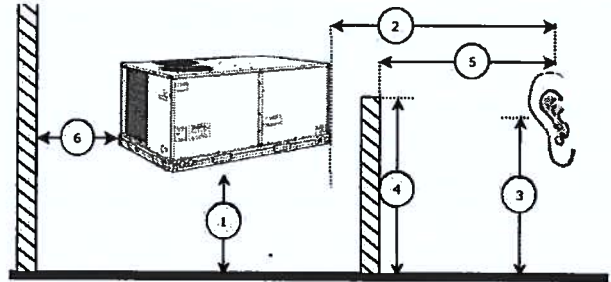
Performance Summary For 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (L _w), dB	91	85	80	86	79	73	68	63	93
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	65	69	71	83	79	74	69	62	85
Sound Press. Levels at Dist. Specified above (L _p), dB	66	60	55	61	54	48	43	38	69
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	40	44	47	58	54	50	44	37	61

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

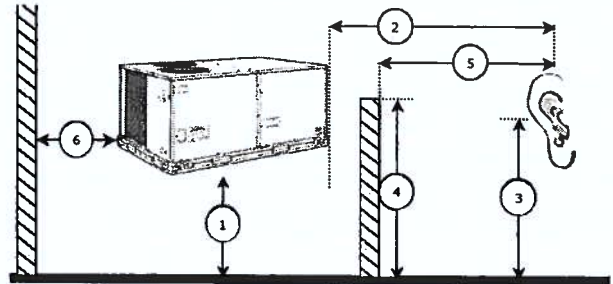
Acoustic Summary For 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters:

Tag Name: 20SCIENCE BUILDING THIRD FLOOR 112321
 Unit Model: 38AUD
 Unit Size: 20 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 2
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (L _w), dB	91	85	80	86	79	73	68	63	93
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	65	69	71	83	79	74	69	62	85
Sound Press. Levels at Dist. Specified above (L _p), dB	66	60	55	61	54	48	43	38	69
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	40	44	47	58	54	50	44	37	61

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

- 1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
- 2. The acoustic center of the unit is located at the geometric center of the unit.
- 3. All estimated sound power levels, dB re 1 Picowatt should not be guaranteed or certified as being the actual sound power levels.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021

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UNIT	ELECTRICAL CHARACTERISTICS	STD. UNIT WT	CORNER A	CORNER B	CORNER C	CORNER D	CENTER OF GRAVITY			UNIT HEIGHT									
	LESS 1	2	LESS 1	2	LESS 1	2	X	Y	Z										
38AUZ4 (TRYP)	208/230-1-50 400-1-10, 373-1-40	978	424	340	183	180	45	147	67	203	128	30	1895.23	23	1594.23	11	1491.03	50-376	11273-23
38AUZ5 (TRYP)	208/230-1-50 400-1-10, 373-1-40	978	424	340	183	180	45	147	67	203	128	30	1895.23	23	1594.23	11	1491.03	50-376	11273-23

LEFT SIDE VIEW FOR 38AUD SYSTEMS

TOP VIEW

NOTES:

- MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
 - A. BOTTOM TO COMBUSTIBLE SURFACES: 8 INCHES.
 - B. OUTDOOR COIL, LOW PROPER AIR FLOW: 36 INCHES ONE SIDE, 18 INCHES ON OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
 - C. OVERHEAD: 48 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
 - D. BETWEEN UNITS: CONTROL BOX SIDE, 48 INCHES PER REC. SIDE, 36 INCHES PER REC.
 - E. BETWEEN UNIT AND BACKGROUND SURFACES, CONTROL BOX SIDE, 36 INCHES PER REC.
 - F. BETWEEN UNIT AND WALLS OR CONCRETE WALLS AND OTHER COMBUSTIBLE SURFACES, CONTROL BOX SIDE, 42 INCHES PER REC.
- WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRIAGE IS REQUIRED NO CLEARANCE.
- UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

SERVICE VALVE CONNECTIONS			
UNIT	SUCT. PORT	LIQUID IN	OPT.
38AUZ3	1-5/8 (141.33)	3/8 (115.91)	1 EA.
38AUZ5	1-5/8 (141.33)	1/2 (127.17)	2 EA.

DIMENSIONS IN () ARE 30 MM

LEFT SIDE VIEW

FRONT VIEW

DETAIL A
(NOTE POSITION OF CCT 1)

DATE	REVISIONS	DESCRIPTION	NO.
11/17/10	08/24/10	38AUZ - 38AUD CONDENSING UNIT	REV E

Guide Specification for 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38AUDA25A0E5-0A0A0

Commercial Air-Cooled Condensing Units HVAC Guide Specifications

Size: 25

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

QUALITY ASSURANCE

- 1.01. Unit shall be rated in accordance with AHRI Standard 360.
- 1.02. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- 1.03. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.
- 1.04. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- 1.05. Air-cooled condenser coils for hermetic scroll compressor units (38AUZ) and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.
- 1.06. Unit shall be manufactured in a facility registered to ISO 9001:2000 manufacturing quality standard.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2: Products

EQUIPMENT

2.01. General:

- A. Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.

2.02. Unit Cabinet:

- A. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
- B. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

2.03. Condenser Fans:

- A. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
- B. Fan blades shall be balanced.
- C. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
- D. Condenser fan and motor shaft shall be corrosion resistant.

2.04. Compressor:

- A. Compressor shall be of the hermetic scroll type.

Guide Specification for 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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- B. Compressor shall be mounted on rubber grommets.
- C. Compressors shall include overload protection.
- D. Compressors shall be equipped with a crankcase heater.
- E. Compressor shall be equipped with internal high pressure and high temperature protection.
- F. 38AUZ*16 and 25 sizes shall use two scroll compressors manifold together.

2.05. Condenser Coils:

- A. Standard Aluminum fin - Copper Tube Coils:
 - 1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - 2. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
 - 3. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
- B. Optional Copper-fin evaporator and condenser coils:
 - 1. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - 2. Galvanized steel tube sheets shall not be acceptable.
 - 3. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

2.07. Controls and Safeties:

- A. Minimum control functions shall include:
 - 1. Control wire terminal blocks.
 - 2. Compressor lockout on auto-reset safety until reset from thermostat.
 - 3. Each unit shall utilize the Comfort Alert Diagnostic Board that provides:
 - a. System Pressure Trip fault code indication
 - b. Short Cycling fault code indication
 - c. Locked Rotor fault code indication
 - d. Open Circuit fault code indication
 - e. Reverse Phase 3 fault code indication
 - f. Welded Contactor fault code indication
 - g. Low Voltage fault code indication
 - h. Anti-short cycle protection
 - i. Phase reversal protection
- B. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
 - 1. High discharge pressure cutout.
 - 2. Low pressure cutout.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____ F. The power consumption at full load shall not exceed _____ kW.
- B. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____ F wet bulb and _____ F dry bulb, and air entering the condensing unit at _____ F.
- C. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
- D. Standard unit shall be capable to operate up to 125_F (52_C) and down to 40_F (4_C)

2.09. Electrical Requirements:

- A. Nominal unit electrical characteristics shall be _____ v, 3-ph, 60 Hz. The unit shall be capable of satisfactory operation

Guide Specification for 20SCIENCE BUILDING THIRD FLOOR 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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within voltage limits of ____ v to ____ v.

- B. Unit electrical power shall be single-point connection.
- C. Unit control circuit shall contain a 24-v transformer for unit control.

2.10. Special Features:

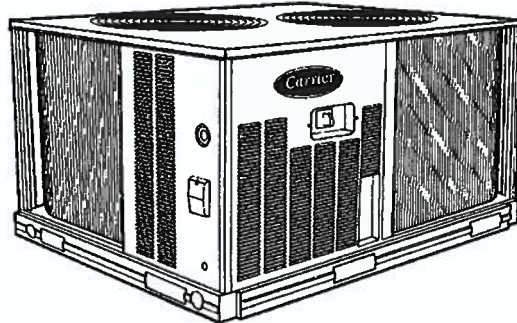
A. Thermostat Controls:

1. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
2. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.

**COMMERCIAL SPLIT SYSTEMS
38AUZ 6 to 20 Ton
38AUD 10 to 20 Ton**

AIR-COOLED COOLING ONLY CONDENSING UNITS with PURON® REFRIGERANT

These light commercial air-cooled cooling only condensing units are easily connected by refrigerant lines and low voltage control wiring to matching Carrier packaged air-handling units or other suitable evaporator units. They are ideal for new construction or renovation applications where quality and performance are required.



**Manufactured in facility registered to
ISO 9001:2008 quality standard**

BASE UNIT STANDARD FEATURES:

- Puron® (R-410A) HFC refrigerant partial charge
- Single circuit units (38AUZ) are available in 1 or 2 stage cooling
- Two circuit units (38AUD) are available in 2 stage cooling
- All models utilize round tube plate fin coils.
- Standard one year parts warranty and five year compressor parts warranty. Extended 2-5 year parts and 1-5 labor coverage are available.
- Cooling operating range up to 125°F (52°C) and down to 35°F (2°C) as standard.
- Available Motormaster® I control for cooling operation down to -20°F (-29°C)
- Fully hermetic scroll compressor with crankcase heater
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement. 24-volt 75va control system
- High and low pressure switches.

- Comfort Alert™ Diagnostic Board:
 - LED Go-No-Go and fault code
 - Built in time guard anti-short cycle
 - Phase protection
 - Fault code retention logic
 - Low voltage compressor contactor protector
- UL and UL, Canada apply to standard units; 575-volt units UL, Canada only.
- Full perimeter base rails with built-in rigging adapters and fork truck slots
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Direct drive permanently lubricated condenser fan motors
- All units factory run tested
- Compressors mounted on independent vibration isolators

10ENGLISH COMMUNICATION BUILDING CLASSROOM 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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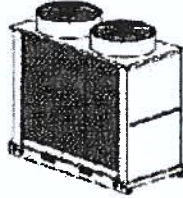
10ENGLISH COMMUNICATION BUILDING CLASSROOM 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 10ENGLISH COMMUNICATION BUILDING CLASSROOM 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38APD
 Unit Size:.....30 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 No. of Circuits:.....Two Circuits

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....1 (Circ A), 1 (Circ B)
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....50, 100
 Std. Min. Outdoor Temp(Cooling):.....32.0 °F
 No. of Outdoor fans:.....2

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 4.2"
 Unit Width:.....3' 4.3"
 Unit Height:.....6' 1.1"
 Unit Operating Weight:.....1264 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD03056-3009J		1
	Base Unit	
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
30GT-911--062	Navigator for Outdoor Unit	1
33CS2PP2S-03	Thermostat for Outdoor Unit	1

Performance Summary For 10ENGLISH COMMUNICATION BUILDING
CLASSROOM 112221
 Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS 02:16PM

System:.....38APD030
 No. of Stages:.....Dual Stage
 System Quantity:.....1
 Altitude:.....600.0 ft
 EER @ ARI Conditions:.....10.8
 EER @ Ambient Conditions:.....10.0
 IPLV:.....12.8
 Capacity Split Percentage (A ckt/B ckt):.....50/50 %
 Suction Line Loss:.....2.0 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 1/8 (A), 1 1/8 (B)
26 - 50	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
51 - 75	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
76 - 100	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
101 - 125	5/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
126 - 150	5/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
151 - 175	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
176 - 200	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 5/8 (B)
51 - 75	5/8 (A), 5/8 (B)
76 - 100	5/8 (A), 5/8 (B)
101 - 125	5/8 (A), 5/8 (B)
126 - 150	5/8 (A), 5/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 1/8 (A), 1 1/8 (B)
26 - 50	1 3/8 (A), 1 3/8 (B)
51 - 75	1 3/8 (A), 1 3/8 (B)
76 - 100	1 3/8 (A), 1 3/8 (B)
101 - 125	1 5/8 (A), 1 5/8 (B)
126 - 150	1 5/8 (A), 1 5/8 (B)
151 - 175	1 5/8 (A), 1 5/8 (B)
176 - 200	1 5/8 (A), 1 5/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity:.....1
 PartNumber:.....38APD03056-3009J
 Unit Model:.....38APD
 Unit Size:.....30 Tons
 Voltage:.....208-3-60 V-Ph-Hz

Performance Summary For 10ENGLISH COMMUNICATION BUILDING CLASSROOM 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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Total Clg Cap.(Gross):.....	361.7	MBH
SDT:.....	129.2	°F
SDT2:.....	129.2	°F
SCT:.....	129.1	°F
SCT2:.....	129.1	°F
Clg Ent Air DB:.....	95.0	°F
Saturated Suction Temp:.....	45.0	°F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....	208-3-60	V-Ph-Hz
Unit MCA:.....	138.8	Amps
Unit MOCP:.....	175.0	Amps
Compressor Power:.....	32.50	kW
Voltage Range Min:.....	187	V
Voltage Range Max:.....	254	V
Compressor RLA:.....	55.8/55.8	
Compressor LRA:.....	340/340	
Compressor Quantity:.....	1 (Circ A), 1 (Circ B)	
Fan Motors Qty:.....	2	
Fan Motor FLA:.....	NA	Amps

Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Navigator for Outdoor Unit	1
Thermostat for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:..... 94.9 dbA

Acoustic Notes:

1. The acoustic center of the unit is located at the geometric center of the unit.
2. All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

Performance Summary For 10ENGLISH COMMUNICATION BUILDING

CLASSROOM 112221

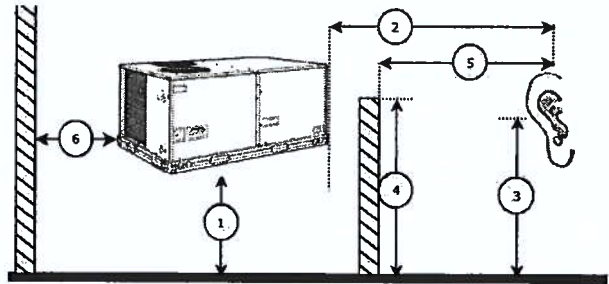
Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

Prepared By: BERNARD LLARENAS

02:16PM

Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Overa
Sound Power Levels at Unit's Acoustic Center (L _w), dB	77	96	93	92	93	90	87	84	80	101
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	37	70	77	84	89	90	88	85	79	95
Sound Press. Levels at Dist. Specified above (L _p), dB	52	72	69	68	68	66	62	59	56	76
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	13	46	53	59	65	66	64	60	55	71

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Summary For 10ENGLISH COMMUNICATION BUILDING CLASSROOM 112221

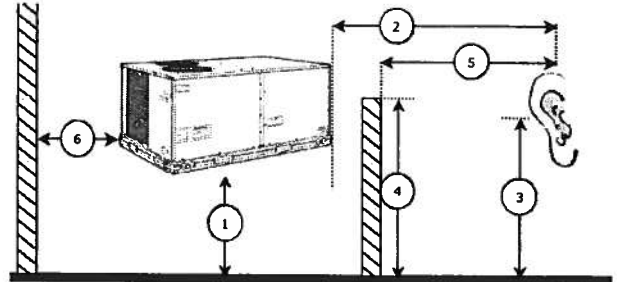
Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters:

Tag Name: 10ENGLISH COMMUNICATION BUILDING CLASSROOM 112221

Unit Model: 38APD
 Unit Size: 30 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 1 (Circ A), 1 (Circ B)
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Ove
Sound Power Levels at Unit's Acoustic Center (Lw), dB	77	96	93	92	93	90	87	84	80	101
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	37	70	77	84	89	90	88	85	79	95
Sound Press. Levels at Dist. Specified above (Lp), dB	52	72	69	68	68	66	62	59	56	76
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	13	46	53	59	65	66	64	60	55	71

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Acoustic Note:

1. Estimated Sound Power levels - dB re: 1 picowatt
2. Estimated Sound Pressure levels - dB re: 20 micropascal
3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.
4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.
5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

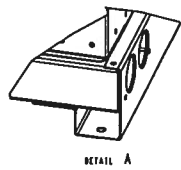
Certified Drawing for 10EGGLISH COMMUNICATION BUILDING CLASSROOM 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

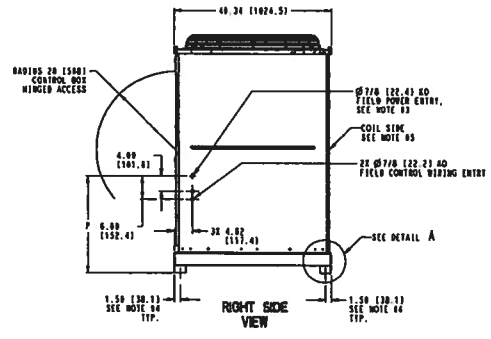
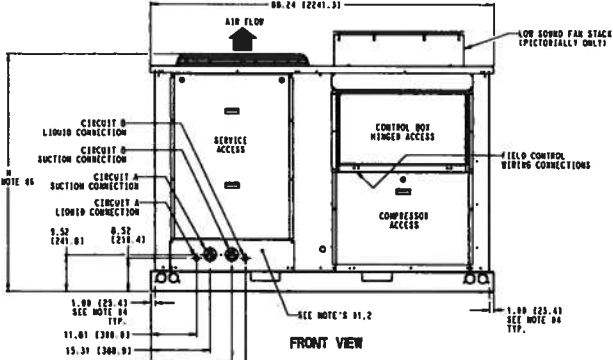
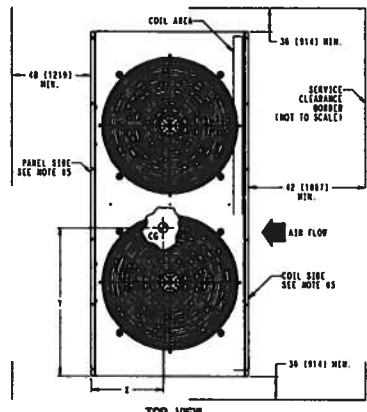
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UNIT	STD. UNIT WT.		CENTER OF GRAVITY		UNIT HEIGHT	POWER ENTRY	SERVICE VALVE CONNECTIONS	
	LBS.	KG.	X	Y			SUCTION	LIQUID
38AP025	1071	489	17.0 (432)	35.0 (893)	61.0 (1549)	24.0 (610)	1-3/8 (41)	3/8 (10)
38AP025	1095	497	17.0 (432)	31.0 (789)			1-3/8 (35)	3/8 (10)
38AP027	1248	563	18.2 (462)	37.0 (953)			1-3/8 (41)	3/8 (10)
38AP027	1236	571	18.2 (462)	37.0 (953)	73.1 (1857)	36.0 (914)	1-3/8 (35)	3/8 (10)
38AP030	1246	565	18.2 (462)	37.5 (953)			1-3/8 (41)	3/8 (10)
38AP030	1264	572	18.2 (462)	37.5 (953)			1-3/8 (35)	3/8 (10)
38AP025	1113	505	17.0 (432)	36.0 (914)	61.5 (1569)	24.0 (610)	1-3/8 (41)	3/8 (10)
38AP025	1131	513	17.0 (432)	37.0 (948)			1-3/8 (35)	3/8 (10)
38AP027	1276	579	18.2 (462)	37.6 (955)			1-3/8 (41)	3/8 (10)
38AP027	1274	587	18.2 (462)	37.6 (955)			1-3/8 (35)	3/8 (10)
38AP030	1282	582	18.2 (462)	37.5 (953)	70.6 (1793)	36.0 (914)	1-3/8 (41)	3/8 (10)
38AP030	1306	599	18.2 (462)	37.6 (955)			1-3/8 (35)	3/8 (10)

- NOTES:**
1. BE SURE TO USE A WET BAG AND REMOVE ALL VALVE CONES BEFORE BRAZING FIELD PIPING.
 2. DO NOT CAP OR OTHERWISE OBSTRUCT THE LIQUID LINE TEMPERATURE RELIEF.
 3. Ø7/8 (22.4) PILOT HOLE PROVIDED FOR LOCATING FIELD POWER WIRING. ACTUAL HOLE REQUIRED DEPENDS ON FIELD WIRE SIZING.
 4. Ø9.437 (241.19) HOLE USED FOR MOUNTING UNIT.
 5. UNIT MUST HAVE CLEARANCES AS FOLLOWS.
 TOP - DO NOT RESTRICT.
 COIL END - 42 (1067) FROM SOLID SURFACE.
 PANEL SIDE - 40 (1016) MIN. MIN.
 6. SEE TABLE COLUMN 8, DIMENSION FOR STANDARD AND LOW SOUND WITH STACK FAN OPTION.
 7. CARRIER DOES NOT RECOMMEND INSTALLATION IN A PIT.
 8. UNIT CAN BE HANDLED USING THE FOUR TRUCK LIFT POCKETS.
 9. DIMENSIONS SHOWN IN INCHES (MM).
 10. WEIGHT DOES NOT INCLUDE REFRIGERANT CHARGE.
 11. FOR 38AP5 PIPING, REFER TO "CIRCUIT A LIQUID CONNECTION" AND "CIRCUIT A SUCTION CONNECTION" DIMENSIONS SHOWN.



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DATE	REVISIONS	DESCRIPTION	BY
04/09/12	0	38AP025-030 UNIT ASSY	E

Guide Specification for 10ENGLISH COMMUNICATION BUILDING CLASSROOM

112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38APD03056-3009J

HVAC Guide Specifications

Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 030

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001: 2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association).
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1 mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

2.01. General:

- A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.

2.02. Unit Cabinet:

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A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.

B. Control box access panels shall be hinged for service access.

2.03. Fans:

A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.

B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.

C. Shafts shall have inherent corrosion resistance.

D. Fan blades shall be statically and dynamically balanced.

E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

A. Compressors shall be rotary scroll.

B. Operating oil charge and a crankcase heater control oil dilution.

C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.

D. Staging of compressors shall provide unloading capability.

E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.

B. Tubes shall be cleaned, dehydrated, and sealed.

C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.

B. Standard line length (0-100 ft)

C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).

D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

A. Unit ComfortLink controls shall include:

1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.

2. Carrier Comfort Network® (CCN) system capability.

3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.

4. Current alarm list and alarm history list on display.

5. Automatic compressor lead/lag control.

6. Service run test capability.

7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).

8. Service diagnostic mode.

9. Self-contained low voltage control circuit.

Guide Specification for 10ENGLISH COMMUNICATION BUILDING CLASSROOM 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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10. Cycle condenser fans to maintain proper head pressure control.
 11. Capacity control with staging compressors.
 12. Alarm relay output to indicate when unit is in alarm condition.
 - B. Minimum unit safety devices shall include:
 1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.
- 2.08. Operating Characteristics:
- A. The capacity of the condensing unit shall meet or exceed ___ Btuh (___ kW) at a suction temperature of ___ F (___ C). The power consumption at full load shall not exceed ___ Btuh (___ kW).
 - B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ___ Btuh (___ kW) or greater at conditions of ___ cfm (___ L/s) entering-air temperature at the evaporator at ___ F (___ C) wet bulb and ___ F (___ C) dry bulb, and air entering the condensing unit at ___ F (___ C).
 - C. The system shall have an Energy Efficiency Ratio (EER) of ___ Btuh/watt or greater at standard AHRI conditions.
- 2.09. Electrical Requirements:
- A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.
- 2.10. Special Features:
- A. Optional E-coated copper-fin coils:
 1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.
 - B. Navigator™ Hand Held Display:
 1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
 2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
 3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
 4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
 5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
 6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.

Guide Specification for 10 ENGLISH COMMUNICATION BUILDING CLASSROOM

112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

Prepared By: BERNARD LLARENAS

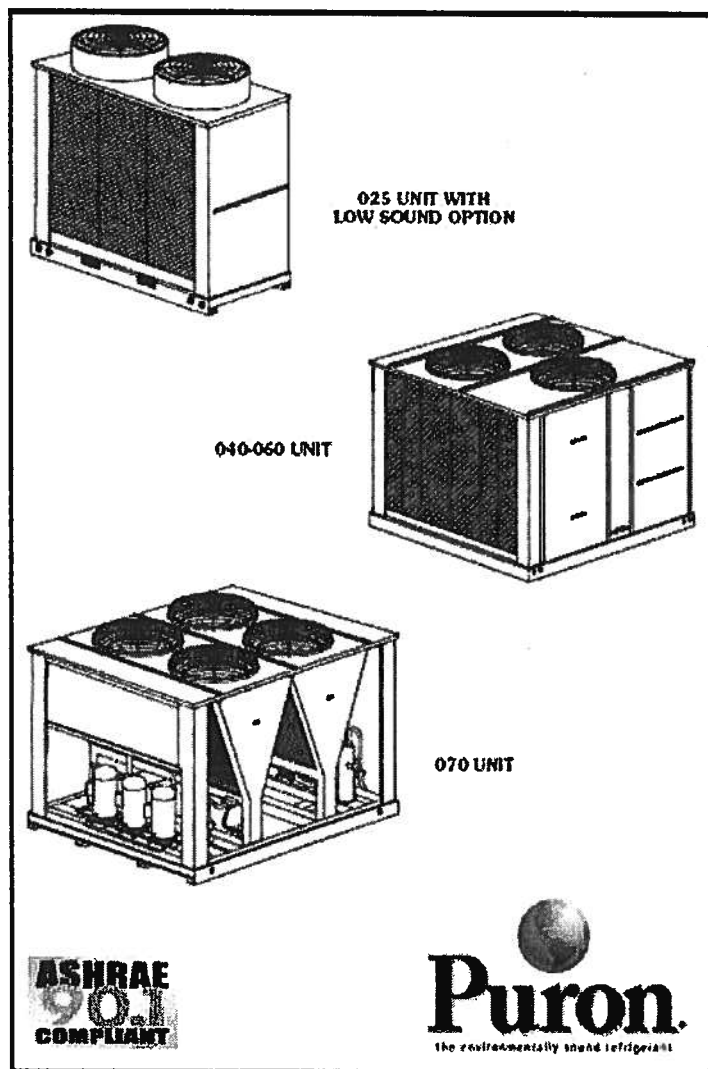
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7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
 8. Navigator module shall have raised surface buttons with positive tactile response.
 9. Navigator module shall be available as field-installed accessory for all units.
- C. BACnet Communication Option:
1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.
- D. Energy Management Module (EMM):
1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.



These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

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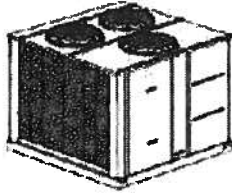
15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For 15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38APD
 Unit Size:.....50 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 No. of Circuits:.....Two Circuits

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....23, 50, 73, 100
 Std. Min. Outdoor Temp(Cooling):.....25.0 °F
 No. of Outdoor fans:.....3

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 8.1"
 Unit Width:.....7' 4.2"
 Unit Height:.....6' 1.0"
 Unit Operating Weight:.....2120 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD05056-3009J		1
	Base Unit	
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
33CS2PP2S-03	Thermostat for Outdoor Unit	1
30GT-911---062	Navigator for Outdoor Unit	1

Performance Summary For 15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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System:.....38APD050
 No. of Stages:.....Dual Stage
 System Quantity:.....1
 Altitude:.....600.0 ft
 EER @ ARI Conditions:.....11.1
 EER @ Ambient Conditions:.....10.2
 IPLV:.....14.9
 Capacity Split Percentage (A ckt/B ckt):.....48/52 %
 Suction Line Loss:.....2.0 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
26 - 50	5/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
51 - 75	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
76 - 100	7/8 (A), 7/8 (B)	1 5/8 (A), 2 1/8 (B)
101 - 125	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
126 - 150	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
151 - 175	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
176 - 200	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 7/8 (B)
51 - 75	7/8 (A), 7/8 (B)
76 - 100	7/8 (A), 7/8 (B)
101 - 125	7/8 (A), 7/8 (B)
126 - 150	7/8 (A), 7/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 3/8 (A), 1 3/8 (B)
26 - 50	1 5/8 (A), 1 5/8 (B)
51 - 75	1 5/8 (A), 1 5/8 (B)
76 - 100	1 5/8 (A), 2 1/8 (B)
101 - 125	2 1/8 (A), 2 1/8 (B)
126 - 150	2 1/8 (A), 2 1/8 (B)
151 - 175	2 1/8 (A), 2 1/8 (B)
176 - 200	2 1/8 (A), 2 1/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity:.....1
 PartNumber:.....38APD05056-3009J
 Unit Model:.....38APD
 Unit Size:.....50 Tons
 Voltage:.....208-3-60 V-Ph-Hz

Performance Summary For 15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Total Clg Cap.(Gross):.....	576.8	MBH
SDT:.....	127.9	°F
SDT2:.....	131.2	°F
SCT:.....	127.8	°F
SCT2:.....	131.1	°F
Clg Ent Air DB:.....	95.0	°F
Saturated Suction Temp:.....	45.0	°F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....	208-3-60	V-Ph-Hz
Unit MCA:.....	231.4	Amps
Unit MOCB:.....	250.0	Amps
Compressor Power:.....	52.30	kW
Voltage Range Min:.....	187	V
Voltage Range Max:.....	254	V
Compressor RLA:.....	48.1/51.3	
Compressor LRA:.....	245/300	
Compressor Quantity:.....	2 (Circ A), 2 (Circ B)	
Fan Motors Qty:.....	3	
Fan Motor FLA:.....	NA	Amps

Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Thermostat for Outdoor Unit	1
Navigator for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:.....96.7 dbA

Acoustic Notes:

1. The acoustic center of the unit is located at the geometric center of the unit.
2. All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

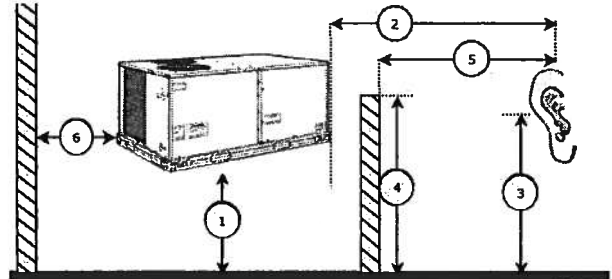
Performance Summary For 15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
Sound Power Levels at Unit's Acoustic Center (L _w), dB	78	98	95	94	95	92	88	85	82	103
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	39	72	79	86	91	92	90	86	81	97
Sound Press. Levels at Dist. Specified above (L _p), dB	53	73	70	69	69	66	63	60	57	78
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	14	47	54	61	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Summary For 15COMPUTER CENTER OIT BUILDING FIRST FLOOR

112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

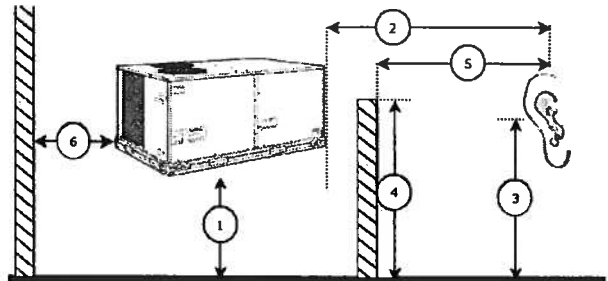
Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters:

Tag Name: 15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

Unit Model: 38APD
 Unit Size: 50 Tons
 System Type: Dx Cooling Only
 Refrigerant Type: PURON
 Compressor Quantity: 2 (Circ A), 2 (Circ B)
 Compressor Type: Scroll



Advanced Acoustics Parameters

- 1. Unit height above ground: 1.0 ft
- 2. Horizontal distance from unit to receiver: 20.0 ft
- 3. Receiver height above ground: 5.7 ft
- 4. Height of obstruction: 0.0 ft
- 5. Horizontal distance from obstruction to receiver: 0.0 ft
- 6. Horizontal distance from unit to obstruction: 0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Ove
Sound Power Levels at Unit's Acoustic Center (Lw), dB	78	98	95	94	95	92	88	85	82	103
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	39	72	79	86	91	92	90	86	81	97
Sound Press. Levels at Dist. Specified above (Lp), dB	53	73	70	69	69	66	63	60	57	78
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	14	47	54	61	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

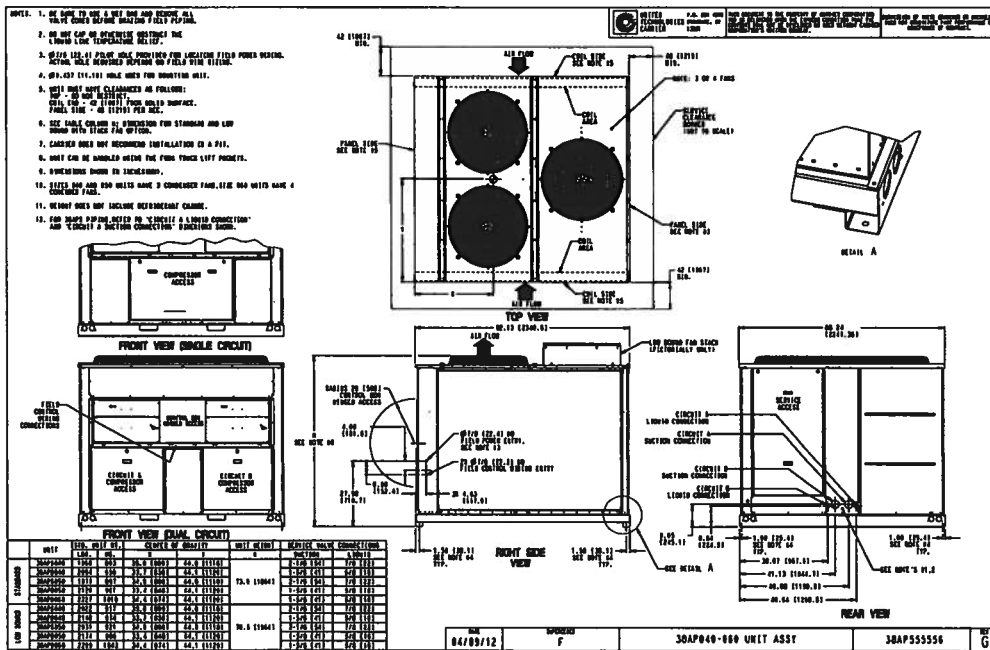
1. Estimated Sound Power levels - dB re: 1 picowatt
2. Estimated Sound Pressure levels - dB re: 20 micropascal
3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.
4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.
5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for 15COMPUTER CENTER OIT BUILDING FIRST FLOOR 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021

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Guide Specification for 15COMPUTER CENTER OIT BUILDING FIRST FLOOR

112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38APD05056-3009J

HVAC Guide Specifications Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 050

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001:2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association).
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1 mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

2.01. General:

- A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.

2.02. Unit Cabinet:

Guide Specification for 15COMPUTER CENTER OIT BUILDING FIRST FLOOR

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Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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- A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.
- B. Control box access panels shall be hinged for service access.

2.03. Fans:

- A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.
- B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
- C. Shafts shall have inherent corrosion resistance.
- D. Fan blades shall be statically and dynamically balanced.
- E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

- A. Compressors shall be rotary scroll.
- B. Operating oil charge and a crankcase heater control oil dilution.
- C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.
- D. Staging of compressors shall provide unloading capability.
- E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

- A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.
- B. Tubes shall be cleaned, dehydrated, and sealed.
- C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.
- B. Standard line length (0-100 ft)
- C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).
- D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

- A. Unit ComfortLink controls shall include:
 - 1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.
 - 2. Carrier Comfort Network® (CCN) system capability.
 - 3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.
 - 4. Current alarm list and alarm history list on display.
 - 5. Automatic compressor lead/lag control.
 - 6. Service run test capability.
 - 7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).
 - 8. Service diagnostic mode.
 - 9. Self-contained low voltage control circuit.

Guide Specification for 15COMPUTER CENTER OIT BUILDING FIRST FLOOR

112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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10. Cycle condenser fans to maintain proper head pressure control.
11. Capacity control with staging compressors.
12. Alarm relay output to indicate when unit is in alarm condition.

B. Minimum unit safety devices shall include:

1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed ____ Btuh (____ kW) at a suction temperature of ____ F (____ C). The power consumption at full load shall not exceed ____ Btuh (____ kW).
- B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ____ Btuh (____ kW) or greater at conditions of ____ cfm (____ L/s) entering-air temperature at the evaporator at ____ F (____ C) wet bulb and ____ F (____ C) dry bulb, and air entering the condensing unit at ____ F (____ C).
- C. The system shall have an Energy Efficiency Ratio (EER) of ____ Btuh/watt or greater at standard AHRI conditions.

2.09. Electrical Requirements:

- A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.

2.10. Special Features:

- A. Optional E-coated copper-fin coils:
 1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.
- B. Navigator™ Hand Held Display:
 1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
 2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
 3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
 4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
 5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
 6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.

Guide Specification for 15COMPUTER CENTER OIT BUILDING FIRST FLOOR

112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

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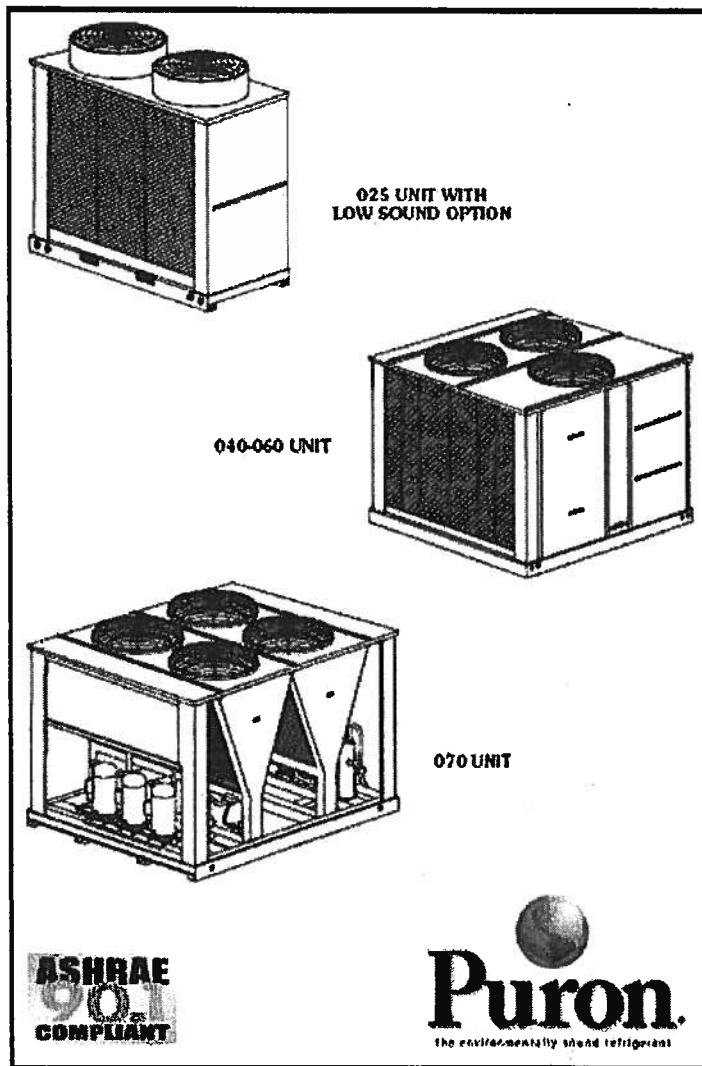
7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
 8. Navigator module shall have raised surface buttons with positive tactile response.
 9. Navigator module shall be available as field-installed accessory for all units.
- C. BACnet Communication Option:
1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.
- D. Energy Management Module (EMM):
1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



United Technologies

38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.



Gemini Select

These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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LECTURE HALL AUDITORIUM 112321

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....**38AUD**
 Unit Size:.....**20 Tons**
 Voltage:.....**208-3-60** V-Ph-Hz
 Condenser Coil:.....**Cu/Cu**
 No. of Stages:.....**Dual Stage**

System Parameter

System Quantity:.....1
 Refrigerant Type:.....**PURON**
 Compressor Quantity:.....**2**
 Compressor Type:.....**Scroll**
 Std. Capacity Steps:.....**50, 100**
 Std. Min. Outdoor Temp(Cooling):.....**35.0** °F
 No. of Outdoor fans:.....**4**

Outdoor Unit Dimensions and Weight

Unit Length:.....**7' 2.1"**
 Unit Width:.....**5' 7.1"**
 Unit Height:.....**4' 2.4"**
 Unit Shipping Weight:.....**978** lb
 Unit Operating Weight:.....**978** lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38AUDA25A0E5-0A0A0		1
	Base Unit	
	Cu/Cu Condensing Coil	1
	Standard Refrigerant Options	1
	Service Options - None	1
	Electrical Options - None	1
	Packaging Options - Standard	1
	Standard Electrical Mechanical Controls	1
	Refrig Circ/Compressor Staging - Two Circuits/ Dual Stage	1
Accessories		
EF680035	Liquid Line Solenoid Valve for Outdoor Unit	2
EF680037	Liquid Line Solenoid Valve for Outdoor Unit	2

Unit Report For LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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KM680004	Sight Glass for Outdoor Unit	2
33CS2PP2S-03	Thermostat for Outdoor Unit	1

The 38AUZ/AUD are furnished with filter drier which is factory provided (field installed). Additional filter driers can be purchased separately through RCD (Replacement Components Division). See the Product Library for Replacement Filter Drier Information for more information.

Performance Summary For LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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System:..... 38AUD025
No. of Stages:..... Dual Stage
System Quantity:..... 1
Altitude:..... 600.0 ft
EER @ ARI Conditions:..... 13.6
Suction Line Loss:..... 1.4 °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	3/8	1 1/8
26 - 50	1/2	1 1/8
51 - 75	5/8	1 3/8
76 - 100	5/8	1 3/8
101 - 125	5/8	1 3/8
126 - 150	5/8	1 3/8
151 - 175	5/8	1 3/8
176 - 200	3/4	1 3/8

Refer to the 38AU installation instructions for installation specific line sizing guidance

Outdoor Unit Parameters

Unit Quantity:..... 1
PartNumber:..... 38AUDA25A0E5-0A0A0
Unit Model:..... 38AUD
Unit Size:..... 20 Tons
Condenser Coil:..... Cu/Cu
Voltage:..... 208-3-60 V-Ph-Hz
Total Clg Cap.(Gross):..... 240.0 MBH
SDT:..... 119.2 °F
Clg Ent Air DB:..... 95.0 °F
Saturated Suction Temp:..... 45.0 °F

Outdoor Electrical Data

Unit Voltage:..... 208-3-60 V-Ph-Hz
Unit MCA:..... 73.7 Amps
Unit MOCP:..... 100.0 Amps
Total Compressor Power of Unit:..... 16.70 kW
Voltage Range Min:..... 187 V
Voltage Range Max:..... 253 V
Compressor RLA:..... 30.1
Compressor LRA:..... 225
Compressor Quantity:..... 2
Fan Motors Qty:..... 4
Fan Motor FLA:..... 1.5 Amps

Notice: Outdoor unit elect. data is based on 208-3-60
 Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

FIOPS and Accessories Information

FIOPS	Quantity
Accessories	Quantity
Liquid Line Solenoid Valve for Outdoor Unit	2
Liquid Line Solenoid Valve for Outdoor Unit	2
Sight Glass for Outdoor Unit	2

Performance Summary For LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Thermostat for Outdoor Unit	1
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A-Weighted	Outdoor Unit (dB)	Indoor Unit (dB,Ducted)
Total Level	85.2	NA
63Hz	64.8	NA
125Hz	68.9	NA
250Hz	71.4	NA
500Hz	82.8	NA
1000Hz	79.0	NA
2000Hz	74.2	NA
4000Hz	69.0	NA
8000Hz	61.9	NA
Sound Message	Sound for AUD025	

Acoustic Notes:

1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
2. The acoustic center of the unit is located at the geometric center of the unit.

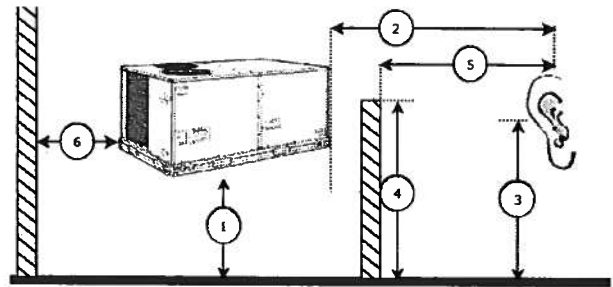
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Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	91	85	80	86	79	73	68	63	93
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	65	69	71	83	79	74	69	62	85
Sound Press. Levels at Dist. Specified above (Lp), dB	66	60	55	61	54	48	43	38	69
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	40	44	47	58	54	50	44	37	61

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

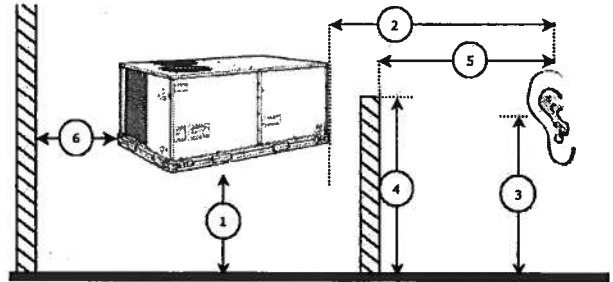
Acoustic Summary For LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

02:16PM

Outdoor Unit Parameters:

Tag Name: **LECTURE HALL AUDITORIUM 112321**
 Unit Model: **38AUD**
 Unit Size: **20 Tons**
 System Type: **Dx Cooling Only**
 Refrigerant Type: **PURON**
 Compressor Quantity: **2**
 Compressor Type: **Scroll**



Advanced Acoustics Parameters

- 1. Unit height above ground: **1.0 ft**
- 2. Horizontal distance from unit to receiver: **20.0 ft**
- 3. Receiver height above ground: **5.7 ft**
- 4. Height of obstruction: **0.0 ft**
- 5. Horizontal distance from obstruction to receiver: **0.0 ft**
- 6. Horizontal distance from unit to obstruction: **0.0 ft**

Detailed Acoustics Information

Octave Band Center Frequency, Hz	63	125	250	500	1k	2k	4k	8k	Overall
Sound Power Levels at Unit's Acoustic Center (Lw), dB	91	85	80	86	79	73	68	63	93
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	65	69	71	83	79	74	69	62	85
Sound Press. Levels at Dist. Specified above (Lp), dB	66	60	55	61	54	48	43	38	69
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	40	44	47	58	54	50	44	37	61

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

- 1. 38AUZ/D/Q units sound ratings are in accordance with AHRI 270-2008 - Sound Rating of Outdoor Unitary Equipment.
- 2. The acoustic center of the unit is located at the geometric center of the unit.
- 3. All estimated sound power levels, dB re 1 Picowatt should not be guaranteed or certified as being the actual sound power levels.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

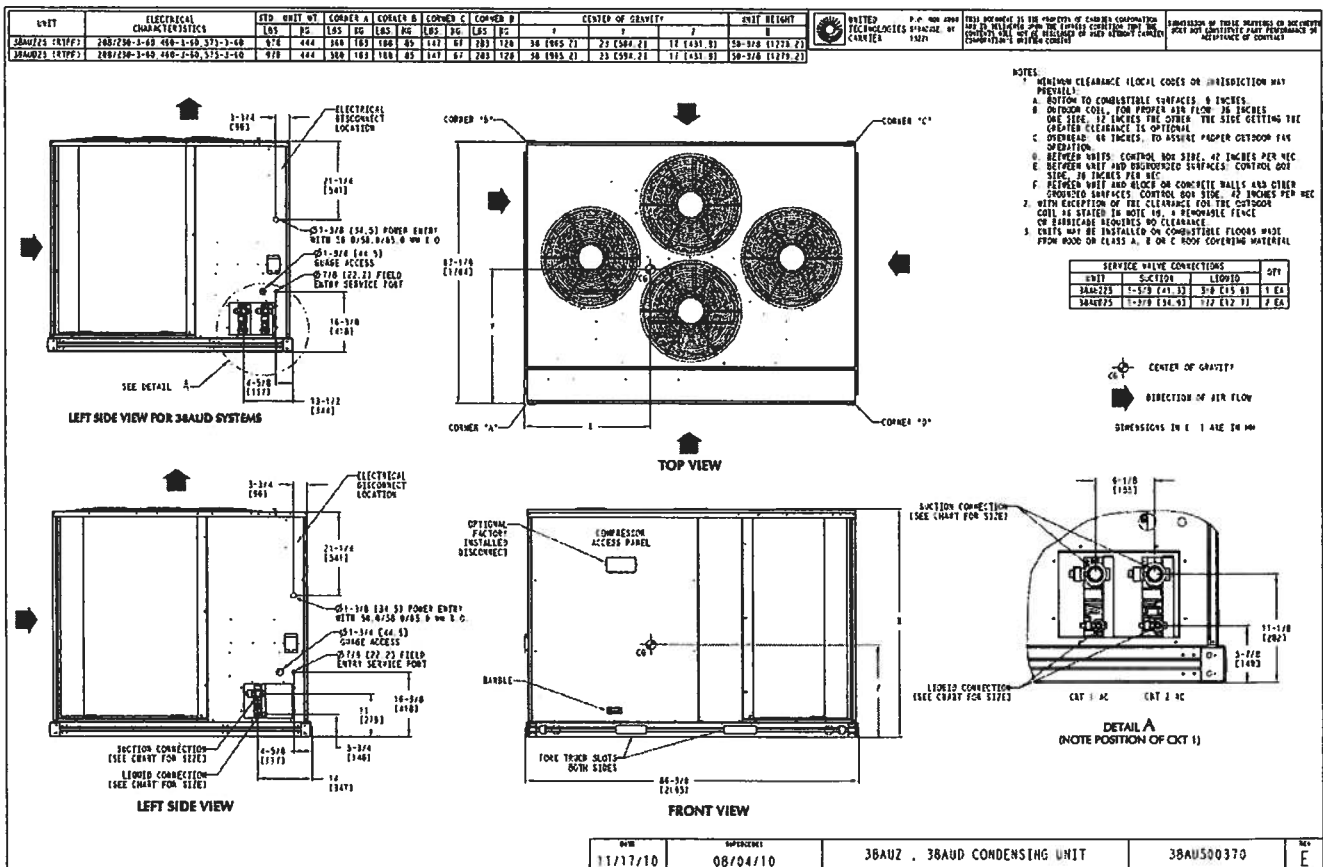
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Certified Drawing for LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

12/01/2021

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Guide Specification for LECTURE HALL AUDITORIUM 112321

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38AUDA25A0E5-0A0A0

Commercial Air-Cooled Condensing Units HVAC Guide Specifications

Size: 25

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

QUALITY ASSURANCE

- 1.01. Unit shall be rated in accordance with AHRI Standard 360.
- 1.02. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- 1.03. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.
- 1.04. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- 1.05. Air-cooled condenser coils for hermetic scroll compressor units (38AUZ) and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.
- 1.06. Unit shall be manufactured in a facility registered to ISO 9001:2000 manufacturing quality standard.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
 - B. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.
- 2.03. Condenser Fans:
 - A. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
 - B. Fan blades shall be balanced.
 - C. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
 - D. Condenser fan and motor shaft shall be corrosion resistant.
- 2.04. Compressor:
 - A. Compressor shall be of the hermetic scroll type.

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- B. Compressor shall be mounted on rubber grommets.
- C. Compressors shall include overload protection.
- D. Compressors shall be equipped with a crankcase heater.
- E. Compressor shall be equipped with internal high pressure and high temperature protection.
- F. 38AUZ*16 and 25 sizes shall use two scroll compressors manifold together.

2.05. Condenser Coils:

- A. Standard Aluminum fin - Copper Tube Coils:
 - 1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - 2. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
 - 3. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
- B. Optional Copper-fin evaporator and condenser coils:
 - 1. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - 2. Galvanized steel tube sheets shall not be acceptable.
 - 3. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

2.07. Controls and Safeties:

- A. Minimum control functions shall include:
 - 1. Control wire terminal blocks.
 - 2. Compressor lockout on auto-reset safety until reset from thermostat.
 - 3. Each unit shall utilize the Comfort Alert Diagnostic Board that provides:
 - a. System Pressure Trip fault code indication
 - b. Short Cycling fault code indication
 - c. Locked Rotor fault code indication
 - d. Open Circuit fault code indication
 - e. Reverse Phase 3 fault code indication
 - f. Welded Contactor fault code indication
 - g. Low Voltage fault code indication
 - h. Anti-short cycle protection
 - i. Phase reversal protection
- B. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
 - 1. High discharge pressure cutout.
 - 2. Low pressure cutout.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____ F. The power consumption at full load shall not exceed _____ kW.
- B. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____ F wet bulb and _____ F dry bulb, and air entering the condensing unit at _____ F.
- C. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
- D. Standard unit shall be capable to operate up to 125_F (52_C) and down to 40_F (4_C)

2.09. Electrical Requirements:

- A. Nominal unit electrical characteristics shall be _____ v, 3-ph, 60 Hz. The unit shall be capable of satisfactory operation

Guide Specification for LECTURE HALL AUDITORIUM 112321

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within voltage limits of ____ v to ____ v.

- B. Unit electrical power shall be single-point connection.
- C. Unit control circuit shall contain a 24-v transformer for unit control.

2.10. Special Features:

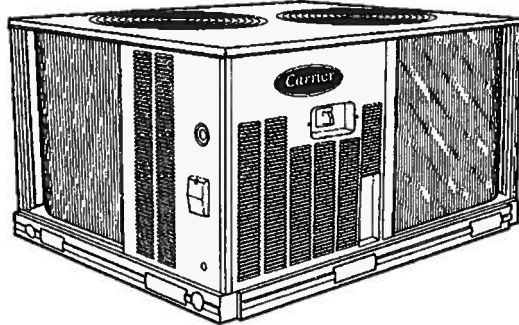
A. Thermostat Controls:

1. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
2. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.

**COMMERCIAL SPLIT SYSTEMS
38AUZ 6 to 20 Ton
38AUD 10 to 20 Ton**

AIR-COOLED COOLING ONLY CONDENSING UNITS with PURON® REFRIGERANT

These light commercial air-cooled cooling only condensing units are easily connected by refrigerant lines and low voltage control wiring to matching Carrier packaged air-handling units or other suitable evaporator units. They are ideal for new construction or renovation applications where quality and performance are required.



**Manufactured in facility registered to
ISO 9001:2008 quality standard**

BASE UNIT STANDARD FEATURES:

- Puron® (R-410A) HFC refrigerant partial charge
- Single circuit units (38AUZ) are available in 1 or 2 stage cooling
- Two circuit units (38AUD) are available in 2 stage cooling
- All models utilize round tube plate fin coils.
- Standard one year parts warranty and five year compressor parts warranty. Extended 2-5 year parts and 1-5 labor coverage are available.
- Cooling operating range up to 125°F (52°C) and down to 35°F (2°C) as standard.
- Available Motormaster® I control for cooling operation down to -20°F (-29°C)
- Fully hermetic scroll compressor with crankcase heater
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement. 24-volt 75va control system
- High and low pressure switches.

- Comfort Alert™ Diagnostic Board:
 - LED Go-No-Go and fault code
 - Built in time guard anti-short cycle
 - Phase protection
 - Fault code retention logic
 - Low voltage compressor contactor protector
- UL and UL, Canada apply to standard units; 575-volt units UL, Canada only.
- Full perimeter base rails with built-in rigging adapters and fork truck slots
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Direct drive permanently lubricated condenser fan motors
- All units factory run tested
- Compressors mounted on independent vibration isolators

HSS BUILDING 50T 112221

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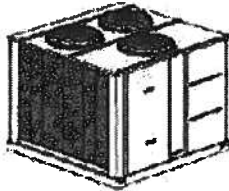
HSS BUILDING 50T 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For HSS BUILDING 50T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38APD
 Unit Size:.....50 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 No. of Circuits:.....Two Circuits

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....23, 50, 73, 100
 Std. Min. Outdoor Temp(Cooling):.....25.0 °F
 No. of Outdoor fans:.....3

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 8.1"
 Unit Width:.....7' 4.2"
 Unit Height:.....6' 1.0"
 Unit Operating Weight:.....2120 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD05056-3009J		1
	Base Unit	
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
33CS2PP2S-03	Thermostat for Outdoor Unit	1
30GT-911--062	Navigator for Outdoor Unit	1

Performance Summary For HSS BUILDING 50T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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System: **38APD050**
No. of Stages: **Dual Stage**
System Quantity: **1**
Altitude: **600.0** ft
EER @ ARI Conditions: **11.1**
EER @ Ambient Conditions: **10.2**
IPLV: **14.9**
Capacity Split Percentage (A ckt/B ckt): **48/52** %
Suction Line Loss: **2.0** °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
26 - 50	5/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
51 - 75	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
76 - 100	7/8 (A), 7/8 (B)	1 5/8 (A), 2 1/8 (B)
101 - 125	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
126 - 150	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
151 - 175	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)
176 - 200	7/8 (A), 7/8 (B)	2 1/8 (A), 2 1/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 7/8 (B)
51 - 75	7/8 (A), 7/8 (B)
76 - 100	7/8 (A), 7/8 (B)
101 - 125	7/8 (A), 7/8 (B)
126 - 150	7/8 (A), 7/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 3/8 (A), 1 3/8 (B)
26 - 50	1 5/8 (A), 1 5/8 (B)
51 - 75	1 5/8 (A), 1 5/8 (B)
76 - 100	1 5/8 (A), 2 1/8 (B)
101 - 125	2 1/8 (A), 2 1/8 (B)
126 - 150	2 1/8 (A), 2 1/8 (B)
151 - 175	2 1/8 (A), 2 1/8 (B)
176 - 200	2 1/8 (A), 2 1/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity: **1**
 PartNumber: **38APD05056-3009J**
 Unit Model: **38APD**
 Unit Size: **50 Tons**
 Voltage: **208-3-60** V-Ph-Hz
 Total Clg Cap.(Gross): **576.8** MBH

Performance Summary For HSS BUILDING 50T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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SDT:.....127.9 °F
 SDT2:.....131.2 °F
 SCT:.....127.8 °F
 SCT2:.....131.1 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....231.4 Amps
 Unit MOCP:.....250.0 Amps
 Compressor Power:.....52.30 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....254 V
 Compressor RLA:.....48.1/51.3
 Compressor LRA:.....245/300
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Fan Motors Qty:.....3
 Fan Motor FLA:.....NA Amps

Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Thermostat for Outdoor Unit	1
Navigator for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:.....96.7 dbA

Acoustic Notes:

1. The acoustic center of the unit is located at the geometric center of the unit.
2. All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

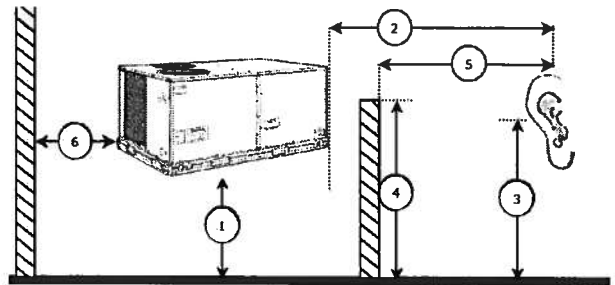
Performance Summary For HSS BUILDING 50T 112221

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Advanced Acoustics Parameters

- 1. Unit height above ground:.....1.0 ft
- 2. Horizontal distance from unit to receiver:.....20.0 ft
- 3. Receiver height above ground:.....5.7 ft
- 4. Height of obstruction:.....0.0 ft
- 5. Horizontal dist. from obstruction to receiver:.....0.0 ft
- 6. Horizontal dist. from unit to obstruction:.....0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
Sound Power Levels at Unit's Acoustic Center (Lw), dB	78	98	95	94	95	92	88	85	82	103
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	39	72	79	86	91	92	90	86	81	97
Sound Press. Levels at Dist. Specified above (Lp), dB	53	73	70	69	69	66	63	60	57	78
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	14	47	54	61	66	66	64	61	56	72

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

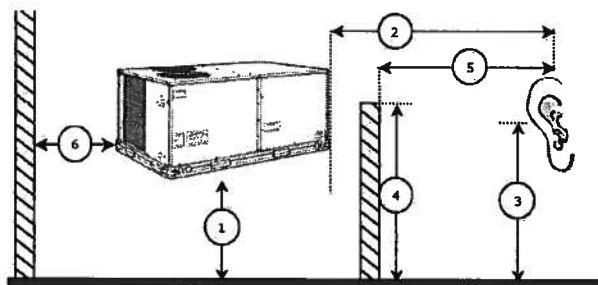
Acoustic Summary For HSS BUILDING 50T 112221

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Outdoor Unit Parameters:

Tag Name:.....HSS BUILDING 50T 112221
 Unit Model:.....38APD
 Unit Size:.....50 Tons
 System Type:.....Dx Cooling Only
 Refrigerant Type:.....PURON
 Compressor Quantity:.....2 (Circ A), 2 (Circ B)
 Compressor Type:.....Scroll



Advanced Acoustics Parameters

1. Unit height above ground:.....1.0 ft
 2. Horizontal distance from unit to receiver:.....20.0 ft
 3. Receiver height above ground:.....5.7 ft
 4. Height of obstruction:.....0.0 ft
 5. Horizontal distance from obstruction to receiver:.....0.0 ft
 6. Horizontal distance from unit to obstruction:.....0.0 ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
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Acoustic Note:

1. Estimated Sound Power levels - dB re: 1 picowatt
2. Estimated Sound Pressure levels - dB re: 20 micropascal
3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.
4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.
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Certified Drawing for HSS BUILDING 50T 112221

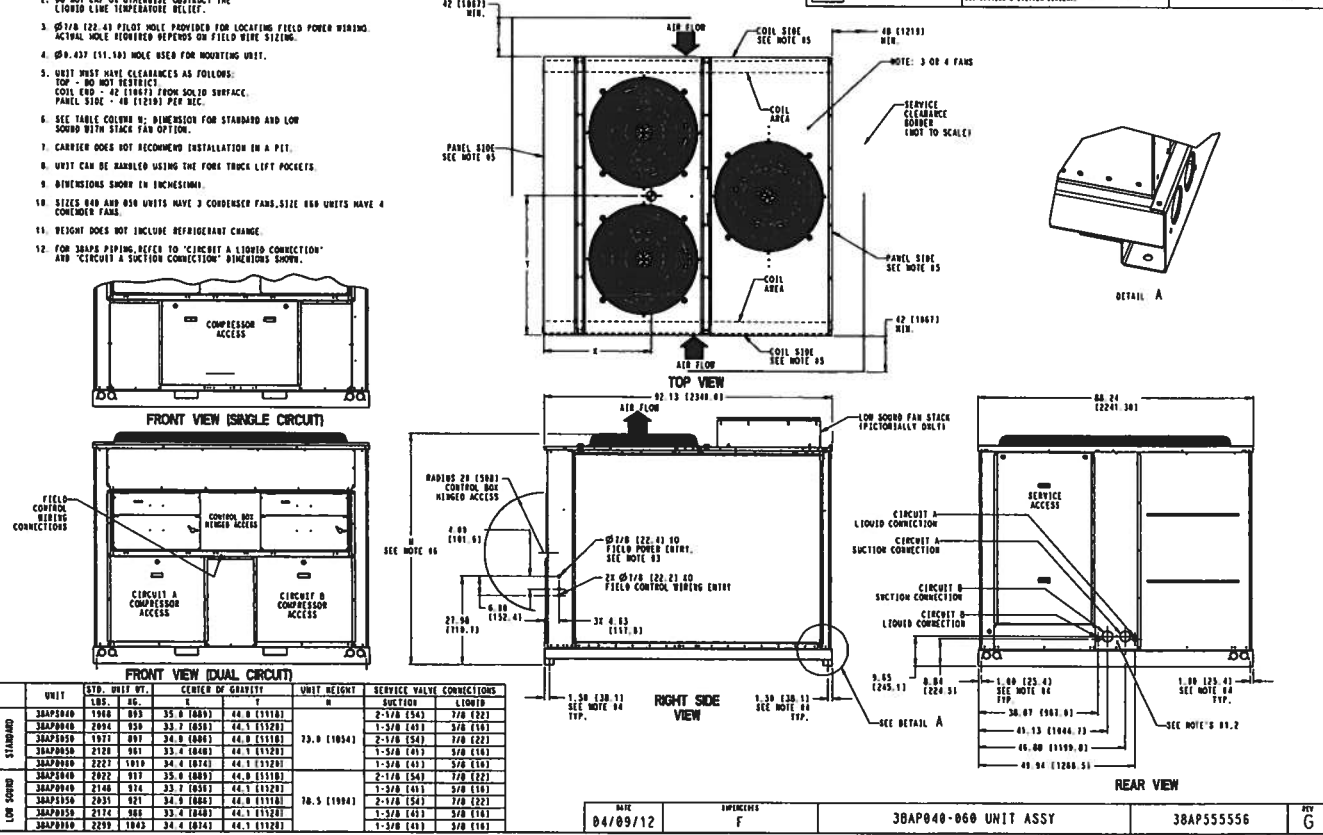
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- NOTES:**
1. BE SURE TO USE A WET BAG AND REMOVE ALL VALVE CORES BEFORE BRAZING FIELD PIPING.
 2. DO NOT CAP OR OTHERWISE OBSTRUCT THE LIQUID LINE TEMPERATURE RELIEF.
 3. Ø1/8" (22.4) PILOT HOLE PROVIDED FOR LOCATING FIELD POWER WIRING. ACTUAL HOLE REQUIRED DEPENDS ON FIELD WIRE SIZES.
 4. Ø9.437 (11.13) HOLE USED FOR MOUNTING UNIT.
 5. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
 TOP - NO RESTRICTION
 COIL END - 42 (1047) FROM SOLID SURFACE.
 PANEL SIDE - 48 (1219) MIN.
 6. SEE TABLE COLUMN H; DIMENSION FOR STANDARD AND LOW SOUND WITH STACK FAN OPTION.
 7. CARRIER DOES NOT RECOMMEND INSTALLATION IN A PIT.
 8. UNIT CAN BE HANDED USING THE FORK TRUCK LIFT POCKETS.
 9. DIMENSIONS SHOWN IN INCHES(MM).
 10. SIZES 040 AND 050 UNITS HAVE 3 CONDENSER FANS. SIZE 060 UNITS HAVE 4 CONDENSER FANS.
 11. WEIGHT DOES NOT INCLUDE REFRIGERANT CHARGE.
 12. FOR BRASS PIPING, ACCESS TO "CIRCUIT A LIQUID CONNECTION" AND "CIRCUIT B SUCTION CONNECTION" DIMENSIONS SHOWN.

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	UNIT	STD. UNIT WT.		CENTER OF GRAVITY		UNIT HEIGHT	SERVICE VALVE CONNECTIONS	
		SBS	SG	E	T		SUCTION	LIQUID
STANDARD	38AP040	1940	893	35.0 (883)	42.0 (1067)		2-1/2" (54)	3/8" (22)
	38AP050	2004	920	33.7 (857)	42.1 (1072)	73.0 (1854)	1-3/8" (43)	3/8" (22)
	38AP055	1972	897	34.0 (863)	42.0 (1067)		2-1/2" (54)	3/8" (22)
	38AP060	2128	961	33.4 (848)	42.1 (1072)		1-5/8" (41)	3/8" (22)
LOW SOUND	38AP060	2227	1010	34.4 (874)	42.1 (1072)		1-3/8" (43)	3/8" (22)
	38AP060	1922	875	35.0 (883)	42.0 (1067)		2-1/2" (54)	3/8" (22)
	38AP060	2146	974	33.7 (857)	42.1 (1072)		1-3/8" (43)	3/8" (22)
	38AP050	2031	921	34.0 (863)	42.0 (1067)	70.5 (1794)	2-1/2" (54)	3/8" (22)
	38AP055	2172	988	33.4 (848)	42.1 (1072)		1-3/8" (43)	3/8" (22)
	38AP060	2239	1043	34.4 (874)	42.1 (1072)		1-3/8" (43)	3/8" (22)

DATE	REVISIONS	DESCRIPTION	REV
04/09/12	F	38AP040-060 UNIT ASSY	G

Guide Specification for HSS BUILDING 50T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

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GUIDE SPECIFICATIONS – 38APD05056-3009J

HVAC Guide Specifications Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 050

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001:2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association).
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.

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B. Control box access panels shall be hinged for service access.

2.03. Fans:

- A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.
- B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
- C. Shafts shall have inherent corrosion resistance.
- D. Fan blades shall be statically and dynamically balanced.
- E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

- A. Compressors shall be rotary scroll.
- B. Operating oil charge and a crankcase heater control oil dilution.
- C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.
- D. Staging of compressors shall provide unloading capability.
- E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

- A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.
- B. Tubes shall be cleaned, dehydrated, and sealed.
- C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.
- B. Standard line length (0-100 ft)
- C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).
- D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

- A. Unit ComfortLink controls shall include:
 - 1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.
 - 2. Carrier Comfort Network® (CCN) system capability.
 - 3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.
 - 4. Current alarm list and alarm history list on display.
 - 5. Automatic compressor lead/lag control.
 - 6. Service run test capability.
 - 7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).
 - 8. Service diagnostic mode.
 - 9. Self-contained low voltage control circuit.
 - 10. Cycle condenser fans to maintain proper head pressure control.
 - 11. Capacity control with staging compressors.

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12. Alarm relay output to indicate when unit is in alarm condition.

B. Minimum unit safety devices shall include:

1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed ___ Btuh (___ kW) at a suction temperature of ___ F (___ C). The power consumption at full load shall not exceed ___ Btuh (___ kW).
- B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ___ Btuh (___ kW) or greater at conditions of ___ cfm (___ L/s) entering-air temperature at the evaporator at ___ F (___ C) wet bulb and ___ F (___ C) dry bulb, and air entering the condensing unit at ___ F (___ C).
- C. The system shall have an Energy Efficiency Ratio (EER) of ___ Btuh/watt or greater at standard AHRI conditions.

2.09. Electrical Requirements:

- A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.

2.10. Special Features:

A. Optional E-coated copper-fin coils:

1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.

B. Navigator™ Hand Held Display:

1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.
7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
8. Navigator module shall have raised surface buttons with positive tactile response.
9. Navigator module shall be available as field-installed accessory for all units.

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C. BACnet Communication Option:

1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.

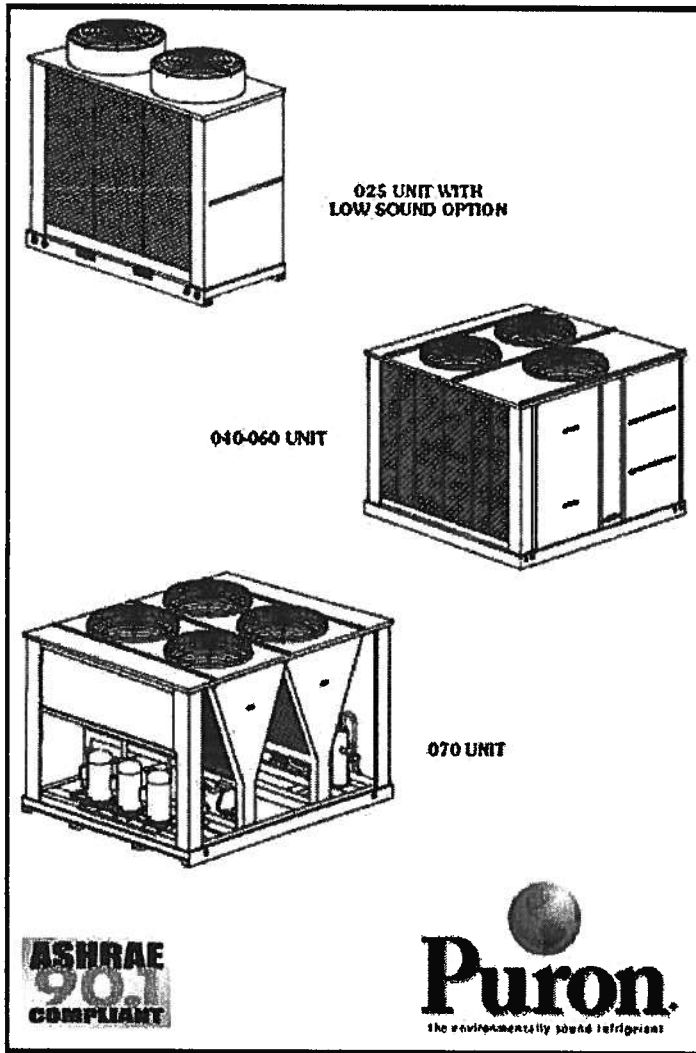
D. Energy Management Module (EMM):

1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.



Gemini™ Select

These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

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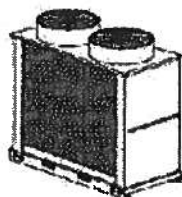
HSS BUILDING 30T 112221

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Guide Specifications
Feature Sheet**

Unit Report For HSS BUILDING 30T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
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Outdoor Unit Parameters

Unit Quantity:.....1
 Unit Model:.....38APD
 Unit Size:.....30 Tons
 Voltage:.....208-3-60 V-Ph-Hz
 No. of Circuits:.....Two Circuits

System Parameter

System Quantity:.....1
 Refrigerant Type:.....PURON
 Compressor Quantity:.....1 (Circ A), 1 (Circ B)
 Compressor Type:.....Scroll
 Std. Capacity Steps:.....50, 100
 Std. Min. Outdoor Temp(Cooling):.....32.0 °F
 No. of Outdoor fans:.....2

Outdoor Unit Dimensions and Weight

Unit Length:.....7' 4.2"
 Unit Width:.....3' 4.3"
 Unit Height:.....6' 1.1"
 Unit Operating Weight:.....1264 lb

Warranty Information Outdoor (Note: for US & Canada only)

First Year - Parts Only (Standard)

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
Base Unit - Outdoor		
38APD03056-3009J		1
	Base Unit	
	Standard Line Length, RTPF	1
	Single Point Power, Terminal Block	1
	Export packaging, (Skid + Bag)	1
	Scrolling Marquee, EMM, BACnet Communication	1
	Copper E-Coat Fin / Copper Tube	1
Accessories		
33CS2PP2S-03	Thermostat for Outdoor Unit	1
30GT-911---062	Navigator for Outdoor Unit	1

Performance Summary For HSS BUILDING 30T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
 Prepared By: BERNARD LLARENAS

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System:.....**38APD030**
No. of Stages:.....**Dual Stage**
System Quantity:.....**1**
Altitude:.....**600.0** ft
EER @ ARI Conditions:.....**10.8**
EER @ Ambient Conditions:.....**10.0**
IPLV:.....**12.8**
Capacity Split Percentage (A ckt/B ckt):.....**50/50** %
Suction Line Loss:.....**2.0** °F
 Condensing unit is rated in accordance with ARI 365.

Typical Liquid and Suction Line Sizing

Pipe Length	Liquid Line Size	Suction Line Size
0 - 25	5/8 (A), 5/8 (B)	1 1/8 (A), 1 1/8 (B)
26 - 50	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
51 - 75	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
76 - 100	5/8 (A), 5/8 (B)	1 3/8 (A), 1 3/8 (B)
101 - 125	5/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
126 - 150	5/8 (A), 5/8 (B)	1 5/8 (A), 1 5/8 (B)
151 - 175	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)
176 - 200	7/8 (A), 7/8 (B)	1 5/8 (A), 1 5/8 (B)

Do NOT exceed 200 ft max linear separation or 75 ft vertical liquid lift. Oil management is critical on split systems for compressor reliability. Refrigerant circuit warranty may be void beyond these limits.

Liquid Line Sizing

Pipe Length	Liquid Line Size
0 - 25	5/8 (A), 5/8 (B)
26 - 50	5/8 (A), 5/8 (B)
51 - 75	5/8 (A), 5/8 (B)
76 - 100	5/8 (A), 5/8 (B)
101 - 125	5/8 (A), 5/8 (B)
126 - 150	5/8 (A), 5/8 (B)
151 - 175	7/8 (A), 7/8 (B)
176 - 200	7/8 (A), 7/8 (B)

Suction Line Sizing

Pipe Length	Suction Line Size
0 - 25	1 1/8 (A), 1 1/8 (B)
26 - 50	1 3/8 (A), 1 3/8 (B)
51 - 75	1 3/8 (A), 1 3/8 (B)
76 - 100	1 3/8 (A), 1 3/8 (B)
101 - 125	1 5/8 (A), 1 5/8 (B)
126 - 150	1 5/8 (A), 1 5/8 (B)
151 - 175	1 5/8 (A), 1 5/8 (B)
176 - 200	1 5/8 (A), 1 5/8 (B)

Dual suction riser may be required, refer to PD.

Outdoor Unit Parameters

Unit Quantity:.....**1**
 PartNumber:.....**38APD03056-3009J**
 Unit Model:.....**38APD**
 Unit Size:.....**30 Tons**
 Voltage:.....**208-3-60** V-Ph-Hz
 Total Clg Cap.(Gross):.....**361.7** MBH

Performance Summary For HSS BUILDING 30T 112221

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SDT:.....129.2 °F
 SDT2:.....129.2 °F
 SCT:.....129.1 °F
 SCT2:.....129.1 °F
 Clg Ent Air DB:.....95.0 °F
 Saturated Suction Temp:.....45.0 °F

38AP units are not designed for Refrigeration Duty. Unit operational range should be reviewed to ensure that operation at full and part load conditions with Saturated Suction Temperatures at or below 30 F are avoided. Operation below 30 F SST may result in ice build-up on evaporator coil resulting in liquid flood-back and possible compressor failure. Return/Mixed Air Temperature should not be below 55F. If the customer requires differently, please contact application engineering.

Outdoor Electrical Data

Unit Voltage:.....208-3-60 V-Ph-Hz
 Unit MCA:.....138.8 Amps
 Unit MOCP:.....175.0 Amps
 Compressor Power:.....32.50 kW
 Voltage Range Min:.....187 V
 Voltage Range Max:.....254 V
 Compressor RLA:.....55.8/55.8
 Compressor LRA:.....340/340
 Compressor Quantity:.....1 (Circ A), 1 (Circ B)
 Fan Motors Qty:.....2
 Fan Motor FLA:.....NA Amps
 Notice: Outdoor unit elect. data is based on 208-3-60

FIOPS and Accessories Information

FIOPS	Quantity
Standard Line Length, RTPF	1
Export packaging, (Skid + Bag)	1
Scrolling Marquee, EMM, BACnet Communication	1
Accessories	Quantity
Thermostat for Outdoor Unit	1
Navigator for Outdoor Unit	1

Liquid line check valve(s) prevent charge migration to compressor. These valves may be required for certain applications, refer to PD.

Acoustic Information

A-Wgt Outdoor Sound Power Level:.....94.9 dbA

Acoustic Notes:

1. The acoustic center of the unit is located at the geometric center of the unit.
2. All estimated sound power levels, dB re 1 Pico watt should not be guaranteed or certified as being the actual sound power levels.

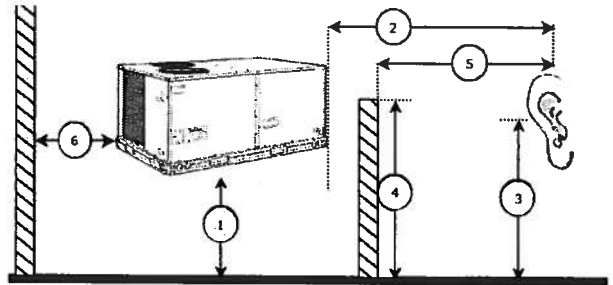
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Advanced Acoustics Parameters

- 1. Unit height above ground:..... 1.0 ft
- 2. Horizontal distance from unit to receiver:..... 20.0 ft
- 3. Receiver height above ground:..... 5.7 ft
- 4. Height of obstruction:..... 0.0 ft
- 5. Horizontal dist. from obstruction to receiver:..... 0.0 ft
- 6. Horizontal dist. from unit to obstruction:..... 0.0 ft



Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
Sound Power Levels at Unit's Acoustic Center (Lw), dB	77	96	93	92	93	90	87	84	80	101
A-Wgtd Sound Power Levels at Unit's Acoustic Center (LwA), dBA	37	70	77	84	89	90	88	85	79	95
Sound Press. Levels at Dist. Specified above (Lp), dB	52	72	69	68	68	66	62	59	56	76
A-Wgtd Sound Press. Levels at Dist. Specified above (LpA), dBA	13	46	53	59	65	66	64	60	55	71

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

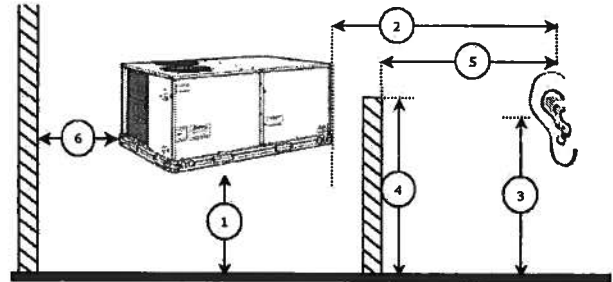
Acoustic Summary For HSS BUILDING 30T 112221

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Outdoor Unit Parameters:

Tag Name:.....**HSS BUILDING 30T 112221**
 Unit Model:.....**38APD**
 Unit Size:.....**30 Tons**
 System Type:.....**Dx Cooling Only**
 Refrigerant Type:.....**PURON**
 Compressor Quantity:.....**1 (Circ A), 1 (Circ B)**
 Compressor Type:.....**Scroll**



Advanced Acoustics Parameters

- 1. Unit height above ground:.....**1.0** ft
- 2. Horizontal distance from unit to receiver:.....**20.0** ft
- 3. Receiver height above ground:.....**5.7** ft
- 4. Height of obstruction:.....**0.0** ft
- 5. Horizontal distance from obstruction to receiver:.....**0.0** ft
- 6. Horizontal distance from unit to obstruction:.....**0.0** ft

Detailed Acoustics Information

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Over
Sound Power Levels at Unit's Acoustic Center (L _w), dB	77	96	93	92	93	90	87	84	80	101
A-Wgtd Sound Power Levels at Unit's Acoustic Center (L _{wA}), dBA	37	70	77	84	89	90	88	85	79	95
Sound Press. Levels at Dist. Specified above (L _p), dB	52	72	69	68	68	66	62	59	56	76
A-Wgtd Sound Press. Levels at Dist. Specified above (L _{pA}), dBA	13	46	53	59	65	66	64	60	55	71

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Acoustic Note:

- 1. Estimated Sound Power levels - dB re: 1 picowatt
- 2. Estimated Sound Pressure levels - dB re: 20 micropascal
- 3. Estimated sound levels given above are assumed to originate at the acoustic center of the unit. The acoustic center of the unit is located at the projection of the condensing unit's geometric center of its base.

4. Sound power levels shown above were determined in accordance with ARI standard 370 for large outdoor refrigeration and air conditioning equipment.

5. Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the ARI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Certified Drawing for HSS BUILDING 30T 112221

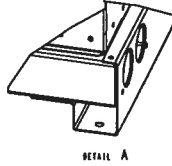
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12/01/2021

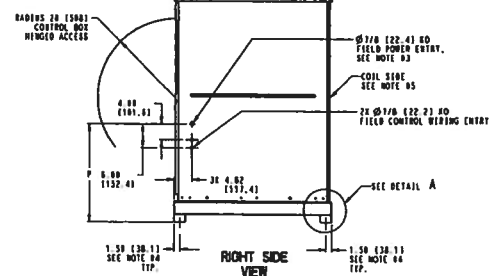
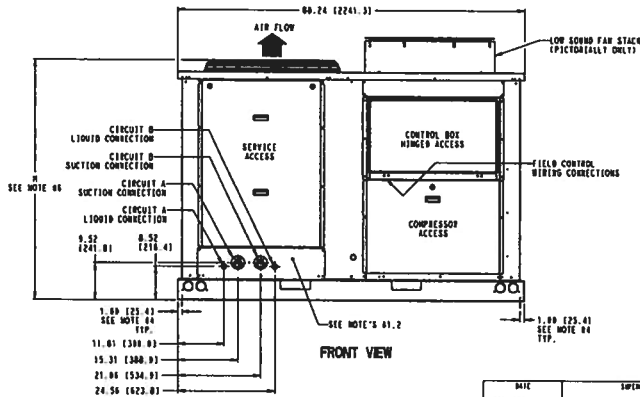
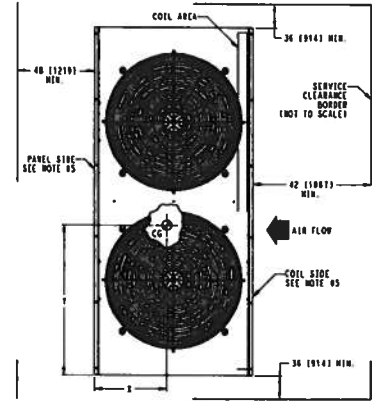
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UNIT	STD. UNIT WT.		CENTER OF GRAVITY		UNIT HEIGHT	POWERM ENTRY	SERVICE VALVE CONNECTIONS	
	LSB.	KG	X	Y			SECTION	LOWVIB
STANDARD								
38AP025	1871	489	17.8 (452)	30.9 (937)	61.9 (1549)	24.9 (632)	1-3/8 (41)	5/8 (16)
38AP025	1895	497	17.8 (452)	31.0 (940)			1-3/8 (41)	5/8 (16)
38AP027	1240	347	18.2 (462)	31.0 (935)			1-3/8 (41)	5/8 (16)
38AP027	1250	351	18.2 (462)	31.0 (935)	73.1 (1857)	26.9 (937)	1-3/8 (41)	5/8 (16)
38AP030	1240	345	18.2 (462)	31.5 (953)			1-3/8 (41)	5/8 (16)
38AP030	1244	347	18.2 (462)	31.6 (955)			1-3/8 (41)	5/8 (16)
38AP025	1117	305	17.8 (452)	30.9 (937)	64.5 (1660)	24.9 (632)	1-3/8 (41)	5/8 (16)
38AP025	1131	312	17.8 (452)	31.0 (940)			1-3/8 (41)	5/8 (16)
38AP027	1216	319	18.2 (462)	31.0 (935)			1-3/8 (41)	5/8 (16)
38AP027	1294	367	18.2 (462)	31.0 (935)	70.8 (1796)	26.9 (937)	1-3/8 (41)	5/8 (16)
38AP030	1287	362	18.2 (462)	31.5 (953)			1-3/8 (41)	5/8 (16)
38AP030	1309	369	18.2 (462)	31.6 (955)			1-3/8 (41)	5/8 (16)

- NOTES:
- BE SURE TO USE A NET BAG AND REMOVE ALL VALVE CORES BEFORE MAKING FIELD PIPING.
 - DO NOT CAP OR OTHERWISE OBSTRUCT THE LIQUID LINE TEMPERATURE BELLET.
 - Ø 7/8 (22.1) PILOT HOLE PROVIDED FOR LOCATING FIELD POWER WIRING. ACTUAL HOLE REQUIRED DEPENDS ON FIELD WIRE SIZING.
 - Ø 9.437 (241.18) HOLE USED FOR MOUNTING UNIT.
 - UNIT MUST HAVE CLEARANCES AS FOLLOWS:
 TOP - DO NOT RESTRICT
 COIL END - 42 (1067) FROM SOLID SURFACE.
 PANEL SIDE - 48 (1219) PER REC
 - SEE TABLE COLUMN H, DIMENSION FOR STANDARD AND LOW SOUND WITH STACK FAN OPTION.
 - CARRIER DOES NOT RECOMMEND INSTALLATION IN A PIT.
 - UNIT CAN BE HANDLED USING THE FOUR TRUCK LIFT POCKETS.
 - DIMENSIONS SHOWN IN INCHES (MM).
 - WEIGHT DOES NOT INCLUDE REFRIGERANT CHARGE.
 - FOR DRAP PIPING, REFER TO "CIRCUIT A LIQUID CONNECTION" AND "CIRCUIT A SUCTION CONNECTION" DIMENSIONS SHOWN.



UNITED TECHNOLOGIES AIRCARE, 4000 W. WASHINGTON AVENUE, CHICAGO, IL 60649
 THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS RETURNED UPON THE SPECIAL CONDITION THAT THE CONTENTS WILL NOT BE REPRODUCED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.
 INSTALLATION OF THESE UNITS MUST BE ACCORDING TO THE INSTRUCTIONS AND RECOMMENDATIONS PROVIDED WITH EACH UNIT TO ENSURE PROPER PERFORMANCE AND ACCEPTANCE OF CONTRACT.



DATE	REVISIONS	DESCRIPTION	BY
04/09/12	0	38AP025-030 UNIT ASSY	E

Guide Specification for HSS BUILDING 30T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

02:16PM



GUIDE SPECIFICATIONS – 38APD03056-3009J

HVAC Guide Specifications Commercial Air-Cooled Condensing Units with Puron® Refrigerant (R-410A)

Size: 030

Part 1: General

SYSTEM DESCRIPTION

- 1.01. Outdoor-mounted, air-cooled condensing unit with Puron® refrigerant (R-410A) suitable for on-the-ground or rooftop installation. The 38APD unit shall have two independent refrigeration circuits and shall consist of two, four, five or six rotary scroll compressors. Unit shall have air-cooled coils, propeller-type condenser fans, a control box, and shall discharge condenser air vertically upward as shown on certified drawings. Unit shall be used in refrigeration circuit with a central station air-handling unit or direct-expansion coils.

QUALITY ASSURANCE

- 1.01. Unit performance shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Institute) Standard 365, latest edition (U.S.A).
- 1.02. Unit construction shall comply with latest edition of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15 Safety Code, UL 1995, and ASME (American Society of Mechanical Engineers) applicable codes (U.S.A. codes).
- 1.03. The management system governing the manufacturer of the product is ISO (International Organization for Standardization) 9001:2015 certified.
- 1.04. Base unit shall be constructed in accordance with UL (Underwriters Laboratories) standards and CSA (Canadian Standards Association).
- 1.05. Painted parts shall withstand 1000 hours in constant neutral salt spray under ASTM B117 conditions with a 1mm scribe per ASTM D1654. After test, painted parts shall show no signs of wrinkling or cracking, no loss of adhesion, no evidence of blistering, and the mean creepage shall not exceed 1/4 in. (Rating = 4 per ASTM D1654) on either side of the scribe line.
- 1.06. Design pressure shall be 650 psig (4482 kPa).
- 1.07. Unit shall be functional checked at the factory.
- 1.08. Lifting holes shall be provided to facilitate rigging.

DELIVERY, STORAGE, AND HANDLING

- 1.01. Unit shall be shipped as single package and shall be stored and handled per unit manufacturer's recommendations.

WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

Part 2: Products

EQUIPMENT

- 2.01. General:
 - A. Factory assembled, single-piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressors, nitrogen holding charge, and special features required prior to field start-up.
- 2.02. Unit Cabinet:
 - A. Cabinet shall be galvanized steel casing with a baked enamel powder or pre-painted finish.

Guide Specification for HSS BUILDING 30T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

02:16PM

- B. Control box access panels shall be hinged for service access.

2.03. Fans:

- A. Condenser fans shall be direct-drive propeller type, discharging air vertically upward.
- B. All condenser fan motors shall be totally enclosed 3-phase type with permanently lubricated ball bearings, class F insulation and internal, automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
- C. Shafts shall have inherent corrosion resistance.
- D. Fan blades shall be statically and dynamically balanced.
- E. Condenser-fan openings shall be equipped with PVC-coated steel wire safety guards.

2.04. Compressors:

- A. Compressors shall be rotary scroll.
- B. Operating oil charge and a crankcase heater control oil dilution.
- C. Compressors shall be mounted on two rails having rubber in shear vibration isolators.
- D. Staging of compressors shall provide unloading capability.
- E. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have either internal line break thermal and current overload protection or external current overload modules with compressor temperature sensors.

2.05. Condenser Coils:

- A. Coil shall be air-cooled microchannel heat exchanger (MCHX) and shall have a series of flat tubes containing a series of multiple, parallel flow microchannels layered between the refrigerant manifolds. Microchannel coils shall consist of a two-pass arrangement. Coil construction shall consist of aluminum alloys for the fins, tubes and manifolds in combination with a corrosion-resistant coating on the tubes.
- B. Tubes shall be cleaned, dehydrated, and sealed.
- C. Assembled condenser coils shall be leak tested and pressure tested at 650 psig (4482 kPa).

2.06. Refrigeration Components:

- A. Refrigeration circuit components shall include liquid line temperature relief device, pressure transducers, liquid line shutoff valve, suction shutoff valve, suction line accumulators, nitrogen holding charge, and compressor oil.
- B. Standard line length (0-100 ft)
- C. Long line length check valves are required for liquid line installation on all linear line length applications of more than 100 ft (30.5 m) to prevent liquid migration during unit shutdown. For any 025-030 size dual circuit unit application where evaporator is located higher than the condensing unit, check valves are required for linear line length above 55 ft (16.8 m).
- D. Units shall include one factory-installed suction line accumulator for each refrigerant circuit.

2.07. Controls and Safeties:

- A. Unit ComfortLink controls shall include:
 - 1. Scrolling marquee display module shall be used for accessing condensing unit information, reading sensor values, and testing the condensing unit. The scrolling marquee display is a 4-key, 4-character, 16-segment LED (light-emitting diode) display. Eleven mode LEDs shall be located on the display as well as an Alarm Status LED. The display shows all of the ComfortLink control codes (with 60-character expandable clear language), plus set points, time of day, temperatures, pressures, and superheat. Additional information can be displayed all at once with the accessory Navigator™ display.
 - 2. Carrier Comfort Network® (CCN) system capability.
 - 3. Unit control with standard pressure transducer, discharge pressure transducer and suction temperature thermistors.
 - 4. Current alarm list and alarm history list on display.
 - 5. Automatic compressor lead/lag control.
 - 6. Service run test capability.
 - 7. Compressor minimum run time (3 minutes) and minimum off time (3 minutes).
 - 8. Service diagnostic mode.
 - 9. Self-contained low voltage control circuit.
 - 10. Cycle condenser fans to maintain proper head pressure control.
 - 11. Capacity control with staging compressors.

Guide Specification for HSS BUILDING 30T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP

Prepared By: BERNARD LLARENAS

02:16PM

12. Alarm relay output to indicate when unit is in alarm condition.

B. Minimum unit safety devices shall include:

1. Solid-state compressor lockout to provide optional reset capability at the space thermostat if any of the following safety devices trip and shut off compressor.
 - a. Compressor lockout protection for internal or external overload.
 - b. Low pressure protection.
 - c. High pressure protection (high pressure switch or internal).
 - d. Compressor reverse rotation protection.
 - e. Loss of charge protection.
 - f. Low suction superheat protection.
 - g. Short cycle protection.
 - h. Suction and discharge pressure transducers.
 - i. Circuit breakers or fuses for short circuit protection of compressors.

2.08. Operating Characteristics:

- A. The capacity of the condensing unit shall meet or exceed ___ Btuh (___ kW) at a suction temperature of ___ F (___ C). The power consumption at full load shall not exceed ___ Btuh (___ kW).
- B. The combination of the condensing unit and the evaporator or air handling unit shall have a total net cooling capacity of ___ Btuh (___ kW) or greater at conditions of ___ cfm (___ L/s) entering-air temperature at the evaporator at ___ F (___ C) wet bulb and ___ F (___ C) dry bulb, and air entering the condensing unit at ___ F (___ C).
- C. The system shall have an Energy Efficiency Ratio (EER) of ___ Btuh/watt or greater at standard AHRI conditions.

2.09. Electrical Requirements:

- A. All unit power wiring shall enter unit cabinet at a single location. Unit shall be provided with a XL starter and a terminal block.

2.10. Special Features:

A. Optional E-coated copper-fin coils:

1. Coil shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss; 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 3000 hours salt spray per ASTM B117-90. Coil construction shall be copper-fins mechanically bonded to copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between the coil and pan.

B. Navigator™ Hand Held Display:

1. Portable hand held display module with a minimum of 4 lines and 20 characters per line, of clear English, French, Spanish, or Portuguese language.
2. Display menus shall provide clear language descriptions of all menu items, operating modes, configuration points and alarm diagnostics. Reference to factory codes shall not be accepted.
3. RJ-14 connection plug shall allow display module to be connected to factory-installed receptacle.
4. Industrial grade coiled extension cord shall allow the display module to be moved around the unit.
5. Magnets shall hold the display module to any sheet metal panel to allow hands-free operation.
6. Display module shall have NEMA (National Electrical Manufacturers Association, U.S.A.) 4x housing suitable for use in outdoor environments.
7. Display shall have back light and contrast adjustment for easy viewing in bright sunlight or night conditions.
8. Navigator module shall have raised surface buttons with positive tactile response.
9. Navigator module shall be available as field-installed accessory for all units.

Guide Specification for HSS BUILDING 30T 112221

Project: HA-1702-21-11 UOG IFB B21-17 PURCHASING HVAC EQUIP
Prepared By: BERNARD LLARENAS

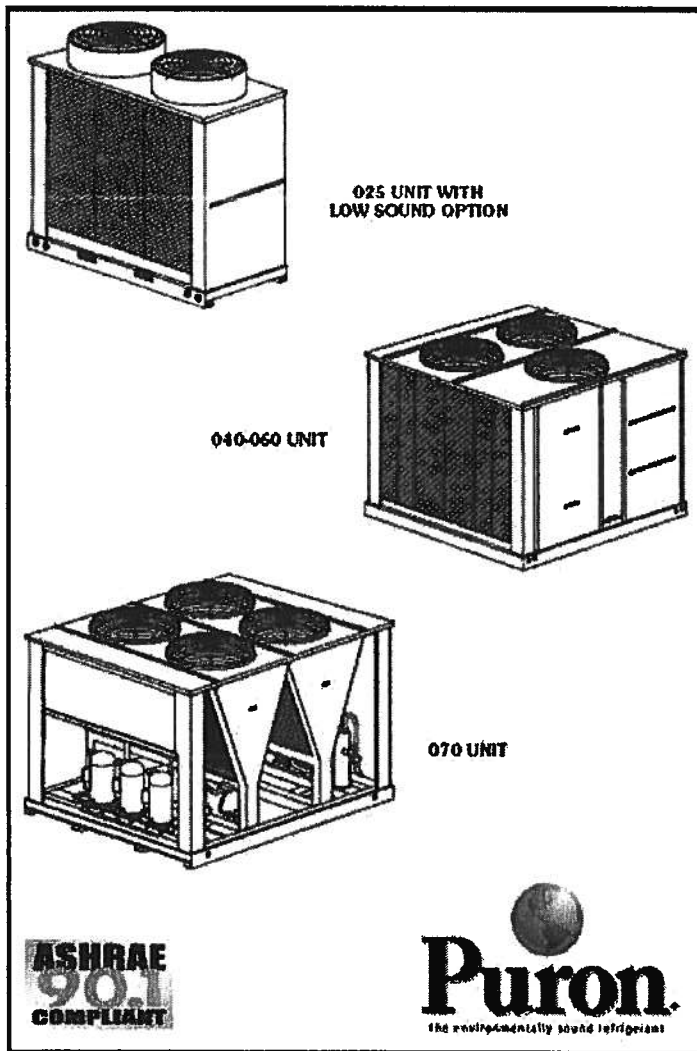
02:16PM

- C. BACnet Communication Option:
 - 1. The BACnet Communication option shall provide factory-installed communication capability with a BACnet MS/TP network. Allows integration with i-Vu® Open control system or a BACnet building automation system.
- D. Energy Management Module (EMM):
 - 1. The EMM shall provide remote set point, demand limit control, and percent capacity input. The EMM is not needed with use of BACnet or LON accessory kit.



38AP GEMINISELECT AIR COOLED CONDENSING UNITS

These condensing units feature two independent refrigerant circuits, each circuit having its own highly efficient scroll compressors. All units are factory wired, nitrogen charged, and easily connected by refrigerant lines and control wiring to the matching Carrier air-handling unit (40RU or 39 Series). Various combinations of these extremely flexible condensing units matched with air handlers provide customized packages to cover a wide range of cooling requirements. Low roof-load weight distribution and weatherproof construction make these units excellent selections for rooftop or on-the-ground installations. These 38AP condensing units are well suited for commercial or industrial air conditioning applications.



These dependable split systems match Carrier's 40RU or 39 Series indoor-air handlers with the versatile outdoor 38AP condensing units for a wide selection of commercial cooling solutions.

- Split condensing units compatible with ASHRAE 90.1
- Chlorine-free, non-ozone depleting Puron refrigerant (R-410A)
- Condenser coils feature the Novation® heat exchanger with microchannel coil technology
- 38APS single-circuit unit has up to 3 rotary scroll compressors
- 38APD unit has up to 6 rotary scroll compressors with 2 independent circuits
- Standard scroll compressor units operate as low as 33% (single circuit) or 15% (dual circuit) of nominal capacity
- Optional digital scroll compressors allow incremental unloading down to 10% (single circuit) or 5% (dual circuit) of nominal capacity for VAV applications
- Protection against high discharge and low suction refrigerant pressure, and low oil pressure

Nelia Bangayan uploaded new files to your request for B21-17 BID SUBMISSION

SharePoint Online <no-reply@sharepointonline.com>

Mon 12/6/2021 11:31 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

**New files were uploaded to your
request for "B21-17 BID
SUBMISSION"**

Nelia_Bangayan_UOG BID NO. B21-17 ALL BUSINESS ENTERPRISES
CORPORATION

[See new files](#)

**EXHIBIT B
UOG BID NO.B21-17**

PURCHASING OF HVAC EQUIPMENT OF THE UNIVERSITY OF GUAM

Scope of Work

1. Scope of the Work

This bid is to select and award a contract for the purchasing of multiple Air Conditioning units for the University of Guam.

2. Bid Submittals

a) Bid prices shall be submitted on Bid Price Form. All prices shall include shipping, delivery, and manufacturer's warranty. Any additional cost not stated in this bid but are required to complete the delivery must be included in the bidder's price.

b) Bidder shall submit an electronic copy to the Share folder that UOG procurement office provides.

Contractor is required to submit prices for Table 1.0.

Bid award to be based on the required items in Table 1.0 and to be based on price, compliance to the specification, services, delivery and any requirements in the BID package, BID NO. B21-17.

Table 1.0 Bid Price Form

No.	ITEM DESCRIPTION					BID Price
1	LOCATION	UNIT	TONS	VOLTAGE	TVX	
	RFK BUILDING SECOND FLOOR	1	50	208 / 230	2 EA. - 25	120,002.50
	RFK BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	107,574.60
	20RFK BUILDING FIRST FLOOR MAIN ENTRANCE	1	15	208 / 230	2 EA. -	67,372.50
	7.5RFK BUILDING FIRST FLOOR AV ROOM	1	15	208 / 230	2 EA. -	67,372.50
	7.5RFK BUILDING FIRST FLOOR OFFICES	1	20	208 / 230	2 EA. - 10	80,461.60
	PIP (GLE) SECOND FLOOR	1	20	208 / 230	2 EA. -	80,461.60
	10SCIENCE BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	107,574.60
	20SCIENCE BUILDING SECOND FLOOR	1	40	208 / 230	2 EA. -	107,574.60
	20SCIENCE BUILDING THIRD FLOOR	1	20	208 / 230	2 EA. -	80,461.60
	10ENGLISH COMMUNICATION BUILDING CLASSROO	1	30	208 / 230	2 EA. -	98,359.60
	15COMPUTER CENTER OIT					

BUILDING FIRST FLOOR	1	50	277 / 460	2 EA. - 25	120,002.50
LECTURE HALL AUDITORIUM	1	20	277 / 460	2 EA. - 10	80,461.60
HSS BUILDING	2	50	277 / 460	2 EA. - 25	240,005.00
HSS BUILDING	1	30	277 / 460	2 EA. - 15	98,359.60
Grand Total					\$1,456,044.40

Delivery: 18-20 weeks after receipt of purchase order

18 TO 20 WEEKS FACTORY ;EAD TIME PLUS 5 WEEKS SHIPPING.

ALL UNITS MANUFACTURED WITH COPPER TUBES, COPPER FINS PLUS FACTORY PHENOLIC COATING FOR CORROSION.

NELIA V. BARGAYAN - DEC. 6, 2021

SIGNATURE OF BIDDER DATE

OPTIONS

For Table 2.0 Options, the bidder's price will not be included as part of the total price evaluation for this bid award. UOG reserves the right to exercise any or part of the options requested. Insert any additional options recommended.

Table 2.0 Options

No.	Item Description	Price
1	Services for Maintenance and upkeep. Quarterly preventive Maintenance. 1,200 per unit discounted to 850.00 per unit X 15 units = 12,750 x 4 quarters equals;	\$51,000.00
2	Services for disposal. heavy equipment rental 750.00 per unit X 15 = \$ 11,250.00	
3	Replacement/trade in program To be discussed upon award.	

OTHER NOTES:

1. These specifications have been written to describe minimum equipment and performance requirements to be supplied by the equipment manufacturer bidding. Reasonable tests may be conducted upon delivery before acceptance.

2. The University reserves the right to accept and/or reject any and all bids, to waive any defects, irregularities, or specification discrepancies and to award the bid deemed to be in the best interest of the University.

NOTE: Name and title of author of specifications:

University of Guam

Glenn Leon Guerrero, Director, Facilities Management & Services, Email: glennlg@triton.uog.edu

Emily Gumataotao, Supply Management Administrator, Email: eggumataotao@triton.uog.edu

DO NOT CASH THIS CHECK UNLESS YOU CAN SEE THE WATERMARK. HOLD UP TO LIGHT TO VIEW. READ WARNING MESSAGE BELOW.



P.O. BOX BW · HAGÁTÑA, GUAM 96932

101-511
1214 NO. 1020651

DATE: DECEMBER 03, 2021

NOT VALID AFTER 90 DAYS FROM DATE OF ISSUE

PAY TO THE ORDER OF UNIVERSITY OF GUAM

\$ 218,410.00***

*****TWO HUNDRED EIGHTEEN THOUSAND FOUR HUNDRED TEN AND NO/100*****

MEMO: UOG BID NO. B21-17

TWO SIGNATURES REQUIRED OVER \$100,000
DAMIEN C. AMBASSADOR III
ARLENE C. AMBASSADOR I

DOLLA

CASHIER'S CHECK

WARNING: DO NOT CASH THIS CHECK UNLESS YOU CAN SEE THE WATERMARK. TO VERIFY WATERMARK HOLD UP TO LIGHT TO VIEW. RUB GRAY SIGNATURE AREA TO SEE COLOR CHANGE. CHECK BACKGROUND IS IN GREEN COLOR.

⑈ 1020651⑈ ⑆ 21405115⑆ 3110140⑈ 81

Received BY Kaimana Terkaje
Kaimata
DEC. 3, 2021

INVITATION FOR BID (IFB)
UOG BID No. B21-17

The University of Guam is soliciting sealed bids for:
PURCHASING OF HVAC EQUIPMENT

Information may be obtained from: UOG Procurement Office

2925

-3010

uog.edu

tion Building, Mangilao, Guam

urement to obtain a copy of the Bid Package. Once your request is received, you will
cess and ability to download the PDF file.

00 is ONLY required to submit a bid offer due before bid deadline. Payment may be
t card at the UOG Business Office, Cashier Services located at the UOG Administration
4 pm. Pay by phone is available by contacting 735-2923/45/46. Please reference Bid
king payment. Send proof of receipt to uog.bids@triton.uog.edu.

.....
bid Packages is on **Monday, November 22, 2021** on or before 2:00 P.M. via electronic
submission to electronic Bid Share folder provided by UOG Procurement Office. Bid Opening will take place at 3:00
pm through Zoom link provided to all bidders.

*Note: Prospective bidders/respondents will automatically be registered with information provided on
form when requesting for bid documents. Contact information should be accurate to ensure you receive
any notices regarding any changes or updates to the IFB/RFP. UOG will not be liable for failure to
provide notice to any party who inputs inaccurate contact information.*

/s/Thomas W. Krise, Ph.D.
President

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2022

CONTRACTOR'S LICENSE

LOU LEON GUERRERO
Governor of Guam

JOSH TENORIO
Lt. Governor of Guam

Pursuant to the provisions of Chapter VII Title XI of the Government of Guam and the Rules and Regulations of the Contractors License Board, the Executive Director of Contractors hereby issues this license to:

All Business Enterprises Corporation

To engage in the business or act in the capacity of a contractor in the following classifications

A, B, C3, C4, C11, C13, C13A, C16, C17, C18, C19, C20, C33, C37, C40, C42, C44, C51, C55, C56 & C68 (Epoxy, Generator Maintenance)

This license is the property of the Executive Director of Contractors, not transferable, and shall be returned to the Executive Director upon demand when suspended, revoked, or invalidated for any reason. It becomes void if not renewed on or before the expiration date.


Signature of RME
RME # 7733


Signature of LICENSEE
License # 8112

GRT # 200200441

Certificate # C-0621-0929

Issued: June 29, 2021

Expires: June 30, 2022




JAMES M. CASALLO
CLB BOARD CHAIRMAN


CECIL "BUDDY" L. ORSINI
EXECUTIVE DIRECTOR



ADMINISTRATION & FINANCE
Consolidated Procurement Office

AMENDMENT 1

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: October 29, 2021

PURCHASING OF HVAC EQUIPMENT

This is to notify all prospective offerors of the following amendment:

- 1.1 **PRE-BID Conference and Site visit is scheduled for Wednesday, November 3, 2021 at 10:00am. Meet-up will be at Facilities Maintenance Services, 1st Floor Bay. Please contact 735-2377 for directions.**

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: ALL BUSINESS ENTERPRISES CORPORATION

NELLA F. BANGSAYAN NOV. 30, 2021
Print Name/Signature/Date

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges Senior College and University Commission and is an equal opportunity provider and employer.

AMENDMENT 2

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: October 29, 2021

PURCHASING HVAC EQUIPMENT

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 **REPLACE** "Cover Page" with corrected form as set forth in the attached.
- 1.2 **ADD:** after Cover Page, p.2 "Bidders Registry" with corrected form as set forth in the attached.
- 1.3 **REPLACE** "Table of Contents" with corrected form as set forth in the attached.
- 1.4 **REPLACE** "Instructions to Bidders" with corrected forms as set forth in the attached.
- 1.5 **ADD:** after ATTACHMENT I, "Register of Wage Determinations Under The Service Contract Act"
- 1.6 **REPLACE** Exhibit B "Bid Price Form" with corrected forms as set forth in the attached.

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: ALL BUSINESS ENTERPRISES CORPORATION

NELIA F. BANGAYAN

NOV. 30, 2021

Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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ADMINISTRATION & FINANCE
Consolidated Procurement Office

**INVITATION FOR BID (IFB)
 UOG BID NO. B21-17**

**The University of Guam is soliciting sealed bids for the
 PURCHASING OF HVAC EQUIPMENT
 For The University of Guam**

Copies of the Bid Package and Instructions and Information may be obtained from:

OFFICE: UOG Procurement Office
TELEPHONE: (671) 735-2925
FAX NO.: (671) 735-3010
LOCATION: UOG Administration Building (ANNEX BUILDING) Mangilao, Guam
E-MAIL: uog.bids@triton.uog.edu

A non-refundable fee of \$25.00 is required to obtain a hard copy of the bid package. Payment may be made via cash, check or credit card at the UOG Business Office, Cashier Services located at the UOG Administration Building Mon-Fri from 8 am - 4 pm. Pay by phone is available from 8 am - 4 pm. You may schedule an appointment with our cashier services at 735-2923/45/46, please reference Bid number and title when making payment. Send proof of receipt to the Procurement Office.

In accordance with 5 G.C.A. §5220(a), a digital copy of this solicitation shall be posted on UOG's website at uog.bids@triton.uog.edu. No fees shall be assessed to potential bidders or other parties for accessing or downloading a copy of this solicitation from UOG's website. Potential bidders who access or download a copy of this solicitation from UOG's website must register their contact information with UOG to ensure that they receive any notices regarding any changes or updates to this solicitation. In accordance with 5 G.C.A. §5220(b), UOG shall not be liable for failure to provide notice to any party who accesses or downloads a copy of this solicitation from UOG's website and who fails to register their contact information with UOG as required herein. Please have subject line reference as indicated the *UOG Bid number, Bid Title, and your Company or Requestor's Name to register for UOG's Bid Distribution Registry.*

Deadline for Submission of Bid Packages is on Monday, November 22, 2021 on or before 2:00 P.M. via electronic submission to electronic Bid Share folder provided by UOG Procurement Office.

/s/ Thomas W. Krise, Ph.D.
 President

University of Guam is an equal opportunity employer and provider.
 This Advertisement is paid for by University of Guam Funds.

AUTHORIZED FOR ANNOUNCEMENT

Thomas W. Krise, Ph.D. President



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ADMINISTRATION & FINANCE
Consolidated Procurement Office

**UOG BIDDERS DISTRIBUTION REGISTRY FORM
FOR UOG BID NO. B21-17**

INFORMATION ON INTERESTED BIDDER FOR BID REGISTRY ENTRY MUST BE RECEIVED BY
UOG'S PROCUREMENT OFFICE PRIOR TO RECEIVING ANY DISTRIBUTED COPY SET OF THIS IFB
(WITH OR WITHOUT THE BID FEE)

NOTICE:

ALL DISTRIBUTIONS OF THIS BID PACKET MUST BE RECORDED IN THE BID'S REGISTRY (LOG) AT UOG'S CONSOLIDATED PROCUREMENT OFFICE.

THE BID REGISTRY ALSO PROVIDES THE NECESSARY CONTACT INFORMATION NEEDED TO DISTRIBUTE FUTURE AMENDMENTS, ADDENDUMS, AND CLARIFICATIONS FOR THIS BID PACKET.

UOG PAYMENT RECEIPT NO. _____ DATE: 11 / 30 / 21 TIME: _____

PAYMENT METHOD: [] CASH [] CHECK NO. _____ [] CREDIT CARD _____

NAME OF COMPANY: ALL BUSINESS ENTERPRISES CORPORATION

PHYSICAL ADDRESS: 153 B HARMON INDUSTRIAL PARK, TAMUNING, GUAM 96913

MAILING ADDRESS: P.O. BOX 9788, TAMUNING, GUAM 96931

CONTACT PERSON & TITLE: NELIA F. BANGAYAN , PRESIDENT

CONTACT NUMBERS: TELEPHONE 671-646-4435 FAX 671-646-0589 CELLULAR 671-483-8310

E-MAIL ADDRESS: nbangayan@jbmodernotech.com

OTHER CONTACT
INFORMATION OR
HELPFUL INSTRUCTIONS
FOR UOG WHEN FORWARDING
FUTURE UPDATES:

UNIVERSITY OF GUAM - CONSOLIDATED PROCUREMENT OFFICE
UOG Station, Mangilao, Guam 96923 Tel. (671) 735.2925 Fax. (671) 735.3010
A U.S. LAND GRANT INSTITUTION ACCREDITED BY THE WESTERN ASSOCIATION OF SCHOOLS & COLLEGES
THE UNIVERSITY OF GUAM IS AN EQUAL OPPORTUNITY EMPLOYER AND PROVIDER



ADMINISTRATION & FINANCE
Consolidated Procurement Office

**UNIVERSITY OF GUAM
 INVITATION FOR BID UOG BID NO. B21-17
 PURCHASING OF HVAC EQUIPMENT FOR THE UNIVERSITY OF
 GUAM**

DATE ISSUED: October 22, 2021

UOG SECTION: FACILITIES MANAGEMENT & SERVICES (FMS),
 ADMINISTRATION & FINANCE

ISSUED BY: UOG CONSOLIDATED PROCUREMENT OFFICE
 TELEPHONE NO.: (671) 735-2925 FAX NO.: (671) 735-3010
 E-MAIL: uog.bids@triton.uog.edu

INSTRUCTIONS TO BIDDERS

1. **RECEIPT AND OPENING OF BIDS:** Sealed bids for UOG **B21-17 PURCHASING OF HVAC EQUIPMENT FOR THE UNIVERSITY OF GUAM (UOG)** must be received by the Procurement Office no later than:

TIME: 2:00 P.M. DATE: Monday, November, 22, 2021

Bids submitted after the time and date specified above shall be rejected. Bid opening will be conducted electronically via Zoom Link at 4:00 pm; link will be provided through email to all registered offerors.

Attention is called to the fact that bidders not only offer to assume the obligations and liabilities imposed upon the contractor in the form of a contract, but are expressly made certain of the representations and warrants made herein. No effort is made to emphasize any particular provision of the contract, but bidders must familiarize themselves with every provision and its effect. This Bid is subject to **General Terms and Conditions of the Invitation for Sealed Bids (Attachment A)** and the **Special General Provisions (Attachment B)**.

In consideration of the expense of the University of Guam of opening, tabulating, and evaluating this and other bids, and other considerations, the undersigned agrees that this bid shall remain firm and irrevocable within sixty (60) calendar days from the date of opening to supply any or all of items for which prices are quoted.

2. **BIDDER QUALIFICATIONS (Attachment C):** The University of Guam may require bidders to present satisfactory evidence that they have sufficient experience and that they are fully prepared, thus it is required that the bidder completely fill out the Bidder's Qualifications Form.
3. **NON-COLLUSION AFFIDAVIT (Attachment D):** Each person submitting a bid for any portion of the work covered by the bidding documents shall execute an affidavit, in the form provided with the Bid to the effect that he has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the proposal.

4. **MAJOR SHAREHOLDERS AFFIDAVIT (Attachment E):** As a condition to submitting of bids or proposals, any partnership, sole proprietorship or corporation doing business with the University of Guam shall submit an affidavit that lists the name and address of any person who has held more than ten percent (10) of outstanding shares in said partnership, sole proprietorship or corporation at any time during the twelve (12) month period immediately preceding submission of a proposal. The affidavit shall contain the number of shares or the percentage of all assets of such partnership, sole proprietorship or corporation which have been held by each person during the twelve (12) month period. In addition, the affidavit shall contain the name and address of any person who has received or is entitled to receive a commission, gratuity or other compensation for the procuring or assisting in obtaining business related to the bid or proposal for the Offeror and shall contain the amounts of any shall commission, gratuity or other compensation. The affidavit shall be open and available for inspection and copying.
5. **AFFIDAVIT RE GRATUITIES, KICKBACKS AND FAVORS (Attachment G):** The bidder, offeror or contractor represents that it will not violate the prohibition against gratuities and kickbacks and favors set forth (Gratuities and Kickbacks) in 5 GCA, Chapter 5, Article 11, Ethics in Public Contracting and Section 11.7 (Gratuities and Kickbacks and Favors) of the UOG Procurement Manual.
6. **AFFIDAVIT RE ETHICAL STANDARDS (Attachment H):** The bidder, offeror, or contractor represents that it has not knowingly influenced and promises that it will not knowingly influence a government employee to breach any of the ethical standards set forth in 5 GCA, Chapter 5, Article 11, and in Chapter 11 (Ethics in Public Contracting) of the UOG Procurement Manual.
7. **COVENANT AGAINST CONTINGENT FEES (Attachment I):** The prospective contractor represents as part of such contractor's bid or proposal that such contractor has/has not (Circle applicable word or words) retained any person or agency on a percentage, commission, or other contingent arrangement, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business.
8. **DECLARATION RE COMPLIANCE WITH U.S. DEPARTMENT OF LABOR WAGE DETERMINATION (Attachment J):** In accordance with 5 GCA §§ 5801 and 5802, as may be applicable, each bidder certifies that any of its employees whose purpose, in whole or in part, is the direct delivery of service contracted by the University shall be paid in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the University, including health and other similar benefits. The updated wage rate with the most current revision shall be included in the bid submission.
9. **RIGHT TO ACCEPT AND REJECT BIDS:** The President of the University of Guam reserves the unqualified right, in his sole and absolute discretion, to reject any and all bids, or to accept that bid or combination of bids, if any, which in his sole and absolute judgment will under all circumstances best serve the interests of the University of Guam. In the event that the successful bidder fails to execute the contract upon his part or to furnish a satisfactory performance and payment bond, the University, after declaring the security deposit of such bidder forfeited, reserves the option to accept the bid of any other bidder within ten (10) days from such default, in which case such acceptance shall have the same effect as to such bidder as though he was the originally successful bidder.
10. **MODIFICATIONS PRIOR TO DATE SET FOR OPENING BIDS:** The University reserves the right to revise or amend the specifications prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Invitation for Bids and shall be identified as such. It is required that the bidders acknowledge in writing receipt of all amendments issued and such acknowledgment must be included in the bid. The

amendment shall refer to the portions of the Invitation for Bids it amends. Amendments shall be sent to all prospective Bidders known to have received an Invitation for Bids. Amendments shall be distributed within a reasonable time to allow prospective Bidders to consider the amendment in preparing their Bids. If the time and date set for receipt of bids will not permit such preparation, such time shall be increased to the extent possible in the amendment or, if necessary, by email or telephone and confirmed in the amendment.

11. **CANCELLATION OF SOLICITATION:** Prior to the date set for opening bids, a solicitation may be cancelled in whole or in part when the President or his designee determines in writing that the cancellation of the solicitation is in the University's best interest, in accordance with the University's Procurement Rules and Regulations.
12. **METHOD OF AWARD:** Bid shall be awarded to the lowest, highest, responsible and responsive bidder whose bid meets the requirements and criteria set forth in the Invitation for Bids. A responsible bidder is one who has the capability in all respects to perform fully the contract requirements, and the integrity and reliability which will assure good faith performance. A responsive bidder is one who has submitted a bid which conforms in all material respects to the Invitation for Bids. The University reserves the right to waive any minor information of irregularity in Bids received. The President shall have the authority to award or reject Bids, in whole or in part for any one or more items if he determines it is in the public interest.

Award issued to the lowest, highest, responsible and responsive bidder within the specified time for acceptance as indicated in the Bid, results in a binding contract without further action by either party provided the successful bidder executes a formal contract with the University. In case of any error in the extension of prices, unit price will govern. It is the policy of the Government of Guam to award Bids to qualified local vendors.

13. SUBMISSION OF BIDS:

- a. Bids and modifications thereof shall be submitted through electronic submission to the Share folder that UOG procurement office provides and addressed to the office specified in the Solicitation. The electronic file submission will show the hour and date of submission as specified in the Solicitation for receipt. The file should identify the Solicitation number, and the name of the bidder.
- b. Bids may be modified or withdrawn by written or telegraphic notice, provided such notice is received prior to the hour and date specified for receipt (see paragraph 9 of these instructions).
- c. Samples of items, when required, must be submitted within the time specified, unless otherwise specified by the University, at no expense to the University. If not destroyed by testing, samples will be returned at bidder's request and expense, unless otherwise specified by the Solicitation.
- d. Samples or descriptive literature should not be submitted unless it is required on this Solicitation. Regardless of any attempt by a bidder to condition the bid, unsolicited samples or descriptive literature will not be examined or tested at the bidder's risk, and will not be deemed to vary any of the provisions of this Solicitation.

14. **FAILURE TO SUBMIT BID:** If no bid is to be submitted, do not return the Solicitation unless otherwise specified. A letter or postcard shall be sent to the issuing office advising whether future Solicitations for the type of supplies or services covered by this Solicitation is desired.
15. **PRE-BID CONFERENCES.** Pre-Bid conferences will be permitted any time prior to the date established herein for submission of bid. The conferences will be conducted only to explain the procurement requirements for this Request for Proposal. The Authority will notify all Bidders of any substantive clarification provided in response to any inquiry. The Authority will extend the due date if such information significantly amends the solicitation or makes compliance with the original proposed due date impractical.
16. **BID PACKET.** The prospective bidder is required to read each and every page of the Bid Packet and by the act of submitting a proposal shall be deemed to have accepted all conditions contained therein. In no case will failure to inspect constitute grounds for claim or for the withdrawal of a bid after opening. Bid submission shall be sent electronically. Erasures or other changes in a bid must be explained or noted over the signature of the offeror. Bid submission containing any conditions, omissions, unexplained erasure or alterations or items not called for in the Bid packet, or irregularities of any kind may be rejected by the University as being incomplete.
17. **BID PACKET FORM.** A non-refundable fee of **\$25.00 (U.S.)** shall be charged for each hard copy or CD ROM bid packet. All payments shall be made by cash, certified check or money order to the University of Guam. Cashier services are located at the UOG Administration Building Mon-Fri from 8am-4pm by appointment only. Payby phone is also available from 8am-4pm at 735-2923/45/46.
18. **NOTICE OF AWARD.** UOG will notify all bidders the status of the Bid and Notice of Award. Written notice of award will be public information and made a part of the contract file.
19. **LOCAL PROCUREMENT PREFERENCE:** "All procurement of supplies and services shall be made from among businesses licensed to do business on Guam in accordance with Guam Code Annotated Title 5 Chapter 5 Section 5008 and Section 3.9.14.5, UOG Procurement Regulation."
20. **BIODEGRADABLE, REUSEABLE, RECYCLABLE MATERIALS:** Section 1.5, UOG Procurement Regulations. UOG's President or his designee, whenever possible, shall procure products that are biodegradable, reusable, recyclable, or made of recycled material, or any of these in any combination. The cost (prior to any adjustments for local vendors) of appropriate biodegradable, reusable, recyclable, or recycled products may be as much as ten percent (10%) greater than the cost of the non-biodegradable, non-reusable, non-recyclable, or non-recycled products they are replacing.
21. **SERVICE-DISABLED VETERAN PREFERENCE:** UOG will award the contract for this solicitation to bidders that are business concerns that are at least fifty-one-percent (51%) owned by a service-disabled veteran(s) who served in the active U.S. military: (1) Who was discharged or released under honorable conditions and whose disability is service-connected as demonstrated by a DD Form 214, and certified by an award letter from the U.S. Department of Veterans Affairs; (2) That submitted the DD Form 214 and Disability award letter from the U.S. Department of Veterans Affairs with their bid submitted in response to this solicitation; (3) The service-disabled veteran(s) owner of the business concern has filed individual tax returns on Guam for a period of at least three (3) consecutive years; (4) The business concern is licensed to do business on Guam; (5) The business concern maintains its headquarters on Guam; (6) the supply or service offered by the business concern is available within the period required by UOG; and (7) The price for the supply or service does not exceed one-hundred-five-percent (105%) of the lowest price bidder. The Service-Disabled Veteran Preference is given in addition to any other procurement benefit the service-disabled veteran owned business may qualify for under Guam law.

22. WOMEN OWNED BUSINESS PREFERENCE: UOG will award the contract for this solicitation to bidders that are business concerns that are at least fifty-one-percent (51%) owned by women, who manage day-to-day operations and make long-term decisions, and: (1) The owner(s) of the business concern has filed individual tax returns on Guam for a period of at least three (3) consecutive years; (2) The business concern is licensed to do business on Guam; (3) The business concern maintains its headquarters on Guam; (4) the supply or service offered by the business concern is available within the period required by UOG; (5) The business concern is certified as a Women-Owned Small business (WOSB) or an Economically Disadvantaged Women-Owned Small Business (EDWOSB) by the U.S. Small Business Administration; and (6) The price for the supply or service does not exceed one-hundred-five-percent (105%) of the lowest price bidder. The Women Owned Business Preference is given in addition to any other procurement benefit the women owned business may qualify for under Guam law.

23. DETERMINING LOWEST PRICE IF BIDDERS CLAIM PREFERENCES. In accordance with 5 G.C.A. §5013(a), UOG shall determine the lowest price in the case of more than one (1) women-owned business, or a women-owned business and a service-disabled veteran owned business, who are competing for the same government contract.

24. MULTIPLE OR ALTERNATIVE BIDS. UOG shall not accept any multiple or alternative bid and shall reject any multiple or alternate bids its received. However, if a bidder clearly indicates a base bid, such base bid shall be considered for award as though it were the only bid submitted by the bidder. If UOG is not able to distinguish which bid is the base bid, it will reject all the multiple or alternative bids submitted by the bidder.

25. MULTI-TERM CONTRACT. If a multi-term contract is awarded for this solicitation, the amount of supplies or services stated on the bid price form of this solicitation shall be the amount of supplies or services required for the proposed contract period and the unit prices given by the bidder awarded the contract shall be the same throughout the multi-term contract period, except to the extent that price adjustments may be provided in this solicitation and the resulting contract, and UOG may cancel, after giving timely notice to the contractor, the multi-term contract if funds are not appropriated or otherwise made available to support continuation of performance in any fiscal period succeeding the first. However, this will not effect either UOG's rights or the contractor's rights under any termination clause in the contract. If the contract is canceled, the contractor will be reimbursed the unamortized, reasonably incurred, nonrecurring costs.



ADMINISTRATION & FINANCE
Consolidated Procurement Office

AMENDMENT 3

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: November 19, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 Question & Answer Sheet 1 as set forth in the attached.
- 1.2 **REPLACE** Exhibit B "Scope of Work & Bid Price Form" with corrected forms as set forth in the attached.
- 1.3 Copy of Pre-bid Conference Sign-In sheet as set forth in the attached.
- 1.4 Deadline for submission should read as follows: Monday, November 29, 2021 at 2:00 p.m. (your bid submission must be submitted electronically to the Bid Share folder provided by UOG Procurement Office on or before 2:00 p.m.) Bid opening will take place at 3:15 p.m. via ZOOM link provided by procurement office to all registered offerors.

All other terms and conditions remain the same.


Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: ALL BUSINESS ENTERPRISES CORPORATION

NELLY F. BANGKAYAN NOV. 30, 2021
Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu
Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913
The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges Senior College and University Commission and is an equal opportunity provider and employer.

UOG INVITATION FOR BIDS NO. B21-17:
PURCHASING OF HVAC EQUIPMENT

QUESTION & ANSWER SHEET NO. 1
November 19, 2021

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 10/26/2021 @ 4:49pm from vendor: Guam Pacific Enterprise, Inc.

Question 1: Section 5011 of Chapter 5 is not included in the Bid documents. (Policy In Favor of Serviced - Disabled Veteran Owned Business)

Answer: Please refer to Amendment 2. Item 1.4 #21

Question 2: Is the Bid All or None Bid?

Answer: UOG confirms yes, this is an All or None Bid.

Question 3: Is the installation required?

Answer: UOG confirms Installation is not required.

Question 4: Also, will you be using Federal Financial assistance Awards for this Bid therefore it is covered by Buy American Act.

Answer: UOG confirms Funds are from Higher Education Emergency Relief Fund (HEERF) The Buy American Act is to be followed "to the most extent possible.

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 10/29/2021 @ 5:48pm from vendor: MJM International Corporation

Question 1: May I please get more information for the attached? Kindly clarify if it is the ton per unit and column (ton) is the total tonnage.

Answer: UOG confirms ton is the total tonnage.

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 11/7/2021 @ 12:00pm from vendor: JWS Refrigeration & A/C Ltd.

Question 1: It was mentioned that you want to use only one manufacturer for the complete project, but you have Daikin condensers at the Marine Lab. It also is our understanding that many of the indoor units connected to these Daikin condensers also do not operate. These are VRF systems, which means they communicate with each other so you cannot use different manufacturers. Please clarify your intentions on this system.

Answer: UOG Confirms there is no need for VRF/VRV units as Item Description/Location has been revised to remove Marine Lab requirement. Please refer to Amendment 3, item 1.2.

**UOG INVITATION FOR BIDS NO. B21-17:
PURCHASING OF HVAC EQUIPMENT**

Question 2: On the Science building 3rd floor you have two 10-ton condensers which you want to remove and replace with a single 20 ton, do those two-line sets go to one AHU with two circuits?

Answer: UOG Confirms, Yes, they both connect to one (1) AHU. However, we are only requesting for condensing units not installation.

Question 3: On the Lecture hall Auditorium you have the exact same issue you have two 10 ton condensers and you want to replace with a single 20 ton, do those two line sets go to one AHU with two circuits?

Answer: UOG Confirms, Yes, they both connect to one (1) AHU. However, we are only requesting for condensing units not installation.

Question 4: In the specs Page 28 2.2.1.1 it says "copper to copper condensing coils" and then it says "condensing coils to have a special coating for corrosion coating". Please clarify you want copper fins and a coating on the copper?

Answer: UOG confirms, copper fins and a coating on the copper is needed.

Question 5: In the specs Page 28 2.2.1.3 it says you want a "208 volt control circuit". Will 115 volts be acceptable?

Answer: UOG confirms 115 volts are not acceptable

Question 6: In Exhibit B page 63 Table 2.0 options No. 1 refers to "Service for maintenance and upkeep". Can you please clarify the meaning of that?

Answer: UOG confirms although we are only soliciting for condenser units, we would like to understand what the maintenance and upkeep cost for your units. This will give us an idea of the overall cost of your unit.

Question 7: In Exhibit B page 63 Table 2.0 options No. 3 refers to "Replacement/trade in program". Can you please clarify the meaning of that?

Answer: UOG confirms although we are only soliciting for condenser units, we would like to understand what the maintenance and upkeep cost for your units. This will give us an idea of the overall cost of your unit.

Question 8: Does this contract include installation of purchased equipment? At the site visit, it was stated that the contract did not include installation. However, in the bid packet Exhibit B: 2a. it says: "Any additional cost not stated in this bid but are required to complete the delivery and installation must be included in the bidders price" Please clarify.

Answer: UOG confirms Installation is not required.

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 11/8/2021 @ 11:53am from vendor: Green Energy Solutions, Inc.

Question 1: Is the purchase funded by Federal Cares Act funds? If so, do the units need to be BAA compliant?

**UOG INVITATION FOR BIDS NO. B21-17:
PURCHASING OF HVAC EQUIPMENT**

Answer: UOG confirms Funds are from Higher Education Emergency Relief Fund (HEERF) The Buy American Act is to be followed "to the most extent possible.

Question 2: The RFQ Equipment specifications refer to VFR /VRV Units. It does not go into detail on the units being requested.

Answer: UOG Confirms there is no need for VRF/VRV units as Item Description/Location has been revised to remove Marine Lab requirement. Please refer to Amendment 3, item 1.2.

Question 3: Of the units requested, the RFQ does not state whether they are Packaged Units, or Ducted Split Units that require Air Handling Units.

Answer: UOG confirms we are purchasing "Ducted Split Condensers only. No AHU's in this bid.

Question 4: The RFQ does not state efficiency requirements (EER rating)

Answer: UOG confirms there are no EER rating.

Question 5: Are you asking for direct replacements for the units in each of the buildings?

Answer: UOG confirms, no. In some of the buildings we are consolidating units from smaller units to a bigger unit.

Question 6: The RFQ mentions Storage, some about installation, & providing specs 5 weeks in advance of purchases. However, the Scope states it purchase only.

Answer: UOG confirms no storage or installation required.

Question 7: Does the bidder need to supply storage?

Answer: UOG confirms no storage required

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 11/9/2021 @ 3:14pm from vendor: Ability Solutions LLC

Question 1: Can you provide a copy of the transcript for the sign-in on inspection day?

Answer: Please refer to Amendment 3, item 1.3.

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 11/10/2021 @ 10:02am from vendor: Ability Solutions LLC

Question 1: May I inquire when the deadline is to deliver the equipment's?

**UOG INVITATION FOR BIDS NO. B21-17:
PURCHASING OF HVAC EQUIPMENT**

Answer: UOG confirms vendor to provide delivery deadline.



UNIVERSITY OF GUAM
UNIBETSEBAT GUAHAN

ATTENDANCE SHEET
REQUEST FOR PROPOSAL (RFP) REGISTER

PRE-PRO CONF
11/03/21 10:00

ADMINISTRATION & FINANCE
Consolidated Procurement Office

SHEET 1 of 1

UOG RFP P21-17 "HVAC PURCHASES"

PAID #	COMPANY NAME	FULL NAME (PERSON REQUESTING / PICKING UP)	EMAIL ADDRESS (PRINT NEATLY)	ADDRESS	DATE	TIME	PHONE NUMBER & FAX NUMBER	RFP SUBMISSION		
								DATE	TIME	REC BY
1	Guam Pacific Ent.	Sutton M Lindsay	gsutton@guam.net	Harris	11/3/21	10:00	649-65528 649-65888 FX			
2	US D Marine Tech	Gene Berggren	geneberg@usmarine.com	Harris	11/3/21	11:00	483-8555-			
3	NTM	DANVILLE DEBIS DEBIS	dandville@netnet.com	Harris	11/3/21	11:00	646-43294			
4	AB Harmon Tech	Dee Logman	Dee@abharmon.com	Harris	11/3/21	10:00	664-1811			
5	JPL Harmon Tech	PETER ABERNETHY		Harris	11/3/21	10:00	482-5995			
6	STUD & C INC	TRACY GUYON	wfreguyon.com	1785 Harmon Ave 16 RM.	11/4/21	10:00	649-8120/21 649-5737			
7	TWS Retail	Anthony Kuback	antkuback@twsretail.com	200 Joe's Sales Center	11/3/21	10:00	864-2551			
8	JWS	Roger Jones	rogerj@jws.guam.gm	200 SNAAS TRUSS	11/3/21	11:00	787-1046			
9	Desonnis	Chuck Sanchez	chuck.desonnis@gmail.com	Harris	11/4/21	10:00	790-1135			
10	Arcovert	Jordan Javalan	j@arcover.com	48 Harmon Ave	11/3/21	10:00	798-5662			
11	TWS	James Jones	ajames@jws.guam.gm	270 SNAAS TRUSS	11/3/21	10:00	667-0572			
12	Pos Enterprises	John T Ryan	jtryan@me.com	167 CHINA STREET THROUNDS BLDG	11/3/21	10:00	482-8291			



UNIVERSITY OF
GUAM
UNIBETSEDAT GUAHAN

REQUEST FOR PROPOSAL (RFP) REGISTER

ADMINISTRATION & FINANCE
Consolidated Procurement Office

UOG RFP P21-17 "HVAC PURCHASES"

DATE ISSUED:
ISSUED:
CONFERENCE:

RFP SUBMISSION
Submission date:
TIME:

PAID #	COMPANY NAME	FULL NAME (PERSON REQUESTING / PROVIDING UFG)	EMAIL ADDRESS (PRINT HEATLY)	ADDRESS	DATE	TIME	PHONE NUMBER & FAX NUMBER	DATE	TIME	REC BY
1	PORT ENT	Miguel Tanguilan	portent@guam.net	Yigo, Guam	11-3-21	10:00	971-0188 976-1722			
2	Ability Solutions	Nancy Atalig	naci@abitysolutionsllc.biz	Dededo, Guam	11/2/21	10:15	483-3639 989-5630			
3	UFG MOD. TECH	BERNARD PEREZ	bernard@modtech.com	Dededo, GU	11/3/21	10:15	482-4022			
4										
5										
6										
7										
8										
9										
10										
11										
12										

11/2/21 12:00



ADMINISTRATION & FINANCE
Consolidated Procurement Office

AMENDMENT 4

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: November 22, 2021

“PURCHASING HVAC EQUIPMENT”

This is to notify all prospective offerors of the following amendment set forth below:

1.1 Question & Answer Sheet 2 as set forth in the attached.

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of Company: ALL BUSINESS ENTERPRISES CORPORATION

NELIA F. BANGAYAN NOV. 30, 2021
Print Name/Signature/date

UOG INVITATION FOR BIDS NO. B21-17:
PURCHASING OF HVAC EQUIPMENT

QUESTION & ANSWER SHEET NO. 2
November 22, 2021

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 11/08/2021 @ 11:12am from vendor: Guam Pacific Enterprise, Inc.

Question 1: 1) The quote request is not clear what exactly is required because in Section 2.1.4, 2.2, 2.2.1, 2.2.1.1 specified large split system. Large split system implies 1 condensing unit connected to one indoor air handler.

Then there is another specs on VRF SYSTEMS which are 1 set of outdoor condensing units connected to multiple indoor units. VRF is completely different animal to above large split systems. Please see 2.1, 2.1.1, 2.1.1.1, 2.1.1.2

The lists of equipment could be condensing units for large split systems or VRF systems. Condensing units for large split systems can work with any air handler with DX coils. VRF condensing units could only work with indoor unit by the same manufacturer.

Question- Can you please clarify what is the design intention?

Answer: UOG confirms this bid request is for a large split system condensing unit only.

Question 2: Does UOG want VRF or large split systems ?

Answer: UOG Confirms there is no need for VRF/VRV units as Item Description/Location has been revised to remove Marine Lab requirement. Please refer to Amendment 3, item 1.2.

Question 3: Does UOG only wants outdoor condensing unit ?

Answer: UOG confirms this bid request is for a large split system condensing unit only.

Question 4: Is there any set of mechanical plans? Reason is for vendors to know the design intents, where each piece of equipment goes, what type of indoor units are needed, control design, etc. These are not off the shelf type products so it is very risky for the purchaser to buy equipment like this.

Answer: UOG confirms no mechanical plans needed as required information is provided. Please refer to Exhibit A. Please refer to Exhibit B issued in Amendment 3, item 1.2.



ADMINISTRATION & FINANCE
Consolidated Procurement Office

AMENDMENT 5

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: November 24, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

1.1 Deadline for submission should read as follows: Monday, December 06, 2021 at 2:00 p.m. (your bid submission must be submitted electronically to the Bid Share folder provided by UOG Procurement Office on or before 2:00 p.m.) Bid opening will take place at 3:15 p.m. via ZOOM link provided by procurement office to all registered offerors.

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: ALL BUSINESS ENTERPRISES CORPORATION

NELIA F. BANGAYAN NOV. 30, 2021

Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges Senior College and University Commission and is an equal opportunity provider and employer.



ADMINISTRATION & FINANCE
Consolidated Procurement Office

AMENDMENT 6

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: December 3, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

1.1 Question & Answer Sheet 3 as set forth in the attached.

All other terms and conditions remain the same.

Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: ALL BUSINESS ENTERPRISES CORPORATION

NELIA F. BANGAYAN NOV. 3, 2021
Print Name/Signature/Date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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UOG INVITATION FOR BIDS NO. B21-17:
PURCHASING OF HVAC EQUIPMENT

QUESTION & ANSWER SHEET NO. 3
December 3, 2021

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 11/05/2021 @ 2:28pm from vendor: Guam Pacific Enterprise, Inc.

Question 1: Did UOG remiss by requiring 15% Bid bond under Guam Law for a project that the funds being used is from financial assistance awards ? (American Rescue Funds Act)

Argument. 15 % bid bond pursuant to Guam law only applies for local funds. 15% BID BOND substantially burdens the small business owners and the manufacturers that they are representing

Therefore , it is non compliant and inconsistent with the Section1 and 3 of Executive Order 14005 of President Biden's American Made Act Law. The bid bond should be waived.

Answer: UOG confirms Bid security shall be required for all competitive sealed bidding for the procurement of supplies or services when the total price is estimated to exceed Twenty-Five Thousand Dollars (\$25,000.00). 5 G.C.A. §5212(a). Further, Bid security shall be in an amount equal to fifteen percent (15%) of the total amount bid. 5 G.C.A. §5212(b). There is no exception in the aforementioned Guam Procurement Law for solicitations made by Public Corporations, such as UOG, that are federally funded. When Invitation for Bids requires bid security, noncompliance requires that the bid be rejected. 5 G.C.A. §5212(e).

Deo Lagman

From: UOG Procurement Bids <uog.bids@triton.uog.edu>
Sent: Friday, December 3, 2021 4:39 PM
To: Procurement Office
Subject: UOG IFB B21-17 : Purchasing of HVAC Equipment - AMENDMENT 6
Attachments: B21-17 AMEND 6.pdf

Håfa Adai & Good Afternoon,

Please see attached notice for the above referenced UOG IFB B21-17 - **AMENDMENT 6**.

All conditions of the bid remain the same.

Kind reminder, your original bid security should be receipted by our procurement office NLT bid submission deadline, Monday December 6, 2021 by 2pm.

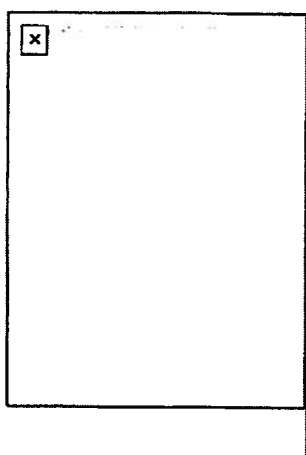
The link for bid opening and link to upload bid submissions to our electronic share folder will also be provided on Monday December 6, 2021. Please submit 1 PDF file.

Please acknowledge receipt.

Thank you & Stay safe!

Note: All Amendments are updated and uploaded on our UOG Procurement Site to be downloaded for your reference.

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

The University of Guam is an equal opportunity provider and employer.

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ADMINISTRATION & FINANCE
Consolidated Procurement Office

INVITATION FOR BID (IFB)
UOG BID No. B21-17

The University of Guam is soliciting sealed bids for:
PURCHASING OF HVAC EQUIPMENT

Copies of Instruction and Information may be obtained from: UOG Procurement Office

Uog.bids@triton.uog.edu

Tel: (671) 735-2925

Fax: (671) 735-3010

UOG Administration Building Mangilao, Guam

Please visit www.uog.edu/procurement to obtain a copy of the Bid Package. Once your request is received, you will receive a link allowing you access and ability to download the PDF file.

A non-refundable fee of \$25.00 is ONLY required to submit a bid offer due before bid deadline. Payment may be made via cash, check or credit card at the UOG Business Office, Cashier Services located at the UOG Administration Building Mon-Fri from 8 am – 4 pm Pay by phone is available by contacting 735-2923/45/46, please reference Bid number and Bid title when making payment. Send proof of receipt to uog.bids@triton.uog.edu.

Deadline for Submission of Bid Packages is on **Monday, November 22, 2021** on or before 2:00 P.M. via electronic submission to electronic Bid Share folder provided by UOG Procurement Office. Bid Opening will take place at 3:00 pm through Zoom link provided to all bidders.

Note: Prospective bidders/respondents will automatically be registered with information provided on form when requesting for bid documents. Contact information should be accurate to ensure you receive any notices regarding any changes or updates to the IFB/RFP. UOG will not be liable for failure to provide notice to any party who inputs inaccurate contact information.

/s/Thomas W. Krise, Ph.D.
President

University of Guam is an equal opportunity employer and provider.
This Advertisement is paid for by University of Guam Funds.

AUTHORIZED FOR ANNOUNCEMENT
Thomas W. Krise, Ph.D.
President

UOG Bid No. B21-17

Bid Registration Space below:

Set No.

REGISTER AS AN INTERESTED BIDDER TO RECEIVE DIRECT UPDATES

(Registration into the "Bidders List" is automatic when the form to request a bid packet is received)

UOG Payment Receipt No. _____ Date: ___/___/___ Payment Reference: Check No. _____

Name of Company: _____

Physical Address: _____

Contact Person & Title: _____

Contact Numbers: Tel. _____ Fax _____ Cellular _____

E-Mail Address: _____

TABLE OF CONTENTS
Procurement Solicitation Instructions & Information

Registration	Bid Coversheet & Bidder's Registration Space for Bid Packet Purchased.....	01	✓
Table of Contents	02	✓
Invitation for Bid	<i>Instructions to Bidders (Items 1 ~ 20)</i>	03-06	✓
	<i>Instructions about the General Terms & Conditions of the Invitation for Bids (A# A); Special General Provisions (A# B); Bidder's Qualifications (A# C); Bid Security (A# D); Affidavit Disclosing Ownership & Commissions (A# E); Affidavit re Non-Collusion (A# F); Affidavit re No Gratuities, Kickbacks and/or Favors (A# G); Affidavit re Ethical Standards (A# H); Declaration re Compliance with U.S. Department of Labor (DOL) Wage Determination (A# I); Affidavit re Contingent Fees (A# J); Right to Accept & Reject Bids; Modifications Prior To Date Set for Opening Bids; Method of Award; Submission of Bids; Failure to Submit Bid; Pre-Bid Conferences; Bid Packet; Bid Packet Form; Notice of Award; Local Procurement Preference; and Cancellation of Bid Prior to Date set for Bid Opening.</i>		
Attachment A	<i>General Terms & Conditions of the Invitation for Bids (Items 1 ~ 17)</i>	07-09	
	<i>Terms and conditions regarding Compliance with Specifications; Late Bids, Late Withdrawals, & Late Modifications; Determination of Lowest Responsible Bidders; Low Tie Bid; Taxes; Licensing; Equal Employment Opportunity; Determination of Responsibility of Bidder; Justification of Delay; EEO & Equal Opportunity Provider; Employment Restriction; Bid Security (A# D); Independent Contractor; Indemnity; Contractor Provided Insurance; the University's Green Protocols; and Biodegradable, Reusable, Recyclable Materials.</i>		
Attachment B	<i>Special General Provisions (Items 1 ~ 9)</i>	10-11	
	<i>General Intention; Competency of Bidders; Contact for Contract Administration; Inspection; Bid Forms; Bid Envelope; Receipt, Opening & Recording of Bids; Confidential Data; and Inquiries.</i>		
Attachment C	<i>Bidder's Qualifications (Items 1 ~ 3)</i>	12	✓
Attachment D	<i>Bid Security (Bid Bond)</i>	13	✓
Attachment E	<i>Affidavit re Disclosing Ownership & Commissions (Revised AG Form 002)</i>	14	✓
Attachment F	<i>Affidavit re Non-Collusion (Revised AG Form 003)</i>	15	✓
Attachment G	<i>Affidavit re No Gratuities, Kickbacks and/or Favors (Revised AG Form 004)</i>	16	✓
Attachment H	<i>Affidavit re Ethical Standards (Revised AG Form 005)</i>	17	✓
Attachment I	<i>Declaration re Compliance with U.S. DOL Wage Determinations (Revised AG Form 006)</i> ..	18	✓
Attachment J	<i>Affidavit re Contingent Fees (Revised AG Form 007)</i>	19	✓
BID SPECIFICATIONS / SCOPE OF WORK / BID PRICE			
Exhibit A	<i>BID SPECIFICATIONS</i>	20	✓
Exhibit B	<i>SCOPE OF PURCHASING HVAC EQUIPMENT FOR THE UOG</i>	62-	✓
(NOTE: "✓" Identifies this form is a "Required Bid Submittal Document" to be submitted with bidder's proposal.)			

**UNIVERSITY OF GUAM
INVITATION FOR BID
UOG BID NO. B21-17**

PURCHASING OF HVAC EQUIPMENT

DATE ISSUED: October 22, 2021

UOG SECTION: FACILITIES MANAGEMENT & SERVICES (FMS),
ADMINISTRATION & FINANCE

ISSUED BY: UOG CONSOLIDATED PROCUREMENT OFFICE
TELEPHONE NO.: (671) 735-2925 FAX NO.: (671) 735-3010
Email: uog.bids@triton.uog.edu

INSTRUCTIONS TO BIDDERS

1. RECEIPT AND OPENING OF BIDS: Sealed bids for UOG **B21-17 PURCHASING OF HVAC EQUIPMENT** for the University of Guam (UOG must be received by the Procurement Office no later than:
TIME: 2:00 P.M. DATE: Monday, November 22, 2021

Bid submitted after the time and date specified above shall be rejected. Bid opening will be conducted electronically via Zoom Link at 3:00 pm; link will be provided through email to all registered offerors.

Attention is called to the fact that bidders not only offer to assume the obligations and liabilities imposed upon the contractor in the form of a contract, but are expressly made certain of the representations and warrants made herein. No effort is made to emphasize any particular provision of the contract, but bidders must familiarize themselves with every provision and its effect. This Bid is subject to **General Terms and Conditions of the Invitation for Sealed Bids (Attachment A)** and the **Special General Provisions (Attachment B)**.

In consideration of the expense of the University of Guam of opening, tabulating, and evaluating this and other bids, and other considerations, the undersigned agrees that this bid shall remain firm and irrevocable within sixty (60) calendar days from the date of opening to supply any or all of items for which prices are quoted.

2. BIDDER'S QUALIFICATIONS (Attachment C): The University of Guam may require a bidder to present satisfactory evidence that he has sufficient experience and he is fully prepared, thus it is required that the bidder completely fill out the Bidder's Qualifications Form.

3. NON-COLLUSION AFFIDAVIT (Attachment D): Each person submitting a bid for any portion of the work covered by the bidding documents shall execute an affidavit, in the form provided with the Bid to the

effect that he has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the proposal.

4. MAJOR SHAREHOLDERS AFFIDAVIT (Attachment E): As a condition to submitting of bids or proposals, any partnership, sole proprietorship or corporation doing business with the University of Guam shall submit an affidavit that lists the name and address of any person who has held more than ten percent (10) of outstanding shares in said partnership, sole proprietorship or corporation at any time during the twelve (12) month period immediately preceding submission of a proposal. The affidavit shall contain the number of shares or the percentage of all assets of such partnership, sole proprietorship or corporation which have been held by each person during the twelve (12) month period. In addition, the affidavit shall contain the name and address of any person who has received or is entitled to receive a commission, gratuity or other compensation for the procuring or assisting in obtaining business related to the bid or proposal for the Offeror and shall contain the amounts of any shall commission, gratuity or other compensation. The affidavit shall be open and available for inspection and copying.

5. AFFIDAVIT RE GRATUITIES, KICKBACKS AND FAVORS (Attachment G): The bidder, offeror or contractor represents that it will not violate the prohibition against gratuities and kickbacks and favors set forth (Gratuities and Kickbacks) in 5 GCA, Chapter 5, Article 11, Ethics in Public Contracting and Section 11.7 (Gratuities and Kickbacks and Favors) of the UOG Procurement Manual.

6. AFFIDAVIT RE ETHICAL STANDARDS (Attachment H): The bidder, offeror, or contractor represents that it has not knowingly influenced and promises that it will not knowingly influence a government employee to breach any of the ethical standards set forth in 5 GCA, Chapter 5, Article 11, and in Chapter 11 (Ethics in Public Contracting) of the UOG Procurement Manual.

7. COVENANT AGAINST CONTINGENT FEES (Attachment I): The prospective contractor represents as part of such contractor's bid or proposal that such contractor has/has not (Circle applicable word or words) retained any person or agency on a percentage, commission, or other contingent arrangement, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business.

8. DECLARATION RE COMPLIANCE WITH U.S. DEPARTMENT OF LABOR WAGE DETERMINATION (Attachment J): In accordance with 5 GCA §§ 5801 and 5802, as may be applicable, each bidder certifies that any of its employees whose purpose, in whole or in part, is the direct delivery of service contracted by the University shall be paid in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the University, including health and other similar benefits. The updated wage rate with the most current revision shall be included in the bid submission.

9. RIGHT TO ACCEPT AND REJECT BIDS: The President of the University of Guam reserves the unqualified right, in his sole and absolute discretion, to reject any and all bids, or to accept that bid or combination of bids, if any, which in his sole and absolute judgment will under all circumstances best serve the interests of the University of Guam. In the event that the successful bidder fails to execute the contract upon his part or to furnish a satisfactory performance and payment bond, the University, after declaring the security deposit of such bidder forfeited, reserves the option to accept the bid of any other bidder within ten (10) days from such default, in which case such acceptance shall have the same effect as to such bidder as though he was the originally successful bidder.

10. **MODIFICATIONS PRIOR TO DATE SET FOR OPENING BIDS:** The University reserves the right to revise or amend the specifications prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Invitation for Bids and shall be identified as such. It is required that the bidders acknowledge in writing receipt of all amendments issued and such acknowledgment must be included in the bid. The amendment shall refer to the portions of the Invitation for Bids it amends. Amendments shall be sent to all prospective Bidders known to have received an Invitation for Bids. Amendments shall be distributed within a reasonable time to allow prospective Bidders to consider the amendment in preparing their Bids. If the time and date set for receipt of bids will not permit such preparation, such time shall be increased to the extent possible in the amendment or, if necessary, by email or telephone and confirmed in the amendment.

11. **CANCELLATION OF SOLICITATION:** Prior to the date set for opening bids, a solicitation may be cancelled in whole or in part when the President or his designee determines in writing that the cancellation of the solicitation is in the University's best interest, in accordance with the University's Procurement Rules and Regulations.

12. **METHOD OF AWARD:** Bid shall be awarded to the [x] lowest, [] highest, responsible and responsive bidder whose bid meets the requirements and criteria set forth in the Invitation for Bids. A responsible bidder is one who has the capability in all respects to perform fully the contract requirements, and the integrity and reliability which will assure good faith performance. A responsive bidder is one who has submitted a bid which conforms in all material respects to the Invitation for Bids. The University reserves the right to waive any minor information of irregularity in Bids received. The President shall have the authority to award or reject Bids, in whole or in part for any one or more items if he determines it is in the public interest.

Award issued to the [x] lowest, [] highest, responsible and responsive bidder within the specified time for acceptance as indicated in the Bid, results in a binding contract without further action by either party provided the successful bidder executes a formal contract with the University. In case of any error in the extension of prices, unit price will govern. It is the policy of the Government of Guam to award Bids to qualified local vendors.

13. **SUBMISSION OF BIDS:**

- a. Bids and modifications thereof shall be submitted through electronic submission to the Share folder that UOG procurement office provides and addressed to the office specified in the Solicitation. The electronic file submission will show the hour and date of submission as specified in the Solicitation for receipt. The file should identify the Solicitation number, and the name of the bidder.
- b. Bids may be modified or withdrawn by written or telegraphic notice, provided such notice is received prior to the hour and date specified for receipt (see paragraph 9 of these instructions).
- c. Samples of items, when required, must be submitted within the time specified, unless otherwise specified by the University, at no expense to the University. If not destroyed by testing, samples will be returned at bidder's request and expense, unless otherwise specified by the Solicitation.
- d. Samples or descriptive literature should not be submitted unless it is required on this Solicitation. Regardless of any attempt by a bidder to condition the bid, unsolicited samples or descriptive literature will not be examined or tested at the bidder's risk, and will not be deemed to vary any of the provisions of this Solicitation.

14. **FAILURE TO SUBMIT BID:** If no bid is to be submitted, do not return the Solicitation unless otherwise specified. A letter or postcard shall be sent to the issuing office advising whether future Solicitations for the type of supplies or services covered by this Solicitation is desired.

15. **PRE-BID CONFERENCES.** Pre-Bid conferences will be permitted any time prior to the date established herein for submission of bid. The conferences will be conducted only to explain the procurement requirements for this Request for Proposal. The Authority will notify all Bidders of any substantive clarification provided in response to any inquiry. The Authority will extend the due date if such information significantly amends the solicitation or makes compliance with the original proposed due date impractical.

16. **BID PACKET.** The prospective bidder is required to read each and every page of the Bid Packet and by the act of submitting a proposal shall be deemed to have accepted all conditions contained therein. In no case will failure to inspect constitute grounds for claim or for the withdrawal of a bid after opening. Bid submission shall be sent electronically. Erasures or other changes in a bid must be explained or noted over the signature of the offeror. Bid submission containing any conditions, omissions, unexplained erasure or alterations or items not called for in the Bid packet, or irregularities of any kind may be rejected by the University as being incomplete.

17. **BID PACKET FORM.** A non-refundable fee of **\$25.00 (U.S.)** shall be charged to submit a bid offer. All payments shall be made by cash, certified check or money order to the University of Guam. Cashier services are located at the UOG Administration Building Mon-Fri from 8am-4pm. Pay by phone is also available from 8am-4pm at 735-2923/45/46.

18. **NOTICE OF AWARD.** UOG will notify all bidders the status of the Bid and Notice of Award. Written notice of award will be public information and made a part of the contract file.

19. **LOCAL PROCUREMENT PREFERENCE:** "All procurement of supplies and services shall be made from among businesses licensed to do business on Guam in accordance with Guam Code Annotated Title 5 Chapter 5 Section 5008 and UOG Procurement Regulation Section 3.9.14.5."

20. **BIODEGRADABLE, REUSEABLE, RECYCLABLE MATERIALS:** 2 GAR Section 1102.2 (UOG Procurement Regulations Section 1.5) Bio-degradable, Reusable, Recyclable or Recycled Material or Any Combination: The Chief Procurement Officer, the Director of Public Works, or the head of the Purchasing Agency shall, whenever possible, procure products that are biodegradable, reusable, recyclable, or made of recycled material, or any of these in any combination. The cost (prior to any adjustments for local vendors) of appropriate biodegradable, reusable, recyclable, or recycled products may be as much as ten percent (10%) greater than the cost of the non-biodegradable, non-reusable, non-recyclable, or non-recycled products they are replacing.

ATTACHMENT A

GENERAL TERMS AND CONDITIONS FOR THE INVITATION FOR BIDS

1. **COMPLIANCE WITH SPECIFICATIONS:** Bidder should comply with specifications outlined.
2. **LATE BIDS, LATE WITHDRAWALS, AND LATE MODIFICATIONS:**
Any bid received after the time and date set for receipt of bids is late. Any withdrawal or modification of a bid received after the time and date set for opening of bids at the place designated for opening is late. (Section 3.9.11.1, University of Guam Procurement Manual).
3. **DETERMINATION OF LOWEST RESPONSIBLE BIDDERS:** In determining lowest responsible bidder, the University shall be guided by the following:
 - (a) Price of bid items.
 - (b) The ability, capacity, and skill of the bidder to perform.
 - (c) Whether the bidder can perform promptly or within the specified time.
 - (d) The character, integrity, reputation, judgment, experience, and efficiency of the bidder.
 - (e) The quality of performance of the bidder with regards to awards previously made to him.
 - (f) The previous and existing compliance by the bidder with laws and regulations relative to procurement.
 - (g) The sufficiency of the financial resources and ability of the bidder to perform.
 - (h) The quality, availability, and adaptability of the supplies for the use of the subject of the award.
 - (i) The ability of the bidder to provide future maintenance and services for the use of the subject of the award.
 - (j) The number and scope of the conditions attached to the bid.
4. **LOW TIE BIDS:** Low tie bids are low responsive bids from responsible bidders that are identical in price and which meet all the requirements and criteria set forth in the Invitation for Bids. Award shall not be made by drawing lots, except as set forth UOG Procurement Regulations Section 3.9.15, or by dividing business among identical bidders.
5. **TAXES:** Bidders are cautioned that they are subject to Guam Business Privilege Taxes, including 4% Gross Receipt Tax and Guam Income Taxes on Guam Transactions. Specific information of taxes may be obtained from the Director of Revenue and Taxation.
6. **LICENSING:** Bidders are cautioned that the University will not consider for award any Bid Offer submitted by a bidder who has not complied with Guam Licensing Law. Specific information on licenses may be obtained from the Director of Revenue and Taxation.
7. **EQUAL EMPLOYMENT OPPORTUNITY:** Section 3.01(1) of the President Executive Order No. 10935 dated March 7, 1965, requires the bidder not to discriminate against any employee or applicant for employment because of race, creed, color or national origin. The bidder will take affirmative action to

ensure that applicants are employed and the employees are treated equally during employment without regard to their race, creed, color or national origin.

8. **DETERMINATION OF RESPONSIBILITY OF BIDDER:** The University reserves the right for securing from bidders information necessary to determine whether or not they are responsible and to determine the responsibility in accordance with Section 3 of the General Terms and Conditions.

9. **JUSTIFICATION OF DELAY:** Vendors who are awarded items under the Bid guarantee that the goods will be delivered to their destination within the time specified. If the vendor is not able to meet the specified delivery date, he is required to notify the purchasing agent of such delay. Notification shall be in writing and should be received by the agent at least twenty-four (24) hours before the specified delivery date. Notification of delay shall include an explanation of the causes and reasons for the delay including statement(s) from supplier or shipping company causing the delay. The University of Guam reserves the right to reject delay justification if in the opinion of the President such justification is not adequate.

10. **EQUAL OPPORTUNITY EMPLOYER AND PROVIDER:** It is the policy of the University of Guam to provide equal opportunity in its higher educational mission and as employer. The University complies with all federal and local statutes, rules and regulations which prohibit discrimination in its policies and practices and direct affirmative action, including but not limited to Titles VII and IX of the Civil Rights Act of 1964 (as amended), Executive Order 11246, and the Equal Pay act of 1963 (as amended). The University shall promote a full realization of equal opportunity through a positive, continuing program, including a requirement that those doing business with the University also are equal opportunity employers.

11. **EMPLOYMENT RESTRICTION:** If a contract for services is awarded to the bidder or offeror, then the service provider must warrant that no person in its employment who has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 of the Guam Code Annotated or of an offense defined in Article 2 of Chapter 28 of Title 9 of the Guam Code Annotated, or who has been convicted in any other jurisdiction of an offense with the same elements as heretofore define, or who is listed on the Sex Offender Registry, shall provide services on behalf of the service provider while on University of Guam property, with the exception of public highways. If any employee of a service provider is providing services on University property and is convicted subsequent to an award of a contract, then the service provider warrants that it will notify the University of the Conviction, within twenty-four hours of the conviction, and will immediately remove such convicted person from providing services on University property. If the service provider is found to be in violation of any of the provisions of this paragraph, then the University will give notice to the service provider to take corrective action. The service provider shall take corrective action within twenty-four hours of notice from the University, and the service provider shall notify the University when action has been taken. If the service provider fails to take corrective steps within twenty-four hours of notice from the University, then the University in its sole discretion may suspend temporarily any contract for services until corrective action has been taken.

12. (Required if checked) **BID SECURITY REQUIREMENT (Attachment D):** Bidder is required to submit a Bid Security or standby irrevocable Letter of Credit or Certified Check or Cashier's Check or other security supplied in a form satisfactory to the University in the same bid envelope to be held by the University of Guam (UOG). A bidder should contact the University for Pre-approval of the bid security requirement before the deadline for submission of bid packages if it is proposing security in a form not specifically listed above. The bid security required under any applicable invitation for Bid shall not be released upon award of the bid, but instead shall continue in full force and effect until delivery of the

supplies or services required by any contract awarded to contractor under the associated Invitation for Bid is completed. The Bid Security, Letter of Credit, Certified Check or Cashier's Check must be issued by any local surety or banking institution licensed to do business on Guam and made payable to the University of Guam in the amount of fifteen percent (15%) of the total amount bid. The Original Bid Security must be submitted to the UOG Procurement office on or before bid submission deadline. Personal Checks will not be accepted as Bid Security.

If a successful Bidder (contractor) withdraws from the bid or fails to enter into contract within the prescribed time, such Bid guarantee will be forfeited to the University of Guam. Bids will be disqualified if not accompanied by Bid Security, Letter of Credit, Certified Check or Cashier's Check. Bidder must include in his/her bid, valid copies of a Power of Attorney from the Surety and a Certificate of Authority from the Government of Guam to show proof that the surety company named on the bond instrument is authorized by the Government of Guam and qualified to do business on Guam. For detailed information on bonding matters, contact the Department of Revenue and Taxation. Failure to submit a valid Power of Attorney and Certificate of Authority on the surety is cause for rejection of bid. (Pursuant to Public Law 27-127, all competitive sealed bidding for the procurement of supplies or services, exceeding \$25,000.00, a 15% Bid Security of the total bid price must accompany the bid package.) When the Invitation for Bids requires bid security, non-compliance requires that the bid be rejected unless, pursuant to Policy Office regulations, it is determined that the bid fails to comply in a non-substantial manner with the security requirements.

13. INDEPENDENT CONTRACTOR: Contractor shall operate its business as an independent contractor and shall discharge all of its duties as such. No act performed or representation made, whether oral or written by Contractor with respect to third parties shall be binding on UOG.

14. INDEMNITY: Contractor agrees to indemnify and hold harmless UOG and its officers and employees from any claim, damage, liability, injury, expense or loss, including defense costs and attorney's fees, arising out of Contractor's duties under this agreement resulting from Contractor's negligence, save and except those caused by the negligence on the part of UOG.

ATTACHMENT B

SPECIAL GENERAL PROVISIONS

1. **GENERAL INTENTION:** It is the declared and acknowledged intention and meaning of this Special General Provision for the Bidder to provide the University of Guam with materials, supplies, or equipment completely assembled, and ready for use.
2. **COMPETENCY OF BIDDERS:** Bids will be considered only from such bidders who, in the opinion of the University, can show evidence of their ability, experience, and facilities to render satisfactory service.
3. **CONTACT FOR CONTRACT ADMINISTRATION:** If your firm receives a contract as a result of this invitation, please designate a person whom we may contact for prompt administration.

NAME: NELIA F. BANGAYAN TITLE: PRESIDENT
NAME OF COMPANY: ALL BUSINESS ENTERPRISES CORPORATION ADDRESS: P.O. BOX 8410, TAMUNING, GUAM 96931
TEL: 671-646-4435 FAX: 671-6460589 E-Mail Address: nbangayan@jbmodernotech.com

4. **INSPECTION:** All supplies, materials, or equipment delivered under this contract shall be subject to the inspection and test conducted by the University at destination. If, in any case, the supplies, materials, or equipment are found to be defective in material, workmanship, performance or otherwise does not conform to the specifications, the University shall have the right to reject the items or require that they be corrected. The number of days required for correction will be determined by the University of Guam.
6. **BID ELECTRONIC FILE:** Bid file shall be marked with the bidder's name, bid invitation number, and bid title.

NOTE: UNDER NO CIRCUMSTANCES WILL LATE BIDS BE ACCEPTED BY THIS OFFICE.

7. **RECEIPT, OPENING AND RECORDING OF BIDS:** Bids and modifications shall be publicly opened in the presence of one or more witnesses, at the time, date, and place designated in the Invitation for Bid. The name of each bidder, the bid price, and such other information as is deemed appropriate by the Procurement Officer, shall be read aloud and recorded, or otherwise made available. The names and addresses of required witnesses shall be recorded at the opening. The opened bids shall be available for public inspection except to the extent the bidder designates trade secrets or other proprietary data to be confidential as set forth in accordance with Section 8, below. Materials so designated shall accompany the bid and shall be readily separable from the bid in order to facilitate public inspection of the non-confidential portion of the bid. Prices, makes and models or catalogue numbers of the items offered, deliveries, and terms of payment shall be publicly available at the time of bid opening regardless of any designation to the contrary.
8. **CONFIDENTIAL DATA:** The Procurement Officer shall examine the bids to determine the validity of any requests for nondisclosure of trade secrets and other proprietary data identified in writing. If the parties do not agree as to the disclosure of data, the Procurement Officer shall inform the bidders in writing what portions of the bid will be disclosed and that, unless the bidders protest under Chapter 9 of UOG Procurement Regulations, the bids will be so disclosed. The bids shall be opened to public inspection subject to any continuing prohibition on the disclosure of confidential data.

9. **INQUIRIES:** All inquiries or questions and concerns must be submitted to the President of the University of Guam in writing through the procurement office at uog.bids@triton.uog.edu. Oral communications will not be considered.

ATTACHMENT C

BIDDER'S QUALIFICATIONS

To be submitted in accordance with the provisions set forth in the INSTRUCTIONS TO BIDDERS contained in the bidding documents for the project.

The undersigned Bidder makes the following representations relating to its proposal to the UNIVERSITY OF GUAM.

The word "it", used herein by way of reference to the undersigned, shall be deemed to mean "he or she" if the Bidder is an individual and "they" if the Bidder is a partnership

1. It maintains a permanent place of business at

153 B HARMON INDUSTRIAL PARK,

TAMUNING, GUAM 96913

2. STANDARD FOR DETERMINATION OF QUALIFIED BIDDER: In order to qualify as responsible, a prospective bidder must meet the following standards as they relate to the particular procurement under consideration:

- (a) Has adequate financial resources for performance, or has the ability to obtain such resources as required during performance.
- (b) Has the necessary experience, organization, technical qualifications, skills, and facilities, or has the ability to obtain them.
- (c) Is able to comply with the proposed or required performance schedule.
- (d) Has a satisfactory record of integrity, judgment, and performance.
- (e) Must be able to conform to the requirements of the Equal Employment Opportunity Act.

3. It hereby represents and warrants that all statements set forth herein are true and correct. (If the Bidder is a partnership, the partnership name must be signed, followed by the signature of at least one of the partners. If the Bidder is a corporation, the corporate name must be signed, followed by the signature of a duly authorized officer and the corporate seal affixed. A typewritten copy of all such names and signatures shall be appended. No alterations, erasures, corrections or interlineations will be permitted).


NELIA F. BANGAYAN - PRESIDENT

NAME OF BIDDER

ATTACHMENT D
BID SECURITY

BID BOND
NO. B21-17

KNOW ALL MEN BY THESE PRESENTS that _____, as Principal, hereinafter called the "Principal", and _____ (Bonding Company), _____, a duly admitted insurer under the laws of the Territory of Guam, as Surety, hereinafter called the "Surety", are held firmly bound unto the University of Guam for the sum of _____ Dollars (\$_____), for payment of which sum will and truly to be made, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal has submitted a bid for (identify project by number and brief description)

_____.

NOW, THEREFORE, if the University of Guam shall accept the bid of the Principal, the Principal shall enter into a Contract with the University of Guam in accordance with the terms of such bid, and give such bond or bonds as may be specified in bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof. In the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the University of Guam the difference not to exceed the penalty hereof between the amounts specified in said bid and such larger amount for which the University of Guam may in good faith contract with another party to perform work covered by said bid or an appropriate liquidated amount as specified in the Invitation for Bid, then this obligation shall be null and void, but otherwise will remain in full force and effect.

Signed and sealed this _____ day of _____, 20_____

(PRINCIPAL) (SEAL)

(WITNESS)

(TITLE)

(MAJOR OFFICER OF SURETY)

(TITLE)

(MAJOR OFFICER OF SURETY)

(TITLE)

(RESIDENT GENERAL AGENT)

CASH BOND
CASHIER'S
CHECK
SUBMITTED

**ATTACHMENT E
MAJOR SHAREHOLDER DISCLOSURE AFFIDAVIT**

CITY OF Hagatna)
) ss.
 ISLAND OF GUAM)

A. I, the undersigned, being first duly sworn depose and say that I am an authorized representative of the offeror and that (please check only one):

() The offeror is an individual or sole proprietor and owns the entire (100%) interest in the offering business.

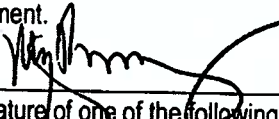
(x) The offeror is a corporation, partnership, joint venture, or association known as **ALL BUSINESS ENTERPRISES CORPORATION** (please state name of offeror company), and the persons, companies, partners, or joint ventures who have held more than 10% of the shares or interest in the offering business during the 365 days immediately preceding the submission date of the proposal are as follows (if none, please so state):

<u>NAME</u>	<u>ADDRESS</u>	<u>% of Interest</u>
<u>NELIA F. BANGAYAN</u>	<u>P.O. BOX 9788, TAMUNING, GUAM 96931</u>	<u>55</u>
<u>HANNAH BANGAYAN</u>	<u>P.O. BOX 9788, TAMUNING, GUAM 96931</u>	<u>45</u>

B. Further, I say that the persons who have received or are entitled to receive a commission, gratuity or other compensation for procuring or assisting in obtaining business related to the bid or proposal for which affidavit is submitted are as follows (if none, please so state):

<u>NAME</u>	<u>ADDRESS</u>	<u>Compensation</u>

C. If the ownership of the offering business should change between the time this affidavit is made and the time an award is made or a contract is entered into, then I promise personally to update the disclosure required by 5 GCA § 5233 by delivering another affidavit to the government.



 Signature of one of the following:
 Offeror, if the offeror is an individual;
 Partner, if the offeror is a partnership;
XX Officer, if the offeror is a corporation

Subscribed and sworn to before me

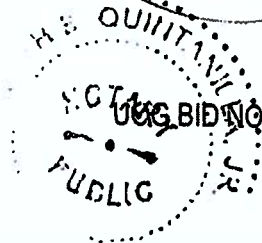
This 2nd day of Dec, 20

NOTARY PUBLIC

My commission expires _____

AG Procurement Form 002 (Rev. Nov 17, 2005)

JOSEPH B. QUINTANILLA, JR.
 NOTARY PUBLIC
 In and for Guam U.S.A.
 My commission expires: August 17, 2023
 P. O. Box 22649 Barrigada, Guam 96921



UCG BID NO. B21-17 **PURCHASING OF HVAC EQUIPMENT**

ATTACHMENT F
AFFIDAVIT re NON-COLLUSION

CITY OF Hagatna)
) ss.
ISLAND OF GUAM)

NELIA F. BANGAYAN (state name of affiant singing below), being first duly sworn deposes and says that:

- 1. The name of the offering company or individual is (state name of company) ALL BUSINESS ENTERPRISES CORPORATION
2. The proposal for the solicitation identified above is genuine and not collusive or a sham. The offeror has not colluded, conspired, connived or agreed, directly or indirectly, with any other offeror or person, to put in a sham proposal or to refrain from making an offer. The offeror has not in any manner, directly or indirectly, sought by an agreement or collusion, or communication or conference, with any person to fix the proposal price of offeror or of any other offeror, or to fix any overhead, profit or cost element of said proposal price, or of that of any other offeror, or to secure any advantage against the government of Guam or any person interested in the proposed contract. All statements in this affidavit and in the proposal are true to the best of the knowledge of the undersigned. This statement is made pursuant to 2 GAR Division 4 § 3126(b).
3. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.

Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror is a partnership;
XX Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 2nd day of Dec, 2021

NOTARY PUBLIC

My commission expires

(AG Procurement Form 003 (Jul. 12, 2010))

JOSEPH B. QUINTANILLA, JR.
NOTARY PUBLIC
In and for Guam U.S.A.
My commission expires: August 17, 2023
P. O. Box 22649 Barrigada, Guam 96921



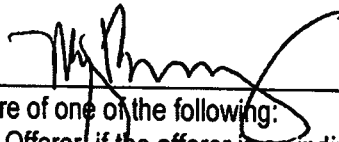
UPG BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT

ATTACHMENT G
AFFIDAVIT re GRATUITIES, KICKBACKS AND FAVORS

CITY OF Hagåtña
ISLAND OF GUAM) ss.
)

NELIA F. BANGAYAN (state name of affiant signing below), being first duly sworn,
deposes and says that:

1. The name of the offering firm or individual is (state name of offeror company) ALL BUSINESS ENTERPRISES CORPORATION Affiant is NELIA F. BANGAYAN (state one of the following: the offeror, a partner of the offeror, and officer of the offeror) making the foregoing identified bid or proposal.
2. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents subcontractors, or employees have violated, are violating the prohibition against gratuities, kickbacks and favors set forth in UOG Procurement Manual Section 11.7 Further, affiant promises, on behalf of offeror, not to violate the prohibition against gratuities, kickbacks and favors as set forth in UOG Procurement Manual Section 11.7.
3. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents, subcontractors, or employees have offered, given or agreed to give, any government of Guam employee or former government employee, any payment, gift, kickback, gratuity or offer of employment in connection with the offeror's proposal.
4. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.



Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror is a partnership;
xx Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 2nd day of Dec, 2021

NOTARY PUBLIC

My commission expires _____

(AG Procurement Form 004 (Jul 12, 2010))

JOSEPH B. QUINTANILLA, JR.
NOTARY PUBLIC
In and for Guam U.S.A.
My commission expires August 17, 2023



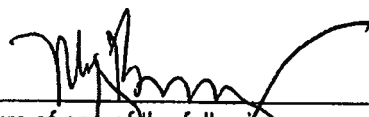
AG BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT

ATTACHMENT H
AFFIDAVIT RE ETHICAL STANDARDS

CITY OF Hagatna)
) ss.
ISLAND OF GUAM)

NELIA F. BANGAYAN (state name of affiant signing below), being first duly sworn,
deposes and says that:

The affiant is PRESIDENT (state one of the following: the offeror, a partner of the offeror, an officer of the offeror) making the foregoing identified bid or proposal. To the best of affiant's knowledge, neither affiant nor any officers, representatives, agents, subcontractors or employees of offeror have knowingly influenced any government of Guam employee to breach any of the ethical standards set forth in 5 GCA Chapter 5, Article 11. Further, affiant promises that neither he or she, nor any officer, reprehensive, agent, subcontractor, or employee of offeror will knowingly influence any government of Guam employee to breach any ethical standards set forth in 5 GCA Chapter 5, Article 11. These statements are made pursuant to UOG Procurement Manual Section 11.3.3.



Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror a partnership;
xx Officer, if the offeror is a corporation.

Subscribed and sworn to before me

This 2nd day of Dec, 2021

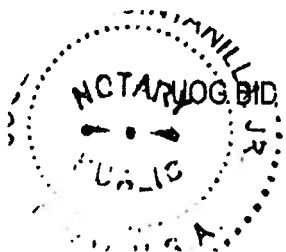


NOTARY PUBLIC

My commission expires _____.

JOSEPH B. QUINTANILLA, JR.
NOTARY PUBLIC
In and for Guam U.S.A.
My commission expires: August 17, 2023
P. O. Box 22649 Barrigada, Guam 96921

(AG Procurement Form 005 (Jul 12, 2010))



LOG. BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT

ATTACHMENT J
AFFIDAVIT re CONTINGENT FEES

CITY OF Hagatna)
) ss.
ISLAND OF GUAM)

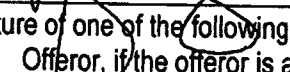
NELIA F. BANGAYAN (state name of affiant signing below), being first duly sworn, deposes and says that:

1. The name of the offering company or individual is (state name of company)
ALL BUSINESS ENTERPRISES CORPORATION

2. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained any person or agency on a percentage, commission, or other contingent arrangement to secure this contract. This statement is made pursuant to UOG Procurement Manual Section 11.8 .2

3. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained a person to solicit or secure a contract with the government of Guam upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. This statement is made pursuant to UOG Procurement Manual Section 11.8.1.

4. I make these statements on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.



Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror is a partnership;
 Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 2nd day of Dec, 2021

NOTARY PUBLIC

My commission expires _____

(AG Procurement Form 007 (Jul 15, 2010))

JOSEPH B. QUINTANILLA, JR.
NOTARY PUBLIC
In and for Guam U.S.A.
My commission expires: August 17, 2023
P. O. Box 22649 Barrigada, Guam 96921



UOG BID NO. **B21-17 PURCHASING OF HVAC EQUIPMENT**

ATTACHMENT I

DECLARATION re COMPLIANCE WITH U.S. DOL WAGE DETERMINATIONS

Procurement No.: UOG BID B21-17

Name of Offeror Company: ALL BUSINESS ENTERPRISES CORPORATION

I, NELIA F. BANGAYAN hereby certify under penalty of perjury:

- (1) That I am PRESIDENT (please select one: *the offeror, a partner of the offeror, an officer of the offeror*) making the bid or proposal in the foregoing identified procurement;
- (2) That I have read and understand the provisions of 5 GCA § 5801 and 5802 which read:

§ 5801. Wage Determination Established.

In such cases where the government of Guam enters into contractual arrangements with a sole proprietorship, a partnership or a corporation ("contractor") for the provision of a service to the government of Guam, and in such cases where the contractor employs a person(s) whose purpose, in whole or in part, is the direct delivery of service contracted by the government of Guam, then the contractor shall pay such employee(s) in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the government of Guam.

The Wage Determination most recently issued by the U.S. Department of Labor at the time a contract is awarded to a contractor by the government of Guam shall be used to determine wages, which shall be paid to employees pursuant to this Article. Should any contract contain a renewal clause, then at the time of renewal adjustments, there shall be made stipulations contained in the contract for applying the Wage Determination, as required by this Article, so the Wage Determination promulgated by the U.S. Department of Labor on a date most recent to the renewal date shall apply. § 5802. Benefits.

In addition to the Wage Determination detailed in this Article, any contract to which this Article applies shall also contain provisions mandating health and similar benefits for employees covered by this Article, such benefits having a minimum value as detailed in the Wage Determination issued and promulgated by the U.S. Department of Labor, and shall contain provisions guaranteeing a minimum of ten (10) paid holidays per annum per employees.

- (3) That the offeror is in full compliance with 5 GCA § 5801 and § 5802, as may be applicable to the procurement referenced herein;
- (4) That I have attached the most recent wage determination applicable to Guam issued by the U.S. Department of Labor. ***(INSTRUCTIONS – Please attach most updated version to bid package)***
(AG Procurement Form 006 (Feb. 16, 2010))

"REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor	U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210
Daniel W. Simms Director	Division of Wage Determinations
Wage Determination No.: 2015-5693 Revision No.: 13 Date Of Last Revision: 08/04/2021	

Note: Under Executive Order (EO) 13658 an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2015. If this contract is covered by the EO the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination if it is higher) for all hours spent performing on the contract in calendar year 2021. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

States: Guam Northern Marianas Wake Island

Area: Guam Statewide

Northern Marianas Statewide

Wake Island Statewide

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.57
01012 - Accounting Clerk II		15.23
01013 - Accounting Clerk III		17.04
01020 - Administrative Assistant		21.43
01035 - Court Reporter		17.40
01041 - Customer Service Representative I		11.51
01042 - Customer Service Representative II		12.94
01043 - Customer Service Representative III		14.12
01051 - Data Entry Operator I		12.15
01052 - Data Entry Operator II		13.25
01060 - Dispatcher Motor Vehicle		17.39
01070 - Document Preparation Clerk		13.85
01090 - Duplicating Machine Operator		13.85
01111 - General Clerk I		10.35
01112 - General Clerk II		11.29
01113 - General Clerk III		12.68
01120 - Housing Referral Assistant		19.39
01141 - Messenger Courier		11.37
01191 - Order Clerk I		12.57
01192 - Order Clerk II		13.71
01261 - Personnel Assistant (Employment) I		15.95
01262 - Personnel Assistant (Employment) II		17.85
01263 - Personnel Assistant (Employment) III		19.89
01270 - Production Control Clerk		21.78
01290 - Rental Clerk		11.10

01300 - Scheduler Maintenance	15.55
01311 - Secretary I	15.55
01312 - Secretary II	17.40
01313 - Secretary III	19.39
01320 - Service Order Dispatcher	15.40
01410 - Supply Technician	21.43
01420 - Survey Worker	16.96
01460 - Switchboard Operator/Receptionist	10.36
01531 - Travel Clerk I	13.01
01532 - Travel Clerk II	14.12
01533 - Travel Clerk III	15.09
01611 - Word Processor I	14.53
01612 - Word Processor II	16.31
01613 - Word Processor III	18.26
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer Fiberglass	15.46
05010 - Automotive Electrician	14.52
05040 - Automotive Glass Installer	13.58
05070 - Automotive Worker	13.58
05110 - Mobile Equipment Servicer	11.65
05130 - Motor Equipment Metal Mechanic	15.46
05160 - Motor Equipment Metal Worker	13.58
05190 - Motor Vehicle Mechanic	15.46
05220 - Motor Vehicle Mechanic Helper	10.66
05250 - Motor Vehicle Upholstery Worker	12.64
05280 - Motor Vehicle Wrecker	13.58
05310 - Painter Automotive	14.52
05340 - Radiator Repair Specialist	13.58
05370 - Tire Repairer	12.67
05400 - Transmission Repair Specialist	15.46
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.47
07041 - Cook I	13.26
07042 - Cook II	15.46
07070 - Dishwasher	9.31
07130 - Food Service Worker	9.45
07210 - Meat Cutter	12.13
07260 - Waiter/Waitress	9.27
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	18.04
09040 - Furniture Handler	10.95
09080 - Furniture Refinisher	18.04
09090 - Furniture Refinisher Helper	13.27
09110 - Furniture Repairer Minor	15.70
09130 - Upholsterer	18.04
11000 - General Services And Support Occupations	
11030 - Cleaner Vehicles	9.35
11060 - Elevator Operator	9.54
11090 - Gardener	13.00
11122 - Housekeeping Aide	9.54
11150 - Janitor	9.54
11210 - Laborer Grounds Maintenance	9.82
11240 - Maid or Houseman	9.32
11260 - Pruner	8.79
11270 - Tractor Operator	11.90
11330 - Trail Maintenance Worker	9.82
11360 - Window Cleaner	10.66
12000 - Health Occupations	
12010 - Ambulance Driver	18.23
12011 - Breath Alcohol Technician	18.23
12012 - Certified Occupational Therapist Assistant	25.01
12015 - Certified Physical Therapist Assistant	25.01
12020 - Dental Assistant	16.32
12025 - Dental Hygienist	36.12
12030 - EKG Technician	25.99

12035 - Electroneurodiagnostic Technologist	25.99
12040 - Emergency Medical Technician	18.23
12071 - Licensed Practical Nurse I	16.30
12072 - Licensed Practical Nurse II	18.23
12073 - Licensed Practical Nurse III	20.32
12100 - Medical Assistant	12.26
12130 - Medical Laboratory Technician	18.82
12160 - Medical Record Clerk	13.61
12190 - Medical Record Technician	17.77
12195 - Medical Transcriptionist	16.30
12210 - Nuclear Medicine Technologist	40.06
12221 - Nursing Assistant I	11.34
12222 - Nursing Assistant II	12.75
12223 - Nursing Assistant III	13.91
12224 - Nursing Assistant IV	15.61
12235 - Optical Dispenser	18.23
12236 - Optical Technician	16.30
12250 - Pharmacy Technician	15.49
12280 - Phlebotomist	16.30
12305 - Radiologic Technologist	25.33
12311 - Registered Nurse I	23.18
12312 - Registered Nurse II	28.36
12313 - Registered Nurse II Specialist	28.36
12314 - Registered Nurse III	34.32
12315 - Registered Nurse III Anesthetist	34.32
12316 - Registered Nurse IV	41.13
12317 - Scheduler (Drug and Alcohol Testing)	22.58
12320 - Substance Abuse Treatment Counselor	22.58
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	21.20
13012 - Exhibits Specialist II	26.27
13013 - Exhibits Specialist III	32.13
13041 - Illustrator I	21.20
13042 - Illustrator II	26.27
13043 - Illustrator III	32.13
13047 - Librarian	29.09
13050 - Library Aide/Clerk	16.88
13054 - Library Information Technology Systems Administrator	26.27
13058 - Library Technician	16.64
13061 - Media Specialist I	18.96
13062 - Media Specialist II	21.20
13063 - Media Specialist III	23.63
13071 - Photographer I	18.96
13072 - Photographer II	21.20
13073 - Photographer III	26.27
13074 - Photographer IV	32.13
13075 - Photographer V	38.88
13090 - Technical Order Library Clerk	21.20
13110 - Video Teleconference Technician	18.96
14000 - Information Technology Occupations	
14041 - Computer Operator I	15.71
14042 - Computer Operator II	17.22
14043 - Computer Operator III	19.19
14044 - Computer Operator IV	21.33
14045 - Computer Operator V	23.62
14071 - Computer Programmer I	(see 1) 15.73
14072 - Computer Programmer II	(see 1) 19.50
14073 - Computer Programmer III	(see 1) 23.84
14074 - Computer Programmer IV	(see 1)
14101 - Computer Systems Analyst I	(see 1) 24.23
14102 - Computer Systems Analyst II	(see 1)
14103 - Computer Systems Analyst III	(see 1)
14150 - Peripheral Equipment Operator	15.71
14160 - Personal Computer Support Technician	21.33

14170 - System Support Specialist	21.24
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	24.23
15020 - Aircrew Training Devices Instructor (Rated)	29.32
15030 - Air Crew Training Devices Instructor (Pilot)	34.91
15050 - Computer Based Training Specialist / Instructor	24.23
15060 - Educational Technologist	27.61
15070 - Flight Instructor (Pilot)	34.91
15080 - Graphic Artist	20.47
15085 - Maintenance Test Pilot Fixed Jet/Prop	34.91
15086 - Maintenance Test Pilot Rotary Wing	34.91
15088 - Non-Maintenance Test/Co-Pilot	34.91
15090 - Technical Instructor	17.67
15095 - Technical Instructor/Course Developer	23.78
15110 - Test Proctor	15.70
15120 - Tutor	15.70
16000 - Laundry Dry-Cleaning Pressing And Related Occupations	
16010 - Assembler	10.12
16030 - Counter Attendant	10.12
16040 - Dry Cleaner	11.56
16070 - Finisher Flatwork Machine	10.12
16090 - Presser Hand	10.12
16110 - Presser Machine Drycleaning	10.12
16130 - Presser Machine Shirts	10.12
16160 - Presser Machine Wearing Apparel Laundry	10.12
16190 - Sewing Machine Operator	12.04
16220 - Tailor	12.52
16250 - Washer Machine	10.60
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	19.46
19040 - Tool And Die Maker	24.46
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	13.96
21030 - Material Coordinator	21.78
21040 - Material Expediter	21.78
21050 - Material Handling Laborer	11.37
21071 - Order Filler	9.76
21080 - Production Line Worker (Food Processing)	13.96
21110 - Shipping Packer	17.12
21130 - Shipping/Receiving Clerk	17.12
21140 - Store Worker I	15.22
21150 - Stock Clerk	21.40
21210 - Tools And Parts Attendant	13.96
21410 - Warehouse Specialist	13.96
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	25.04
23019 - Aircraft Logs and Records Technician	19.47
23021 - Aircraft Mechanic I	23.84
23022 - Aircraft Mechanic II	25.04
23023 - Aircraft Mechanic III	26.30
23040 - Aircraft Mechanic Helper	16.58
23050 - Aircraft Painter	22.39
23060 - Aircraft Servicer	19.47
23070 - Aircraft Survival Flight Equipment Technician	22.39
23080 - Aircraft Worker	21.03
23091 - Aircrew Life Support Equipment (ALSE) Mechanic I	21.03
23092 - Aircrew Life Support Equipment (ALSE) Mechanic II	23.84
23110 - Appliance Mechanic	19.46
23120 - Bicycle Repairer	15.61
23125 - Cable Splicer	19.59
23130 - Carpenter Maintenance	16.07
23140 - Carpet Layer	18.20
23160 - Electrician Maintenance	18.05

23181 - Electronics Technician Maintenance I	18.20
23182 - Electronics Technician Maintenance II	19.46
23183 - Electronics Technician Maintenance III	20.72
23260 - Fabric Worker	16.94
23290 - Fire Alarm System Mechanic	16.77
23310 - Fire Extinguisher Repairer	15.61
23311 - Fuel Distribution System Mechanic	20.72
23312 - Fuel Distribution System Operator	15.61
23370 - General Maintenance Worker	12.01
23380 - Ground Support Equipment Mechanic	23.84
23381 - Ground Support Equipment Servicer	19.47
23382 - Ground Support Equipment Worker	21.03
23391 - Gunsmith I	15.61
23392 - Gunsmith II	18.20
23393 - Gunsmith III	20.72
23410 - Heating Ventilation And Air-Conditioning Mechanic	17.50
23411 - Heating Ventilation And Air Contidioning Mechanic (Research Facility)	18.61
23430 - Heavy Equipment Mechanic	19.27
23440 - Heavy Equipment Operator	17.76
23460 - Instrument Mechanic	20.72
23465 - Laboratory/Shelter Mechanic	19.46
23470 - Laborer	11.37
23510 - Locksmith	19.46
23530 - Machinery Maintenance Mechanic	23.13
23550 - Machinist Maintenance	20.72
23580 - Maintenance Trades Helper	10.67
23591 - Metrology Technician I	20.72
23592 - Metrology Technician II	22.03
23593 - Metrology Technician III	23.33
23640 - Millwright	20.72
23710 - Office Appliance Repairer	19.46
23760 - Painter Maintenance	14.08
23790 - Pipefitter Maintenance	18.39
23810 - Plumber Maintenance	17.27
23820 - Pneudraulic Systems Mechanic	20.72
23850 - Rigger	20.72
23870 - Scale Mechanic	18.20
23890 - Sheet-Metal Worker Maintenance	17.35
23910 - Small Engine Mechanic	18.20
23931 - Telecommunications Mechanic I	19.76
23932 - Telecommunications Mechanic II	21.01
23950 - Telephone Lineman	18.24
23960 - Welder Combination Maintenance	18.31
23965 - Well Driller	21.13
23970 - Woodcraft Worker	20.71
23980 - Woodworker	15.61
24000 - Personal Needs Occupations	
24550 - Case Manager	15.01
24570 - Child Care Attendant	10.09
24580 - Child Care Center Clerk	13.25
24610 - Chore Aide	12.78
24620 - Family Readiness And Support Services Coordinator	15.01
24630 - Homemaker	16.12
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	20.72
25040 - Sewage Plant Operator	21.59
25070 - Stationary Engineer	20.72
25190 - Ventilation Equipment Tender	14.29
25210 - Water Treatment Plant Operator	21.59
27000 - Protective Service Occupations	
27004 - Alarm Monitor	10.90
27007 - Baggage Inspector	9.48

27008 - Corrections Officer	12.05
27010 - Court Security Officer	12.05
27030 - Detection Dog Handler	10.90
27040 - Detention Officer	12.05
27070 - Firefighter	12.05
27101 - Guard I	9.48
27102 - Guard II	10.90
27131 - Police Officer I	12.05
27132 - Police Officer II	13.40
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	13.24
28042 - Carnival Equipment Repairer	14.46
28043 - Carnival Worker	9.78
28210 - Gate Attendant/Gate Tender	13.18
28310 - Lifeguard	11.01
28350 - Park Attendant (Aide)	14.74
28510 - Recreation Aide/Health Facility Attendant	11.84
28515 - Recreation Specialist	18.26
28630 - Sports Official	11.74
28690 - Swimming Pool Operator	17.71
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	25.98
29020 - Hatch Tender	25.98
29030 - Line Handler	25.98
29041 - Stevedore I	24.18
29042 - Stevedore II	27.79
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist Center (HFO) (see 2)	40.29
30011 - Air Traffic Control Specialist Station (HFO) (see 2)	27.78
30012 - Air Traffic Control Specialist Terminal (HFO) (see 2)	30.59
30021 - Archeological Technician I	17.49
30022 - Archeological Technician II	19.56
30023 - Archeological Technician III	24.21
30030 - Cartographic Technician	23.18
30040 - Civil Engineering Technician	23.08
30051 - Cryogenic Technician I	25.57
30052 - Cryogenic Technician II	28.24
30061 - Drafter/CAD Operator I	17.49
30062 - Drafter/CAD Operator II	19.56
30063 - Drafter/CAD Operator III	20.77
30064 - Drafter/CAD Operator IV	25.57
30081 - Engineering Technician I	14.84
30082 - Engineering Technician II	16.66
30083 - Engineering Technician III	18.64
30084 - Engineering Technician IV	23.08
30085 - Engineering Technician V	28.24
30086 - Engineering Technician VI	34.16
30090 - Environmental Technician	23.08
30095 - Evidence Control Specialist	23.08
30210 - Laboratory Technician	20.77
30221 - Latent Fingerprint Technician I	25.57
30222 - Latent Fingerprint Technician II	28.24
30240 - Mathematical Technician	23.34
30361 - Paralegal/Legal Assistant I	19.54
30362 - Paralegal/Legal Assistant II	24.21
30363 - Paralegal/Legal Assistant III	29.61
30364 - Paralegal/Legal Assistant IV	35.83
30375 - Petroleum Supply Specialist	28.24
30390 - Photo-Optics Technician	21.93
30395 - Radiation Control Technician	28.24
30461 - Technical Writer I	23.08
30462 - Technical Writer II	28.24
30463 - Technical Writer III	34.16
30491 - Unexploded Ordnance (UXO) Technician I	25.60
30492 - Unexploded Ordnance (UXO) Technician II	30.98

30493 - Unexploded Ordnance (UXO) Technician III	37.13
30494 - Unexploded (UXO) Safety Escort	25.60
30495 - Unexploded (UXO) Sweep Personnel	25.60
30501 - Weather Forecaster I	25.57
30502 - Weather Forecaster II	31.09
30620 - Weather Observer Combined Upper Air Or Surface Programs	(see 2) 20.77
30621 - Weather Observer Senior	(see 2) 23.08
31000 - Transportation/Mobile Equipment Operation Occupations	
31010 - Airplane Pilot	30.98
31020 - Bus Aide	8.15
31030 - Bus Driver	10.66
31043 - Driver Courier	9.69
31260 - Parking and Lot Attendant	9.91
31290 - Shuttle Bus Driver	11.65
31310 - Taxi Driver	11.41
31361 - Truckdriver Light	10.59
31362 - Truckdriver Medium	11.61
31363 - Truckdriver Heavy	14.64
31364 - Truckdriver Tractor-Trailer	14.64
99000 - Miscellaneous Occupations	
99020 - Cabin Safety Specialist	15.10
99030 - Cashier	9.63
99050 - Desk Clerk	9.70
99095 - Embalmer	25.60
99130 - Flight Follower	25.60
99251 - Laboratory Animal Caretaker I	23.38
99252 - Laboratory Animal Caretaker II	25.54
99260 - Marketing Analyst	21.54
99310 - Mortician	25.60
99410 - Pest Controller	14.61
99510 - Photofinishing Worker	13.45
99710 - Recycling Laborer	17.32
99711 - Recycling Specialist	23.38
99730 - Refuse Collector	16.40
99810 - Sales Clerk	9.87
99820 - School Crossing Guard	17.27
99830 - Survey Party Chief	23.01
99831 - Surveying Aide	13.08
99832 - Surveying Technician	17.00
99840 - Vending Machine Attendant	23.38
99841 - Vending Machine Repairer	29.78
99842 - Vending Machine Repairer Helper	23.38

Note: Executive Order (EO) 13706 Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2017. If this contract is covered by the EO the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness injury or other health-related needs including preventive care; to assist a family member (or person who is like family to the employee) who is ill injured or has other health-related needs including preventive care; or for reasons resulting from or to assist a family member (or person who is like family to the employee) who is the victim of domestic violence sexual assault or stalking. Additional information on contractor requirements and worker protections

under the EO is available at www.dol.gov/whd/govcontracts.

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$4.60 per hour up to 40 hours per week or \$184.00 per week or \$797.33 per month

HEALTH & WELFARE EO 13706: \$4.23 per hour up to 40 hours per week or \$169.20 per week or \$733.20 per month*

*This rate is to be used only when compensating employees for performance on an SCA-covered contract also covered by EO 13706 Establishing Paid Sick Leave for Federal Contractors. A contractor may not receive credit toward its SCA obligations for any paid sick leave provided pursuant to EO 13706.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; and 4 weeks after 3 years. Length of service includes the whole span of continuous service with the present contractor or successor wherever employed and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day Martin Luther King Jr.'s Birthday Washington's Birthday Memorial Day Independence Day Labor Day Columbus Day Veterans' Day Thanksgiving Day and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE NUMBERED FOOTNOTES IN PARENTHESES RECEIVE THE FOLLOWING:

1) COMPUTER EMPLOYEES: Under the SCA at section 8(b) this wage determination does not apply to any employee who individually qualifies as a bona fide executive administrative or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than \$27.63 (or on a salary or fee basis at a rate not less than \$455 per week) an hour would likely qualify as exempt computer professionals (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds \$27.63 per hour conformances may be necessary for certain nonexempt employees. For example if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage

determination.

Additionally because job titles vary widely and change quickly in the computer industry job titles are not determinative of the application of the computer professional exemption. Therefore the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures including consulting with users to determine hardware software or system functional specifications;

(2) The design development documentation analysis creation testing or modification of computer systems or programs including prototypes based on and related to user or system design specifications;

(3) The design documentation testing creation or modification of computer programs related to machine operating systems; or

(4) A combination of the aforementioned duties the performance of which requires the same level of skills. (29 C.F.R. 541.400).

2) AIR TRAFFIC CONTROLLERS AND WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** HAZARDOUS PAY DIFFERENTIAL ****

An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance explosives and incendiary materials. This includes work such as screening blending dying mixing and pressing of sensitive ordnance explosives and pyrotechnic compositions such as lead azide black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization modification renovation demolition and maintenance operations on sensitive ordnance explosives and incendiary materials. All operations involving re-grading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with or in close proximity to ordnance (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands face or arms of the employee engaged in the operation irritation of the skin minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving unloading storage and hauling of ordnance explosive and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance explosives and incendiary material differential pay.

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract by the employer by the state or local law etc.) the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition where uniform cleaning and maintenance is made the responsibility of the employee all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount or the furnishing of contrary affirmative proof as to the actual cost) reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However in those instances where the uniforms furnished are made of "wash and wear" materials may be routinely washed and dried with other personal garments and do not require any special treatment such as dry cleaning daily washing or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract by the contractor by law or by the nature of the work there is no requirement that employees be reimbursed for uniform maintenance costs.

**** SERVICE CONTRACT ACT DIRECTORY OF OCCUPATIONS ****

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations" Fifth Edition (Revision 1) dated September 2015 unless otherwise indicated.

**** REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE Standard Form 1444 (SF-1444) ****

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e. the work to be performed is not performed by any classification listed in the wage determination) be classified by the contractor so as to provide a reasonable relationship (i.e. appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination (See 29 CFR 4.6(b)(2)(i)). Such conforming procedures shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees (See 29 CFR 4.6(b)(2)(ii)). The Wage and Hour Division shall make a final determination of conformed classification wage rate and/or fringe benefits which shall be paid to all employees performing in the classification from the first day of work on which contract work is performed by them in the classification. Failure to pay such unlisted employees the compensation agreed upon by the interested

parties and/or fully determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract. (See 29 CFR 4.6(b)(2)(v)). When multiple wage determinations are included in a contract a separate SF-1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).

- 2) After contract award the contractor prepares a written report listing in order the proposed classification title(s) a Federal grade equivalency (FGE) for each proposed classification(s) job description(s) and rationale for proposed wage rate(s) including information regarding the agreement or disagreement of the authorized representative of the employees involved or where there is no authorized representative the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

- 3) The contracting officer reviews the proposed action and promptly submits a report of the action together with the agency's recommendations and pertinent information including the position of the contractor and the employees to the U.S. Department of Labor Wage and Hour Division for review (See 29 CFR 4.6(b)(2)(ii)).

- 4) Within 30 days of receipt the Wage and Hour Division approves modifies or disapproves the action via transmittal to the agency contracting officer or notifies the contracting officer that additional time will be required to process the request.

- 5) The contracting officer transmits the Wage and Hour Division's decision to the contractor.

- 6) Each affected employee shall be furnished by the contractor with a written copy of such determination or it shall be posted as a part of the wage determination (See 29 CFR 4.6(b)(2)(iii)).

Information required by the Regulations must be submitted on SF-1444 or bond paper.

When preparing a conformance request the "Service Contract Act Directory of Occupations" should be used to compare job definitions to ensure that duties requested are not performed by a classification already listed in the wage determination. Remember it is not the job title but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split combine or subdivide classifications listed in the wage determination (See 29 CFR 4.152(c)(1))."



EXHIBIT A

University of Guam

BID SPECIFICATIONS OR EQUIVALENT

BID NO. B21-17

JR0529 UOG HVAC EQUIPMENT PURCHASE

4/27/2021

Prepared by:

AMORIENT

Prepared for:

UNIVERSITY OF GUAM

**SECTION 23 81 00
DECENTRALIZED UNITARY HVAC EQUIPMENT**

PART 1**GENERAL****1.1 REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. (AMCA)

AMCA 500-D (2018) Laboratory Methods of Testing Dampers for Rating

AMCA 500-L (2015) Laboratory Methods of Testing Louvers for Rating

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

AHRI 540 (2020) Performance Rating Of Positive Displacement Refrigerant Compressors And Compressor Units

AHRI 700 (2019) Specifications for Fluorocarbon Refrigerants

ANSI/AHRI 210/240 (2008; Add 1 2011; Add 2 2012) Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment

ANSI/AHRI 270 (2020) Sound Rating of Outdoor Unitary Equipment

ANSI/AHRI 460 (2005) Performance Rating of Remote Mechanical-Draft Air-Cooled Refrigerant Condensers

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ANSI/ASHRAE 15 & 34 (2013) ANSI/ASHRAE Standard 15 Safety Standard for refrigeration systems and ANSI/ASHRAE Standard 34-Designation and Safety Classification of Refrigerants

ASHRAE 15 & 34 (2013) ASHRAE Standard 34-2016 Safety Standard for Refrigeration Systems/ASHRAE Standard 34-2016 Designation and Safety Classification of Refrigerants-ASHRAE Standard 34-2016

ASHRAE 52.2 (2012) Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size

ASHRAE 55 (2020) Thermal Environmental Conditions for Human Occupancy

ASHRAE 62.1 (2019) Ventilation for Acceptable Indoor Air Quality

(2020) Methods of Testing Remote Mechanical-Draft Evaporative Refrigerant Condensers

ASHRAE 90.1 - IP

(2019) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASHRAE 90.1 - SI

(2019) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASTM INTERNATIONAL (ASTM)

ASTM A307	(2021; E 2017) Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength
ASTM B117	(2019) Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM C1071	(2019) Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material)
ASTM D520	(2000; R 2011) Zinc Dust Pigment
ASTM E84	(2021) Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM F104	(2011; R 2020) Standard Classification System for nonmetallic Gasket Materials

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS 6	(1993; R 2016) Industrial Control and Systems: Enclosures
NEMA MG 1	(2018) Motors and Generators
NEMA MG 2	(2014) Safety Standard for Construction and Guide for Selection, Installation and Use of Electric Motors and Generators

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2020; ERTA 20-1 2020; ERTA 20-2 2020; TIA 20-1; TIA 20-2; TIA 20-3; TIA 20-4) National Electrical Code
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UNDERWRITERS LABORATORIES (UL)

UL 586	(2009; Reprint Dec 2017) UL Standard for Safety High-Efficiency Particulate, Air Filter Units
UL 900	(2015) Standard for Air Filter Units
UL 1995	(2015) UL Standard for Safety Heating and Cooling Equipment

1.2 SUBMITTALS

SD-03 Product Data Spare Parts

Posted Instructions

Coil Corrosion Protection System Performance Tests Training

Inventory

Environmental Data

Supplied Products

SD-06 Test Reports

Refrigerant Tests, Charging, and Start-Up

System Performance Tests

SD-07 Certificates Service

Organizations

SD-10 Operation and Maintenance Data

Operation and Maintenance Manuals

1.3 DELIVERY, STORAGE, AND HANDLING

Protect stored items from the weather, humidity and temperature variations, dirt and dust, or other contaminants. Properly protect and care for all material both before and during installation. Submit an inventory of all the stored items. Replace any materials found to be damaged, at no additional cost to the Government. During installation, cap piping and similar openings capped to keep out dirt and other foreign matter.

1.4 ENVIRONMENTAL REQUIREMENTS

For proper Indoor Environmental Quality, maintain pressure within the building as indicated. Ventilation must meet or exceed ASHRAE 62.1 and all published addenda. Meet or exceed filter media efficiency as tested in accordance with ASHRAE 52.2. Thermal comfort must meet or exceed ASHRAE 55.

1.5 WARRANTY

Provide equipment with the 1 year manufacturer's warranty

PART 2 PRODUCTS

Provide Manufacturer's standard catalog data, at least 5 weeks prior to the purchase or installation of a particular component, highlighted to show material, size, options, performance charts and curves, etc. in adequate detail to demonstrate compliance with contract requirements. Data includes manufacturer's recommended installation instructions and procedures. If vibration isolation is specified for a unit, include vibration isolator literature

containing catalog cuts and certification that the isolation characteristics of the isolators provided meet the manufacturer's recommendations. Submit data for each specified component. Minimum efficiency requirements must be in accordance with ASHRAE 90.1.

2.1.1 Standard Products

Provide materials and equipment that are standard products of a manufacturer regularly engaged in the manufacturing of such products, which are of a similar material, design and workmanship. The standard products must have been in satisfactory commercial or industrial use for 2 years prior to bid opening. The 2 year use includes applications of equipment and materials under similar circumstances and of similar size. The 2 years' experience must be satisfactorily completed by a product which has been sold or is offered for sale on the commercial market through advertisements, manufacturer's catalogs, or brochures. Products having less than a 2 year field service record will be acceptable if a certified record of satisfactory field operation, for not less than 6000 hours exclusive of the manufacturer's factory tests, can be shown. Products must be supported by a service organization. Ensure system components are environmentally suitable for the indicated geographic locations.

2.1.2 Product Sustainability Criteria

2.1.2.1 Energy Efficient Equipment

Provide equipment meeting the minimum efficiency requirement as required by ASHRAE 90.1.

2.1.2.2 Electrical Equipment / Motors

Electrical motor driven equipment specified must be provided complete with motors, motor starters, and controls. Electrical characteristics must be as shown, and unless otherwise indicated, all motors of 1 horsepower and above with open, drip proof, totally enclosed, or explosion proof fan cooled enclosures, must be the premium efficiency type in accordance with NEMA MG 1. Field wiring must be in accordance with manufacturer's instructions. Each motor must conform to NEMA MG 1 and NEMA MG 2 and be of sufficient size to drive the equipment at the specified capacity without exceeding the nameplate rating of the motor. Motors must be continuous duty with the enclosure specified. Motor starters must be provided complete with thermal overload protection and other appurtenances necessary for the motor control indicated. Motors must be furnished with a magnetic across-the-line or reduced voltage type starter as required by the manufacturer. Motor duty requirements must allow for maximum frequency start-stop operation and minimum encountered interval between start and stop. Motors must be sized for the applicable loads. Motor torque must be capable of accelerating the connected load within 20 seconds with 80 percent of the rated voltage maintained at motor terminals during one starting period. Motor bearings must be fitted with grease supply fittings and grease relief to outside of enclosure. Manual or automatic control and protective or signal devices required for the operation specified and any control wiring required for controls and devices specified, but not shown, must be provided.

2.1.2.3 Ozone Depleting Substances

Unitary air conditioning equipment must not use CFC-based refrigerants. Refrigerant shall be R-410A or may be an approved alternative refrigerant in accordance with EPA's Significant New Alternative Policy (SNAP) listing.

2.1.3 Nameplates

Major equipment including compressors, condensers, receivers, heat exchanges, fans, and motors must have the manufacturer's name, address, type or style, model or serial number, and catalog number on a plate secured to the item of equipment. Plates must be durable and legible throughout equipment life and made of stainless steel. Fix plates in prominent locations with nonferrous screws or bolts.

2.1.4 Safety Devices

Exposed moving parts, parts that produce high operating temperature, parts which may be electrically energized, and parts that may be a hazard to operating personnel must be insulated, fully enclosed, guarded, or fitted with other types of safety devices. Safety devices must be installed so that proper operation of equipment is not impaired. Welding and cutting safety requirements must be in accordance with AWS Z49.1.

2.2 EQUIPMENT

2.2.1 Large-Capacity Split-System Air Conditioners (Greater Than 65,000 Btu/h)

Provide an air-cooled, split system which employs a remote condensing unit, a separate indoor unit, and interconnecting refrigerant piping. Provide the air conditioning type unit conforming to applicable Underwriters Laboratories (UL) standards including UL 1995. Unit must be rated in accordance with ANSI/AHRI 210/240. Provide unit with necessary fans, air filters, and cabinet construction as specified in paragraph UNITARY EQUIPMENT ACCESSORIES. Provide double-width, double inlet, forward curved centrifugal scroll type evaporator or supply fans. Provide the manufacturer's standard for the unit specified and may be centrifugal scroll type condenser or outdoor fans. Enclose fan condenser motors in totally enclosed enclosures and permanently lubricate ball bearings. Air Conditioners must have a minimum energy efficiency ratio (EER) of 12.

2.2.1.1 Air-To-Refrigerant Coil

Provide coils with copper tubes of 3/8 inch minimum diameter with copper fins that are mechanically bonded or soldered to the tubes. Provide casing of galvanized steel. Avoid contact of dissimilar metals. Test coils in accordance with ASHRAE 15 & 34 at the factory and ensure suitability for the working pressure of the installed system. Dehydrate and seal each coil testing and prior to evaluation and charging. Provide each unit with a factory operating charge of refrigerant and oil. Field charge unit shipped with a holding charge with refrigerant and oil. Provide separate expansion devices for each compressor circuit. Condenser coil must have special coating for corrosion resistance. Condenser coil must be copper finned. Coat condenser and evaporator coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Apply coating at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation and be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.2.1.2 Refrigeration Circuit

Refrigerant-containing components must comply with ASHRAE 15 & 34 and be factory tested, cleaned, dehydrated, charged, and sealed. Provide refrigerant charging valves and connections, and pumpdown valves for each circuit.

2.2.1.3 Unit Controls

Provide unit internally prewired with a 208 volt control circuit powered by an internal transformer.

Provide terminal blocks for power wiring and external control wiring. Unit must have cutoffs high and low pressure, and low oil pressure for compressors with positive displacement oil pumps, supply fan failure, and safety interlocks on all service panels. Stage multiple compressors by means of a time delay. Internally protect unit by a circuit breaker in accordance with UL 1995.

2.2.1.4 Condensing Unit

Fit each remote condenser coil with a manual isolation valve and an access valve on the coil side. Saturated refrigerant condensing temperature must not exceed 120 degrees F at 95 degrees F ambient. Fan and condenser motors must have totally enclosed enclosures.

2.2.1.4.1 Air-Cooled Condenser

Provide unit rated in accordance with ANSI/AHRI 460 and conform to the requirements of UL 1995. Provide factory fabricated, tested, packaged, and self-contained unit. Unit must be complete with casing, propeller or centrifugal type fans, heat rejection coils, connecting piping and wiring, and all necessary appurtenances.

- a. Provide interconnecting refrigeration piping, electrical power, and control wiring between the condensing unit and the indoor unit as required and as indicated. Provide electrical and refrigeration piping terminal connections between condensing unit and evaporator units.
- b. Low ambient control for multi-circuited units serving more than one evaporator coil must provide independent condenser pressure controls for each refrigerant circuit. Set controls to produce a minimum of 95 degrees F saturated refrigerant condensing temperature. Provide unit with a liquid subcooling circuit that ensures proper liquid refrigerant flow to the expansion device over the specified application range of the condenser. Unit must be provided with manufacturer's standard liquid subcooling. Liquid seal the subcooling circuit.
- c. Coils must have copper tubes of 3/8 inch minimum diameter with copper fins that are mechanically bonded or soldered to the tubes. Protect coil in accordance with paragraph COIL CORROSION PROTECTION. Casing must be galvanized steel or aluminum. Avoid contact of dissimilar metals. Test coils in accordance with ASHRAE 15 & 34 at the factory and ensure suitability for the working pressure of the installed system. Dehydrate and seal each coil after testing and prior to evaluation and charging. Provide each unit with a factory operating charge of refrigerant and oil or a holding charge. Field charge unit shipped with a holding charge. Provide separate expansion devices for each compressor circuit.
- d. Provide a complete control system with required accessories for regulating condenser pressure by fan cycling, solid-state variable fan speed, modulating condenser coil or fan dampers, flooding the condenser, or a combination of the above. Construct unit mounted control panels or enclosures in accordance with applicable requirements of NFPA 70 and house in NEMA ICS 6, Class 1 or 3A enclosures. Controls must include overload protective devices, interface with local and remote components, and intercomponent wiring to terminal block points.

2.2.1.4.2 Compressors

Provide compressor rated in accordance with AHRI 540. Provide direct drive, semi-hermetic or hermetic reciprocating, or scroll type compressor capable of operating at partial load conditions. Compressor must be capable of continuous operation down to the lowest step of unloading as specified. Provide units 120,000 Btuh and larger with capacity reduction devices to produce automatic capacity reduction of at least 50 percent. If standard with the manufacturer, two or more compressors may be used in lieu of a single compressor with unloading capabilities, in which case the compressors operate in sequence, and each compressor must have an independent refrigeration circuit through the condenser and evaporator. Each compressor must start in the unloaded position. Provide each compressor with vibration isolators, crankcase heater, lubrication pump, thermal overloads, and high and low pressure safety cutoffs and protection against short cycling.

2.2.1.5 Filters

Provide filters of the sectional or panel type, capable of filtering the entire air supply. Mount filter(s) integral within the unit and make accessible by hinged access panel(s). Factory supply 2.0 inch, MERV 13, throwaway filters. Filters must have an average dust spot efficiency of 90-95 percent and an average arrestance of 90 percent when tested in accordance with ASHRAE 52.2. Provide UL Class 1 filters.

2.4 COMPONENTS

2.4.1 Refrigerant and Oil

The air-conditioning system shall use R410A. Refrigerants must have number designations and safety classifications in accordance with ASHRAE 15 & 34. Refrigerants must meet the requirements of AHRI 700 as a minimum. Provide a complete charge of refrigerant for the installed system as recommended by the manufacturer. Lubricating oil must be of a type and grade recommended by the manufacturer for each compressor. Where color leak indicator dye is incorporated, charge must be in accordance with manufacturer's recommendation.

2.4.2 Fans

Fan wheel shafts must be supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Unit fans must be selected to produce the cfm required at the fan total pressure. Motor starters, if applicable, must be magnetic across-the-line type with a totally enclosed enclosure. Thermal overload protection must be of the manual or automatic-reset type. Fan wheels or propellers must be constructed of aluminum or galvanized steel. Centrifugal fan wheel housings must be of galvanized steel, and both centrifugal and propeller fan casings must be constructed of aluminum or galvanized steel. Steel elements of fans, except fan shafts, must be hot-dipped galvanized after fabrication or fabricated of mill galvanized steel. Mill-galvanized steel surfaces and edges damaged or cut during fabrication by forming, punching, drilling, welding, or cutting must be recoated with an approved zinc-rich compound. Fan wheels or propellers must be statically and dynamically balanced. Centrifugal scroll-type fans must be provided with streamlined orifice inlet and V-belt drive. Each drive will be independent of any other drive. Propeller fans must be V-belt drive type with fixed pitch blades. V-belt driven fans must be mounted on a corrosion protected drive shaft supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Each drive will be independent of any other drive. Drive bearings must be protected with water slingers or shields. V-belt drives must be fitted with guards where exposed to contact by personnel and fixed pitch sheaves.

2.4.3 Air Filters

Provide filters to filter outside air and return air and locate inside combination air filter mixing box. Provide replaceable (throw-away) high efficiency type. Filters must conform to UL 900, Class 1. Polyurethane filters cannot be used on units with multiframe filters. Air filters must be listed in accordance with requirements of UL 900, except high efficiency particulate air filters of 99.97 percent efficiency by the DOP Test Method must be as listed under the label service and must meet the

2.4.3.1 High Efficiency Filters

Additional high efficiency particulate air (HEPA) filters shall be provided. Filters must have a MERV of 17 when tested in accordance with ASHRAE 52.2. Filter assembly must include; holding frame and fastener assembly, filter cartridge, mounting frame, and retainer assembly. Reinforce filter media with glass fiber mat. Pressure drop across

clean filter shall not exceed 1 inches of water gage.

2.4.5 Mixing Boxes

Mixing boxes must match the base unit in physical size and must include equally sized openings, each capable of full air flow. Arrangement must be as indicated.

2.4.6 Cabinet Construction

Casings for the specified unitary equipment must be constructed of galvanized steel with a weather and corrosion resistant enamel finish or aluminum sheet metal and galvanized or aluminum structural members. If cabinet is enamel-finished galvanized steel, the cabinet finish shall be tested in accordance with ASTM B-117 salt spray surface scratch test (SST) procedure for a minimum of 1000 hours. Such documentation shall be included in all submittals. Minimum thickness of single wall exterior surfaces must be 18 gauge galvanized steel or 0.071 inch thick aluminum on units with a capacity above 20 tons and 20 gauge galvanized steel or 0.064 inch thick aluminum on units with a capacity less than 20 tons. Casing must be fitted with lifting provisions, access panels or doors, fan vibration isolators, electrical control panel, corrosion-resistant components, structural support members, insulated condensate drip pan and drain, and internal insulation in the cold section of the casing. Where double-wall insulated construction is proposed, minimum exterior galvanized sheet metal thickness must be 20 gauge.

Provisions to permit replacement of major unit components must be incorporated. Penetrations of cabinet surfaces, including the floor, must be sealed. Unit must be fitted with a drain pan which extends under all areas where water may accumulate. Drain pan must be fabricated from Type 300 stainless steel, galvanized steel with protective coating as required, or an approved plastic material. Pan insulation must be water impervious. Extent and effectiveness of the insulation of unit air containment surfaces must prevent, within limits of the specified insulation, heat transfer between the unit exterior and ambient air, heat transfer between the two conditioned airstreams, and condensation on surfaces. Insulation must conform to ASTM C1071.

2.4.6.1 Indoor Cabinet

Indoor cabinets must be suitable for the specified indoor service and enclose all unit components.

2.4.6.2 Outdoor Cabinet

Outdoor cabinets must be suitable for outdoor service with a weathertight, insulated and corrosion-protected structure. Cabinets constructed exclusively for indoor service which have been modified for outdoor service are not acceptable.

2.6 FINISHES

2.6.1 Coil Corrosion Protection

Provide coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Submit product data on the type coating selected,

the coating thickness, the application process used, the estimated heat transfer loss of the coil, and verification of conformance with the salt spray test requirement. Coating must be applied at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation. Coating must be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.6.2 Equipment and Components Factory Coating

Unless otherwise specified, equipment and component items, when fabricated from ferrous metal, must be factory finished with the manufacturer's standard finish, except that items located outside of buildings must have weather resistant finishes that will withstand 500 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution. Immediately after completion of the test, the specimen must show no signs of blistering, wrinkling, cracking, or loss of adhesion and no sign of rust creepage beyond 1/8 inch on either side of the scratch mark. Cut edges of galvanized surfaces where hot-dip galvanized sheet steel is used must be coated with a zinc-rich coating conforming to ASTM D520, Type I.

Where stipulated in equipment specifications of this section, coat finned tube coils of the affected equipment as specified below. Apply coating at the premises of a company specializing in such work. Degrease and prepare for coating in accordance with the coating applicator's procedures for the type of metals involved. Completed coating must show no evidence of softening, blistering, cracking, crazing, flaking, loss of adhesion, or "bridging" between the fins.

2.6.2.1 Phenolic Coating

Provide a resin base thermosetting phenolic coating. Apply coating by immersion dipping of the entire coil. Provide a minimum of two coats. Bake or heat dry coils following immersions. After final immersion and prior to final baking, spray entire coil with particular emphasis given to building up coating on sheared edges. Total dry film thickness must be 2.5 to 3.0 mils.

2.6.2.2 Chemical Conversion Coating with Polyelastomer Finish Coat

Dip coils in a chemical conversion solution to molecularly deposit a corrosion resistant coating by electrolysis action. Cure conversion coating at a temperature of 110 to 140 degrees F for a minimum of 3 hours. Coat coil surfaces with a complex polymer primer with a dry film thickness of 1 mil. Cure primer coat for a minimum of 1 hour. Using dip tank method, provide three coats of a complex polyelastomer finish coat. After each of the first two finish coats, cure the coils for 1 hour. Following the third coat, spray a fog coat of an inert sealer on the coil surfaces. Total dry film thickness must be 2.5 to 3.0 mils. Cure finish coat for a minimum of 3 hours. Coating materials must have 300 percent flexibility, operate in temperatures of minus 50 to plus 220 degrees F, and protect against atmospheres of a pH range of 1 to 14.

2.6.2.3 Vinyl Coating

Apply coating using an airless fog nozzle. For each coat, make at least two passes with the nozzle. Materials to be applied are as follows:

- a. Total dry film thickness, 6.5 mils maximum
- b. Vinyl Primer, 24 percent solids by volume: One coat 2 mils thick

- c. Vinyl Copolymer, 30 percent solids by volume: One coat 4.5 mils thick

2.6.3 Factory Applied Insulation

Refrigeration equipment must be provided with factory installed insulation on surfaces subject to sweating including the suction line piping. Where motors are the gas-cooled type, factory installed insulation must be provided on the cold-gas inlet connection to the motor in accordance with manufacturer's standard practice. Factory insulated items installed outdoors are not required to be fire-rated. As a minimum, factory insulated items installed indoors must have a flame spread index no higher than 75 and a smoke developed index no higher than 150. Factory insulated items (no jacket) installed indoors and which are located in air plenums, in ceiling spaces, and in attic spaces must have a flame spread index no higher than 25 and a smoke developed index no higher than 50. Flame spread and smoke developed indexes must be determined by ASTM E84.

Insulation must be tested in the same density and installed thickness as the material to be used in the actual construction. Material supplied by a manufacturer with a jacket must be tested as a composite material.

Jackets, facings, and adhesives must have a flame spread index no higher than 25 and a smoke developed index no higher than 50 when tested in accordance with ASTM E84.

2.7 TESTS, INSPECTIONS, AND VERIFICATIONS

All manufactured units must be inspected and tested, and documentation provided to demonstrate that each unit is in compliance with ANSI/AHRI and UL requirements and that the minimum efficiency requirements of ASHRAE 90.1 - IP have been met.

DIVISION 23-HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)
(HVAC) SECTION 23 81 29 VARIABLE
REFRIGERANT FLOW HVAC SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

Provide a complete Air Source, Cooling Only type Variable Refrigerant Flow (VRF) System consisting of one or more outdoor compressor units and multiple indoor fan coil units as specified in this Section and in accordance with the following:

- a. The complete system must be a tested combination in accordance with AHRI 1230.
- b. Provide cooling only control for each zone
- c. For systems which simultaneously heat and cool, the outdoor units must be interconnected to the indoor units through branch selector boxes in accordance with the manufacturer's engineering data detailing each indoor unit. The indoor units and outdoor must be connected to the branch selector boxes utilizing the manufacturer's specified piping joints and headers.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

AHRI 1230	(2010; Addendum 1 2011; Addendum 2 2014) Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment
ANSI/AHRI 270	(2008) Sound Rating of Outdoor Unitary Equipment
ANSI/AHRI 760	(2007) Performance Rating of Solenoid Valves for Use With Volatile Refrigerants

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
(ASHRAE)

ANSI/ASHRAE 15 & 34	(2013) ANSI/ASHRAE Standard 15-Safety Standard for Refrigeration Systems and ANSI/ASHRAE Standard 34-Designation and Safety Classification of Refrigerants
ASHRAE 90.1 - IP	(2013) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASTM INTERNATIONAL (ASTM)

ASTM A307

(2014; E 2017) Standard Specification for Carbon Steel Bolts, Studs, and

ASTM B117	Threaded Rod 60 000 PSI Tensile Strength
ASTM D520	(2019) Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM E84	(2000; R 2011) Zinc Dust Pigment
ASTM F104	(2020) Standard Test Method for Surface Burning Characteristics of Building Materials
	(2011; R 2020) Standard Classification System for Nonmetallic Gasket Materials

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA 250	(2018) Enclosures for Electrical Equipment (1000 Volts Maximum)
NEMA MG 1	(2018) Motors and Generators
NEMA MG 2	(2014) Safety Standard for Construction and Guide for Selection, Installation and Use of Electric Motors and Generators

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star	(1992; R 2006) Energy Star Energy Efficiency Labeling System (FEMP)
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 82	Protection of Stratospheric
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Ozone UNDERWRITERS

LABORATORIES (UL)

UL 207	(2009; Reprint Jan 2020) Refrigerant-Containing Components and Accessories, Nonelectrical
UL 429	(2013; Reprint Jan 2020) Electrically Operated Valves
UL 586	(2009; Reprint Dec 2017) UL Standard for Safety High-Efficiency Particulate, Air Filter Units
UL 900	(2015) Standard for Air Filter Units
UL 1995	(2015) UL Standard for Safety Heating and Cooling Equipment

1.3 SUBMITTALS

SD-01 Preconstruction Submittals

Verification Of Existing

Conditions

VRF System Contractor Design

DrawingsSD-03 Product Data

Spare Parts Data

Coil Corrosion Protection

Manufacturer's Standard Catalog

DataSample Warranty

Refrigerant SDS

SheetsSD-05 Design Data

Manufacturer's Engineering

DataSD-06 Test Reports

System Performance

TestsSD-07 Certificates

Service

Organizations

Warranty

Electronic Refrigerant Leak Detector Calibration

Ozone Depleting Substances Technician

Certification

SD-08 Manufacturer's Instructions Manufacturer's

InstructionsSD-09 Manufacturer's Field Reports

Refrigerant Charging

1.4 QUALITY ASSURANCE

Complete VRF systems must be purchased from a single supplier. The VRF system supplier must be responsible for providing a fully functional VRF system.

Prior to purchase of equipment, shop drawings (e.g. equipment layout, plans and elevations, refrigerant piping system plans, etc.) must be approved by the VRF manufacturers representative. Include approval with name and contact information of VRF manufacturer's representative in the submittal.

1.5 QUALITY CONTROL

Provide materials and equipment that are standard products of a manufacturer regularly engaged in the manufacturing of such products, which are of a similar material, design and workmanship. The standard products must have been in satisfactory commercial or industrial use for 3 years immediately prior to the solicitation of this contract. The 3 year use includes applications of equipment and materials under similar circumstances and of similar size. The 3 years' experience must be satisfactorily completed by a product which has been sold on the commercial market through advertisements, manufacturer's catalogs, or brochures. Products must be supported by a service organization. Ensure system components are environmentally suitable for the indicated geographic locations.

1.5.2 Manufacturer's Engineering Data

Submit VRF manufacturer's engineering data with the shop drawings under separate cover.

installed. Strike out irrelevant items and options not to be
selection procedures required by the manufacturer and as required by this section. Engineering data
must include: Provide all input and output reports for all

- a. Selection Procedures:
 1. Indoor and Outdoor Units
 2. Branch Selector Units
 3. Piping Material and Fittings
 4. Refrigerant Mass for system
 5. Refrigerant Classification

- b. System Efficiency Curves/Data including:
 1. Efficiency correlated with OAT
 2. At least five (5) data points covering full range of operation
 3. Minimum and maximum values over the operational range
 4. Efficiency at Standard AHRI conditions.

1.5.3 Manufacturer's Instructions

Submit VRF manufacturer's instructions with the shop drawings under separate cover.

Strike out irrelevant items and options not to be installed. Provide with the following:

- a. Installation: Include mechanical, electrical, controls and piping complete installation requirements.
- b. Operation: Include startup, normal operation and shutdown procedures.
- c. Maintenance: Include preventative.

1.6 DELIVERY, STORAGE, AND HANDLING

Protect stored items from the weather, humidity and temperature variations, dirt and dust, or other contaminants. Properly protect and care for all material both before and during installation. Submit an inventory of all the stored items. Replace any materials found to be damaged, at no additional cost to the Government.

During installation, keep piping and similar openings capped to keep out dirt and other foreign matter.

1.7 WARRANTY

Provide VRF manufactured equipment with the Manufacturer's Standard Warranty in addition to the Warranty of Construction. Submit Sample Warranty prior to construction. Compare warranty requirements with the requirements of this contract and identify discrepancies in the submittal that would prevent coverage of warranty by the manufacturer.

All products used to meet this specification must meet the indicated requirements, but not all products specified here will be required by every project.

2.1 MATERIALS

Provide Manufacturer's standard catalog data, at least 5 weeks prior to the purchase or installation of a particular component, highlighted to show material, size, options, performance charts and curves, in adequate detail to demonstrate compliance with contract requirements. If field installed vibration isolation is specified for a unit, include vibration isolator literature containing catalog cuts and certification that the isolation characteristics of the isolators provided meet the manufacturer's recommendations. Submit data for each specified component.

Minimum efficiency requirements must be in accordance with ASHRAE 90.1 - IP.

2.1.1 Performance Requirements

Provide energy efficiency curve and data of EFFICIENCY vs. OAT. Provide at least five data points over the full range of operation capturing the minimums and maximums.

2.1.1.1 Variable Refrigerant Flow Multi-Split Air Conditioners

Information on Energy Star requirements can be found at https://www.energystar.gov/products/heating_cooling/light_commercial_heating_cooling/light_commercial_hvac_key_product_criteria

2.1.1.2 Electrical Equipment / Motors

Electrical motor driven equipment specified must be provided complete with motors, motor starters, and controls. Electrical characteristics must be as shown, and unless otherwise indicated and field wiring must be in accordance with manufacturer's instructions. All motor(s):

- a. 1 horsepower and above must be the premium efficiency type in accordance with NEMA MG 1.
- b. Conform to NEMA MG 1 and NEMA MG 2 and be of sufficient size to drive the equipment at the specified capacity without exceeding the nameplate rating.
- c. Continuous duty with the enclosure specified.
- d. Starters must be provided complete with thermal overload protection and other appurtenances necessary for the motor control indicated.
- e. Furnished with a magnetic across-the-line or reduced voltage type starter as required by the manufacturer.
- f. Duty requirements must allow for maximum frequency start-stop operation and minimum encountered interval between start and stop.
- g. Must be sized for all applicable loads.
- h. Bearings with grease supply fittings must have grease relief to outside of enclosure.

- i. Automatic control and protective or signal devices required for the operation specified and any control wiring required for controls and devices specified, but not shown, must be provided.

2.1.1.3 Refrigerant

The air-conditioning system shall use R410A.

2.1.2 Safety Devices

Exposed moving parts, parts that produce high operating temperature, parts which may be electrically energized, and parts that may be a hazard to operating personnel must be insulated, fully enclosed, guarded, or fitted with other types of safety devices.

2.2.1 Zone Control

Provide a Space Sensor Module for each fan coil unit unless otherwise indicated in contract drawings and with the following additional requirements:

- a. Displays the current temperature, temperature setpoint, fans status, occupancy status and conditioning mode at the same time. If information is displayed electronically then it must be illuminated.
- b. Temperature setpoint adjustment in one degree increments.
- c. Fans speed control (At least: High-low-Auto).
- d. Occupancy override button which changes the mode of the zone to occupied for one hour per press of occupancy override button with 8 hours maximum at any instance.

2.3 INDOOR FAN COIL

Provide with the

following:

- a. Factory complete, tested and pre-wired with all necessary electronic and refrigerant controls.
- b. Equipped with auto-restart function and test run capability either via a switch or controller.
- c. Refrigerant: Refrigerant circuits factory-charged with dehydrated inert gas.
- d. Coils: Direct expansion type constructed from copper, aluminum, or copper and aluminum.
- e. Fans: Direct-drive, with statically and dynamically balanced impellers; variable speed ECM unless otherwise indicated; motor thermally protected.

- f. Return Air Filter: Washable long-life net filter with mildew proof resin, or replaceable, unless otherwise indicated.
- g. Condensate Drainage: Built-in condensate drain pan with drain connection.
- h. Dedicated electronic modulating refrigerant expansion and flow control.

- i. Unit must be in accordance with UL 1995 and AHRI 1230.
- j. For units with Built-In Condensate Pumps, provide condensate safety shutoff and alarm. For units without Built-In Condensate Pump, provide built in or field supplied overflow protection.

2.3.1 Concealed-In-Ceiling

Units Provide with the following:

- a. Ducted horizontal discharge and return; galvanized steel cabinet in accordance with Section 23 30 00 HVAC AIR DISTRIBUTION.
- b. Field adjustable external static pressure switch for high efficiency filter operation.
- c. Switch box accessible from side or bottom.

2.3.2 Recessed Ceiling

Units Provide with the

following:

- a. Four-way airflow cassette with central return air grille, for installation in a fixed ceiling, unless otherwise indicated.
- b. Exposed Housing: White, impact resistant, with washable decoration panel.
- c. Supply Airflow Adjustment:
 - (1) Via motorized louvers which can be horizontally and vertically adjusted from 0 to 90 degrees.
 - (2) Field-modifiable to 3-way and 2-way airflow.

2.3.3 Wall Surface-Mounted

Units Provide with the following:

- a. Finished white casing, with removable front grille; sound insulation; wall mounting plate; condensate drain pan.
- b. Airflow Control: Auto-swing louver that closes automatically when unit stops; adjustable discharge angle, set using remote controller; upon restart, discharge angle defaulting to same angle as previous operation.
- c. Fan: Direct-drive cross-flow type.

d. Condensate Drain Connection: Side (end), not concealed in wall.

2.4 **OUTDOOR COMPRESSOR**

UNIT Provide with the

following:

- a. The outdoor unit must have one or more variable capacity compressors or alternative method resulting in three or more steps of capacity needed to load match the indoor unit fan coils at all times.
- b. The unit must be factory complete, tested and pre-wired with all necessary electronic and refrigerant controls.
- c. The sound pressure dB(A) at rated conditions must be a value of 58 decibels at 3 feet from the front of the unit when rated in accordance with ANSI/AHRI 270.
- d. The unit must automatically restart normal operation after a power failure of any duration without reprogramming or manual assistance.
- e. Oil recovery cycle must be automatic occurring a minimum of 2 hours after start of operation and then at least every 8 hours of operation.
- f. Each outdoor unit must have its own dedicated power feed, each with disconnect and main power circuit breaker.
- g. The unit must be in compliance with ANSI/ASHRAE 15 & 34, factory tested, cleaned, dehydrated, charged, and sealed. Provide refrigerant charging valves. Filter-drier must be provided in liquid line.
- h. The outdoor units capacity must meet or exceed the scheduled value in the contract drawings. The ratio of the outdoor unit capacity to the total connected indoor capacity must be in accordance with the manufacturer's recommendations for selecting the outdoor unit.
- i. Unit must be in accordance with UL 1995 and AHRI 1230.

2.4.1 Air-Cooled

The unit must have full design cooling capacity at 95 degrees F dry bulb ambient.

2.4.2 Casing

Construct the unit of zinc coated, heavy-gage (14-gage minimum) galvanized steel. The cabinet finish shall be tested in accordance with ASTM B-117 salt spray surface scratch test (SST) procedure for a minimum of 1000 hours. Such documentation shall be included in all submittals. Provide cabinet panels with lifting handles and water- and air-tight seal. Insulate all exposed vertical panels, top covers and base pan.

2.4.3 Compressor

Each compressor system must have the following:

- a. High pressure safety switch, and internal thermal overload protection.

- b. Factory installed vibration dampeners on all mounting points.
- c. Factory installed crank case heater or other control logic to ensure reliable operation in freezing environments.
- d. Oil separator with an oil balance circuit.

2.5 COMPONENTS

2.5.1 Fans

Fan wheel shafts must be supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Unit fans must be selected to produce the flow rate required at the fan total pressure. Motor starters, if applicable, must be magnetic across-the-line type with a totally enclosed enclosure. Thermal overload protection must be of the manual or automatic-reset type. Fan wheels or propellers must be constructed of aluminum or galvanized steel. Centrifugal fan wheel housings must be of galvanized steel, and both centrifugal and propeller fan casings must be constructed of aluminum or galvanized steel. Steel elements of fans, except fan shafts, must be hot-dipped galvanized after fabrication or fabricated of mill galvanized steel. Mill-galvanized steel surfaces and edges damaged or cut during fabrication by forming, punching, drilling, welding, or cutting must be recoated with an approved zinc-rich compound. Fan wheels or propellers must be statically and dynamically balanced. Direct-drive fan motors must be of the multiple-speed variety. Belt-driven fans must have adjustable sheaves. The sheave size must be selected so that the fan speed at the approximate midpoint of the sheave adjustment will produce the specified air quantity. Centrifugal scroll-type fans must be provided with streamlined orifice inlet and V-belt drive. Each drive will be independent of any other drive.

Propeller fans must be direct-drive type with fixed pitch blades. V-belt driven fans must be mounted on a corrosion protected drive shaft supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Each drive will be independent of any other drive. Drive bearings must be protected with water slingers or shields. V-belt drives must be fitted with guards where exposed to contact by personnel and fixed pitch sheaves. Axial fans may not be used to distribute air through duct systems.

2.5.2 Air Filters

High efficiency particulate air (HEPA) filters shall be provided. Filters must have a MERV of 17 when tested in accordance with ASHRAE 52.2. Filter assembly must include; holding frame and fastener assembly, filter cartridge, mounting frame, and retainer assembly. Reinforce filter media with glass fiber mat. Pressure drop across clean filter shall not exceed 1 inches of water gage.

2.5.3 Internal Dampers

Dampers must be parallel blade type with renewable blade seals and be integral to the unitary unit. Damper provisions must be provided for each outside air intake, exhaust, economizer, and mixing boxes. Dampers must have manual modulation and operate as specified.

2.5.4 Mixing Boxes

Mixing boxes must match the base unit in physical size and must include equally-sized openings, each capable of full air flow. Arrangement must be as indicated.

2.5.5 Refrigerant Solenoid Valves

Solenoid valves must comply with ANSI/AHRI 760 and UL 429, be suitable for continuous duty rated voltage at maximum and minimum encountered pressure and temperature service conditions. Solenoid

valves must be direct-acting or pilot-operating type, packless, seal capped. Manual lifting provisions must be furnished. Solenoid coils must comply with NEMA 250 type 4.

Valves must have safe working pressure of 125 percent of maximum working pressure and a maximum operating pressure differential of at least half of the valve maximum working pressure at 85 percent rated voltage. Valves must have an operating pressure differential suitable for the fluid phase and refrigerant used.

2.5.6 Branch Selector Unit

Branch Selector port control must be provided for each connected indoor unit to enable individual heating and cooling selection year round unless otherwise indicated in the contract drawings. The cabinet must be galvanized steel. The branch selector units must be factory assembled, wired, piped and run tested.

2.6 EQUIPMENT ACCESSORIES AND MISCELLANEOUS EQUIPMENT

2.6.1 Refrigerant Leak Detector

Provide continuously-operating, halogen-specific type refrigerant leak detector. Detector must be appropriate for the refrigerant in use.

Detector must be specifically designed for area monitoring and must include a single sampling point installed where indicated. Detector design and construction must be compatible with the temperature, humidity, barometric pressure and voltage fluctuations of the operating area. Detector must have an adjustable sensitivity such that it can detect refrigerant at or above 3 parts per million (ppm). Detector must be supplied factory-calibrated for the appropriate refrigerant(s). Detector must be provided with an alarm relay output which energizes when the detector detects a refrigerant level at or above the TLV-TWA (or toxicity measurement consistent therewith) for the refrigerant in use. The detector's relay must be capable of initiating corresponding alarms and ventilation system as indicated on the drawings. Detector must be provided with a failure relay output that energizes when the monitor detects a fault in its operation.

2.6.2 Refrigerant Signs

Refrigerant signs must be a medium-weight aluminum type with a baked enamel finish. Signs must be suitable for indoor or outdoor service. Signs must have a white background with red letters not less than 0.5 inches in height.

2.6.2.1 Installation Identification

Provide each new refrigeration system with a refrigerant sign which indicates the following as a minimum:

- a. Contractor's name.
- b. Refrigerant number and amount of refrigerant.
- c. The lubricant identity and amount.
- d. Field test pressure applied.

2.6.2.2 Controls and Piping Identification

Provide refrigerant systems containing more than 110 lb of refrigerant with refrigerant signs which designate the following as a minimum:

- a. Valves or switches for controlling the refrigerant flow and the refrigerant compressor.

b. Pressure limiting device(s).

2.6.3 Gaskets

Provide gaskets conforming to ASTM F104 - classification for compressed sheet with nitrile binder and acrylic fibers for maximum 700 degrees F service.

2.6.4 Bolts and Nuts

Bolts and nuts must be in accordance with ASTM A307. The bolt head must be marked to identify the manufacturer and the standard with which the bolt complies in accordance with ASTM A307.

2.7 FINISHES

2.7.1 Coil Corrosion Protection

Provide coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Submit product data on the type coating selected, the coating thickness, the application process used, the estimated heat transfer loss of the coil, and verification of conformance with the salt spray test requirement. Coating must be applied at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation. Coating must be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.7.2 Equipment and Components Factory Coating

Unless otherwise specified, equipment and component items, when fabricated from ferrous metal, must be factory finished with the manufacturer's standard finish, except that items located outside of buildings must have weather resistant finishes that will withstand 500 hours exposure to the salt spray test specified in ASTM B117. Immediately after completion of the test, the specimen must show no signs of blistering, wrinkling, cracking, or loss of adhesion and no sign of rust creepage beyond 1/8 inch on either side of the scratch mark. Cut edges of galvanized surfaces where hot-dip galvanized sheet steel is used must be coated with a zinc-rich coating conforming to ASTM D520, Type I.

Where stipulated in equipment specifications of this section, coat finned tube coils of the affected equipment as specified below. Apply coating at the premises of a company specializing in such work. Degrease and prepare for coating in accordance with the coating applicator's procedures for the type of metals involved. Completed coating must show no evidence of softening, blistering, cracking, crazing, flaking, loss of adhesion, or "bridging" between the fins.

2.7.2.1 Phenolic Coating

Provide a resin base thermosetting phenolic coating. Apply coating by immersion dipping of the entire coil. Provide a minimum of two coats. Bake or heat dry coils following immersions. After final immersion and prior to final baking, spray entire coil with particular emphasis given to building up coating on sheared edges. Total dry film thickness must be 2.5 to 3.0 mils.

2.7.2.2 Chemical Conversion Coating with Polyelastomer Finish Coat

Dip coils in a chemical conversion solution to molecularly deposit a corrosion resistant coating by electrolysis action. Cure conversion coating at a temperature of 110 to 140 degrees F for a

minimum of 3 hours. Coat coil surfaces with a complex polymer primer with a dry film thickness of 1 mil. Cure primer coat for a minimum of 1 hour. Using dip tank method, provide three coats of a complex polyelastomer finish coat. After each of the firsttwo finish coats, cure the coils for 1 hour. Following the third coat, spray a fog coat of an inert sealer on the coilsurfaces. Total dry film thickness must be 2.5 to 3.0 mils. Cure finish coat for a minimum of 3 hours. Coating

materials must have 300 percent flexibility, operate in temperatures of minus 50 to plus 220 degrees F, and protect against atmospheres of a pH range of 1 to 14.

2.7.2.3 Vinyl Coating

Apply coating using an airless fog nozzle. For each coat, make at least two passes with the nozzle. Materials to be applied are as follows:

- a. Total dry film thickness, 6.5 mils maximum
- b. Vinyl Primer, 24 percent solids by volume: One coat 2 mils thick
- c. Vinyl Copolymer, 30 percent solids by volume: One coat 4.5 mils thick

2.7.3 Factory Applied Insulation

Refrigeration equipment must be provided with factory installed insulation on surfaces subject to sweating including the suction line piping. Where motors are the gas-cooled type, factory installed insulation must be provided on the cold-gas inlet connection to the motor in accordance with manufacturer's standard practice. Factory insulated items installed outdoors are not required to be fire-rated. As a minimum, factory insulated items installed indoors must have a flame spread index no higher than 75 and a smoke developed index no higher than 150. Factory insulated items (no jacket) installed indoors and which are located in air plenums, in ceiling spaces, and in attic spaces must have a flame spread index no higher than 25 and a smoke developed index no higher than 50. Flame spread and smoke developed indexes must be determined by ASTM E84.

Insulation must be tested in the same density and installed thickness as the material to be used in the actual construction. Material supplied by a manufacturer with a jacket must be tested as a composite material.

Jackets, facings, and adhesives must have a flame spread index no higher than 25 and a smoke developed index no higher than 50 when tested in accordance with ASTM E84.

2.8 TESTS, INSPECTIONS, AND VERIFICATIONS

All manufactured units must be inspected and tested, and documentation provided to demonstrate that each unit is in compliance with applicable ANSI/AHRI and UL requirements and that the minimum efficiency requirements of ASHRAE 90.1 - SI ASHRAE 90.1 - IP have been met.

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Mon 12/6/2021 11:33 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

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11
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**JWS REFRIGERATION & AIR CONDITIONING
LTD**

UOG BID NO. B21-17

PURCHASING OF HVAC EQUIPMENT

EXHIBIT B
UOG BID NO.B21-17

PURCHASING OF HVAC EQUIPMENT OF THE UNIVERSITY OF GUAM

Scope of Work

1. Scope of the Work

This bid is to select and award a contract for the purchasing of multiple Air Conditioning units for the University of Guam.

2. Bid Submittals

a) Bid prices shall be submitted on Bid Price Form. All prices shall include shipping, delivery, and manufacturer's warranty. Any additional cost not stated in this bid but are required to complete the delivery must be included in the bidder's price.

b) Bidder shall submit an electronic copy to the Share folder that UOG procurement office provides.

Contractor is required to submit prices for Table 1.0.

Bid award to be based on the required items in Table 1.0 and to be based on price, compliance to the specification, services, delivery and any requirements in the BID package, BID NO. B21-17.

Table 1.0 Bid Price Form

No.	ITEM DESCRIPTION					BID Price
1	<u>LOCATION</u>	<u>UNIT</u>	<u>TONS</u>	<u>VOLTAGE</u>	<u>TVX</u>	
	RFK BUILDING SECOND FLOOR	1	50	208 / 230	2 EA. - 25	\$74,837.72
	RFK BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	\$59,870.18
	20RFK BUILDING FIRST FLOOR MAIN ENTRANCE	1	15	208 / 230	2 EA. -	\$22,451.32
	7.5RFK BUILDING FIRST FLOOR AV ROOM	1	15	208 / 230	2 EA. -	\$22,451.32
	7.5RFK BUILDING FIRST FLOOR OFFICES	1	20	208 / 230	2 EA. - 10	\$29,935.09
	PIP (GLE) SECOND FLOOR	1	20	208 / 230	2 EA. -	\$29,935.09
	10SCIENCE BUILDING FIRST FLOOR	1	40	208 / 230	2 EA. -	\$59,870.18
	20SCIENCE BUILDING SECOND FLOOR	1	40	208 / 230	2 EA. -	\$59,870.18
	20SCIENCE BUILDING THIRD FLOOR	1	20	208 / 230	2 EA. -	\$29,935.09
	10ENGLISH COMMUNICATION BUILDING CLASSROOM	1	30	208 / 230	2 EA. -	\$44,902.64
	15COMPUTER CENTER OIT					

BUILDING FIRST FLOOR	1	50	277 / 460	2 EA. - 25	\$74,837.73
LECTURE HALL AUDITORIUM	1	20	277 / 460	2 EA. - 10	\$29,935.09
HSS BUILDING	2	50	277 / 460	2 EA. - 25	\$74,837.73
HSS BUILDING	1	30	277 / 460	2 EA. - 15	\$44,902.64
Grand Total					\$658,572.00
Delivery: <u>9-12</u> weeks after receipt of purchase order					

Verified by pdfFiller
Anthony Serrano 12/26/21
 SIGNATURE OF BIDDER DATE

OPTIONS

For Table 2.0 Options, the bidder's price will not be included as part of the total price evaluation for this bid award. UOG reserves the right to exercise any or part of the options requested. Insert any additional options recommended.

Table 2.0 Options

No.	Item Description	Price
1	Services for Maintenance and upkeep.	\$1,275 for Quarterly PM \$5,100 Annual Total
2	Services for disposal.	\$0.00* *Disposal included w purchase of equipment
3	Replacement/trade in program	1 Year Factory Warranty for Replacement Parts & Compressor

OTHER NOTES:

1. These specifications have been written to describe minimum equipment and performance requirements to be supplied by the equipment manufacturer bidding. Reasonable tests may be conducted upon delivery before acceptance.
2. The University reserves the right to accept and/or reject any and all bids, to waive any defects, irregularities, or specification discrepancies and to award the bid deemed to be in the best interest of the University.

NOTE: Name and title of author of specifications:

University of Guam

Glenn Leon Guerrero, Director, Facilities Management & Services, Email: glennlg@triton.uog.edu

Emily Gumataotao, Supply Management Administrator, Email: eggumataotao@triton.uog.edu

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COMMUNITY FIRST FEDERAL CREDIT UNION
238 AFC Flores St., Suite 102, Hagatña, Guam 96910
Tel: (671) 472-8210 • Fax: (671) 477-5522

No. 126291

0253

151597 ROBERTO D PEREZ

CASHIERS CHECK

CHECK NUMBER: 000126291 CHECK AMOUNT: 98785.80

UNIVERSITY OF GUAM

Handwritten signature

DETACH THIS PORTION BEFORE DEPOSITING

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FEDERAL CREDIT UNION

238 AFC Flores St., Suite 102, Hagatña, Guam 96910
Tel: (671) 472-8210 • Fax: (671) 477-5522

CASHIERS CHECK

No. 126291

AMOUNT

*****98,785.80

CHECK NO.

000126291

DATE

12-06-21

NINETY-EIGHT THOUSAND SEVEN HUNDRED EIGHTY-FIVE
AND .80 DOLLARS

PAY TO THE
ORDER OF

UNIVERSITY OF GUAM

Handwritten signature

VOID AFTER 180 DAYS

⑆ 126291⑆ ⑆ 321480406⑆ 000999197⑆

**INVITATION FOR BID (IFB)
UOG BID NO. B21-17**

**The University of Guam is soliciting sealed bids for the
PURCHASING OF HVAC EQUIPMENT
For The University of Guam**

Copies of the Bid Package and Instructions and Information may be obtained from:

OFFICE: UOG Procurement Office
TELEPHONE: (671) 735-2925
FAX NO.: (671) 735-3010
LOCATION: UOG Administration Building (ANNEX BUILDING) Mangilao, Guam
E-MAIL: uog.bids@triton.uog.edu

A non-refundable fee of \$25.00 is required to obtain a hard copy of the bid package. Payment may be made via cash, check or credit card at the UOG Business Office, Cashier Services located at the UOG Administration Building Mon-Fri from 8 am - 4 pm. Pay by phone is available from 8 am - 4 pm. You may schedule an appointment with our cashier services at 735-2923/45/46, please reference Bid number and title when making payment. Send proof of receipt to the Procurement Office.

In accordance with 5 G.C.A. §5220(a), a digital copy of this solicitation shall be posted on UOG's website at uog.bids@triton.uog.edu. No fees shall be assessed to potential bidders or other parties for accessing or downloading a copy of this solicitation from UOG's website. Potential bidders who access or download a copy of this solicitation from UOG's website must register their contact information with UOG to ensure that they receive any notices regarding any changes or updates to this solicitation. In accordance with 5 G.C.A. §5220(b), UOG shall not be liable for failure to provide notice to any party who accesses or downloads a copy of this solicitation from UOG's website and who fails to register their contact information with UOG as required herein. Please have subject line reference as indicated the *UOG Bid number, Bid Title, and your Company or Requestor's Name to register for UOG's Bid Distribution Registry.*

Deadline for Submission of Bid Packages is on Monday, November 22, 2021 on or before 2:00 P.M. via electronic submission to electronic Bid Share folder provided by UOG Procurement Office.

**/s/ Thomas W. Krise, Ph.D.
President**

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This Advertisement is paid for by University of Guam Funds.

AUTHORIZED FOR ANNOUNCEMENT

Thomas W. Krise, Ph.D. President

AMENDMENT 1

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: October 29, 2021

PURCHASING OF HVAC EQUIPMENT

This is to notify all prospective offerors of the following amendment:

- 1.1 **PRE-BID Conference and Site visit is scheduled for Wednesday, November 3, 2021 at 10:00am. Meet-up will be at Facilities Maintenance Services, 1st Floor Bay. Please contact 735-2377 for directions.**

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: JWS Refrigeration and A/C Ltd.

Anthony Scragg / Anthony Scragg / 10/29/21
Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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AMENDMENT 2

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: October 29, 2021

PURCHASING HVAC EQUIPMENT

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 **REPLACE** "Cover Page" with corrected form as set forth in the attached.
- 1.2 **ADD:** after Cover Page, p.2 "Bidders Registry" with corrected form as set forth in the attached.
- 1.3 **REPLACE** "Table of Contents" with corrected form as set forth in the attached.
- 1.4 **REPLACE** "Instructions to Bidders" with corrected forms as set forth in the attached.
- 1.5 **ADD:** after ATTACHMENT I, "Register of Wage Determinations Under The Service Contract Act"
- 1.6 **REPLACE** Exhibit B "Bid Price Form" with corrected forms as set forth in the attached.

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: JWS Refrigeration and A/C Ltd.

Anthony Scragg / Anthony Scragg
Print Name/Signature/date

11/2/21

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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AMENDMENT 3

Invitation for Bid (IFB)
UOG IFB No. B21-17

Date Issued: November 19, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 Question & Answer Sheet 1 as set forth in the attached.
- 1.2 **REPLACE** Exhibit B "Scope of Work & Bid Price Form" with corrected forms as set forth in the attached.
- 1.3 Copy of Pre-bid Conference Sign-in sheet as set forth in the attached.
- 1.4 Deadline for submission should read as follows: **Monday, November 29, 2021 at 2:00 p.m.** (your bid submission must be submitted electronically to the Bid Share folder provided by UOG Procurement Office on or before 2:00 p.m.) Bid opening will take place at 3:15 p.m. via ZOOM link provided by procurement office to all registered offerors.

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: JWS Refrigeration and A/C Ltd.

Anthony Scragg / Chris Scragg
Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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AMENDMENT 4

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: November 22, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

1.1 Question & Answer Sheet 2 as set forth in the attached.

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: JWS Refrigeration and A/C Ltd.

Anthony Scragg / Anthony Scragg / 11/23/21
Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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AMENDMENT 5

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date Issued: November 24, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

- 1.1 **Deadline for submission should read as follows: Monday, December 06, 2021 at 2:00 p.m. (your bid submission must be submitted electronically to the Bid Share folder provided by UOG Procurement Office on or before 2:00 p.m.) Bid opening will take place at 3:15 p.m. via ZOOM link provided by procurement office to all registered offerors.**

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: JWS Refrigeration and A/C Ltd.

Anthony Scragg / Anthony Scragg / 11/24/21
Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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AMENDMENT 6

**Invitation for Bid (IFB)
UOG IFB No. B21-17**

Date issued: December 3, 2021

"PURCHASING HVAC EQUIPMENT"

This is to notify all prospective offerors of the following amendment set forth below:

1.1 Question & Answer Sheet 3 as set forth in the attached.

All other terms and conditions remain the same.



Emily G. Gumataotao
Supply Management Administrator

Please acknowledge receipt and email: uog.bids@triton.uog.edu:

Name of company: JWS Refrigeration and A/C Ltd.
Anthony Scragg / Anthony Scragg / 12/6/21
Print Name/Signature/date

T: +1 671.735.2925 F: +1 671.735-3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges Senior College and University Commission and is an equal opportunity provider and employer.

UOG INVITATION FOR BIDS NO. B21-17:
PURCHASING OF HVAC EQUIPMENT

QUESTION & ANSWER SHEET NO. 3
December 3, 2021

In response to the written "Questions" and/or 'Request for Clarifications' UOG received as of 11/05/2021 @ 2:28pm from vendor: Guam Pacific Enterprise, Inc.

Question 1: Did UOG remiss by requiring 15% Bid bond under Guam Law for a project that the funds being used is from financial assistance awards ? (American Rescue Funds Act)

Argument. 15 % bid bond pursuant to Guam law only applies for local funds. 15% BID BOND substantially burdens the small business owners and the manufacturers that they are representing

Therefore , it is non compliant and inconsistent with the Section1 and 3 of Executive Order 14005 of President Biden's American Made Act Law. The bid bond should be waived.

Answer: UOG confirms Bid security shall be required for all competitive sealed bidding for the procurement of supplies or services when the total price is estimated to exceed Twenty-Five Thousand Dollars (\$25,000.00). 5 G.C.A. §5212(a). Further, Bid security shall be in an amount equal to fifteen percent (15%) of the total amount bid. 5 G.C.A. §5212(b). There is no exception in the aforementioned Guam Procurement Law for solicitations made by Public Corporations, such as UOG that are federally funded. When invitation for Bids requires bid security, noncompliance requires that the bid be rejected. 5 G.C.A. §5212(e)



ADMINISTRATION & FINANCE
Consolidated Procurement Office

**UOG BIDDERS DISTRIBUTION REGISTRY FORM
FOR UOG BID NO. B21-17**

INFORMATION ON INTERESTED BIDDER FOR BID REGISTRY ENTRY MUST BE RECEIVED BY
UOG'S PROCUREMENT OFFICE PRIOR TO RECEIVING ANY DISTRIBUTED COPY SET OF THIS IFB
(WITH OR WITHOUT THE BID FEE)

NOTICE:

ALL DISTRIBUTIONS OF THIS BID PACKET MUST BE RECORDED IN THE BID'S REGISTRY (LOG) AT UOG'S CONSOLIDATED PROCUREMENT OFFICE.

THE BID REGISTRY ALSO PROVIDES THE NECESSARY CONTACT INFORMATION NEEDED TO DISTRIBUTE FUTURE AMENDMENTS, ADDENDUMS, AND CLARIFICATIONS FOR THIS BID PACKET.

UOG PAYMENT RECEIPT NO. N/A (Original Copy) DATE: 11, 1, 21 TIME: 1:15 pm

PAYMENT METHOD: CASH CHECK NO. n/a CREDIT CARD n/a

NAME OF COMPANY: JWS Refrigeration & A/C Ltd.

PHYSICAL ADDRESS: 290 Tun Jose Salas St. Tamuning GU 96913

MAILING ADDRESS: 290 Tun Jose Salas St. Tamuning GU 96913

CONTACT PERSON & TITLE: Roger Jones (Project Manager) / Anthony Scragg (Service + Sale Rep.)

CONTACT NUMBERS: TELEPHONE (671) 555-5981 FAX (671) 644-0053 CELLULAR Roger: (671) 787-1046

E-MAIL ADDRESS: anthony.s@jwsguam.com / roger.jones@jwsguam.com

OTHER CONTACT
INFORMATION OR
HELPFUL INSTRUCTIONS
FOR UOG WHEN FORWARDING
FUTURE UPDATES:

HR : Louise Jordan : louisej@jwsguam.com

Gen. Manager : Robert Perez : robert.p@jwsguam.com

UNIVERSITY OF GUAM - CONSOLIDATED PROCUREMENT OFFICE
UOG Station, Mangilao, Guam 96923 Tel. (671) 735.2925 Fax. (671) 735.3010
A U.S. LAND GRANT INSTITUTION ACCREDITED BY THE WESTERN ASSOCIATION OF SCHOOLS & COLLEGES
THE UNIVERSITY OF GUAM IS AN EQUAL OPPORTUNITY EMPLOYER AND PROVIDER

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UNIVERSITY OF GUAM
INVITATION FOR BID UOG BID NO. B21-17
PURCHASING OF HVAC EQUIPMENT FOR THE UNIVERSITY OF
GUAM

DATE ISSUED: October 22, 2021

UOG SECTION: FACILITIES MANAGEMENT & SERVICES (FMS),
ADMINISTRATION & FINANCE

ISSUED BY: UOG CONSOLIDATED PROCUREMENT OFFICE
TELEPHONE NO.: (671) 735-2925 FAX NO.: (671) 735-3010
E-MAIL: uog.bids@triton.uog.edu

INSTRUCTIONS TO BIDDERS

1. RECEIPT AND OPENING OF BIDS: Sealed bids for UOG B21-17 PURCHASING OF HVAC EQUIPMENT FOR THE UNIVERSITY OF GUAM (UOG) must be received by the Procurement Office no later than:

TIME: 2:00 P.M. DATE: Monday, November, 22, 2021

Bids submitted after the time and date specified above shall be rejected. Bid opening will be conducted electronically via Zoom Link at 4:00 pm; link will be provided through email to all registered offerors.

Attention is called to the fact that bidders not only offer to assume the obligations and liabilities imposed upon the contractor in the form of a contract, but are expressly made certain of the representations and warrants made herein. No effort is made to emphasize any particular provision of the contract, but bidders must familiarize themselves with every provision and its effect. This Bid is subject to **General Terms and Conditions of the Invitation for Sealed Bids (Attachment A)** and the **Special General Provisions (Attachment B)**.

In consideration of the expense of the University of Guam of opening, tabulating, and evaluating this and other bids, and other considerations, the undersigned agrees that this bid shall remain firm and irrevocable within sixty (60) calendar days from the date of opening to supply any or all of items for which prices are quoted.

2. BIDDER QUALIFICATIONS (Attachment C): The University of Guam may require bidders to present satisfactory evidence that they have sufficient experience and that they are fully prepared, thus it is required that the bidder completely fill out the Bidder's Qualifications Form.
3. NON-COLLUSION AFFIDAVIT (Attachment D): Each person submitting a bid for any portion of the work covered by the bidding documents shall execute an affidavit, in the form provided with the Bid to the effect that he has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the proposal.

- 4. MAJOR SHAREHOLDERS AFFIDAVIT (Attachment E):** As a condition to submitting of bids or proposals, any partnership, sole proprietorship or corporation doing business with the University of Guam shall submit an affidavit that lists the name and address of any person who has held more than ten percent (10) of outstanding shares in said partnership, sole proprietorship or corporation at any time during the twelve (12) month period immediately preceding submission of a proposal. The affidavit shall contain the number of shares or the percentage of all assets of such partnership, sole proprietorship or corporation which have been held by each person during the twelve (12) month period. In addition, the affidavit shall contain the name and address of any person who has received or is entitled to receive a commission, gratuity or other compensation for the procuring or assisting in obtaining business related to the bid or proposal for the Offeror and shall contain the amounts of any shall commission, gratuity or other compensation. The affidavit shall be open and available for inspection and copying.
- 5. AFFIDAVIT RE GRATUITIES, KICKBACKS AND FAVORS (Attachment G):** The bidder, offeror or contractor represents that it will not violate the prohibition against gratuities and kickbacks and favors set forth (Gratuities and Kickbacks) in 5 GCA, Chapter 5, Article 11, Ethics in Public Contracting and Section 11.7 (Gratuities and Kickbacks and Favors) of the UOG Procurement Manual.
- 6. AFFIDAVIT RE ETHICAL STANDARDS (Attachment H):** The bidder, offeror, or contractor represents that it has not knowingly influenced and promises that it will not knowingly influence a government employee to breach any of the ethical standards set forth in 5 GCA, Chapter 5, Article 11, and in Chapter 11 (Ethics in Public Contracting) of the UOG Procurement Manual.
- 7. COVENANT AGAINST CONTINGENT FEES (Attachment I):** The prospective contractor represents as part of such contractor's bid or proposal that such contractor has/has not (Circle applicable word or words) retained any person or agency on a percentage, commission, or other contingent arrangement, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business.
- 8. DECLARATION RE COMPLIANCE WITH U.S. DEPARTMENT OF LABOR WAGE DETERMINATION (Attachment J):** In accordance with 5 GCA §§ 5801 and 5802, as may be applicable, each bidder certifies that any of its employees whose purpose, in whole or in part, is the direct delivery of service contracted by the University shall be paid in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the University, including health and other similar benefits. The updated wage rate with the most current revision shall be included in the bid submission.
- 9. RIGHT TO ACCEPT AND REJECT BIDS:** The President of the University of Guam reserves the unqualified right, in his sole and absolute discretion, to reject any and all bids, or to accept that bid or combination of bids, if any, which in his sole and absolute judgment will under all circumstances best serve the interests of the University of Guam. In the event that the successful bidder fails to execute the contract upon his part or to furnish a satisfactory performance and payment bond, the University, after declaring the security deposit of such bidder forfeited, reserves the option to accept the bid of any other bidder within ten (10) days from such default, in which case such acceptance shall have the same effect as to such bidder as though he was the originally successful bidder.
- 10. MODIFICATIONS PRIOR TO DATE SET FOR OPENING BIDS:** The University reserves the right to revise or amend the specifications prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Invitation for Bids and shall be identified as such. It is required that the bidders acknowledge in writing receipt of all amendments issued and such acknowledgment must be included in the bid. The

amendment shall refer to the portions of the Invitation for Bids it amends. Amendments shall be sent to all prospective Bidders known to have received an Invitation for Bids. Amendments shall be distributed within a reasonable time to allow prospective Bidders to consider the amendment in preparing their Bids. If the time and date set for receipt of bids will not permit such preparation, such time shall be increased to the extent possible in the amendment or, if necessary, by email or telephone and confirmed in the amendment.

11. **CANCELLATION OF SOLICITATION:** Prior to the date set for opening bids, a solicitation may be cancelled in whole or in part when the President or his designee determines in writing that the cancellation of the solicitation is in the University's best interest, in accordance with the University's Procurement Rules and Regulations.
12. **METHOD OF AWARD:** Bid shall be awarded to the [x] lowest, [] highest, responsible and responsive bidder whose bid meets the requirements and criteria set forth in the Invitation for Bids. A responsible bidder is one who has the capability in all respects to perform fully the contract requirements, and the integrity and reliability which will assure good faith performance. A responsive bidder is one who has submitted a bid which conforms in all material respects to the Invitation for Bids. The University reserves the right to waive any minor information of irregularity in Bids received. The President shall have the authority to award or reject Bids, in whole or in part for any one or more items if he determines it is in the public interest.

Award issued to the [x] lowest, [] highest, responsible and responsive bidder within the specified time for acceptance as indicated in the Bid, results in a binding contract without further action by either party provided the successful bidder executes a formal contract with the University. In case of any error in the extension of prices, unit price will govern. It is the policy of the Government of Guam to award Bids to qualified local vendors.

13. **SUBMISSION OF BIDS:**

- a. Bids and modifications thereof shall be submitted through electronic submission to the Share folder that UOG procurement office provides and addressed to the office specified in the Solicitation. The electronic file submission will show the hour and date of submission as specified in the Solicitation for receipt. The file should identify the Solicitation number, and the name of the bidder.
- b. Bids may be modified or withdrawn by written or telegraphic notice, provided such notice is received prior to the hour and date specified for receipt (see paragraph 9 of these instructions).
- c. Samples of items, when required, must be submitted within the time specified, unless otherwise specified by the University, at no expense to the University. If not destroyed by testing, samples will be returned at bidder's request and expense, unless otherwise specified by the Solicitation.
- d. Samples or descriptive literature should not be submitted unless it is required on this Solicitation. Regardless of any attempt by a bidder to condition the bid, unsolicited samples or descriptive literature will not be examined or tested at the bidder's risk, and will not be deemed to vary any of the provisions of this Solicitation.

14. FAILURE TO SUBMIT BID: If no bid is to be submitted, do not return the Solicitation unless otherwise specified. A letter or postcard shall be sent to the issuing office advising whether future Solicitations for the type of supplies or services covered by this Solicitation is desired.

15. PRE-BID CONFERENCES. Pre-Bid conferences will be permitted any time prior to the date established herein for submission of bid. The conferences will be conducted only to explain the procurement requirements for this Request for Proposal. The Authority will notify all Bidders of any substantive clarification provided in response to any inquiry. The Authority will extend the due date if such information significantly amends the solicitation or makes compliance with the original proposed due date impractical.

16. BID PACKET. The prospective bidder is required to read each and every page of the Bid Packet and by the act of submitting a proposal shall be deemed to have accepted all conditions contained therein. In no case will failure to inspect constitute grounds for claim or for the withdrawal of a bid after opening. Bid submission shall be sent electronically. Erasures or other changes in a bid must be explained or noted over the signature of the offeror. Bid submission containing any conditions, omissions, unexplained erasure or alterations or items not called for in the Bid packet, or irregularities of any kind may be rejected by the University as being incomplete.

17. BID PACKET FORM. A non-refundable fee of **\$25.00 (U.S.)** shall be charged for each hard copy or CD ROM bid packet. All payments shall be made by cash, certified check or money order to the University of Guam. Cashier services are located at the UOG Administration Building Mon-Fri from 8am-4pm by appointment only. Payby phone is also available from 8am-4pm at 735-2923/45/46.

18. NOTICE OF AWARD. UOG will notify all bidders the status of the Bid and Notice of Award. Written notice of award will be public information and made a part of the contract file.

19. LOCAL PROCUREMENT PREFERENCE: "All procurement of supplies and services shall be made from among businesses licensed to do business on Guam in accordance with Guam Code Annotated Title 5 Chapter 5 Section 5008 and Section 3.9.14.5, UOG Procurement Regulation."

20. BIODEGRADABLE, REUSEABLE, RECYCLABLE MATERIALS: Section 1.5, UOG Procurement Regulations. UOG's President or his designee, whenever possible, shall procure products that are biodegradable, reusable, recyclable, or made of recycled material, or any of these in any combination. The cost (prior to any adjustments for local vendors) of appropriate biodegradable, reusable, recyclable, or recycled products may be as much as ten percent (10%) greater than the cost of the non-biodegradable, non-reusable, non-recyclable, or non-recycled products they are replacing.

21. SERVICE-DISABLED VETERAN PREFERENCE: UOG will award the contract for this solicitation to bidders that are business concerns that are at least fifty-one-percent (51%) owned by a service-disabled veteran(s) who served in the active U.S. military: (1) Who was discharged or released under honorable conditions and whose disability is service-connected as demonstrated by a DD Form 214, and certified by an award letter from the U.S. Department of Veterans Affairs; (2) That submitted the DD Form 214 and Disability award letter from the U.S. Department of Veterans Affairs with their bid submitted in response to this solicitation; (3) The service-disabled veteran(s) owner of the business concern has filed individual tax returns on Guam for a period of at least three (3) consecutive years; (4) The business concern is licensed to do business on Guam; (5) The business concern maintains its headquarters on Guam; (6) the supply or service offered by the business concern is available within the period required by UOG; and (7) The price for the supply or service does not exceed one-hundred-five-percent (105%) of the lowest price bidder. The Service-Disabled Veteran Preference is given in addition to any other procurement benefit the service-disabled veteran owned business may qualify for under Guam law.

22. WOMEN OWNED BUSINESS PREFERENCE: UOG will award the contract for this solicitation to bidders that are business concerns that are at least fifty-one-percent (51%) owned by women, who manage day-to-day operations and make long-term decisions, and: (1) The owner(s) of the business concern has filed individual tax returns on Guam for a period of at least three (3) consecutive years; (2) The business concern is licensed to do business on Guam; (3) The business concern maintains its headquarters on Guam; (4) the supply or service offered by the business concern is available within the period required by UOG; (5) The business concern is certified as a Women-Owned Small business (WOSB) or an Economically Disadvantaged Women-Owned Small Business (EDWOSB) by the U.S. Small Business Administration; and (6) The price for the supply or service does not exceed one-hundred-five-percent (105%) of the lowest price bidder. The Women Owned Business Preference is given in addition to any other procurement benefit the women owned business may qualify for under Guam law.

23. DETERMINING LOWEST PRICE IF BIDDERS CLAIM PREFERENCES. In accordance with 5 G.C.A. §5013(a), UOG shall determine the lowest price in the case of more than one (1) women-owned business, or a women-owned business and a service-disabled veteran owned business, who are competing for the same government contract.

24. MULTIPLE OR ALTERNATIVE BIDS. UOG shall not accept any multiple or alternative bid and shall reject any multiple or alternate bids its received. However, if a bidder clearly indicates a base bid, such base bid shall be considered for award as though it were the only bid submitted by the bidder. If UOG is not able to distinguish which bid is the base bid, it will reject all the multiple or alternative bids submitted by the bidder.

25. MULTI-TERM CONTRACT. If a multi-term contract is awarded for this solicitation, the amount of supplies or services stated on the bid price form of this solicitation shall be the amount of supplies or services required for the proposed contract period and the unit prices given by the bidder awarded the contract shall be the same throughout the multi-term contract period, except to the extent that price adjustments may be provided in this solicitation and the resulting contract, and UOG may cancel, after giving timely notice to the contractor, the multi-term contract if funds are not appropriated or otherwise made available to support continuation of performance in any fiscal period succeeding the first. However, this will not effect either UOG's rights or the contractor's rights under any termination clause in the contract. If the contract is canceled, the contractor will be reimbursed the unamortized, reasonably incurred, nonrecurring costs.

ATTACHMENT A

GENERAL TERMS AND CONDITIONS FOR THE INVITATION FOR BIDS

1. **COMPLIANCE WITH SPECIFICATIONS:** Bidder should comply with specifications outlined.

2. **LATE BIDS, LATE WITHDRAWALS, AND LATE MODIFICATIONS:**

Any bid received after the time and date set for receipt of bids is late. Any withdrawal or modification of a bid received after the time and date set for opening of bids at the place designated for opening is late. (Section 3.9.11.1, University of Guam Procurement Manual).

3. **DETERMINATION OF LOWEST RESPONSIBLE BIDDERS:** In determining lowest responsible bidder, the University shall be guided by the following:

- (a) Price of bid items.
- (b) The ability, capacity, and skill of the bidder to perform.
- (c) Whether the bidder can perform promptly or within the specified time.
- (d) The character, integrity, reputation, judgment, experience, and efficiency of the bidder.
- (e) The quality of performance of the bidder with regards to awards previously made to him.
- (f) The previous and existing compliance by the bidder with laws and regulations relative to procurement.
- (g) The sufficiency of the financial resources and ability of the bidder to perform.
- (h) The quality, availability, and adaptability of the supplies for the use of the subject of the award.
- (i) The ability of the bidder to provide future maintenance and services for the use of the subject of the award.
- (j) The number and scope of the conditions attached to the bid.

4. **LOW TIE BIDS:** Low tie bids are low responsive bids from responsible bidders that are identical in price and which meet all the requirements and criteria set forth in the Invitation for Bids. Award shall not be made by drawing lots, except as set forth UOG Procurement Regulations Section 3.9.15, or by dividing business among identical bidders.

5. **TAXES:** Bidders are cautioned that they are subject to Guam Business Privilege Taxes, including 4% Gross Receipt Tax and Guam Income Taxes on Guam Transactions. Specific information of taxes may be obtained from the Director of Revenue and Taxation.

6. **LICENSING:** Bidders are cautioned that the University will not consider for award any Bid Offer submitted by a bidder who has not complied with Guam Licensing Law. Specific information on licenses may be obtained from the Director of Revenue and Taxation.

7. **EQUAL EMPLOYMENT OPPORTUNITY:** Section 3.01(1) of the President Executive Order No. 10935 dated March 7, 1965, requires the bidder not to discriminate against any employee or applicant for employment because of race, creed, color or national origin. The bidder will take affirmative action to

ensure that applicants are employed and the employees are treated equally during employment without regard to their race, creed, color or national origin.

8. **DETERMINATION OF RESPONSIBILITY OF BIDDER:** The University reserves the right for securing from bidders information necessary to determine whether or not they are responsible and to determine the responsibility in accordance with Section 3 of the General Terms and Conditions.

9. **JUSTIFICATION OF DELAY:** Vendors who are awarded items under the Bid guarantee that the goods will be delivered to their destination within the time specified. If the vendor is not able to meet the specified delivery date, he is required to notify the purchasing agent of such delay. Notification shall be in writing and should be received by the agent at least twenty-four (24) hours before the specified delivery date. Notification of delay shall include an explanation of the causes and reasons for the delay including statement(s) from supplier or shipping company causing the delay. The University of Guam reserves the right to reject delay justification if in the opinion of the President such justification is not adequate.

10. **EQUAL OPPORTUNITY EMPLOYER AND PROVIDER:** It is the policy of the University of Guam to provide equal opportunity in its higher educational mission and as employer. The University complies with all federal and local statutes, rules and regulations which prohibit discrimination in its policies and practices and direct affirmative action, including but not limited to Titles VII and IX of the Civil Rights Act of 1964 (as amended), Executive Order 11246, and the Equal Pay act of 1963 (as amended). The University shall promote a full realization of equal opportunity through a positive, continuing program, including a requirement that those doing business with the University also are equal opportunity employers.

11. **EMPLOYMENT RESTRICTION:** If a contract for services is awarded to the bidder or offeror, then the service provider must warrant that no person in its employment who has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 of the Guam Code Annotated or of an offense defined in Article 2 of Chapter 28 of Title 9 of the Guam Code Annotated, or who has been convicted in any other jurisdiction of an offense with the same elements as heretofore define, or who is listed on the Sex Offender Registry, shall provide services on behalf of the service provider while on University of Guam property, with the exception of public highways. If any employee of a service provider is providing services on University property and is convicted subsequent to an award of a contract, then the service provider warrants that it will notify the University of the Conviction, within twenty-four hours of the conviction, and will immediately remove such convicted person from providing services on University property. If the service provider is found to be in violation of any of the provisions of this paragraph, then the University will give notice to the service provider to take corrective action. The service provider shall take corrective action within twenty-four hours of notice from the University, and the service provider shall notify the University when action has been taken. If the service provider fails to take corrective steps within twenty-four hours of notice from the University, then the University in its sole discretion may suspend temporarily any contract for services until corrective action has been taken.

12. (Required if checked) **BID SECURITY REQUIREMENT (Attachment D):** Bidder is required to submit a Bid Security or standby irrevocable Letter of Credit or Certified Check or Cashier's Check or other security supplied in a form satisfactory to the University in the same bid envelope to be held by the University of Guam (UOG). A bidder should contact the University for Pre-approval of the bid security requirement before the deadline for submission of bid packages if it is proposing security in a form not specifically listed above. The bid security required under any applicable invitation for Bid shall not be released upon award of the bid, but instead shall continue in full force and effect until delivery of the

supplies or services required by any contract awarded to contractor under the associated Invitation for Bid is completed. The Bid Security, Letter of Credit, Certified Check or Cashier's Check must be issued by any local surety or banking institution licensed to do business on Guam and made payable to the University of Guam in the amount of fifteen percent (15%) of the total amount bid. The Original Bid Security must be submitted to the UOG Procurement office on or before bid submission deadline. Personal Checks will not be accepted as Bid Security.

If a successful Bidder (contractor) withdraws from the bid or fails to enter into contract within the prescribed time, such Bid guarantee will be forfeited to the University of Guam. Bids will be disqualified if not accompanied by Bid Security, Letter of Credit, Certified Check or Cashier's Check. Bidder must include in his/her bid, valid copies of a Power of Attorney from the Surety and a Certificate of Authority from the Government of Guam to show proof that the surety company named on the bond instrument is authorized by the Government of Guam and qualified to do business on Guam. For detailed information on bonding matters, contact the Department of Revenue and Taxation. Failure to submit a valid Power of Attorney and Certificate of Authority on the surety is cause for rejection of bid. (Pursuant to Public Law 27-127, all competitive sealed bidding for the procurement of supplies or services, exceeding \$25,000.00, a 15% Bid Security of the total bid price must accompany the bid package.) When the Invitation for Bids requires bid security, non-compliance requires that the bid be rejected unless, pursuant to Policy Office regulations, it is determined that the bid fails to comply in a non-substantial manner with the security requirements.

13. INDEPENDENT CONTRACTOR: Contractor shall operate its business as an independent contractor and shall discharge all of its duties as such. No act performed or representation made, whether oral or written by Contractor with respect to third parties shall be binding on UOG.

14. INDEMNITY: Contractor agrees to indemnify and hold harmless UOG and its officers and employees from any claim, damage, liability, injury, expense or loss, including defense costs and attorney's fees, arising out of Contractor's duties under this agreement resulting from Contractor's negligence, save and except those caused by the negligence on the part of UOG.

ATTACHMENT B

SPECIAL GENERAL PROVISIONS

1. **GENERAL INTENTION:** It is the declared and acknowledged intention and meaning of this Special General Provision for the Bidder to provide the University of Guam with materials, supplies, or equipment completely assembled, and ready for use.

2. **COMPETENCY OF BIDDERS:** Bids will be considered only from such bidders who, in the opinion of the University, can show evidence of their ability, experience, and facilities to render satisfactory service.

3. **CONTACT FOR CONTRACT ADMINISTRATION:** If your firm receives a contract as a result of this invitation, please designate a person whom we may contact for prompt administration.

NAME: Roberto Perez TITLE: CFO / General Manager

NAME OF COMPANY: JWS Refrigeration & Air Conditioning, Ltd ADDRESS: 290 Tun Jose Salas St. Suite A Tamuning, GU 96913

TEL: (671) 588-5979 FAX: (671) 649-0053 E-Mail Address: robertp@jwsguam.com

4. **INSPECTION:** All supplies, materials, or equipment delivered under this contract shall be subject to the inspection and test conducted by the University at destination. If, in any case, the supplies, materials, or equipment are found to be defective in material, workmanship, performance or otherwise does not conform to the specifications, the University shall have the right to reject the items or require that they be corrected. The number of days required for correction will be determined by the University of Guam.

6. **BID ELECTRONIC FILE:** Bid file shall be marked with the bidder's name, bid invitation number, and bid title.

NOTE: UNDER NO CIRCUMSTANCES WILL LATE BIDS BE ACCEPTED BY THIS OFFICE.

7. **RECEIPT, OPENING AND RECORDING OF BIDS:** Bids and modifications shall be publicly opened in the presence of one or more witnesses, at the time, date, and place designated in the Invitation for Bid. The name of each bidder, the bid price, and such other information as is deemed appropriate by the Procurement Officer, shall be read aloud and recorded, or otherwise made available. The names and addresses of required witnesses shall be recorded at the opening. The opened bids shall be available for public inspection except to the extent the bidder designates trade secrets or other proprietary data to be confidential as set forth in accordance with Section 8, below. Materials so designated shall accompany the bid and shall be readily separable from the bid in order to facilitate public inspection of the non-confidential portion of the bid. Prices, makes and models or catalogue numbers of the items offered, deliveries, and terms of payment shall be publicly available at the time of bid opening regardless of any designation to the contrary.

8. **CONFIDENTIAL DATA:** The Procurement Officer shall examine the bids to determine the validity of any requests for nondisclosure of trade secrets and other proprietary data identified in writing. If the parties do not agree as to the disclosure of data, the Procurement Officer shall inform the bidders in writing what portions of the bid will be disclosed and that, unless the bidders protest under Chapter 9 of UOG Procurement Regulations, the bids will be so disclosed. The bids shall be opened to public inspection subject to any continuing prohibition on the disclosure of confidential data.

9. **INQUIRIES:** All inquiries or questions and concerns must be submitted to the President of the University of Guam in writing through the procurement office at uog.bids@triton.uog.edu. Oral communications will not be considered.

ATTACHMENT C

BIDDER'S QUALIFICATIONS

To be submitted in accordance with the provisions set forth in the INSTRUCTIONS TO BIDDERS contained in the bidding documents for the project.

The undersigned Bidder makes the following representations relating to its proposal to the UNIVERSITY OF GUAM.

The word "it", used herein by way of reference to the undersigned, shall be deemed to mean "he or she" if the Bidder is an individual and "they" if the Bidder is a partnership

1. It maintains a permanent place of business at
290 Tun Jose Salas St. Suite A Tamuning, GU 96913

2. **STANDARD FOR DETERMINATION OF QUALIFIED BIDDER:** In order to qualify as responsible, a prospective bidder must meet the following standards as they relate to the particular procurement under consideration:

- (a) Has adequate financial resources for performance, or has the ability to obtain such resources as required during performance.
- (b) Has the necessary experience, organization, technical qualifications, skills, and facilities, or has the ability to obtain them.
- (c) Is able to comply with the proposed or required performance schedule.
- (d) Has a satisfactory record of integrity, judgment, and performance.
- (e) Must be able to conform to the requirements of the Equal Employment Opportunity Act.

3. It hereby represents and warrants that all statements set forth herein are true and correct. (If the Bidder is a partnership, the partnership name must be signed, followed by the signature of at least one of the partners. If the Bidder is a corporation, the corporate name must be signed, followed by the signature of a duly authorized officer and the corporate seal affixed. A typewritten copy of all such names and signatures shall be appended. No alterations, erasures, corrections or interlineations will be permitted).


John W. Scragg

NAME OF BIDDER

**ATTACHMENT E
MAJOR SHAREHOLDER DISCLOSURE AFFIDAVIT**

CITY OF Tamuning)
) ss.
 ISLAND OF GUAM)

A. I, the undersigned, being first duly sworn depose and say that I am an authorized representative of the offeror and that (please check only one):

() The offeror is an individual or sole proprietor and owns the entire (100%) interest in the offering business.

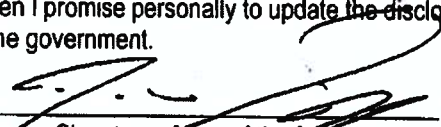
(X) The offeror is a corporation, partnership, joint venture, or association known as JWS Refrigeration & Air Conditioning, Ltd. (please state name of offeror company), and the persons, companies, partners, or joint ventures who have held more than 10% of the shares or interest in the offering business during the 365 days immediately preceding the submission date of the proposal are as follows (if none, please so state):

<u>NAME</u>	<u>ADDRESS</u>	<u>% of Interest</u>
<u>John W. Scragg</u>	<u>160 Hegao St. Asan, Guam</u>	<u>99%</u>

B. Further, I say that the persons who have received or are entitled to receive a commission, gratuity or other compensation for procuring or assisting in obtaining business related to the bid or proposal for which affidavit is submitted are as follows (if none, please so state):

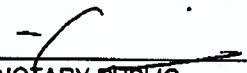
<u>NAME</u>	<u>ADDRESS</u>	<u>Compensation</u>

C. If the ownership of the offering business should change between the time this affidavit is made and the time an award is made or a contract is entered into, then I promise personally to update the disclosure required by 5 GCA § 5233 by delivering another affidavit to the government.

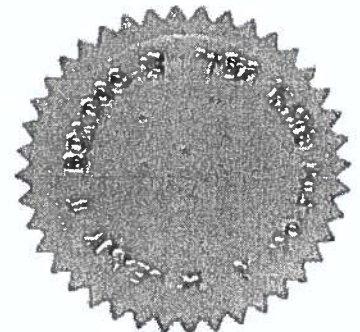

 Signature of one of the following:
 Offeror, if the offeror is an individual;
 Partner, if the offeror is a partnership;
 Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 24th day of Nov., 2021


 NOTARY PUBLIC
 My commission expires March 31, 2024
 (AG Procurement Form 002 (Rev. Nov 17 2005))

JEANY T. BONDOC
 NOTARY PUBLIC
 In and for Guam, U.S.A.
 My Commission Expires: **MARCH 31, 2024**
 P.O. BOX 26823 Barrigada, Guam 96921



UOG BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT

ATTACHMENT F
AFFIDAVIT re NON-COLLUSION

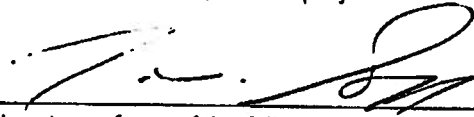
CITY OF Tamuning)
) ss.
ISLAND OF GUAM)

John W. Scragg (state name of affiant singing below), being first duly sworn deposes and says that:

1. The name of the offering company or individual is (state name of company)
JWS Refrigeration & Air Conditioning, Ltd

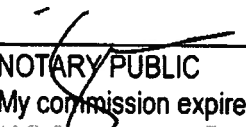
2. The proposal for the solicitation identified above is genuine and not collusive or a sham. The offeror has not colluded, conspired, connived or agreed, directly or indirectly, with any other offeror or person, to put in a sham proposal or to refrain from making an offer. The offeror has not in any manner, directly or indirectly, sought by an agreement or collusion, or communication or conference, with any person to fix the proposal price of offeror or of any other offeror, or to fix any overhead, profit or cost element of said proposal price, or of that of any other offeror, or to secure any advantage against the government of Guam or any person interested in the proposed contract. All statements in this affidavit and in the proposal are true to the best of the knowledge of the undersigned. This statement is made pursuant to 2 GAR Division 4 § 3126(b).

3. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.

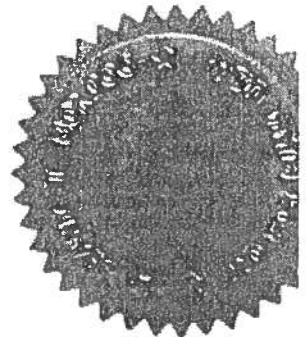

 Signature of one of the following:
 Offeror, if the offeror is an individual;
 Partner, if the offeror is a partnership;
 Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 24th day of NOV., 2021


 NOTARY PUBLIC
 My commission expires MARCH 31, 2024
 (AG Procurement Form 003 (Jul. 12, 2010))

JEANY T. BONDOC
NOTARY PUBLIC
 In and for Guam, U.S.A.
 My Commission Expires: **MARCH 31, 2024**
 P.O. BOX 26823 Barrigada, Guam 96921



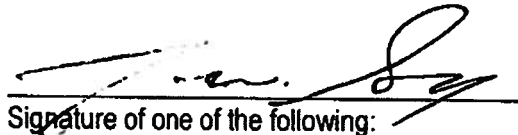
UOG BID NO. B21-17 PURCHASING OF HVAC EQUIPMENT

**ATTACHMENT G
AFFIDAVIT re GRATUITIES, KICKBACKS AND FAVORS**

CITY OF Tamuning)
) ss.
 ISLAND OF GUAM)

John W. Scragg (state name of affiant signing below), being first duly sworn,
 deposes and says that:

1. The name of the offering firm or individual is (state name of offeror company) JWS Refrigeration & Air Conditioning, Ltd. = Affiant is the offeror (state one of the following: the offeror, a partner of the offeror, and officer of the offeror) making the foregoing identified bid or proposal.
2. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents subcontractors, or employees have violated, are violating the prohibition against gratuities, kickbacks and favors set forth in UOG Procurement Manual Section 11.7 Further, affiant promises, on behalf of offeror, not to violate the prohibition against gratuities, kickbacks and favors as set forth in UOG Procurement Manual Section 11.7.
3. To the best of affiant's knowledge, neither affiant, nor any of the offeror's officers, representatives, agents, subcontractors, or employees have offered, given or agreed to give, any government of Guam employee or former government employee, any payment, gift, kickback, gratuity or offer of employment in connection with the offeror's proposal.
4. I make this statement on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.


 Signature of one of the following:

Offeror, if the offeror is an individual;
 Partner, if the offeror is a partnership;
 Officer, if the offeror is a corporation

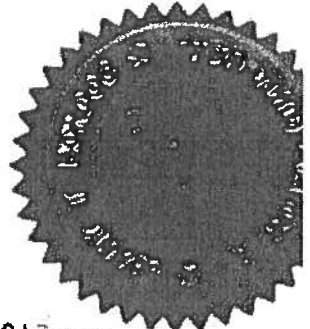
Subscribed and sworn to before me

This 24th day of Nov., 2021

(Signature)
 NOTARY PUBLIC

My commission expires March 31, 2024
 (AG Procurement Form 004 (Jul 12 2010))

JEANY T. BONDOC
 NOTARY PUBLIC
 In and for Guam, U.S.A.
 My Commission Expires: **MARCH 31, 2024**
 P.O.BOX 26823 Barrigada, Guam 96921

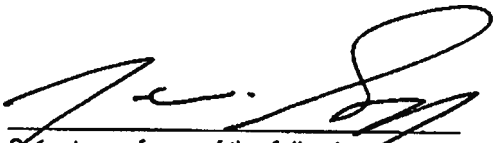


**ATTACHMENT H
AFFIDAVIT RE ETHICAL STANDARDS**

CITY OF Tamuning)
) ss.
ISLAND OF GUAM)

John W. Scragg _____ (state name of affiant signing below), being first duly sworn,
deposes and says that:

The affiant is the offeror _____ (state one of the following: the offeror, a partner of
the offeror, an officer of the offeror) making the foregoing identified bid or proposal. To the best of affiant's
knowledge, neither affiant nor any officers, representatives, agents, subcontractors or employees of offeror
have knowingly influenced any government of Guam employee to breach any of the ethical standards set
forth in 5 GCA Chapter 5, Article 11. Further, affiant promises that neither he or she, nor any officer,
reprehensive, agent, subcontractor, or employee of offeror will knowingly influence any government of Guam
employee to breach any ethical standards set forth in 5 GCA Chapter 5, Article 11. These statements are
made pursuant to UOG Procurement Manual Section 11.3.3.



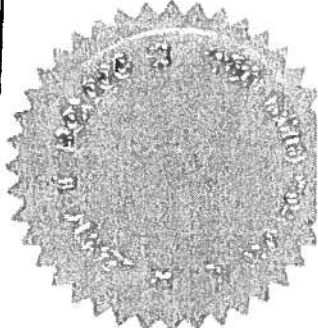
Signature of one of the following:
Offeror, if the offeror is an individual;
Partner, if the offeror a partnership;
Officer, if the offeror is a corporation.

Subscribed and sworn to before me
This 24th day of November, 2021

NOTARY PUBLIC

My commission expires March 31, 2024.

JEANY T. BONDOC
NOTARY PUBLIC
In and for Guam, U.S.A.
My Commission Expires: **MARCH 31, 2024**
P.O. BOX 26823 Barrigada, Guam 96921



(AG Procurement Form 005 (Jul 12 2010))

ATTACHMENT I

DECLARATION re COMPLIANCE WITH U.S. DOL WAGE DETERMINATIONS

Procurement No.: UOG BID B21-17

Name of Offeror Company: JWS Refrigeration & Air Conditioning, Ltd.

I, John W. Scragg hereby certify under penalty of perjury:

- (1) That I am the offeror (please select one: *the offeror, a partner of the offeror, an officer of the offeror*) making the bid or proposal in the foregoing identified procurement;
- (2) That I have read and understand the provisions of 5 GCA § 5801 and 5802 which read:

§ 5801. Wage Determination Established.

In such cases where the government of Guam enters into contractual arrangements with a sole proprietorship, a partnership or a corporation ("contractor") for the provision of a service to the government of Guam, and in such cases where the contractor employs a person(s) whose purpose, in whole or in part, is the direct delivery of service contracted by the government of Guam, then the contractor shall pay such employee(s) in accordance with the Wage Determination for Guam and the Northern Mariana Islands issued and promulgated by the U.S. Department of Labor for such labor as is employed in the direct delivery of contract deliverables to the government of Guam.

The Wage Determination most recently issued by the U.S. Department of Labor at the time a contract is awarded to a contractor by the government of Guam shall be used to determine wages, which shall be paid to employees pursuant to this Article. Should any contract contain a renewal clause, then at the time of renewal adjustments, there shall be made stipulations contained in the contract for applying the Wage Determination, as required by this Article, so the Wage Determination promulgated by the U.S. Department of Labor on a date most recent to the renewal date shall apply. § 5802. Benefits.

In addition to the Wage Determination detailed in this Article, any contract to which this Article applies shall also contain provisions mandating health and similar benefits for employees covered by this Article, such benefits having a minimum value as detailed in the Wage Determination issued and promulgated by the U.S. Department of Labor, and shall contain provisions guaranteeing a minimum of ten (10) paid holidays per annum per employees.

- (3) That the offeror is in full compliance with 5 GCA § 5801 and § 5802, as may be applicable to the procurement referenced herein;
- (4) That I have attached the most recent wage determination applicable to Guam issued by the U.S. Department of Labor. **(INSTRUCTIONS – Please attach most updated version to bid package)**
(AG Procurement Form 006 (Feb. 16, 2010))

"REGISTER OF WAGE DETERMINATIONS UNDER
 THE SERVICE CONTRACT ACT
 By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
 EMPLOYMENT STANDARDS ADMINISTRATION
 WAGE AND HOUR DIVISION
 WASHINGTON D.C. 20210

Daniel W. Simms
 Director
 Division of
 Wage Determinations

Wage Determination No.: 2015-5693
 Revision No.: 13
 Date Of Last Revision: 08/04/2021

Note: Under Executive Order (EO) 13658 an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2015. If this contract is covered by the EO the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination if it is higher) for all hours spent performing on the contract in calendar year 2021. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

States: Guam Northern Marianas Wake Island

Area: Guam Statewide

Northern Marianas Statewide

Wake Island Statewide

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		13.57
01012 - Accounting Clerk II		15.23
01013 - Accounting Clerk III		17.04
01020 - Administrative Assistant		21.43
01035 - Court Reporter		17.40
01041 - Customer Service Representative I		11.51
01042 - Customer Service Representative II		12.94
01043 - Customer Service Representative III		14.12
01051 - Data Entry Operator I		12.15
01052 - Data Entry Operator II		13.25
01060 - Dispatcher Motor Vehicle		17.39
01070 - Document Preparation Clerk		13.85
01090 - Duplicating Machine Operator		13.85
01111 - General Clerk I		10.35
01112 - General Clerk II		11.29
01113 - General Clerk III		12.68
01120 - Housing Referral Assistant		19.39
01141 - Messenger Courier		11.37
01191 - Order Clerk I		12.57
01192 - Order Clerk II		13.71
01261 - Personnel Assistant (Employment) I		15.95
01262 - Personnel Assistant (Employment) II		17.85
01263 - Personnel Assistant (Employment) III		19.89
01270 - Production Control Clerk		21.78
01290 - Rental Clerk		11.10

01300 - Scheduler Maintenance	15.55
01311 - Secretary I	15.55
01312 - Secretary II	17.40
01313 - Secretary III	19.39
01320 - Service Order Dispatcher	15.40
01410 - Supply Technician	21.43
01420 - Survey Worker	16.96
01460 - Switchboard Operator/Receptionist	10.36
01531 - Travel Clerk I	13.01
01532 - Travel Clerk II	14.12
01533 - Travel Clerk III	15.09
01611 - Word Processor I	14.53
01612 - Word Processor II	16.31
01613 - Word Processor III	18.26
05000 - Automotive Service Occupations	
05005 - Automobile Body Repairer Fiberglass	15.46
05010 - Automotive Electrician	14.52
05040 - Automotive Glass Installer	13.58
05070 - Automotive Worker	13.58
05110 - Mobile Equipment Servicer	11.65
05130 - Motor Equipment Metal Mechanic	15.46
05160 - Motor Equipment Metal Worker	13.58
05190 - Motor Vehicle Mechanic	15.46
05220 - Motor Vehicle Mechanic Helper	10.66
05250 - Motor Vehicle Upholstery Worker	12.64
05280 - Motor Vehicle Wrecker	13.58
05310 - Painter Automotive	14.52
05340 - Radiator Repair Specialist	13.58
05370 - Tire Repairer	12.67
05400 - Transmission Repair Specialist	15.46
07000 - Food Preparation And Service Occupations	
07010 - Baker	10.47
07041 - Cook I	13.26
07042 - Cook II	15.46
07070 - Dishwasher	9.31
07130 - Food Service Worker	9.45
07210 - Meat Cutter	12.13
07260 - Waiter/Waitress	9.27
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	18.04
09040 - Furniture Handler	10.95
09080 - Furniture Refinisher	18.04
09090 - Furniture Refinisher Helper	13.27
09110 - Furniture Repairer Minor	15.70
09130 - Upholsterer	18.04
11000 - General Services And Support Occupations	
11030 - Cleaner Vehicles	9.35
11060 - Elevator Operator	9.54
11090 - Gardener	13.00
11122 - Housekeeping Aide	9.54
11150 - Janitor	9.54
11210 - Laborer Grounds Maintenance	9.82
11240 - Maid or Houseman	9.32
11260 - Pruner	8.79
11270 - Tractor Operator	11.90
11330 - Trail Maintenance Worker	9.82
11360 - Window Cleaner	10.66
12000 - Health Occupations	
12010 - Ambulance Driver	18.23
12011 - Breath Alcohol Technician	18.23
12012 - Certified Occupational Therapist Assistant	25.01
12015 - Certified Physical Therapist Assistant	25.01
12020 - Dental Assistant	16.32
12025 - Dental Hygienist	36.12
12030 - EKG Technician	25.99

12035	- Electroneurodiagnostic Technologist	25.99
12040	- Emergency Medical Technician	18.23
12071	- Licensed Practical Nurse I	16.30
12072	- Licensed Practical Nurse II	18.23
12073	- Licensed Practical Nurse III	20.32
12100	- Medical Assistant	12.26
12130	- Medical Laboratory Technician	18.82
12160	- Medical Record Clerk	13.61
12190	- Medical Record Technician	17.77
12195	- Medical Transcriptionist	16.30
12210	- Nuclear Medicine Technologist	40.06
12221	- Nursing Assistant I	11.34
12222	- Nursing Assistant II	12.75
12223	- Nursing Assistant III	13.91
12224	- Nursing Assistant IV	15.61
12235	- Optical Dispenser	18.23
12236	- Optical Technician	16.30
12250	- Pharmacy Technician	15.49
12280	- Phlebotomist	16.30
12305	- Radiologic Technologist	25.33
12311	- Registered Nurse I	23.18
12312	- Registered Nurse II	28.36
12313	- Registered Nurse II Specialist	28.36
12314	- Registered Nurse III	34.32
12315	- Registered Nurse III Anesthetist	34.32
12316	- Registered Nurse IV	41.13
12317	- Scheduler (Drug and Alcohol Testing)	22.58
12320	- Substance Abuse Treatment Counselor	22.58
13000	- Information And Arts Occupations	
13011	- Exhibits Specialist I	21.20
13012	- Exhibits Specialist II	26.27
13013	- Exhibits Specialist III	32.13
13041	- Illustrator I	21.20
13042	- Illustrator II	26.27
13043	- Illustrator III	32.13
13047	- Librarian	29.09
13050	- Library Aide/Clerk	16.88
13054	- Library Information Technology Systems Administrator	26.27
13058	- Library Technician	16.64
13061	- Media Specialist I	18.96
13062	- Media Specialist II	21.20
13063	- Media Specialist III	23.63
13071	- Photographer I	18.96
13072	- Photographer II	21.20
13073	- Photographer III	26.27
13074	- Photographer IV	32.13
13075	- Photographer V	38.88
13090	- Technical Order Library Clerk	21.20
13110	- Video Teleconference Technician	18.96
14000	- Information Technology Occupations	
14041	- Computer Operator I	15.71
14042	- Computer Operator II	17.22
14043	- Computer Operator III	19.19
14044	- Computer Operator IV	21.33
14045	- Computer Operator V	23.62
14071	- Computer Programmer I	(see 1) 15.73
14072	- Computer Programmer II	(see 1) 19.50
14073	- Computer Programmer III	(see 1) 23.84
14074	- Computer Programmer IV	(see 1)
14101	- Computer Systems Analyst I	(see 1) 24.23
14102	- Computer Systems Analyst II	(see 1)
14103	- Computer Systems Analyst III	(see 1)
14150	- Peripheral Equipment Operator	15.71
14160	- Personal Computer Support Technician	21.33

14170 - System Support Specialist	21.24
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	24.23
15020 - Aircrew Training Devices Instructor (Rated)	29.32
15030 - Air Crew Training Devices Instructor (Pilot)	34.91
15050 - Computer Based Training Specialist / Instructor	24.23
15060 - Educational Technologist	27.61
15070 - Flight Instructor (Pilot)	34.91
15080 - Graphic Artist	20.47
15085 - Maintenance Test Pilot Fixed Jet/Prop	34.91
15086 - Maintenance Test Pilot Rotary Wing	34.91
15088 - Non-Maintenance Test/Co-Pilot	34.91
15090 - Technical Instructor	17.67
15095 - Technical Instructor/Course Developer	23.78
15110 - Test Proctor	15.70
15120 - Tutor	15.70
16000 - Laundry Dry-Cleaning Pressing And Related Occupations	
16010 - Assembler	10.12
16030 - Counter Attendant	10.12
16040 - Dry Cleaner	11.56
16070 - Finisher Flatwork Machine	10.12
16090 - Presser Hand	10.12
16110 - Presser Machine Drycleaning	10.12
16130 - Presser Machine Shirts	10.12
16160 - Presser Machine Wearing Apparel Laundry	10.12
16190 - Sewing Machine Operator	12.04
16220 - Tailor	12.52
16250 - Washer Machine	10.60
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	19.46
19040 - Tool And Die Maker	24.46
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	13.96
21030 - Material Coordinator	21.78
21040 - Material Expediter	21.78
21050 - Material Handling Laborer	11.37
21071 - Order Filler	9.76
21080 - Production Line Worker (Food Processing)	13.96
21110 - Shipping Packer	17.12
21130 - Shipping/Receiving Clerk	17.12
21140 - Store Worker I	15.22
21150 - Stock Clerk	21.40
21210 - Tools And Parts Attendant	13.96
21410 - Warehouse Specialist	13.96
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	25.04
23019 - Aircraft Logs and Records Technician	19.47
23021 - Aircraft Mechanic I	23.84
23022 - Aircraft Mechanic II	25.04
23023 - Aircraft Mechanic III	26.30
23040 - Aircraft Mechanic Helper	16.58
23050 - Aircraft Painter	22.39
23060 - Aircraft Servicer	19.47
23070 - Aircraft Survival Flight Equipment Technician	22.39
23080 - Aircraft Worker	21.03
23091 - Aircrew Life Support Equipment (ALSE) Mechanic I	21.03
23092 - Aircrew Life Support Equipment (ALSE) Mechanic II	23.84
23110 - Appliance Mechanic	19.46
23120 - Bicycle Repairer	15.61
23125 - Cable Splicer	19.59
23130 - Carpenter Maintenance	16.07
23140 - Carpet Layer	18.20
23160 - Electrician Maintenance	18.05

23181 - Electronics Technician Maintenance I	18.20
23182 - Electronics Technician Maintenance II	19.46
23183 - Electronics Technician Maintenance III	20.72
23260 - Fabric Worker	16.94
23290 - Fire Alarm System Mechanic	16.77
23310 - Fire Extinguisher Repairer	15.61
23311 - Fuel Distribution System Mechanic	20.72
23312 - Fuel Distribution System Operator	15.61
23370 - General Maintenance Worker	12.01
23380 - Ground Support Equipment Mechanic	23.84
23381 - Ground Support Equipment Servicer	19.47
23382 - Ground Support Equipment Worker	21.03
23391 - Gunsmith I	15.61
23392 - Gunsmith II	18.20
23393 - Gunsmith III	20.72
23410 - Heating Ventilation And Air-Conditioning Mechanic	17.50
23411 - Heating Ventilation And Air Contidioning Mechanic (Research Facility)	18.61
23430 - Heavy Equipment Mechanic	19.27
23440 - Heavy Equipment Operator	17.76
23460 - Instrument Mechanic	20.72
23465 - Laboratory/Shelter Mechanic	19.46
23470 - Laborer	11.37
23510 - Locksmith	19.46
23530 - Machinery Maintenance Mechanic	23.13
23550 - Machinist Maintenance	20.72
23580 - Maintenance Trades Helper	10.67
23591 - Metrology Technician I	20.72
23592 - Metrology Technician II	22.03
23593 - Metrology Technician III	23.33
23640 - Millwright	20.72
23710 - Office Appliance Repairer	19.46
23760 - Painter Maintenance	14.08
23790 - Pipefitter Maintenance	18.39
23810 - Plumber Maintenance	17.27
23820 - Pneudraulic Systems Mechanic	20.72
23850 - Rigger	20.72
23870 - Scale Mechanic	18.20
23890 - Sheet-Metal Worker Maintenance	17.35
23910 - Small Engine Mechanic	18.20
23931 - Telecommunications Mechanic I	19.76
23932 - Telecommunications Mechanic II	21.01
23950 - Telephone Lineman	18.24
23960 - Welder Combination Maintenance	18.31
23965 - Well Driller	21.13
23970 - Woodcraft Worker	20.71
23980 - Woodworker	15.61
24000 - Personal Needs Occupations	
24550 - Case Manager	15.01
24570 - Child Care Attendant	10.09
24580 - Child Care Center Clerk	13.25
24610 - Chore Aide	12.78
24620 - Family Readiness And Support Services Coordinator	15.01
24630 - Homemaker	16.12
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	20.72
25040 - Sewage Plant Operator	21.59
25070 - Stationary Engineer	20.72
25190 - Ventilation Equipment Tender	14.29
25210 - Water Treatment Plant Operator	21.59
27000 - Protective Service Occupations	
27004 - Alarm Monitor	10.90
27007 - Baggage Inspector	9.48

27008 - Corrections Officer	12.05
27010 - Court Security Officer	12.05
27030 - Detection Dog Handler	10.90
27040 - Detention Officer	12.05
27070 - Firefighter	12.05
27101 - Guard I	9.48
27102 - Guard II	10.90
27131 - Police Officer I	12.05
27132 - Police Officer II	13.40
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	13.24
28042 - Carnival Equipment Repairer	14.46
28043 - Carnival Worker	9.78
28210 - Gate Attendant/Gate Tender	13.18
28310 - Lifeguard	11.01
28350 - Park Attendant (Aide)	14.74
28510 - Recreation Aide/Health Facility Attendant	11.84
28515 - Recreation Specialist	18.26
28630 - Sports Official	11.74
28690 - Swimming Pool Operator	17.71
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	25.98
29020 - Hatch Tender	25.98
29030 - Line Handler	25.98
29041 - Stevedore I	24.18
29042 - Stevedore II	27.79
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist Center (HFO) (see 2)	40.29
30011 - Air Traffic Control Specialist Station (HFO) (see 2)	27.78
30012 - Air Traffic Control Specialist Terminal (HFO) (see 2)	30.59
30021 - Archeological Technician I	17.49
30022 - Archeological Technician II	19.56
30023 - Archeological Technician III	24.21
30030 - Cartographic Technician	23.18
30040 - Civil Engineering Technician	23.08
30051 - Cryogenic Technician I	25.57
30052 - Cryogenic Technician II	28.24
30061 - Drafter/CAD Operator I	17.49
30062 - Drafter/CAD Operator II	19.56
30063 - Drafter/CAD Operator III	20.77
30064 - Drafter/CAD Operator IV	25.57
30081 - Engineering Technician I	14.84
30082 - Engineering Technician II	16.66
30083 - Engineering Technician III	18.64
30084 - Engineering Technician IV	23.08
30085 - Engineering Technician V	28.24
30086 - Engineering Technician VI	34.16
30090 - Environmental Technician	23.08
30095 - Evidence Control Specialist	23.08
30210 - Laboratory Technician	20.77
30221 - Latent Fingerprint Technician I	25.57
30222 - Latent Fingerprint Technician II	28.24
30240 - Mathematical Technician	23.34
30361 - Paralegal/Legal Assistant I	19.54
30362 - Paralegal/Legal Assistant II	24.21
30363 - Paralegal/Legal Assistant III	29.61
30364 - Paralegal/Legal Assistant IV	35.83
30375 - Petroleum Supply Specialist	28.24
30390 - Photo-Optics Technician	21.93
30395 - Radiation Control Technician	28.24
30461 - Technical Writer I	23.08
30462 - Technical Writer II	28.24
30463 - Technical Writer III	34.16
30491 - Unexploded Ordnance (UXO) Technician I	25.60
30492 - Unexploded Ordnance (UXO) Technician II	30.98

30493 - Unexploded Ordnance (UXO) Technician III	37.13
30494 - Unexploded (UXO) Safety Escort	25.60
30495 - Unexploded (UXO) Sweep Personnel	25.60
30501 - Weather Forecaster I	25.57
30502 - Weather Forecaster II	31.09
30620 - Weather Observer Combined Upper Air Or (see 2)	20.77
Surface Programs	
30621 - Weather Observer Senior (see 2)	23.08
31000 - Transportation/Mobile Equipment Operation Occupations	
31010 - Airplane Pilot	30.98
31020 - Bus Aide	8.15
31030 - Bus Driver	10.66
31043 - Driver Courier	9.69
31260 - Parking and Lot Attendant	9.91
31290 - Shuttle Bus Driver	11.65
31310 - Taxi Driver	11.41
31361 - Truckdriver Light	10.59
31362 - Truckdriver Medium	11.61
31363 - Truckdriver Heavy	14.64
31364 - Truckdriver Tractor-Trailer	14.64
99000 - Miscellaneous Occupations	
99020 - Cabin Safety Specialist	15.10
99030 - Cashier	9.63
99050 - Desk Clerk	9.70
99095 - Embalmer	25.60
99130 - Flight Follower	25.60
99251 - Laboratory Animal Caretaker I	23.38
99252 - Laboratory Animal Caretaker II	25.54
99260 - Marketing Analyst	21.54
99310 - Mortician	25.60
99410 - Pest Controller	14.61
99510 - Photofinishing Worker	13.45
99710 - Recycling Laborer	17.32
99711 - Recycling Specialist	23.38
99730 - Refuse Collector	16.40
99810 - Sales Clerk	9.87
99820 - School Crossing Guard	17.27
99830 - Survey Party Chief	23.01
99831 - Surveying Aide	13.08
99832 - Surveying Technician	17.00
99840 - Vending Machine Attendant	23.38
99841 - Vending Machine Repairer	29.78
99842 - Vending Machine Repairer Helper	23.38

Note: Executive Order (EO) 13706 Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1 2017. If this contract is covered by the EO the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness injury or other health-related needs including preventive care; to assist a family member (or person who is like family to the employee) who is ill injured or has other health-related needs including preventive care; or for reasons resulting from or to assist a family member (or person who is like family to the employee) who is the victim of domestic violence sexual assault or stalking. Additional information on contractor requirements and worker protections

under the EO is available at www.dol.gov/whd/govcontracts.

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$4.60 per hour up to 40 hours per week or \$184.00 per week or \$797.33 per month

HEALTH & WELFARE EO 13706: \$4.23 per hour up to 40 hours per week or \$169.20 per week or \$733.20 per month*

*This rate is to be used only when compensating employees for performance on an SCA-covered contract also covered by EO 13706 Establishing Paid Sick Leave for Federal Contractors. A contractor may not receive credit toward its SCA obligations for any paid sick leave provided pursuant to EO 13706.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; and 4 weeks after 3 years. Length of service includes the whole span of continuous service with the present contractor or successor wherever employed and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day Martin Luther King Jr.'s Birthday Washington's Birthday Memorial Day Independence Day Labor Day Columbus Day Veterans' Day Thanksgiving Day and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE NUMBERED FOOTNOTES IN PARENTHESES RECEIVE THE FOLLOWING:

1) **COMPUTER EMPLOYEES:** Under the SCA at section 8(b) this wage determination does not apply to any employee who individually qualifies as a bona fide executive administrative or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than \$27.63 (or on a salary or fee basis at a rate not less than \$455 per week) an hour would likely qualify as exempt computer professionals (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds \$27.63 per hour conformances may be necessary for certain nonexempt employees. For example if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage

determination.

Additionally because job titles vary widely and change quickly in the computer industry job titles are not determinative of the application of the computer professional exemption. Therefore the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures including consulting with users to determine hardware software or system functional specifications;

(2) The design development documentation analysis creation testing or modification of computer systems or programs including prototypes based on and related to user or system design specifications;

(3) The design documentation testing creation or modification of computer programs related to machine operating systems; or

(4) A combination of the aforementioned duties the performance of which requires the same level of skills. (29 C.F.R. 541.400).

2) AIR TRAFFIC CONTROLLERS AND WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** HAZARDOUS PAY DIFFERENTIAL ****

An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance explosives and incendiary materials. This includes work such as screening blending drying mixing and pressing of sensitive ordnance explosives and pyrotechnic compositions such as lead azide black powder and photoflash powder.

All dry-house activities involving propellants or explosives. Demilitarization modification renovation demolition and maintenance operations on sensitive ordnance explosives and incendiary materials. All operations involving re-grading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with or in close proximity to ordnance (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands face or arms of the employee engaged in the operation irritation of the skin minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving unloading storage and hauling of ordnance explosive and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance explosives and incendiary material differential pay.

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract by the employer by the state or local law etc.) the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition where uniform cleaning and maintenance is made the responsibility of the employee all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount or the furnishing of contrary affirmative proof as to the actual cost) reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However in those instances where the uniforms furnished are made of "wash and wear" materials may be routinely washed and dried with other personal garments and do not require any special treatment such as dry cleaning daily washing or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract by the contractor by law or by the nature of the work there is no requirement that employees be reimbursed for uniform maintenance costs.

**** SERVICE CONTRACT ACT DIRECTORY OF OCCUPATIONS ****

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations" Fifth Edition (Revision 1) dated September 2015 unless otherwise indicated.

**** REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE Standard Form 1444 (SF-1444) ****

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e. the work to be performed is not performed by any classification listed in the wage determination) be classified by the contractor so as to provide a reasonable relationship (i.e. appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination (See 29 CFR 4.6(b)(2)(i)). Such conforming procedures shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees (See 29 CFR 4.6(b)(2)(ii)). The Wage and Hour Division shall make a final determination of conformed classification wage rate and/or fringe benefits which shall be paid to all employees performing in the classification from the first day of work on which contract work is performed by them in the classification. Failure to pay such unlisted employees the compensation agreed upon by the interested

parties and/or fully determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract. (See 29 CFR 4.6(b)(2)(v)). When multiple wage determinations are included in a contract a separate SF-1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).

- 2) After contract award the contractor prepares a written report listing in order the proposed classification title(s) a Federal grade equivalency (FGE) for each proposed classification(s) job description(s) and rationale for proposed wage rate(s) including information regarding the agreement or disagreement of the authorized representative of the employees involved or where there is no authorized representative the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

- 3) The contracting officer reviews the proposed action and promptly submits a report of the action together with the agency's recommendations and pertinent information including the position of the contractor and the employees to the U.S. Department of Labor Wage and Hour Division for review (See 29 CFR 4.6(b)(2)(ii)).

- 4) Within 30 days of receipt the Wage and Hour Division approves modifies or disapproves the action via transmittal to the agency contracting officer or notifies the contracting officer that additional time will be required to process the request.

- 5) The contracting officer transmits the Wage and Hour Division's decision to the contractor.

- 6) Each affected employee shall be furnished by the contractor with a written copy of such determination or it shall be posted as a part of the wage determination (See 29 CFR 4.6(b)(2)(iii)).

Information required by the Regulations must be submitted on SF-1444 or bond paper.

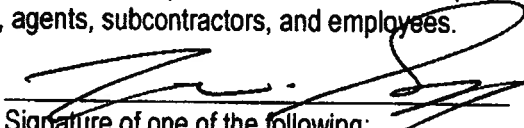
When preparing a conformance request the ""Service Contract Act Directory of Occupations"" should be used to compare job definitions to ensure that duties requested are not performed by a classification already listed in the wage determination. Remember it is not the job title but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split combine or subdivide classifications listed in the wage determination (See 29 CFR 4.152(c)(1))."

ATTACHMENT J
AFFIDAVIT re CONTINGENT FEES

CITY OF Tamuning)
) ss.
ISLAND OF GUAM)

John W. Scragg (state name of affiant signing below), being first duly sworn, deposes and says that:

1. The name of the offering company or individual is (state name of company)
JWS Refrigeration & Air Conditioning, Ltd.
2. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained any person or agency on a percentage, commission, or other contingent arrangement to secure this contract. This statement is made pursuant to UOG Procurement Manual Section 11.8.2
3. As a part of the offering company's bid or proposal, to the best of my knowledge, the offering company has not retained a person to solicit or secure a contract with the government of Guam upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. This statement is made pursuant to UOG Procurement Manual Section 11.8.1.
4. I make these statements on behalf of myself as a representative of the offeror, and on behalf of the offeror's officers, representatives, agents, subcontractors, and employees.


Signature of one of the following:

- Offeror, if the offeror is an individual;
- Partner, if the offeror is a partnership;
- Officer, if the offeror is a corporation

Subscribed and sworn to before me

This 24th day of November, 2021

NOTARY PUBLIC

My commission expires March 31, 2024

(AG Procurement Form 007 (Jul. 15, 2010))

JEANY T. BONDOC NOTARY PUBLIC In and for Guam, U.S.A. My Commission Expires: MARCH 31, 2024 P.O.BOX 26823 Barrigada, Guam 96921
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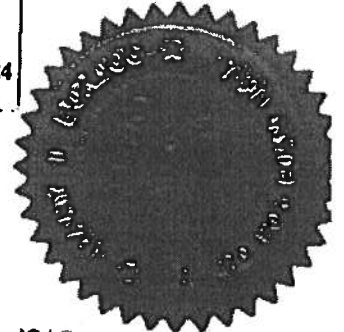




EXHIBIT A

University of Guam

BID SPECIFICATIONS OR EQUIVALENT

BID NO. B21-17

JR0529 UOG HVAC EQUIPMENT PURCHASE

4/27/2021

Prepared by:

AMORIENT

Prepared for:

UNIVERSITY OF GUAM

SECTION 23 81 00
DECENTRALIZED UNITARY HVAC EQUIPMENT

PART 1**GENERAL****1.1 REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. (AMCA)

AMCA 500-D (2018) Laboratory Methods of Testing Dampers for Rating

AMCA 500-L (2015) Laboratory Methods of Testing Louvers for Rating

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

AHRI 540 (2020) Performance Rating Of Positive Displacement Refrigerant Compressors And Compressor Units

AHRI 700 (2019) Specifications for Fluorocarbon Refrigerants

ANSI/AHRI 210/240 (2008; Add 1 2011; Add 2 2012) Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment

ANSI/AHRI 270 (2020) Sound Rating of Outdoor Unitary Equipment

ANSI/AHRI 460 (2005) Performance Rating of Remote Mechanical-Draft Air-Cooled Refrigerant Condensers

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ANSI/ASHRAE 15 & 34 (2013) ANSI/ASHRAE Standard 15 Safety Standard for refrigeration systems and ANSI/ASHRAE Standard 34-Designation and Safety Classification of Refrigerants

ASHRAE 15 & 34 (2013) ASHRAE Standard 34-2016 Safety Standard for Refrigeration Systems/ASHRAE Standard 34-2016 Designation and Safety Classification of Refrigerants-ASHRAE Standard 34-2016

ASHRAE 52.2 (2012) Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size

ASHRAE 55 (2020) Thermal Environmental Conditions for Human Occupancy

ASHRAE 62.1 (2019) Ventilation for Acceptable Indoor Air Quality

(2020) Methods of Testing Remote Mechanical-Draft Evaporative Refrigerant Condensers

ASHRAE 90.1 - IP

(2019) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASHRAE 90.1 - SI

(2019) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASTM INTERNATIONAL (ASTM)

ASTM A307	(2021; E 2017) Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength
ASTM B117	(2019) Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM C1071	(2019) Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material)
ASTM D520	(2000; R 2011) Zinc Dust Pigment
ASTM E84	(2021) Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM F104	(2011; R 2020) Standard Classification System for nonmetallic Gasket Materials

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS 6	(1993; R 2016) Industrial Control and Systems: Enclosures
NEMA MG 1	(2018) Motors and Generators
NEMA MG 2	(2014) Safety Standard for Construction and Guide for Selection, Installation and Use of Electric Motors and Generators

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2020; ERTA 20-1 2020; ERTA 20-2 2020; TIA 20-1; TIA 20-2; TIA 20-3; TIA 20-4) National Electrical Code
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UNDERWRITERS LABORATORIES (UL)

UL 586	(2009; Reprint Dec 2017) UL Standard for Safety High-Efficiency Particulate, Air Filter Units
UL 900	(2015) Standard for Air Filter Units
UL 1995	(2015) UL Standard for Safety Heating and Cooling Equipment

1.2 SUBMITTALS

SD-03 Product Data Spare Parts

Posted Instructions

Coil Corrosion Protection System Performance Tests Training

Inventory

Environmental Data

Supplied Products

SD-06 Test Reports

Refrigerant Tests, Charging, and Start-Up

System Performance Tests

SD-07 Certificates Service

Organizations

SD-10 Operation and Maintenance Data

Operation and Maintenance Manuals

1.3 DELIVERY, STORAGE, AND HANDLING

Protect stored items from the weather, humidity and temperature variations, dirt and dust, or other contaminants. Properly protect and care for all material both before and during installation. Submit an inventory of all the stored items. Replace any materials found to be damaged, at no additional cost to the Government. During installation, cap piping and similar openings capped to keep out dirt and other foreign matter.

1.4 ENVIRONMENTAL REQUIREMENTS

For proper Indoor Environmental Quality, maintain pressure within the building as indicated. Ventilation must meet or exceed ASHRAE 62.1 and all published addenda. Meet or exceed filter media efficiency as tested in accordance with ASHRAE 52.2. Thermal comfort must meet or exceed ASHRAE 55.

1.5 WARRANTY

Provide equipment with the 1 year manufacturer's warranty

PART 2 PRODUCTS

2.1 MATERIALS

Provide Manufacturer's standard catalog data, at least 5 weeks prior to the purchase or installation of a particular component, highlighted to show material, size, options, performance charts and curves, etc. in adequate detail to demonstrate compliance with contract requirements. Data includes manufacturer's recommended installation instructions and procedures. If vibration isolation is specified for a unit, include vibration isolator literature

containing catalog cuts and certification that the isolation characteristics of the isolators provided meet the manufacturer's recommendations. Submit data for each specified component. Minimum efficiency requirements must be in accordance with ASHRAE 90.1.

2.1.1 Standard Products

Provide materials and equipment that are standard products of a manufacturer regularly engaged in the manufacturing of such products, which are of a similar material, design and workmanship. The standard products must have been in satisfactory commercial or industrial use for 2 years prior to bid opening. The 2 year use includes applications of equipment and materials under similar circumstances and of similar size. The 2 years' experience must be satisfactorily completed by a product which has been sold or is offered for sale on the commercial market through advertisements, manufacturer's catalogs, or brochures. Products having less than a 2 year field service record will be acceptable if a certified record of satisfactory field operation, for not less than 6000 hours exclusive of the manufacturer's factory tests, can be shown. Products must be supported by a service organization. Ensure system components are environmentally suitable for the indicated geographic locations.

2.1.2 Product Sustainability Criteria

2.1.2.1 Energy Efficient Equipment

Provide equipment meeting the minimum efficiency requirement as required by ASHRAE 90.1.

2.1.2.2 Electrical Equipment / Motors

Electrical motor driven equipment specified must be provided complete with motors, motor starters, and controls. Electrical characteristics must be as shown, and unless otherwise indicated, all motors of 1 horsepower and above with open, drip proof, totally enclosed, or explosion proof fan cooled enclosures, must be the premium efficiency type in accordance with NEMA MG 1. Field wiring must be in accordance with manufacturer's instructions. Each motor must conform to NEMA MG 1 and NEMA MG 2 and be of sufficient size to drive the equipment at the specified capacity without exceeding the nameplate rating of the motor. Motors must be continuous duty with the enclosure specified. Motor starters must be provided complete with thermal overload protection and other appurtenances necessary for the motor control indicated. Motors must be furnished with a magnetic across-the-line or reduced voltage type starter as required by the manufacturer. Motor duty requirements must allow for maximum frequency start-stop operation and minimum encountered interval between start and stop. Motors must be sized for the applicable loads. Motor torque must be capable of accelerating the connected load within 20 seconds with 80 percent of the rated voltage maintained at motor terminals during one starting period. Motor bearings must be fitted with grease supply fittings and grease relief to outside of enclosure. Manual or automatic control and protective or signal devices required for the operation specified and any control wiring required for controls and devices specified, but not shown, must be provided.

2.1.2.3 Ozone Depleting Substances

Unitary air conditioning equipment must not use CFC-based refrigerants. Refrigerant shall be R-410A or may be an approved alternative refrigerant in accordance with EPA's Significant New Alternative Policy (SNAP) listing.

2.1.3 Nameplates

Major equipment including compressors, condensers, receivers, heat exchanges, fans, and motors must have the manufacturer's name, address, type or style, model or serial number, and catalog number on a plate secured to the item of equipment. Plates must be durable and legible throughout equipment life and made of stainless steel. Fix plates in prominent locations with nonferrous screws or bolts.

2.1.4 Safety Devices

Exposed moving parts, parts that produce high operating temperature, parts which may be electrically energized, and parts that may be a hazard to operating personnel must be insulated, fully enclosed, guarded, or fitted with other types of safety devices. Safety devices must be installed so that proper operation of equipment is not impaired. Welding and cutting safety requirements must be in accordance with AWS Z49.1.

2.2 EQUIPMENT

2.2.1 Large-Capacity Split-System Air Conditioners (Greater Than 65,000 Btu/h)

Provide an air-cooled, split system which employs a remote condensing unit, a separate indoor unit, and interconnecting refrigerant piping. Provide the air conditioning type unit conforming to applicable Underwriters Laboratories (UL) standards including UL 1995. Unit must be rated in accordance with ANSI/AHRI 210/240. Provide unit with necessary fans, air filters, and cabinet construction as specified in paragraph UNITARY EQUIPMENT ACCESSORIES. Provide double-width, double inlet, forward curved centrifugal scroll type evaporator or supply fans. Provide the manufacturer's standard for the unit specified and may be centrifugal scroll type condenser or outdoor fans. Enclose fan condenser motors in totally enclosed enclosures and permanently lubricate ball bearings. Air Conditioners must have a minimum energy efficiency ratio (EER) of 12.

2.2.1.1 Air-To-Refrigerant Coil

Provide coils with copper tubes of 3/8 inch minimum diameter with copper fins that are mechanically bonded or soldered to the tubes. Provide casing of galvanized steel. Avoid contact of dissimilar metals. Test coils in accordance with ASHRAE 15 & 34 at the factory and ensure suitability for the working pressure of the installed system. Dehydrate and seal each coil testing and prior to evaluation and charging. Provide each unit with a factory operating charge of refrigerant and oil. Field charge unit shipped with a holding charge with refrigerant and oil. Provide separate expansion devices for each compressor circuit. Condenser coil must have special coating for corrosion resistance. Condenser coil must be copper finned. Coat condenser and evaporator coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Apply coating at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation and be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.2.1.2 Refrigeration Circuit

Refrigerant-containing components must comply with ASHRAE 15 & 34 and be factory tested, cleaned, dehydrated, charged, and sealed. Provide refrigerant charging valves and connections, and pumpdown valves for each circuit.

2.2.1.3 Unit Controls

Provide unit internally prewired with a 208 volt control circuit powered by an internal transformer.

Provide terminal blocks for power wiring and external control wiring. Unit must have cutoffs high and low pressure, and low oil pressure for compressors with positive displacement oil pumps, supply fan failure, and safety interlocks on all service panels. Stage multiple compressors by means of a time delay. Internally protect unit by a circuit breaker in accordance with UL 1995.

2.2.1.4 Condensing Unit

Fit each remote condenser coil with a manual isolation valve and an access valve on the coil side. Saturated refrigerant condensing temperature must not exceed 120 degrees F at 95 degrees F ambient. Fan and condenser motors must have totally enclosed enclosures.

2.2.1.4.1 Air-Cooled Condenser

Provide unit rated in accordance with ANSI/AHRI 460 and conform to the requirements of UL 1995. Provide factory fabricated, tested, packaged, and self-contained unit. Unit must be complete with casing, propeller or centrifugal type fans, heat rejection coils, connecting piping and wiring, and all necessary appurtenances.

- a. Provide interconnecting refrigeration piping, electrical power, and control wiring between the condensing unit and the indoor unit as required and as indicated. Provide electrical and refrigeration piping terminal connections between condensing unit and evaporator units.
- b. Low ambient control for multi-circuited units serving more than one evaporator coil must provide independent condenser pressure controls for each refrigerant circuit. Set controls to produce a minimum of 95 degrees F saturated refrigerant condensing temperature. Provide unit with a liquid subcooling circuit that ensures proper liquid refrigerant flow to the expansion device over the specified application range of the condenser. Unit must be provided with manufacturer's standard liquid subcooling. Liquid seal the subcooling circuit.
- c. Coils must have copper tubes of 3/8 inch minimum diameter with copper fins that are mechanically bonded or soldered to the tubes. Protect coil in accordance with paragraph COIL CORROSION PROTECTION. Casing must be galvanized steel or aluminum. Avoid contact of dissimilar metals. Test coils in accordance with ASHRAE 15 & 34 at the factory and ensure suitability for the working pressure of the installed system. Dehydrate and seal each coil after testing and prior to evaluation and charging. Provide each unit with a factory operating charge of refrigerant and oil or a holding charge. Field charge unit shipped with a holding charge. Provide separate expansion devices for each compressor circuit.
- d. Provide a complete control system with required accessories for regulating condenser pressure by fan cycling, solid-state variable fan speed, modulating condenser coil or fan dampers, flooding the condenser, or a combination of the above. Construct unit mounted control panels or enclosures in accordance with applicable requirements of NFPA 70 and house in NEMA ICS 6, Class 1 or 3A enclosures. Controls must include overload protective devices, interface with local and remote components, and intercomponent wiring to terminal block points.

2.2.1.4.2 Compressors

Provide compressor rated in accordance with AHRI 540. Provide direct drive, semi-hermetic or hermetic reciprocating, or scroll type compressor capable of operating at partial load conditions. Compressor must be capable of continuous operation down to the lowest step of unloading as specified. Provide units 120,000 Btuh and larger with capacity reduction devices to produce automatic capacity reduction of at least 50 percent. If standard with the manufacturer, two or more compressors may be used in lieu of a single compressor with unloading capabilities, in which case the compressors operate in sequence, and each compressor must have an independent refrigeration circuit through the condenser and evaporator. Each compressor must start in the unloaded position. Provide each compressor with vibration isolators, crankcase heater, lubrication pump, thermal overloads, and high and low pressure safety cutoffs and protection against short cycling.

2.2.1.5 Filters

Provide filters of the sectional or panel type, capable of filtering the entire air supply. Mount filter(s) integral within the unit and make accessible by hinged access panel(s). Factory supply 2.0 inch, MERV 13, throwaway filters. Filters must have an average dust spot efficiency of 90-95 percent and an average arrestance of 90 percent when tested in accordance with ASHRAE 52.2. Provide UL Class 1 filters.

2.4 COMPONENTS

2.4.1 Refrigerant and Oil

The air-conditioning system shall use R410A. Refrigerants must have number designations and safety classifications in accordance with ASHRAE 15 & 34. Refrigerants must meet the requirements of AHRJ 700 as a minimum. Provide a complete charge of refrigerant for the installed system as recommended by the manufacturer. Lubricating oil must be of a type and grade recommended by the manufacturer for each compressor. Where color leak indicator dye is incorporated, charge must be in accordance with manufacturer's recommendation.

2.4.2 Fans

Fan wheel shafts must be supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Unit fans must be selected to produce the cfm required at the fan total pressure. Motor starters, if applicable, must be magnetic across-the-line type with a totally enclosed enclosure. Thermal overload protection must be of the manual or automatic-reset type. Fan wheels or propellers must be constructed of aluminum or galvanized steel. Centrifugal fan wheel housings must be of galvanized steel, and both centrifugal and propeller fan casings must be constructed of aluminum or galvanized steel. Steel elements of fans, except fan shafts, must be hot-dipped galvanized after fabrication or fabricated of mill galvanized steel. Mill-galvanized steel surfaces and edges damaged or cut during fabrication by forming, punching, drilling, welding, or cutting must be recoated with an approved zinc-rich compound. Fan wheels or propellers must be statically and dynamically balanced. Centrifugal scroll-type fans must be provided with streamlined orifice inlet and V-belt drive. Each drive will be independent of any other drive. Propeller fans must be V-belt drive type with fixed pitch blades. V-belt driven fans must be mounted on a corrosion protected drive shaft supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Each drive will be independent of any other drive. Drive bearings must be protected with water slingers or shields. V-belt drives must be fitted with guards where exposed to contact by personnel and fixed pitch sheaves.

2.4.3 Air Filters

Provide filters to filter outside air and return air and locate inside combination air filter mixing box. Provide replaceable (throw-away) high efficiency type. Filters must conform to UL 900, Class 1. Polyurethane filters cannot be used on units with multiframe filters. Air filters must be listed in accordance with requirements of UL 900, except high efficiency particulate air filters of 99.97 percent efficiency by the DOP Test Method must be as listed under the label service and must meet the

2.4.3.1 High Efficiency Filters

Additional high efficiency particulate air (HEPA) filters shall be provided. Filters must have a MERV of 17 when tested in accordance with ASHRAE 52.2. Filter assembly must include; holding frame and fastener assembly, filter cartridge, mounting frame, and retainer assembly. Reinforce filter media with glass fiber mat. Pressure drop across

clean filter shall not exceed 1 inches of water gage.

2.4.5 Mixing Boxes

Mixing boxes must match the base unit in physical size and must include equally sized openings, each capable of full air flow. Arrangement must be as indicated.

2.4.6 Cabinet Construction

Casings for the specified unitary equipment must be constructed of galvanized steel with a weather and corrosion resistant enamel finish or aluminum sheet metal and galvanized or aluminum structural members. If cabinet is enamel-finished galvanized steel, the cabinet finish shall be tested in accordance with ASTM B-117 salt spray surface scratch test (SST) procedure for a minimum of 1000 hours. Such documentation shall be included in all submittals. Minimum thickness of single wall exterior surfaces must be 18 gauge galvanized steel or 0.071 inch thick aluminum on units with a capacity above 20 tons and 20 gauge galvanized steel or 0.064 inch thick aluminum on units with a capacity less than 20 tons. Casing must be fitted with lifting provisions, access panels or doors, fan vibration isolators, electrical control panel, corrosion-resistant components, structural support members, insulated condensate drip pan and drain, and internal insulation in the cold section of the casing. Where double-wall insulated construction is proposed, minimum exterior galvanized sheet metal thickness must be 20 gauge.

Provisions to permit replacement of major unit components must be incorporated. Penetrations of cabinet surfaces, including the floor, must be sealed. Unit must be fitted with a drain pan which extends under all areas where water may accumulate. Drain pan must be fabricated from Type 300 stainless steel, galvanized steel with protective coating as required, or an approved plastic material. Pan insulation must be water impervious. Extent and effectiveness of the insulation of unit air containment surfaces must prevent, within limits of the specified insulation, heat transfer between the unit exterior and ambient air, heat transfer between the two conditioned airstreams, and condensation on surfaces. Insulation must conform to ASTM C1071.

2.4.6.1 Indoor Cabinet

Indoor cabinets must be suitable for the specified indoor service and enclose all unit components.

2.4.6.2 Outdoor Cabinet

Outdoor cabinets must be suitable for outdoor service with a weathertight, insulated and corrosion-protected structure. Cabinets constructed exclusively for indoor service which have been modified for outdoor service are not acceptable.

2.6 FINISHES

2.6.1 Coil Corrosion Protection

Provide coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Submit product data on the type coating selected,

the coating thickness, the application process used, the estimated heat transfer loss of the coil, and verification of conformance with the salt spray test requirement. Coating must be applied at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation. Coating must be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.6.2 Equipment and Components Factory Coating

Unless otherwise specified, equipment and component items, when fabricated from ferrous metal, must be factory finished with the manufacturer's standard finish, except that items located outside of buildings must have weather resistant finishes that will withstand 500 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution. Immediately after completion of the test, the specimen must show no signs of blistering, wrinkling, cracking, or loss of adhesion and no sign of rust creepage beyond 1/8 inch on either side of the scratch mark. Cut edges of galvanized surfaces where hot-dip galvanized sheet steel is used must be coated with a zinc-rich coating conforming to ASTM D520, Type I.

Where stipulated in equipment specifications of this section, coat finned tube coils of the affected equipment as specified below. Apply coating at the premises of a company specializing in such work. Degrease and prepare for coating in accordance with the coating applicator's procedures for the type of metals involved. Completed coating must show no evidence of softening, blistering, cracking, crazing, flaking, loss of adhesion, or "bridging" between the fins.

2.6.2.1 Phenolic Coating

Provide a resin base thermosetting phenolic coating. Apply coating by immersion dipping of the entire coil. Provide a minimum of two coats. Bake or heat dry coils following immersions. After final immersion and prior to final baking, spray entire coil with particular emphasis given to building up coating on sheared edges. Total dry film thickness must be 2.5 to 3.0 mils.

2.6.2.2 Chemical Conversion Coating with Polyelastomer Finish Coat

Dip coils in a chemical conversion solution to molecularly deposit a corrosion resistant coating by electrolysis action. Cure conversion coating at a temperature of 110 to 140 degrees F for a minimum of 3 hours. Coat coil surfaces with a complex polymer primer with a dry film thickness of 1 mil. Cure primer coat for a minimum of 1 hour. Using dip tank method, provide three coats of a complex polyelastomer finish coat. After each of the first two finish coats, cure the coils for 1 hour. Following the third coat, spray a fog coat of an inert sealer on the coil surfaces. Total dry film thickness must be 2.5 to 3.0 mils. Cure finish coat for a minimum of 3 hours. Coating materials must have 300 percent flexibility, operate in temperatures of minus 50 to plus 220 degrees F, and protect against atmospheres of a pH range of 1 to 14.

2.6.2.3 Vinyl Coating

Apply coating using an airless fog nozzle. For each coat, make at least two passes with the nozzle. Materials to be applied are as follows:

- a. Total dry film thickness, 6.5 mils maximum
- b. Vinyl Primer, 24 percent solids by volume: One coat 2 mils thick

- c. Vinyl Copolymer, 30 percent solids by volume: One coat 4.5 mils thick

2.6.3 Factory Applied Insulation

Refrigeration equipment must be provided with factory installed insulation on surfaces subject to sweating including the suction line piping. Where motors are the gas-cooled type, factory installed insulation must be provided on the cold-gas inlet connection to the motor in accordance with manufacturer's standard practice. Factory insulated items installed outdoors are not required to be fire-rated. As a minimum, factory insulated items installed indoors must have a flame spread index no higher than 75 and a smoke developed index no higher than 150. Factory insulated items (no jacket) installed indoors and which are located in air plenums, in ceiling spaces, and in attic spaces must have a flame spread index no higher than 25 and a smoke developed index no higher than 50. Flame spread and smoke developed indexes must be determined by ASTM E84.

Insulation must be tested in the same density and installed thickness as the material to be used in the actual construction. Material supplied by a manufacturer with a jacket must be tested as a composite material.

Jackets, facings, and adhesives must have a flame spread index no higher than 25 and a smoke developed index no higher than 50 when tested in accordance with ASTM E84.

2.7 TESTS, INSPECTIONS, AND VERIFICATIONS

All manufactured units must be inspected and tested, and documentation provided to demonstrate that each unit is in compliance with ANSI/AHRI and UL requirements and that the minimum efficiency requirements of ASHRAE 90.1 - IP have been met.

DIVISION 23-HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

(HVAC) SECTION 23 81 29 VARIABLE
REFRIGERANT FLOW HVAC SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

Provide a complete Air Source, Cooling Only type Variable Refrigerant Flow (VRF) System consisting of one or more outdoor compressor units and multiple indoor fan coil units as specified in this Section and in accordance with the following:

- a. The complete system must be a tested combination in accordance with AHRI 1230.
- b. Provide cooling only control for each zone
- c. For systems which simultaneously heat and cool, the outdoor units must be interconnected to the indoor units through branch selector boxes in accordance with the manufacturer's engineering data detailing each indoor unit. The indoor units and outdoor must be connected to the branch selector boxes utilizing the manufacturer's specified piping joints and headers.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

AHRI 1230	(2010; Addendum 1 2011; Addendum 2 2014) Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment
ANSI/AHRI 270	(2008) Sound Rating of Outdoor Unitary Equipment
ANSI/AHRI 760	(2007) Performance Rating of Solenoid Valves for Use With Volatile Refrigerants

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
(ASHRAE)**

ANSI/ASHRAE 15 & 34	(2013) ANSI/ASHRAE Standard 15-Safety Standard for Refrigeration Systems and ANSI/ASHRAE Standard 34-Designation and Safety Classification of Refrigerants
ASHRAE 90.1 - IP	(2013) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASTM INTERNATIONAL (ASTM)

ASTM A307

(2014; E 2017) Standard Specification for Carbon Steel Bolts, Studs, and

ASTM B117	Threaded Rod 60 000 PSI Tensile Strength
ASTM D520	(2019) Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM E84	(2000; R 2011) Zinc Dust Pigment
ASTM F104	(2020) Standard Test Method for Surface Burning Characteristics of Building Materials
	(2011; R 2020) Standard Classification System for Nonmetallic Gasket Materials

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA 250	(2018) Enclosures for Electrical Equipment (1000 Volts Maximum)
NEMA MG 1	(2018) Motors and Generators
NEMA MG 2	(2014) Safety Standard for Construction and Guide for Selection, Installation and Use of Electric Motors and Generators

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star	(1992; R 2006) Energy Star Energy Efficiency Labeling System (FEMP)
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 82	Protection of Stratospheric
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Ozone UNDERWRITERS

LABORATORIES (UL)

UL 207	(2009; Reprint Jan 2020) Refrigerant-Containing Components and Accessories, Nonelectrical
UL 429	(2013; Reprint Jan 2020) Electrically Operated Valves
UL 586	(2009; Reprint Dec 2017) UL Standard for Safety High-Efficiency Particulate, Air Filter Units
UL 900	(2015) Standard for Air Filter Units
UL 1995	(2015) UL Standard for Safety Heating and Cooling Equipment

1.3 SUBMITTALS

SD-01 Preconstruction Submittals

Verification Of Existing

Conditions

VRF System Contractor Design

DrawingsSD-03 Product Data

Spare Parts Data

Coil Corrosion Protection

Manufacturer's Standard Catalog

DataSample Warranty

Refrigerant SDS

SheetsSD-05 Design Data

Manufacturer's Engineering

DataSD-06 Test Reports

System Performance

TestsSD-07 Certificates

Service

Organizations

Warranty

Electronic Refrigerant Leak Detector Calibration

Ozone Depleting Substances Technician

Certification

SD-08 Manufacturer's Instructions Manufacturer's

InstructionsSD-09 Manufacturer's Field Reports

Refrigerant Charging

1.4 QUALITY ASSURANCE

Complete VRF systems must be purchased from a single supplier. The VRF system supplier must be responsible for providing a fully functional VRF system.

Prior to purchase of equipment, shop drawings (e.g. equipment layout, plans and elevations, refrigerant piping system plans, etc.) must be approved by the VRF manufacturers representative. Include approval with name and contact information of VRF manufacturer's representative in the submittal.

1.5 QUALITY CONTROL

Provide materials and equipment that are standard products of a manufacturer regularly engaged in the manufacturing of such products, which are of a similar material, design and workmanship. The standard products must have been in satisfactory commercial or industrial use for 3 years immediately prior to the solicitation of this contract. The 3 year use includes applications of equipment and materials under similar circumstances and of similar size. The 3 years' experience must be satisfactorily completed by a product which has been sold on the commercial market through advertisements, manufacturer's catalogs, or brochures. Products must be supported by a service organization. Ensure system components are environmentally suitable for the indicated geographic locations.

1.5.2 Manufacturer's Engineering Data

Submit VRF manufacturer's engineering data with the shop drawings under separate cover.

installed.

selection procedures required by the manufacturer and as required by this section. Engineering data must include:

- a. Selection Procedures:
 1. Indoor and Outdoor Units
 2. Branch Selector Units
 3. Piping Material and Fittings
 4. Refrigerant Mass for system
 5. Refrigerant Classification

- b. System Efficiency Curves/Data including:
 1. Efficiency correlated with OAT
 2. At least five (5) data points covering full range of operation
 3. Minimum and maximum values over the operational range
 4. Efficiency at Standard AHRI conditions.

1.5.3 Manufacturer's Instructions

Submit VRF manufacturer's instructions with the shop drawings under separate cover.

outirrelevant items and options not to be installed. Provide with the following:

- a. Installation: Include mechanical, electrical, controls and piping complete installation requirements.
- b. Operation: Include startup, normal operation and shutdown procedures.
- c. Maintenance: Include preventative.

1.6 DELIVERY, STORAGE, AND HANDLING

Protect stored items from the weather, humidity and temperature variations, dirt and dust, or other contaminants. Properly protect and care for all material both before and during installation. Submit an inventory of all the stored items. Replace any materials found to be damaged, at no additional cost to the Government.

During installation, keep piping and similar openings capped to keep out dirt and other foreign matter.

1.7 WARRANTY

Provide VRF manufactured equipment with the Manufacturer's Standard Warranty in addition to the Warranty of Construction. Submit Sample Warranty prior to construction. Compare warranty requirements with the requirements of this contract and identify discrepancies in the submittal that would prevent coverage of warranty by the manufacturer.

All products used to meet this specification must meet the indicated requirements, but not all products specified here will be required by every project.

2.1 MATERIALS

Provide Manufacturer's standard catalog data, at least 5 weeks prior to the purchase or installation of a particular component, highlighted to show material, size, options, performance charts and curves, in adequate detail to demonstrate compliance with contract requirements. If field installed vibration isolation is specified for a unit, include vibration isolator literature containing catalog cuts and certification that the isolation characteristics of the isolators provided meet the manufacturer's recommendations. Submit data for each specified component.

Minimum efficiency requirements must be in accordance with ASHRAE 90.1 - IP.

2.1.1 Performance Requirements

Provide energy efficiency curve and data of EFFICIENCY vs. OAT. Provide at least five data points over the full range of operation capturing the minimums and maximums.

2.1.1.1 Variable Refrigerant Flow Multi-Split Air Conditioners

Information on Energy Star requirements can be found at https://www.energystar.gov/products/heating_cooling/light_commercial_heating_cooling/light_commercial_hvac_key_product_criteria

2.1.1.2 Electrical Equipment / Motors

Electrical motor driven equipment specified must be provided complete with motors, motor starters, and controls. Electrical characteristics must be as shown, and unless otherwise indicated and field wiring must be in accordance with manufacturer's instructions. All motor(s):

- a. 1 horsepower and above must be the premium efficiency type in accordance with NEMA MG 1.
- b. Conform to NEMA MG 1 and NEMA MG 2 and be of sufficient size to drive the equipment at the specified capacity without exceeding the nameplate rating.
- c. Continuous duty with the enclosure specified.
- d. Starters must be provided complete with thermal overload protection and other appurtenances necessary for the motor control indicated.
- e. Furnished with a magnetic across-the-line or reduced voltage type starter as required by the manufacturer.
- f. Duty requirements must allow for maximum frequency start-stop operation and minimum encountered interval between start and stop.
- g. Must be sized for all applicable loads.
- h. Bearings with grease supply fittings must have grease relief to outside of enclosure.

1. Automatic control and protective or signal devices required for the operation specified and any control wiring required for controls and devices specified, but not shown, must be provided.

2.1.1.3 Refrigerant

The air-conditioning system shall use R410A.

2.1.2 Safety Devices

Exposed moving parts, parts that produce high operating temperature, parts which may be electrically energized, and parts that may be a hazard to operating personnel must be insulated, fully enclosed, guarded, or fitted with other types of safety devices.

2.2.1 Zone Control

Provide a Space Sensor Module for each fan coil unit unless otherwise indicated in contract drawings and with the following additional requirements:

- a. Displays the current temperature, temperature setpoint, fans status, occupancy status and conditioning mode at the same time. If information is displayed electronically then it must be illuminated.
- b. Temperature setpoint adjustment in one degree increments.
- c. Fans speed control (At least: High-low-Auto).
- d. Occupancy override button which changes the mode of the zone to occupied for one hour per press of occupancy override button with 8 hours maximum at any instance.

2.3 INDOOR FAN COIL

Provide with the

following:

- a. Factory complete, tested and pre-wired with all necessary electronic and refrigerant controls.
- b. Equipped with auto-restart function and test run capability either via a switch or controller.
- c. Refrigerant: Refrigerant circuits factory-charged with dehydrated inert gas.
- d. Coils: Direct expansion type constructed from copper, aluminum, or copper and aluminum.
- e. Fans: Direct-drive, with statically and dynamically balanced impellers; variable speed ECM unless otherwise indicated; motor thermally protected.

- f. **Return Air Filter: Washable long-life net filter with mildew proof resin, or replaceable, unless otherwise indicated.**
- g. **Condensate Drainage: Built-in condensate drain pan with drain connection.**
- h. **Dedicated electronic modulating refrigerant expansion and flow control.**

- i. Unit must be in accordance with UL 1995 and AHRI 1230.
- j. For units with Built-In Condensate Pumps, provide condensate safety shutoff and alarm. For units without Built-In Condensate Pump, provide built in or field supplied overflow protection.

2.3.1 Concealed-In-Ceiling

Units Provide with the following:

- a. Ducted horizontal discharge and return; galvanized steel cabinet in accordance with Section 23 30 00 HVAC AIR DISTRIBUTION.
- b. Field adjustable external static pressure switch for high efficiency filter operation.
- c. Switch box accessible from side or bottom.

2.3.2 Recessed Ceiling

Units Provide with the

following:

- a. Four-way airflow cassette with central return air grille, for installation in a fixed ceiling, unless otherwise indicated.
- b. Exposed Housing: White, impact resistant, with washable decoration panel.
- c. Supply Airflow Adjustment:
 - (1) Via motorized louvers which can be horizontally and vertically adjusted from 0 to 90 degrees.
 - (2) Field-modifiable to 3-way and 2-way airflow.

2.3.3 Wall Surface-Mounted

Units Provide with the following:

- a. Finished white casing, with removable front grille; sound insulation; wall mounting plate; condensate drain pan.
- b. Airflow Control: Auto-swing louver that closes automatically when unit stops; adjustable discharge angle, set using remote controller; upon restart, discharge angle defaulting to same angle as previous operation.
- c. Fan: Direct-drive cross-flow type.

d. Condensate Drain Connection: Side (end), not concealed in wall.

2.4 **OUTDOOR COMPRESSOR**

UNIT Provide with the

following:

- a. The outdoor unit must have one or more variable capacity compressors or alternative method resulting in three or more steps of capacity needed to load match the indoor unit fan coils at all times.
- b. The unit must be factory complete, tested and pre-wired with all necessary electronic and refrigerant controls.
- c. The sound pressure dB(A) at rated conditions must be a value of 58 decibels at 3 feet from the front of the unit when rated in accordance with ANSI/AHRI 270.
- d. The unit must automatically restart normal operation after a power failure of any duration without reprogramming or manual assistance.
- e. Oil recovery cycle must be automatic occurring a minimum of 2 hours after start of operation and then at least every 8 hours of operation.
- f. Each outdoor unit must have its own dedicated power feed, each with disconnect and main power circuit breaker.
- g. The unit must be in compliance with ANSI/ASHRAE 15 & 34, factory tested, cleaned, dehydrated, charged, and sealed. Provide refrigerant charging valves. Filter-drier must be provided in liquid line.
- h. The outdoor units capacity must meet or exceed the scheduled value in the contract drawings. The ratio of the outdoor unit capacity to the total connected indoor capacity must be in accordance with the manufacturer's recommendations for selecting the outdoor unit.
- i. Unit must be in accordance with UL 1995 and AHRI 1230.

2.4.1 Air-Cooled

The unit must have full design cooling capacity at 95 degrees F dry bulb ambient.

2.4.2 Casing

Construct the unit of zinc coated, heavy-gage (14-gage minimum) galvanized steel. The cabinet finish shall be tested in accordance with ASTM B-117 salt spray surface scratch test (SST) procedure for a minimum of 1000 hours. Such documentation shall be included in all submittals. Provide cabinet panels with lifting handles and water- and air-tight seal. Insulate all exposed vertical panels, top covers and base pan.

2.4.3 Compressor

Each compressor system must have the following:

- a. High pressure safety switch, and internal thermal overload protection.

- b. **Factory installed vibration dampeners on all mounting points.**
- c. **Factory installed crank case heater or other control logic to ensure reliable operation in freezing environments.**
- d. **Oil separator with an oil balance circuit.**

2.5 COMPONENTS

2.5.1 Fans

Fan wheel shafts must be supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Unit fans must be selected to produce the flow rate required at the fan total pressure. Motor starters, if applicable, must be magnetic across-the-line type with a totally enclosed enclosure. Thermal overload protection must be of the manual or automatic-reset type. Fan wheels or propellers must be constructed of aluminum or galvanized steel. Centrifugal fan wheel housings must be of galvanized steel, and both centrifugal and propeller fan casings must be constructed of aluminum or galvanized steel. Steel elements of fans, except fan shafts, must be hot-dipped galvanized after fabrication or fabricated of mill galvanized steel. Mill-galvanized steel surfaces and edges damaged or cut during fabrication by forming, punching, drilling, welding, or cutting must be recoated with an approved zinc-rich compound. Fan wheels or propellers must be statically and dynamically balanced. Direct-drive fan motors must be of the multiple-speed variety. Belt-driven fans must have adjustable sheaves. The sheave size must be selected so that the fan speed at the approximate midpoint of the sheave adjustment will produce the specified air quantity. Centrifugal scroll-type fans must be provided with streamlined orifice inlet and V-belt drive. Each drive will be independent of any other drive.

Propeller fans must be direct-drive type with fixed pitch blades. V-belt driven fans must be mounted on a corrosion protected drive shaft supported by either maintenance-accessible lubricated antifriction block-type bearings, or permanently lubricated ball bearings. Each drive will be independent of any other drive. Drive bearings must be protected with water slingers or shields. V-belt drives must be fitted with guards where exposed to contact by personnel and fixed pitch sheaves. Axial fans may not be used to distribute air through duct systems.

2.5.2 Air Filters

High efficiency particulate air (HEPA) filters shall be provided. Filters must have a MERV of 17 when tested in accordance with ASHRAE 52.2. Filter assembly must include; holding frame and fastener assembly, filter cartridge, mounting frame, and retainer assembly. Reinforce filter media with glass fiber mat. Pressure drop across clean filter shall not exceed 1 inches of water gage.

2.5.3 Internal Dampers

Dampers must be parallel blade type with renewable blade seals and be integral to the unitary unit. Damper provisions must be provided for each outside air intake, exhaust, economizer, and mixing boxes. Dampers must have manual modulation and operate as specified.

2.5.4 Mixing Boxes

Mixing boxes must match the base unit in physical size and must include equally-sized openings, each capable of full air flow. Arrangement must be as indicated.

2.5.5 Refrigerant Solenoid Valves

Solenoid valves must comply with ANSI/AHRI 760 and UL 429, be suitable for continuous duty rated voltage at maximum and minimum encountered pressure and temperature service conditions. Solenoid

valves must be direct-acting or pilot-operating type, packless, seal capped. Manual lifting provisions must be furnished. Solenoid coils must comply with NEMA 250 type 4.

Valves must have safe working pressure of 125 percent of maximum working pressure and a maximum operating pressure differential of at least half of the valve maximum working pressure at 85 percent rated voltage. Valves must have an operating pressure differential suitable for the fluid phase and refrigerant used.

2.5.6 Branch Selector Unit

Branch Selector port control must be provided for each connected indoor unit to enable individual heating and cooling selection year round unless otherwise indicated in the contract drawings. The cabinet must be galvanized steel. The branch selector units must be factory assembled, wired, piped and run tested.

2.6 EQUIPMENT ACCESSORIES AND MISCELLANEOUS EQUIPMENT

2.6.1 Refrigerant Leak Detector

Provide continuously-operating, halogen-specific type refrigerant leak detector. Detector must be appropriate for the refrigerant in use.

Detector must be specifically designed for area monitoring and must include a single sampling point installed where indicated. Detector design and construction must be compatible with the temperature, humidity, barometric pressure and voltage fluctuations of the operating area. Detector must have an adjustable sensitivity such that it can detect refrigerant at or above 3 parts per million (ppm). Detector must be supplied factory-calibrated for the appropriate refrigerant(s). Detector must be provided with an alarm relay output which energizes when the detector detects a refrigerant level at or above the TLV-TWA (or toxicity measurement consistent therewith) for the refrigerant in use. The detector's relay must be capable of initiating corresponding alarms and ventilation system as indicated on the drawings. Detector must be provided with a failure relay output that energizes when the monitor detects a fault in its operation.

2.6.2 Refrigerant Signs

Refrigerant signs must be a medium-weight aluminum type with a baked enamel finish. Signs must be suitable for indoor or outdoor service. Signs must have a white background with red letters not less than 0.5 inches in height.

2.6.2.1 Installation Identification

Provide each new refrigeration system with a refrigerant sign which indicates the following as a minimum:

- a. Contractor's name.
- b. Refrigerant number and amount of refrigerant.
- c. The lubricant identity and amount.
- d. Field test pressure applied.

2.6.2.2 Controls and Piping Identification

Provide refrigerant systems containing more than 110 lb of refrigerant with refrigerant signs which designate the following as a minimum:

- a. Valves or switches for controlling the refrigerant flow and the refrigerant compressor.

- b. Pressure limiting device(s).

2.6.3 Gaskets

Provide gaskets conforming to ASTM F104 - classification for compressed sheet with nitrile binder and acrylic fibers for maximum 700 degrees F service.

2.6.4 Bolts and Nuts

Bolts and nuts must be in accordance with ASTM A307. The bolt head must be marked to identify the manufacturer and the standard with which the bolt complies in accordance with ASTM A307.

2.7 FINISHES

2.7.1 Coil Corrosion Protection

Provide coil with a uniformly applied epoxy electrodeposition, phenolic, or vinyl type coating to all coil surface areas without material bridging between fins. Submit product data on the type coating selected, the coating thickness, the application process used, the estimated heat transfer loss of the coil, and verification of conformance with the salt spray test requirement. Coating must be applied at either the coil or coating manufacturer's factory. Coating process must ensure complete coil encapsulation. Coating must be capable of withstanding a minimum 1,000 hours exposure to the salt spray test specified in ASTM B117 using a 5 percent sodium chloride solution.

2.7.2 Equipment and Components Factory Coating

Unless otherwise specified, equipment and component items, when fabricated from ferrous metal, must be factory finished with the manufacturer's standard finish, except that items located outside of buildings must have weather resistant finishes that will withstand 500 hours exposure to the salt spray test specified in ASTM B117. Immediately after completion of the test, the specimen must show no signs of blistering, wrinkling, cracking, or loss of adhesion and no sign of rust creepage beyond 1/8 inch on either side of the scratch mark. Cut edges of galvanized surfaces where hot-dip galvanized sheet steel is used must be coated with a zinc-rich coating conforming to ASTM D520, Type I.

Where stipulated in equipment specifications of this section, coat finned tube coils of the affected equipment as specified below. Apply coating at the premises of a company specializing in such work. Degrease and prepare for coating in accordance with the coating applicator's procedures for the type of metals involved. Completed coating must show no evidence of softening, blistering, cracking, crazing, flaking, loss of adhesion, or "bridging" between the fins.

2.7.2.1 Phenolic Coating

Provide a resin base thermosetting phenolic coating. Apply coating by immersion dipping of the entire coil. Provide a minimum of two coats. Bake or heat dry coils following immersions. After final immersion and prior to final baking, spray entire coil with particular emphasis given to building up coating on sheared edges. Total dry film thickness must be 2.5 to 3.0 mils.

2.7.2.2 Chemical Conversion Coating with Polyelastomer Finish Coat

Dip coils in a chemical conversion solution to molecularly deposit a corrosion resistant coating by electrolysis action. Cure conversion coating at a temperature of 110 to 140 degrees F for a

minimum of 3 hours. Coat coil surfaces with a complex polymer primer with a dry film thickness of 1 mil. Cure primer coat for a minimum of 1 hour. Using dip tank method, provide three coats of a complex polyelastomer finish coat. After each of the first two finish coats, cure the coils for 1 hour. Following the third coat, spray a fog coat of an inert sealer on the coil surfaces. Total dry film thickness must be 2.5 to 3.0 mils. Cure finish coat for a minimum of 3 hours. Coating

materials must have 300 percent flexibility, operate in temperatures of minus 50 to plus 220 degrees F, and protect against atmospheres of a pH range of 1 to 14.

2.7.2.3 Vinyl Coating

Apply coating using an airless fog nozzle. For each coat, make at least two passes with the nozzle. Materials to be applied are as follows:

- a. Total dry film thickness, 6.5 mils maximum
- b. Vinyl Primer, 24 percent solids by volume: One coat 2 mils thick
- c. Vinyl Copolymer, 30 percent solids by volume: One coat 4.5 mils thick

2.7.3 Factory Applied Insulation

Refrigeration equipment must be provided with factory installed insulation on surfaces subject to sweating including the suction line piping. Where motors are the gas-cooled type, factory installed insulation must be provided on the cold-gas inlet connection to the motor in accordance with manufacturer's standard practice. Factory insulated items installed outdoors are not required to be fire-rated. As a minimum, factory insulated items installed indoors must have a flame spread index no higher than 75 and a smoke developed index no higher than 150. Factory insulated items (no jacket) installed indoors and which are located in air plenums, in ceiling spaces, and in attic spaces must have a flame spread index no higher than 25 and a smoke developed index no higher than 50. Flame spread and smoke developed indexes must be determined by ASTM E84.

Insulation must be tested in the same density and installed thickness as the material to be used in the actual construction. Material supplied by a manufacturer with a jacket must be tested as a composite material.

Jackets, facings, and adhesives must have a flame spread index no higher than 25 and a smoke developed index no higher than 50 when tested in accordance with ASTM E84.

2.8 TESTS, INSPECTIONS, AND VERIFICATIONS

All manufactured units must be inspected and tested, and documentation provided to demonstrate that each unit is in compliance with applicable ANSI/AHRI and UL requirements and that the minimum efficiency requirements of ASHRAE 90.1 - SI ASHRAE 90.1 - IP have been met.

Dunham Bush Equipment Listing for UOG Bid No. B21-17

LOCATION/NAME	QUANTITY	TON	VOLTAGE	CIRCUIT	Model	PRICE
RFK 2nd Floor	1	50	208	dual	ACCS700	\$74,837.72
RFK 1st Floor	1	40	208	dual	ACCS570	\$59,870.18
RFK Main Entrance	1	15	208	single	ACCS220	\$22,451.32
RFK AV Room	1	15	208	single	ACCS220	\$22,451.32
RFK Offices	1	20	208	single	ACCS290	\$29,935.09
PIP 2nd Floor	1	20	460	dual	ACCS290	\$29,935.09
Science 1st floor	1	40	208	dual	ACCS570	\$59,870.18
Science 2nd floor	1	40	208	dual	ACCS570	\$59,870.18
Science 3rd floor	1	20	208	dual	ACCS290	\$29,935.09
English Com.	1	30	208	dual	ACCS435	\$44,902.64
Comp. Center OIT	1	50	460	dual	ACCS700	\$74,837.73
Lecture Hall	1	20	460	dual	ACCS290	\$29,935.09
HSS Building 1	2	50	460	dual	ACCS700	\$74,837.73
HSS Building 2	1	30	460	dual	ACCS435	\$44,902.64
TOTALS						\$658,572.00

TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	208V/3/60HZ
Unit nomenclature	6ACCS220-QG + 6HEB220D-QG		
Altitude	0	ft	Approval
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	25x20x1(1), 25x25x1(2)		
DX COOLING COIL			
Type	Ø3/8	Number of coil	1
Rows	3	Face area	13.22 ft ²
Fins per inch	12	Face velocity	408 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	190397 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	134438 Btu/h	Leaving air (DB)	56.8 °F
Air pressure drop	0.3 inH2O	Leaving air (WB)	55.4 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor			ZP182
Type	Scroll, Fixed Speed	Quantity	1
Total LRA	340.0 A	Total Power	15.7 kW
		Total Amps	51 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	15/15
Air Flow	5400 CFM	Fan Speed	772 RPM
External Static Pressure	0.5 inH2O	Absorbed Power	1.6 kW
Total Static Pressure	1.2 inH2O	Motor Horsepower	3 HP
Quantity	1	FLA	10.3 A
		Locked rotor current (LRA)	64 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	1 HP
Quantity	1	FLA (each)	2.9 A
Condenser Fan Motor	26" (660MM)	Ambient Temperature	95 °F
Quantity	2		
ELECTRICAL SUMMARY			
Unit FLA	67.1 A	MCA	79.9 A
Total Power Input	18.89 kW	MFS	150 A
EER	10.08	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
NOTES			
Manufacturer reserves the right to change specifications without prior notice.			



SPECIFICATIONS

1 GENERAL

The air-cooled condensing section shall consist of the compressor(s); condenser coil; propeller condenser fan(s) with motor and drive assembly.

The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

4 EVAPORATOR COIL

Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin (only applicable for cooling only models)
- Copper Fin
- Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier (Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class O (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV) (Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non-contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

**23. BMS Communication Cards
(Micro-Vision or Vision must be selected)
(Model 108 and above)**

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

**28. Electric Heater Starter
(Electric Heater & IEC DOL must be selected)**

Contactors and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

**30. Compressor Soft Starter
(IEC DOL must be selected)**

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP : ZR190 (407C) / ZP187 (410A)
 COIL SIZE : 3/8x3/8x14-62ELx10FPI (SLIT)
 COND. CIR : 6 1/2 IN/OUT
 SUBCOOL CIR : 2 1/2 IN/OUT
 LIQUID Ø : 1 3/8x(1)
 COND. FAN MTR : 1 HPx(2)
 FAN Ø : 660MM. x(2)

CONDENSER WITH SLIT FINS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES (MM)

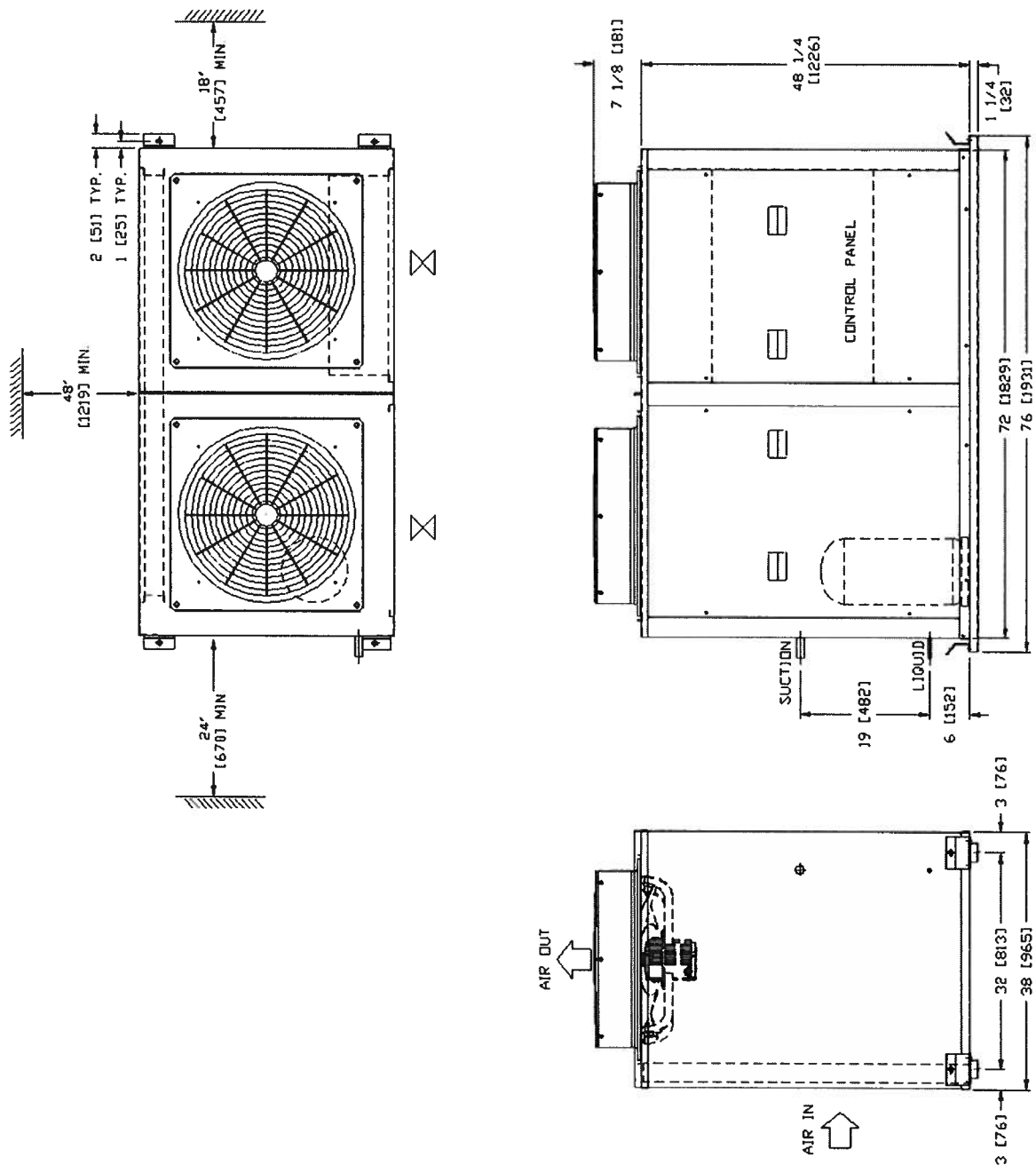
DATE OF	ALYN	DATE	19-09-2012
DESIGNED BY	JOSEPHV	DATE	20/12/2017
CHECKED BY		DATE	
APPROVED BY		DATE	

REF	DESCRIPTION	DATE	DRN BY
1.3	UPDATE R410A DATA	20/12/2017	JOSEPHV
1.2	UPDATE TEXT	20/12/2017	JOSEPHV
1.1	CHANGE FAN TYPE	20/12/2017	JOSEPHV

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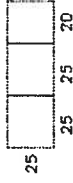
LOCATION	
QTY.	
MODEL	6ACCS 220-P/G
PROJECT	STANDARD
TITLE	A/C CONDENSING UNIT
DRAWING NO	82449A-009
SCALE	N. T. S.
SHEET	1 OF 1



CERTIFIED DRAWING

BLOWER : KAT 15-15 C
 COIL SIZE : Ø 3/8x3R28THx68FLx12FPI
 CIRCUMFERENCE : 4 1/2 IN/OUT
 SUCTION Ø : 1 3/8 x (1)
 LIQUID Ø : 5/8 x (1)
 FILTER SIZE : 25 x 20 x 1 - 1
 : 25 x 25 x 1 - 2

FILTER ARRANGEMENT



THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT RIGHT HAND PIPING.
 ALL DIMENSIONS ARE IN INCHES (MM)

DRAWN BY	ALYN	DATE	09-02-2011
DESIGNED BY		DATE	
CHECKED BY		DATE	
APPROVED BY	SJM	DATE	13-01-2016

REV	DESCRIPTION	DATE	DRN BY	DATE	DISCD BY	APPD BY
1	REVISE PIPE SIZE & QTY	4-01-16	ALYN			



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LOCATION:

QTY:

MODEL 6HEB 220D

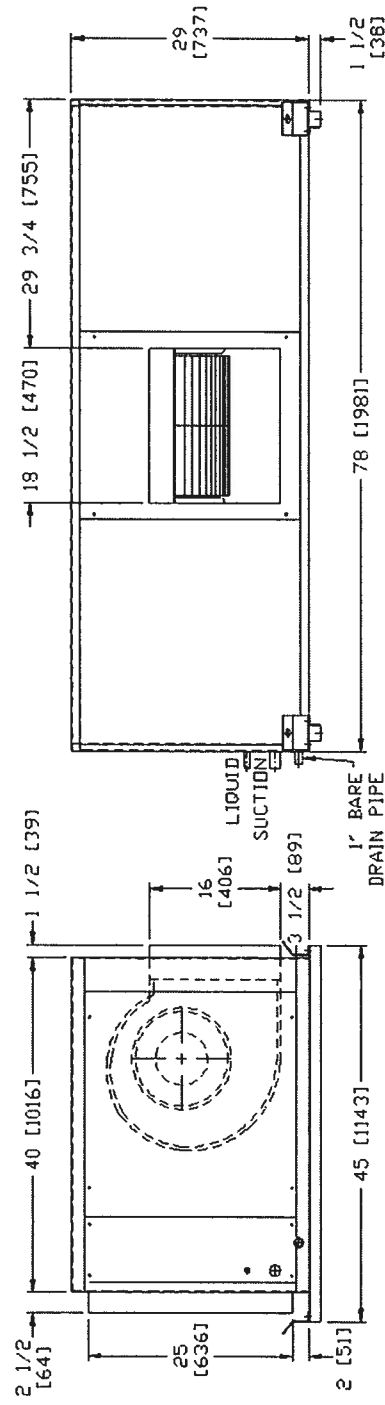
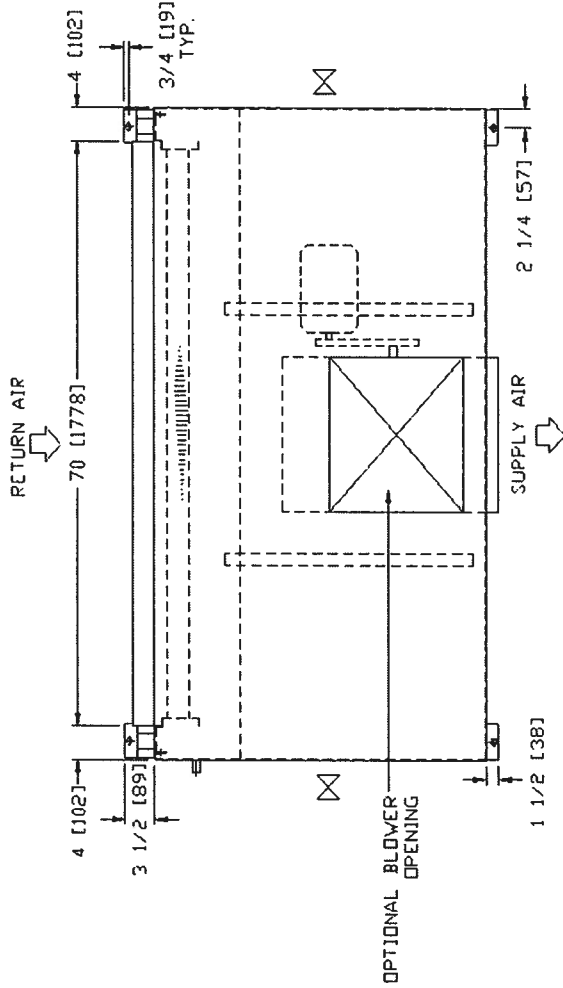
PROJECT STANDARD

TITLE

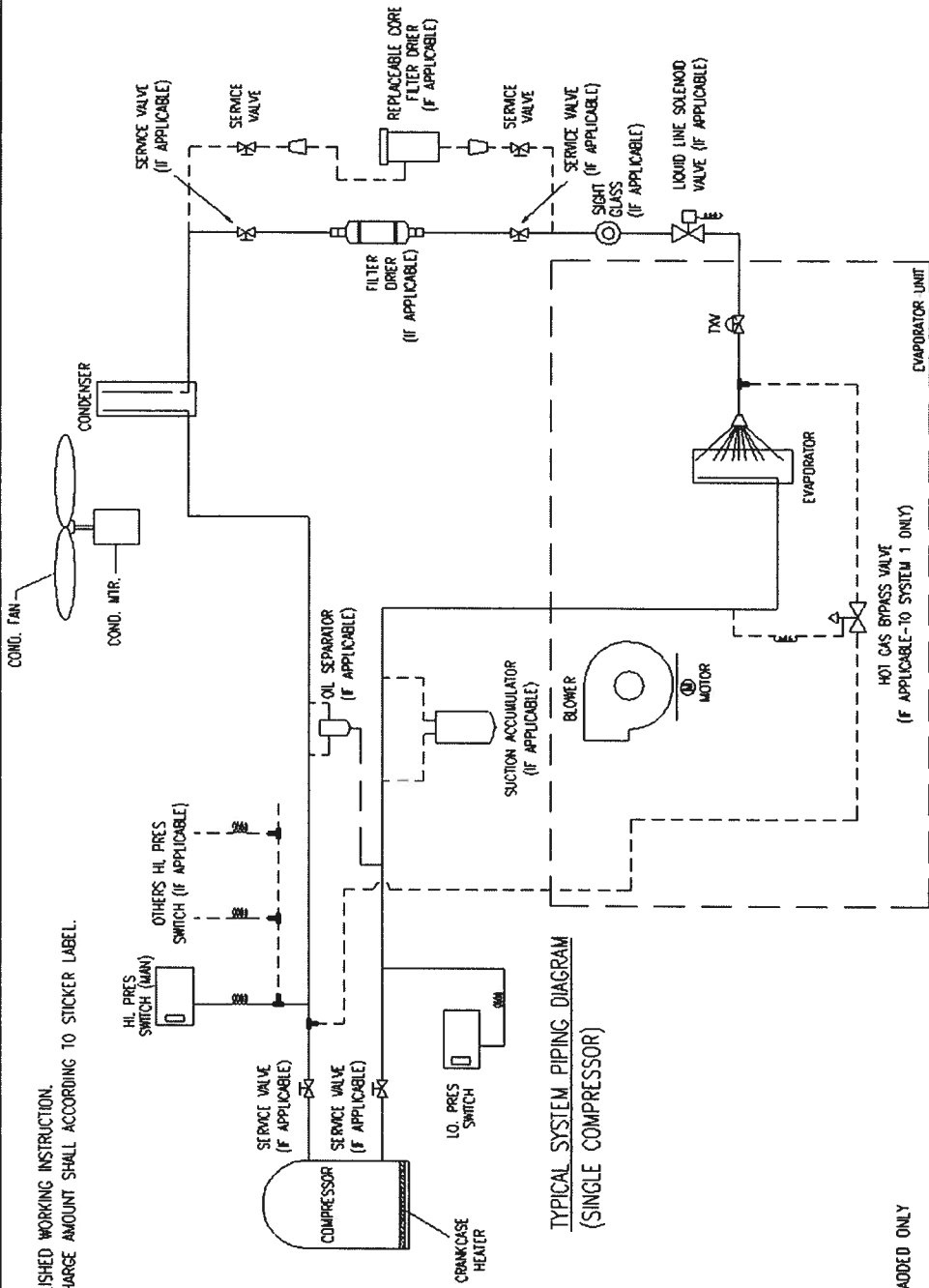
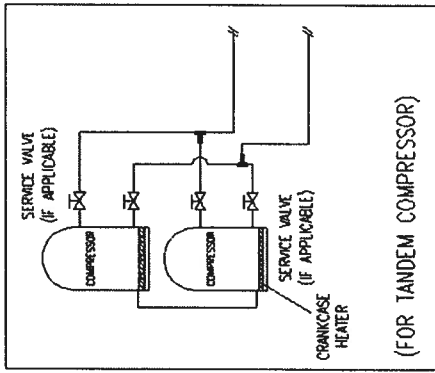
HORIZONTAL BLOW UNIT

DRAWING NO 80779A-009 A3

SCALE : N. T. S. SHEET 1 OF 1



NOTE:
 1) SYSTEM LEAK TEST SHALL ACCORDING TO DB'S ESTABLISHED WORKING INSTRUCTION.
 2) CHARGE LIQUID REFRIGERANT ONLY AT LIQUID LINE. CHARGE AMOUNT SHALL ACCORDING TO STICKER LABEL.



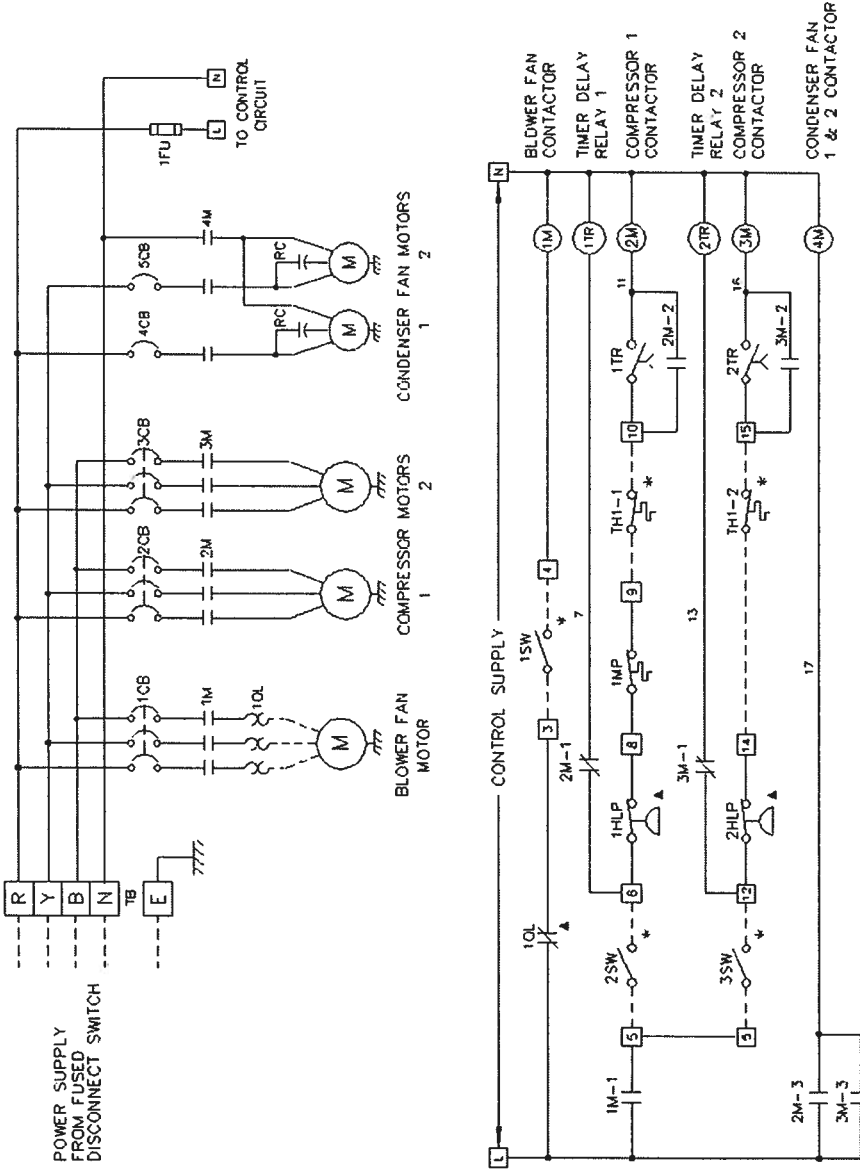
ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED THIRD ANGLE PROJECTION		TOLERANCES UNLESS OTHERWISE SPECIFIED 0 DEC ±.06 1 DEC ±.08 2 DEC ±.006 ANGLE ±.1°	
MATERIAL:		DRAWN BY: _____ DATE: _____ DESIGNED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ APPROVED BY: _____ DATE: _____	
PROJECT: STANDARD		PURCHASE: MANUFACTURE	
REV. / ECA NO.	DESCRIPTION	DATE	DRW'D BY: _____ DESG'D BY: _____ CKD'D BY: _____ APP'D BY: _____
DRAWING NUMBER: STANDARD A3		SCALE: N.T.S. SHEET 1 OF 1	
TITLE: SCHEMATIC PIPING DIAGRAM ACCS/BAACS DUCTED SPLIT COOLING ONLY			
THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SDN BHD AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF THE COMPANY.			
DB DUNHAM-BUSH INDUSTRIES SDN. BHD			

— STANDARD REF LINE
 - - - OPTIONAL REF LINE - FOR OPTIONAL ITEM ADDED ONLY

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

FORM NO. 10/12/11/000 REV. 2 07/13

WITH IEC DIRECT-ON-LINE (DOL) OPTION



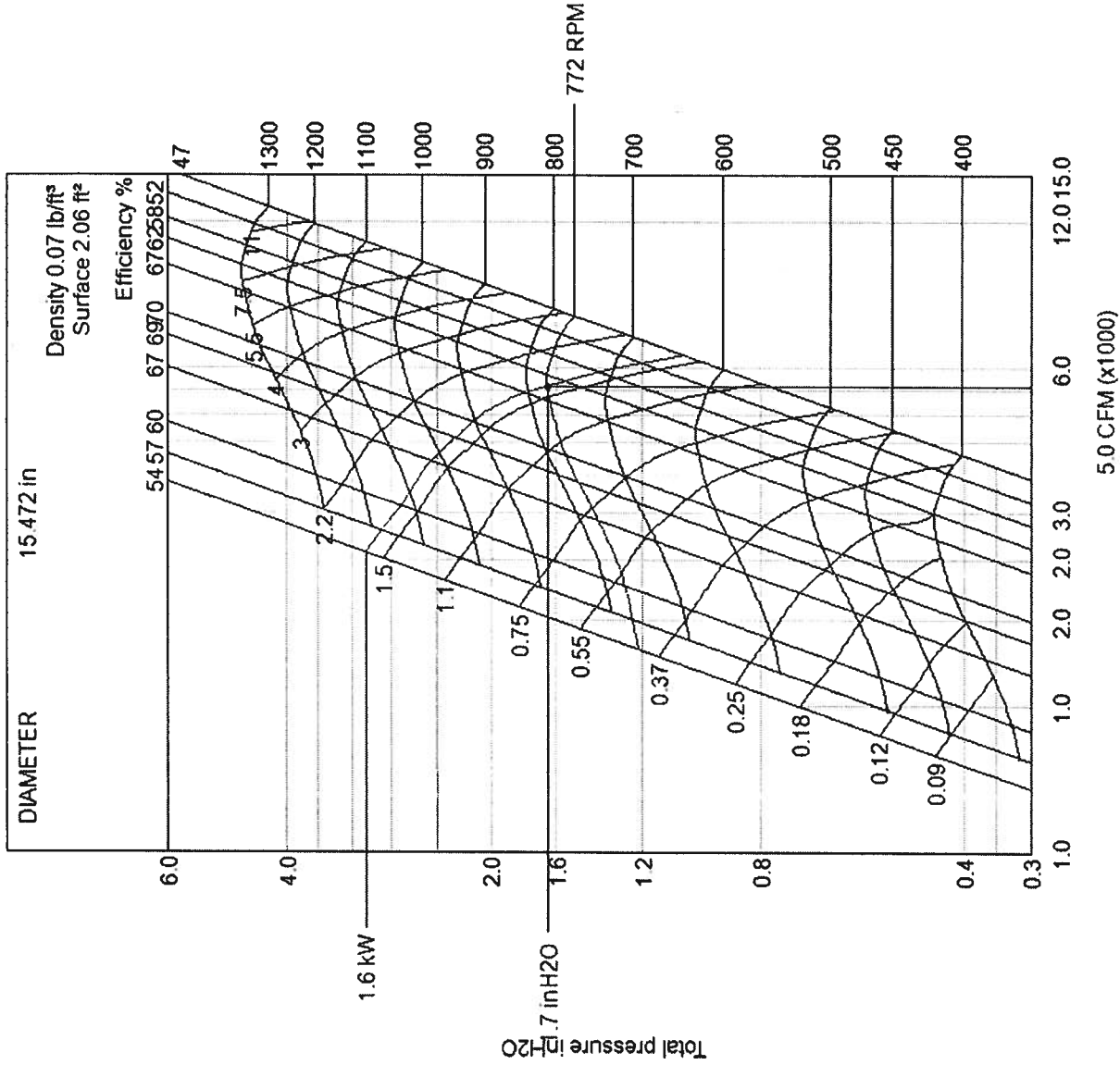
LEGEND

- M = CONTACTOR
- CB = CIRCUIT BREAKER
- CCH = CRANKCASE HEATER
- FLA = FULL LOAD AMPERE
- FU = FUSE
- HP = MOTOR HORSE POWER
- HLP = HIGH-LOW PRESSURE SWITCH
- LRA = LOCKED ROTOR AMPERE
- MCA = MINIMUM CIRCUIT AMPERE
- MFS = MAXIMUM FUSE SIZE
- MP = MOTOR PROTECTOR
- MRA = MAXIMUM RUNNING AMPERE
- NRA = NOMINAL RUNNING AMPERE
- TR = TIMER DELAY RELAY
- OL = OVERLOAD PROTECTOR
- RC = RUN CAPACITOR
- RLA = RATED LOAD AMPERE
- SW = SWITCH
- TB = TERMINAL BLOCK
- TH = THERMOSTAT
- * = FIELD SUPPLY
- ▲ = MANUAL RESET
- = FIELD WIRING
- = FACTORY WIRING
- △ = SEE NOTE 'n'

REV.	DESCRIPTION	DATE	DRN. BY	DSG'D BY	CHK'D BY	APP'D BY
PROJECT: TYPICAL WIRING DIAGRAM						
MODEL: ACCS/6ACCS DUCTED SPLIT						
UNIT NO:						
DRAWN BY:						
DESIGNED BY:						
CHECKED BY:						
APPROVED BY:						
DATE:						
DATE:						
DATE:						
DATE:						
TOLL: SCHEMATIC WIRING DIAGRAM						F.O. NO.:
DUNHAM-BUSH INDUSTRIES SDN. BHD.						

Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



Fan air flow CFM (x1000)

TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	460V/3/60HZ
Unit nomenclature	6ACCS290-QG + 6EB290D-QG		
Altitude	0	ft	Approval
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	25x16x1(3), 25x20x1(3)		
DX COOLING COIL			
Type	Ø3/8	Number of coil	1
Rows	3	Face area	16.53 ft ²
Fins per inch	12	Face velocity	454 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	253522 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	181867 Btu/h	Leaving air (DB)	57.4 °F
Air pressure drop	0.4 inH2O	Leaving air (WB)	55.9 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor	2 X ZP122		
Type	Scroll, Fixed Speed	Quantity	2
Total LRA	280.0 A	Total Power	22.5 kW
		Total Amps	34.3 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	18/13
Air Flow	7500 CFM	Fan Speed	693 RPM
External Static Pressure	0.5 inH2O	Absorbed Power	2.9 kW
Total Static Pressure	1.3 inH2O	Motor Horsepower	5.5 HP
Quantity	1	FLA	8.2 A
		Locked rotor current (LRA)	50.5 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	1 HP
Quantity	1	FLA (each)	1.6 A
Condenser Fan Motor	26" (660MM)	Ambient Temperature	95 °F
Quantity	2		
ELECTRICAL SUMMARY			
Unit FLA	45.7 A	MCA	50 A
Total Power Input	27.04 kW	MFS	70 A
EER	9.38	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
NOTES			
Manufacturer reserves the right to change specifications without prior notice.			



SPECIFICATIONS

1 GENERAL

The air-cooled condensing section shall consist of the compressor(s); condenser coil; propeller condenser fan(s) with motor and drive assembly.

The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

4 EVAPORATOR COIL

Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
(only applicable for cooling only models)
- Copper Fin
- Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier (Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class O (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV) (Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non- contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



Air-Cooled Split

Options Guide

(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



Air-Cooled Split

Options Guide

- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

23. BMS Communication Cards (Micro-Vision or Vision must be selected) (Model 108 and above)

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

28. Electric Heater Starter (Electric Heater & IEC DOL must be selected)

Contactors and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

30. Compressor Soft Starter (IEC DOL must be selected)

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP. : ZB 125(2) (R407C) / ZP 122(2) (R410A)
 COIL SIZE : ϕ 3/8x48x48Hx62TLx10FPI (SLIT)
 COND. CIR. : 8 T/C, 11 IN/OUTx(2)
 SUBCOOL CIR. : 2 T/C, 4 IN/OUTx(2)
 SUCTION ϕ : 1 3/8x(2)
 LIQUID ϕ : 1/2x(2)
 COND. FAN MTR : 1 HPx(2)
 FAN ϕ : 660MM, x(2)

CONDENSER WITH SLIT FINS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES (MM)

DESIGNED BY	ALYN	DATE	20-09-2012
DESIGNED BY	JOSEPH V	DATE	20/12/2017
CREATED BY		DATE	
APPROVED BY		DATE	

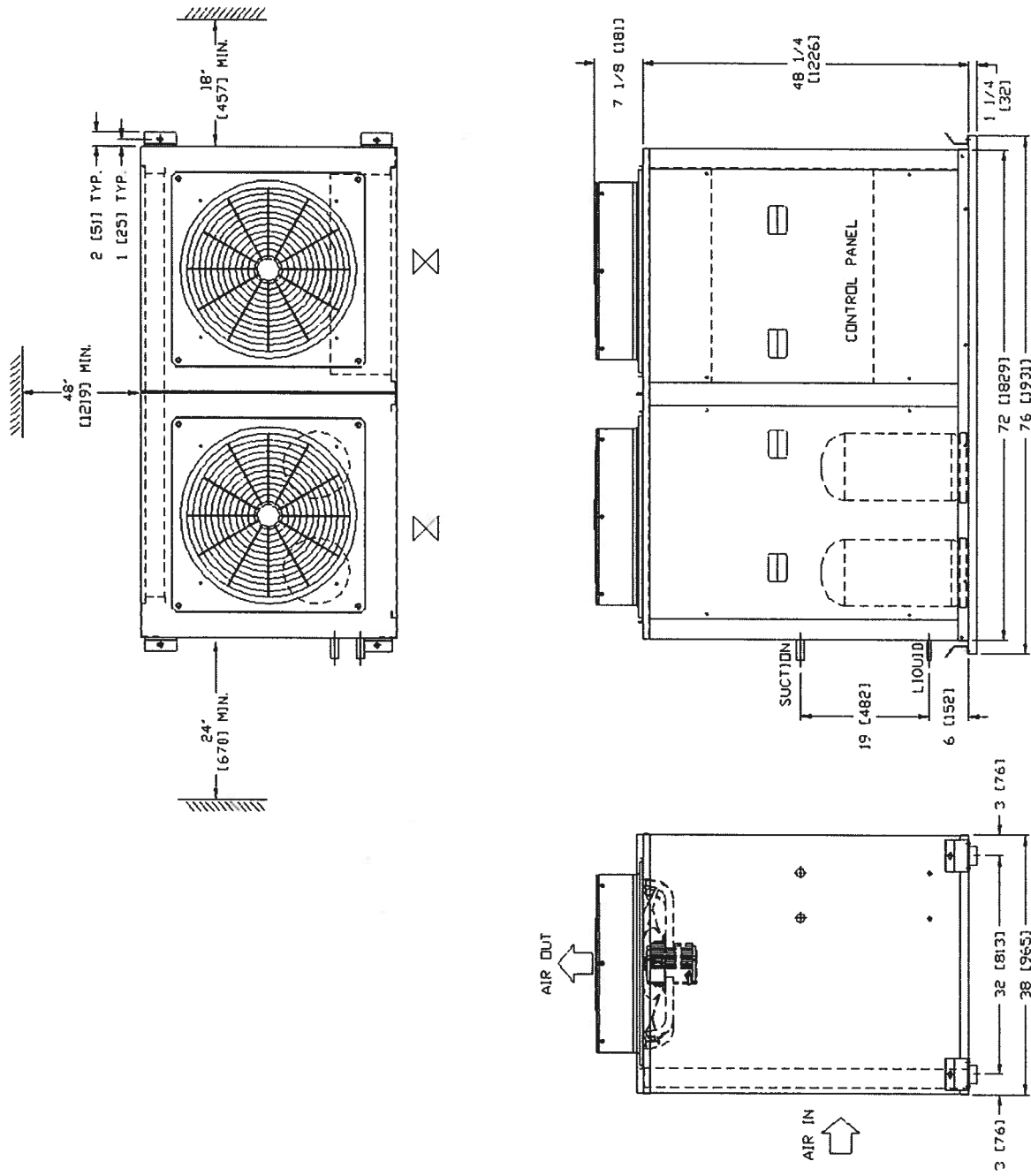
REV	DESCRIPTION	DATE	DRN BY
1.3	UPDATE R410A DATA	20.03.17	JOSEPH V
1.2	UPDATE TEXT	15.3.17	N. DON
1.1	CHANGE FAN TYPE	02.17	N. DON



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LOCATION	
QTY.	
MODEL	6ACCS 290-P/G
PROJECT	STANDARD
TITLE	A/C CONDENSING UNIT
DRAWING NO	92449A-011
SCALE	N.T.S
SHEET	1 OF 1



CERTIFIED DRAWING

BLOWER : KAT 16-13 C
 COIL SIZE : ϕ 3/8x3Rx34Hx70FLx12FPI
 CIRCUITRY : 4 1/C. (12x13) IN/OUT
 SUCTION ϕ : 1 3/8 x (2)
 LIQUID ϕ : 1/2 x (2)
 FILTER SIZE : 25 x 16 x 1 - 3
 25 x 20 x 1 - 3

FILTER ARRANGEMENT

16	
20	
25	25
25	25

THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT. RIGHT HAND PIPING.

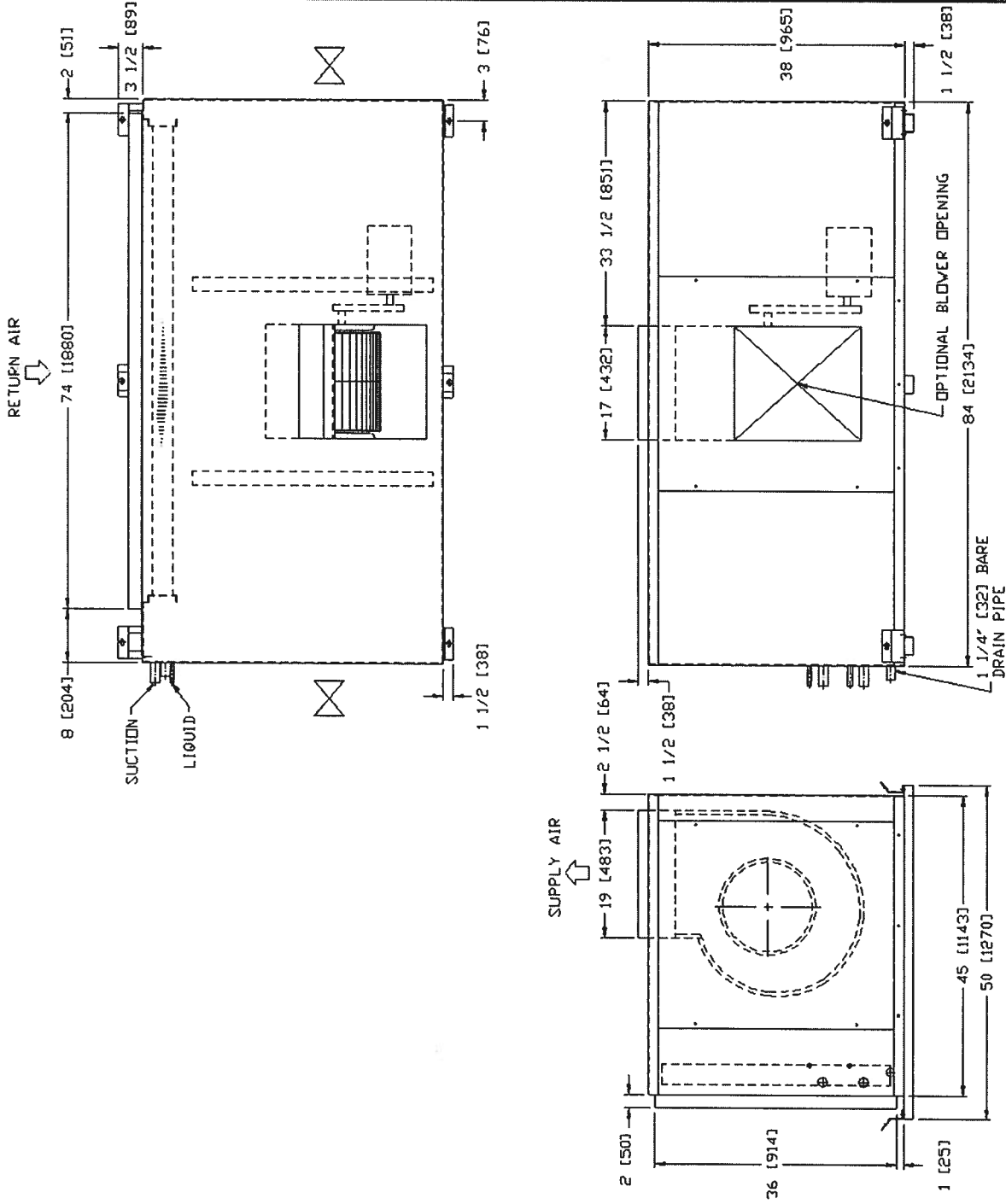
DATE BY	ALYN	DATE	09-02-2011
CHECKED BY		DATE	
APPROVED BY		DATE	

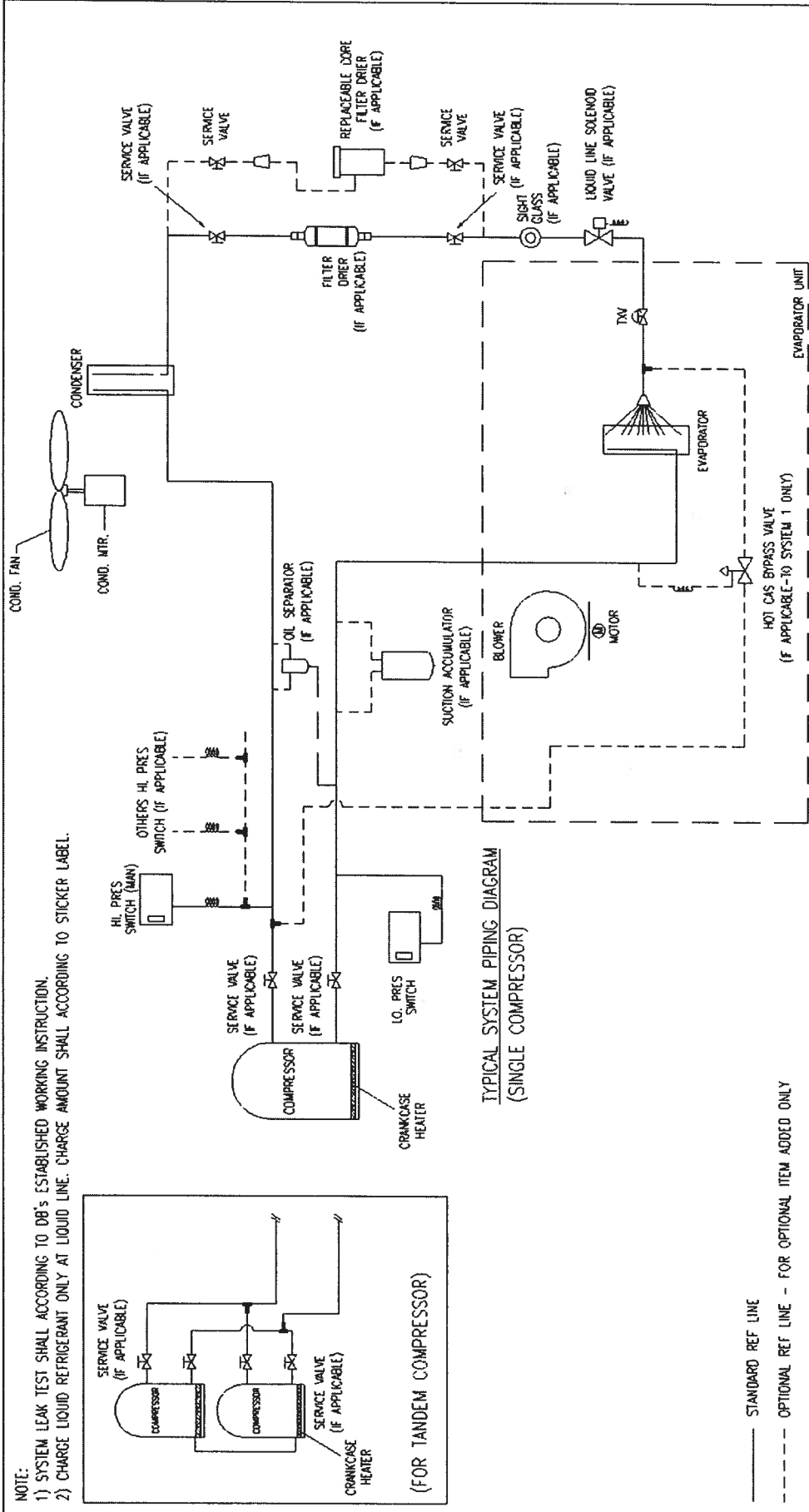
REV	DESCRIPTION	DATE	DRN BY	CHK BY	APPD BY



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LOCATION.	
QTY.	
MODEL	6EB 290D
PROJECT	STANDARD
TITLE	EVAPORATOR BLOW UNIT
DRAWING NO	80779A-011 A3
SCALE :	N. T. S. SHEET 1 OF 1

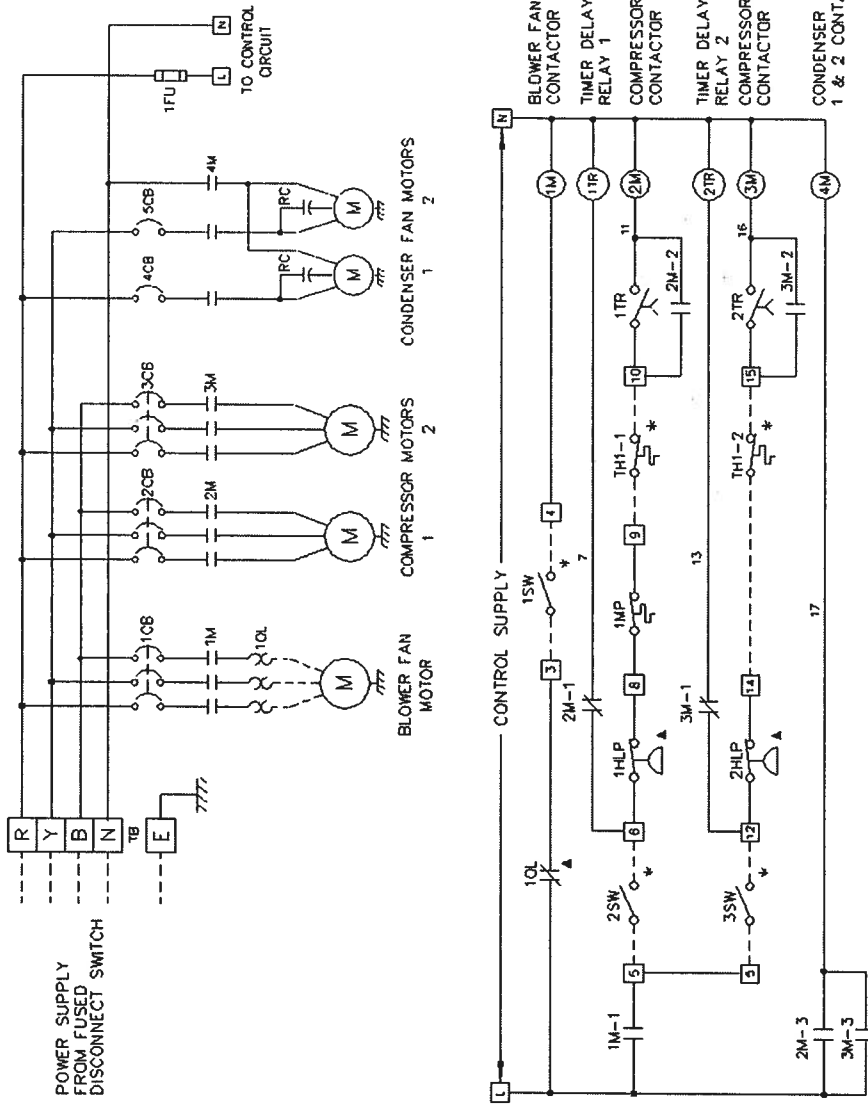




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<p>ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED</p>		<p>TITLE: SCHEMATIC PIPING DIAGRAM ACCS/6ACCS DUCTED SPLIT COOLING ONLY</p>	
<p>THIRD ANGLE PROJECTION</p>		<p>TOLEANCES UNLESS OTHERWISE SPECIFIED 0.005 ± 0.005 0.010 ± 0.005 0.020 ± 0.005 ANGLE 1/2°</p>	
<p>MATERIAL QUANTITY: MANUFACTURE</p>		<p>DRAWING NUMBER: STANDARD A3</p>	
<p>PURCHASE: PROJECT: MODEL:</p>		<p>SCALE: N.T.S. SHEET 1 OF 1</p>	
REV. ECA NO.	DESCRIPTION	DATE	DATE
DRN'D BY	CHK'D BY	APP'D BY	
DRN'D BY	CHK'D BY	DESIGNED BY	
DATE	DATE	CHECKED BY	
		APPROVED BY	

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

WITH IEC DIRECT-ON-LINE (DOL) OPTION



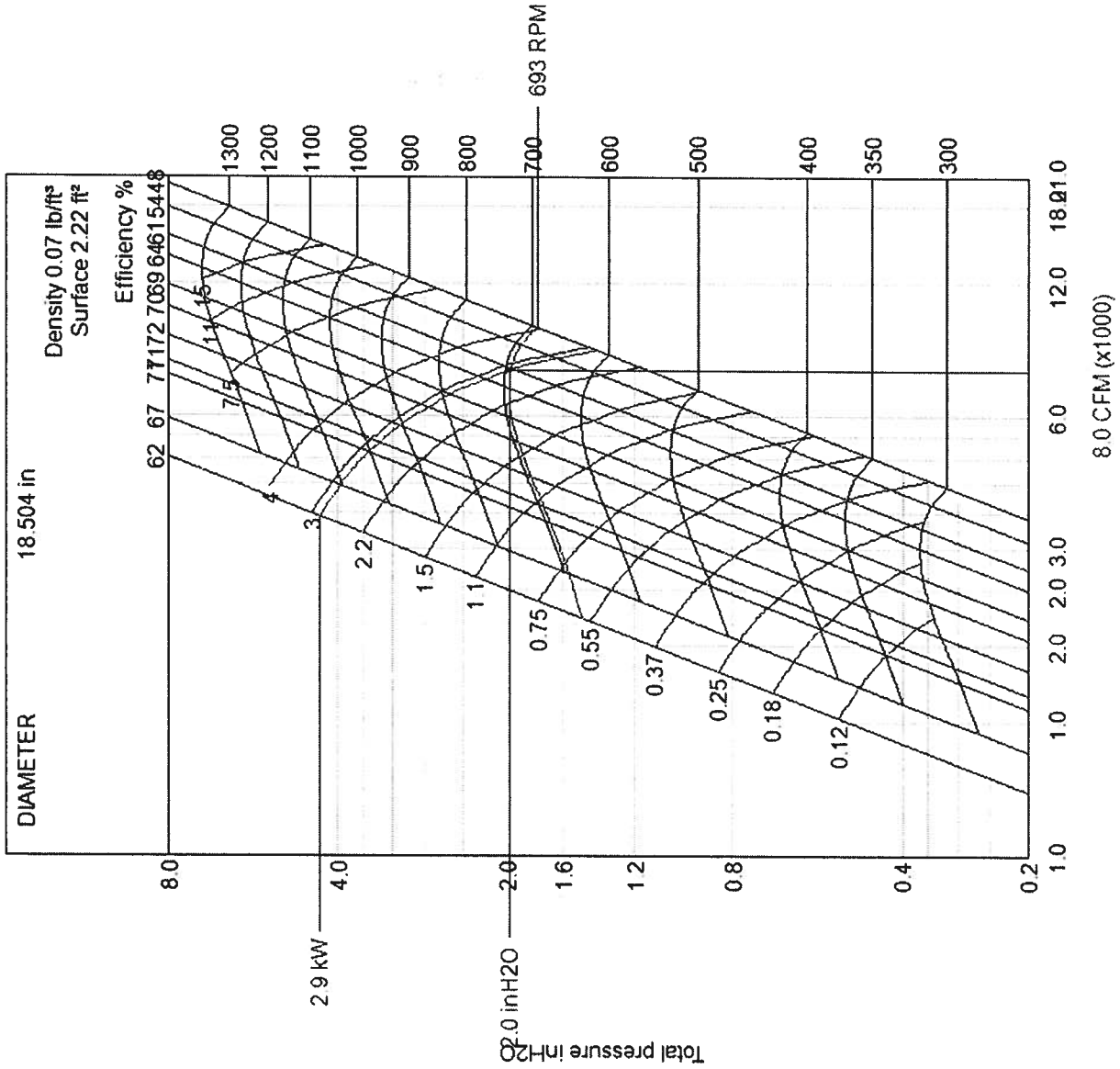
LEGEND

- M = CONTACTOR
- CB = CIRCUIT BREAKER
- CH = CRANKCASE HEATER
- FLA = FULL LOAD AMPERE
- FL = FUSE
- HP = MOTOR HORSE POWER
- HLP = HIGH-LOW PRESSURE
- SW = SWITCH
- LRA = LOCKED ROTOR AMPERE
- MCA = MINIMUM CIRCUIT AMPERE
- MES = MAXIMUM FUSE SIZE
- MP = MOTOR PROTECTOR
- MRA = MAXIMUM RUNNING AMPERE
- NRA = NOMINAL RUNNING AMPERE
- TR = TIMER DELAY RELAY
- DL = OVERLOAD PROTECTOR
- RC = RUN CAPACITOR
- RLA = RATED LOAD AMPERE
- SW = SWITCH
- TB = TERMINAL BLOCK
- TH = THERMOSTAT
- * = FIELD SUPPLY
- ▲ = MANUAL RESET
- = FIELD WIRING
- = FACTORY WIRING
- △ = SEE NOTE 'n'

DUNHAM-BUSH INDUSTRIES SON. BHD PROJECT: TYPICAL WIRING DIAGRAM		THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SON. BHD. AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF COMPANY	
MODEL: ACCS/GACCS DUCTED SPLIT		DRAWN BY:	DATE:
UNIT NO:		DESIGNED BY:	DATE:
REV.		CHECKED BY:	DATE:
DESCRIPTION		APPROVED BY:	DATE:
TITLE: SCHEMATIC WIRING DIAGRAM		DRAWING NO:	
SHEET 1 OF 1		F.O. NO:	

Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



Fan air flow CFM (x1000)

TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	208V/3/60HZ
Unit nomenclature	6ACCS290-QG + 6EB290D-QG		
Altitude	0	ft	Approval
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	25x16x1(3), 25x20x1(3)		
DX COOLING COIL			
Type	Ø3/8	Number of coil	1
Rows	3	Face area	16.53 ft ²
Fins per inch	12	Face velocity	454 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	249769 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	180502 Btu/h	Leaving air (DB)	57.6 °F
Air pressure drop	0.4 inH2O	Leaving air (WB)	56.1 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor	2 X ZP122		
Type	Scroll, Fixed Speed	Quantity	2
Total LRA	480.0 A	Total Power	22.9 kW
		Total Amps	63.7 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	18/13
Air Flow	7500 CFM	Fan Speed	693 RPM
External Static Pressure	0.5 inH2O	Absorbed Power	2.9 kW
Total Static Pressure	1.3 inH2O	Motor Horsepower	5.5 HP
Quantity	1	FLA	18.1 A
		Locked rotor current (LRA)	112 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	1 HP
Quantity	1	FLA (each)	2.9 A
Condenser Fan Motor	26" (660MM)	Ambient Temperature	95 °F
Quantity	2		
ELECTRICAL SUMMARY			
Unit FLA	87.6 A	MCA	95.5 A
Total Power Input	27.3 kW	MFS	150 A
EER	9.15	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
SSD: Stainless Steel Drain Pan			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
NOTES			
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SPECIFICATIONS

1 GENERAL

The air-cooled condensing section shall consist of the compressor(s); condenser coil; propeller condenser fan(s) with motor and drive assembly.

The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

4 EVAPORATOR COIL

Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
(only applicable for cooling only models)
- Copper Fin
- Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier (Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class O (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV) (Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non- contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

**23. BMS Communication Cards
(Micro-Vision or Vision must be selected)
(Model 108 and above)**

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

**28. Electric Heater Starter
(Electric Heater & IEC DOL must be selected)**

Contactors and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

**30. Compressor Soft Starter
(IEC DOL must be selected)**

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP. : ZR 125(2) (R407C) /
 ZP 122(2) (R410A)
 COIL SIZE : Ø 3/8x4R48Hx62TLx10FPI (SLIT)
 COND. CIR. : 8 T/C. 11 IN/OUTx(2)
 SUBCOOL CIR : 2 T/C. 4 IN/OUTx(2)
 SUCTION Ø : 1 3/8x(2)
 LIQUID Ø : 1/2x(2)
 COND. FAN MTR : 1 HPx(2)
 FAN Ø : 660MM, x(2)

CONDENSER WITH SLIT FINS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES (MM)

DRAWN BY	ALYN	DATE	20-09-2012
DESIGNED BY	JOSEPHW	DATE	20/12/2017
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	DRN BY
1.3	UPDATE R410A DATA	20.12.2017	JOSEPHW
1.2	UPDATE TEXT	15.11.17	N. GUN
1.1	CHANGE FAN TYPE	02.11.17	N. GUN



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LOCATION.

QTY.

MODEL 6ACCS 290-P/G

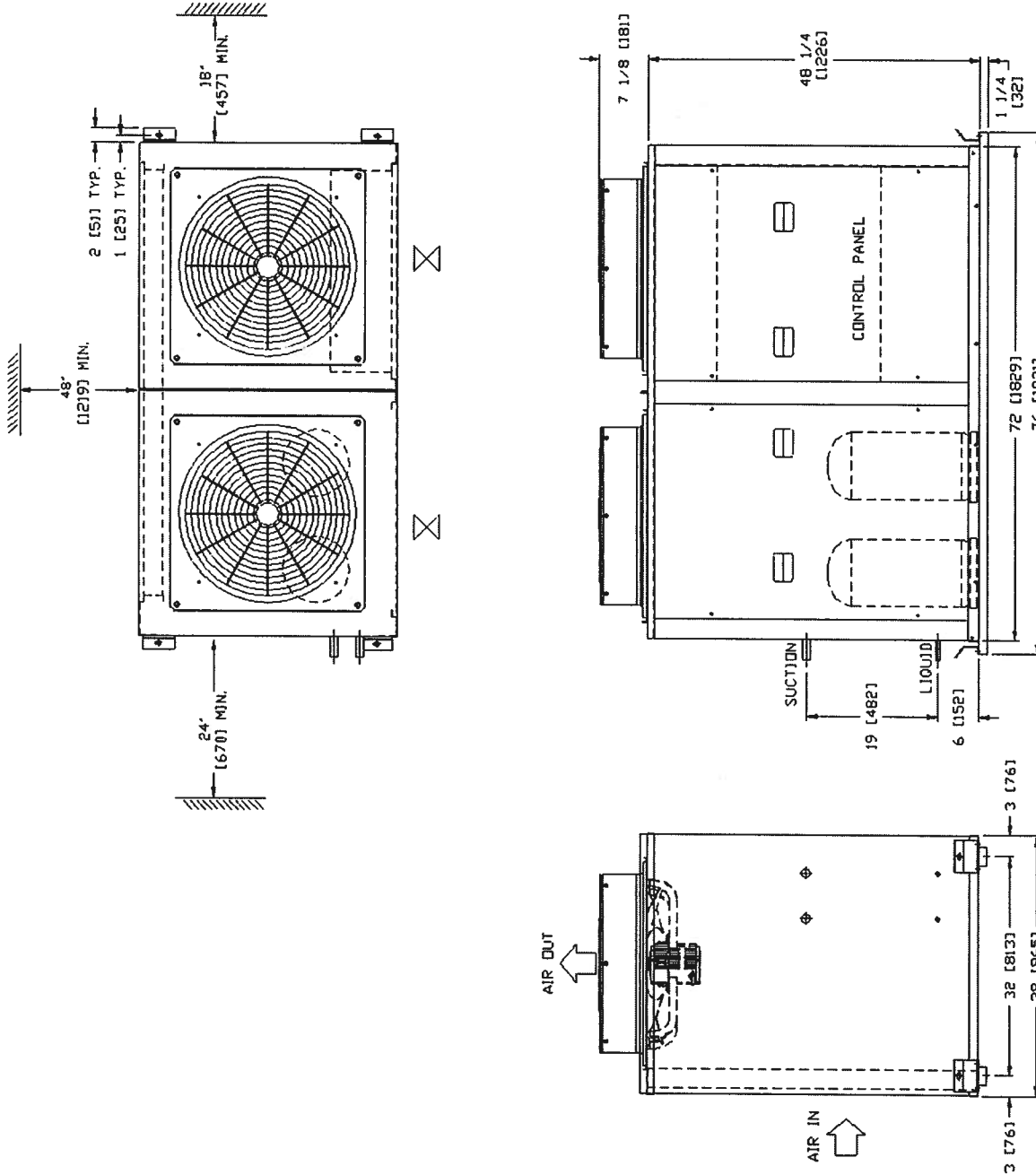
PROJECT STANDARD

TITLE

A/C CONDENSING UNIT

DRAWING NO 82449A-011

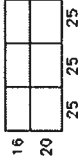
SCALE : N.T.S SHEET 1 OF 1



CERTIFIED DRAWING

BLOWER : KAT 18-13 C
 COIL SIZE : # 3/8-3R-34HX70FL12FPI
 CIRCUITRY : 4 T/C. (12+13) IN/OUT
 SUCTION # : 1 3/8 x (2)
 LIQUID # : 1/2 x (2)
 FILTER SIZE : 25 x 16 x 1 - 3

FILTER ARRANGEMENT



THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT. RIGHT HAND PIPING. ALL DIMENSIONS ARE IN INCHES (MM)

DESIGNED BY	ALYN	DATE	09-02-2011
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	CHK BY	APP'D BY



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LOCATION.

QTY.

MODEL 6EB 290D

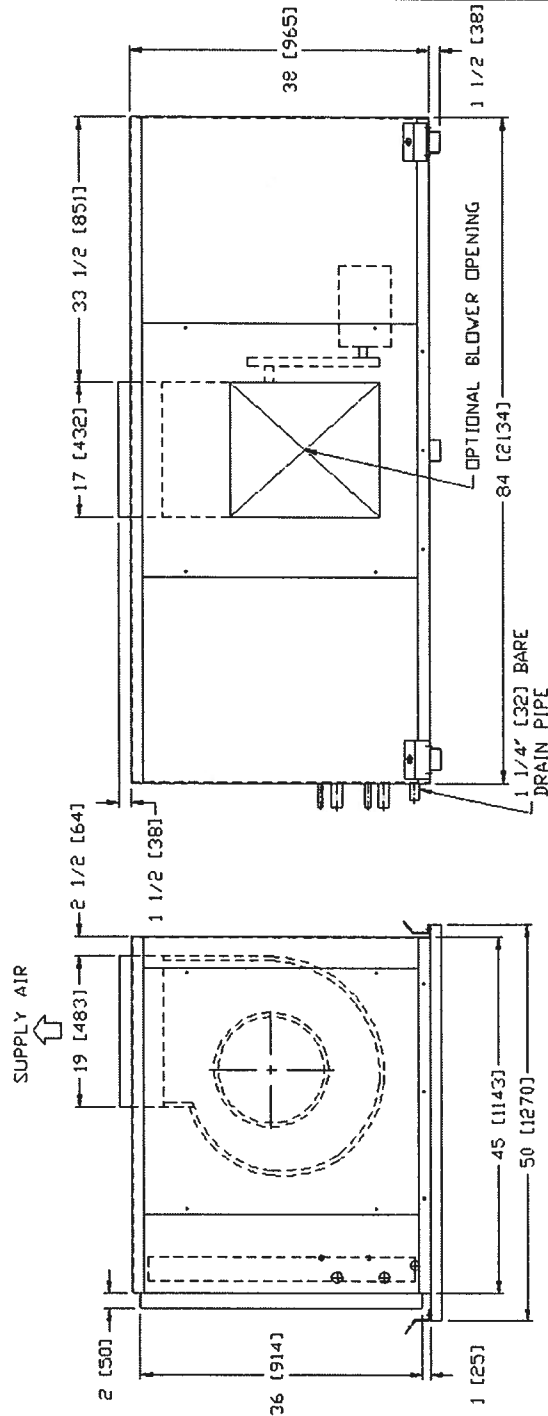
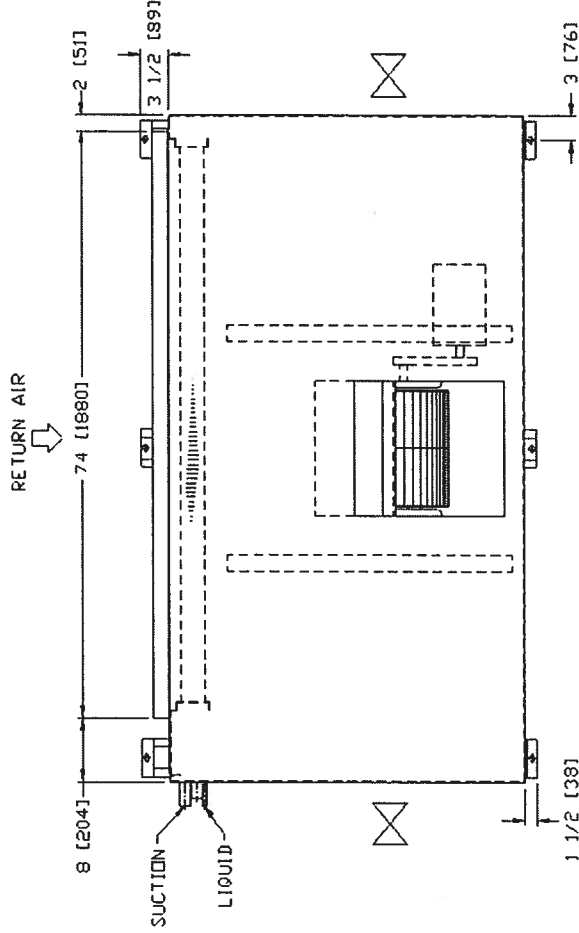
PROJECT STANDARD

TITLE

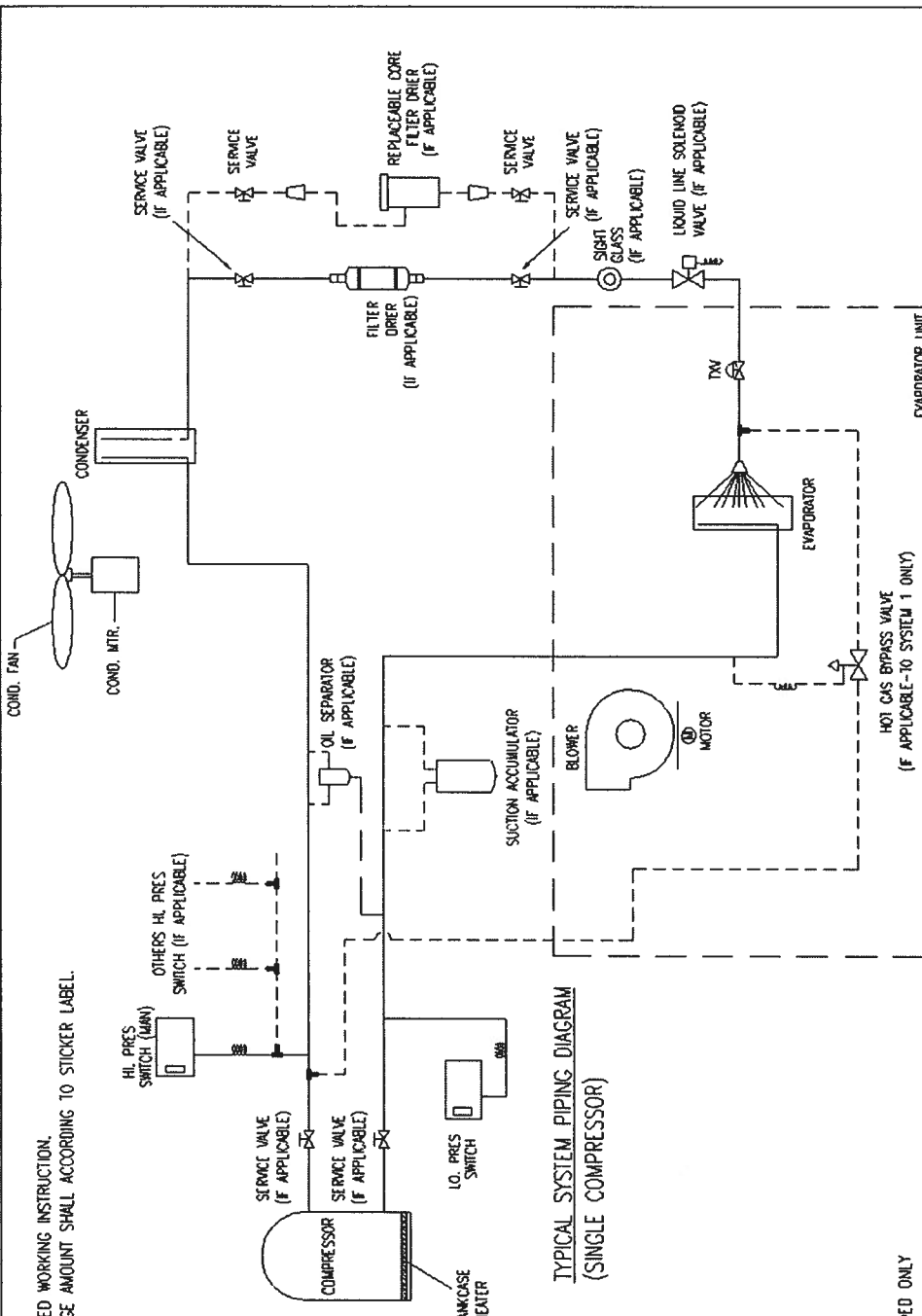
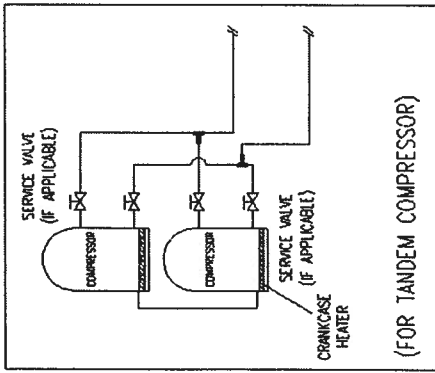
EVAPORATOR BLOW UNIT

DRAWING NO 80779A-011 A3

SCALE : N.T.S SHEET 1 OF 1



NOTE:
 1) SYSTEM LEAK TEST SHALL ACCORDING TO DB'S ESTABLISHED WORKING INSTRUCTION.
 2) CHARGE LIQUID REFRIGERANT ONLY AT LIQUID LINE. CHARGE AMOUNT SHALL ACCORDING TO STICKER LABEL.

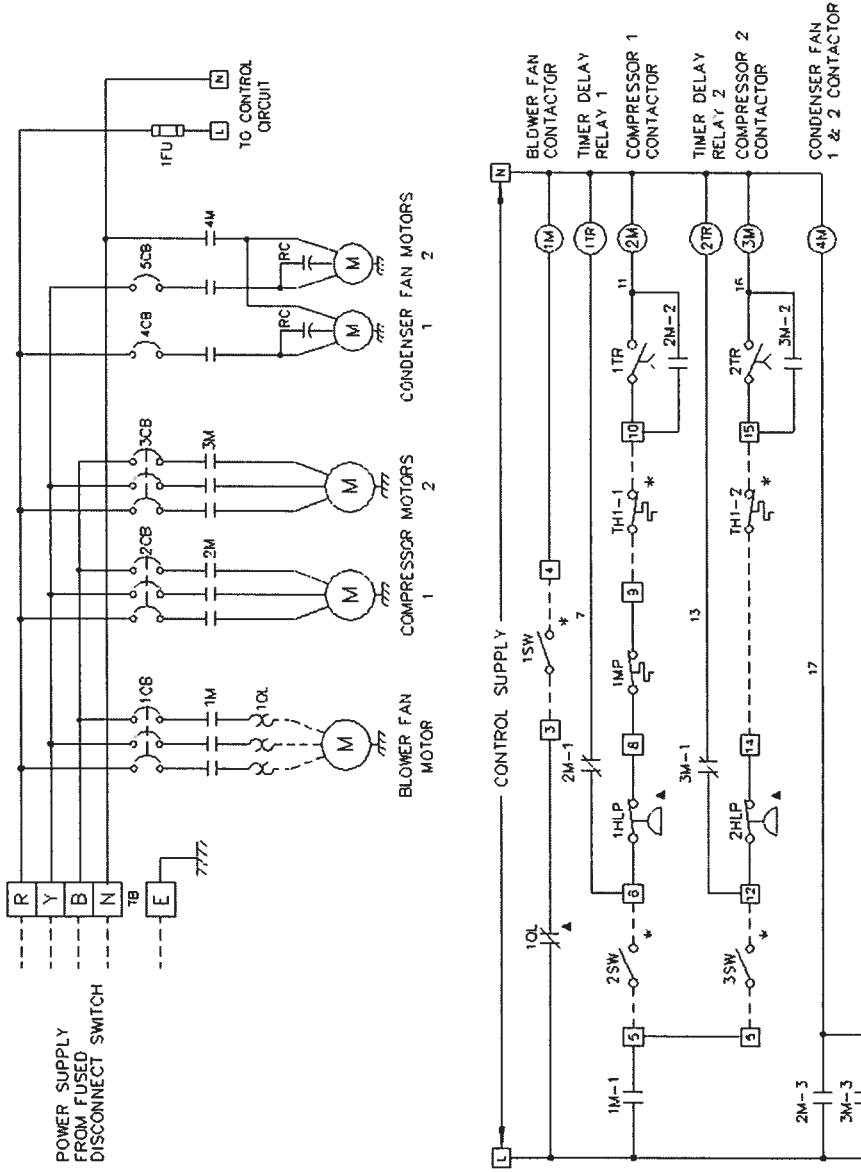


— STANDARD REF LINE
 - - - OPTIONAL REF LINE - FOR OPTIONAL ITEM ADDED ONLY

ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED THIRD ANGLE PROJECTION MATERIAL:		THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SDN BHD AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF THE COMPANY.		DUNHAM-BUSH INDUSTRIES SDN. BHD.			
TOLERANCES UNLESS OTHERWISE SPECIFIED 0 DEC -1 1 DEC -0.08 2 DEC -0.008 3 DEC -0.008 4 DEC -0.008		DATE: _____ DATE: _____ DATE: _____ DATE: _____		TITLE: SCHEMATIC PIPING DIAGRAM ACCS/6ACCS DUCTED SPLIT COOLING ONLY			
DRAWN BY: _____ DESIGNED BY: _____ CHECKED BY: _____ APPROVED BY: _____		MATERIAL QUANTITY: _____ PURCHASE: _____ PROJECT: STANDARD MODEL: _____		DRAWING NUMBER: STANDARD A3			
REV.	ECO NO.	DESCRIPTION	DATE	DRN'D BY	CHK'D BY	DSG'D BY	APP'D BY
SCALE: N.T.S.				SHEET 1 OF 1			

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

WITH IEC DIRECT-ON-LINE (DOL) OPTION



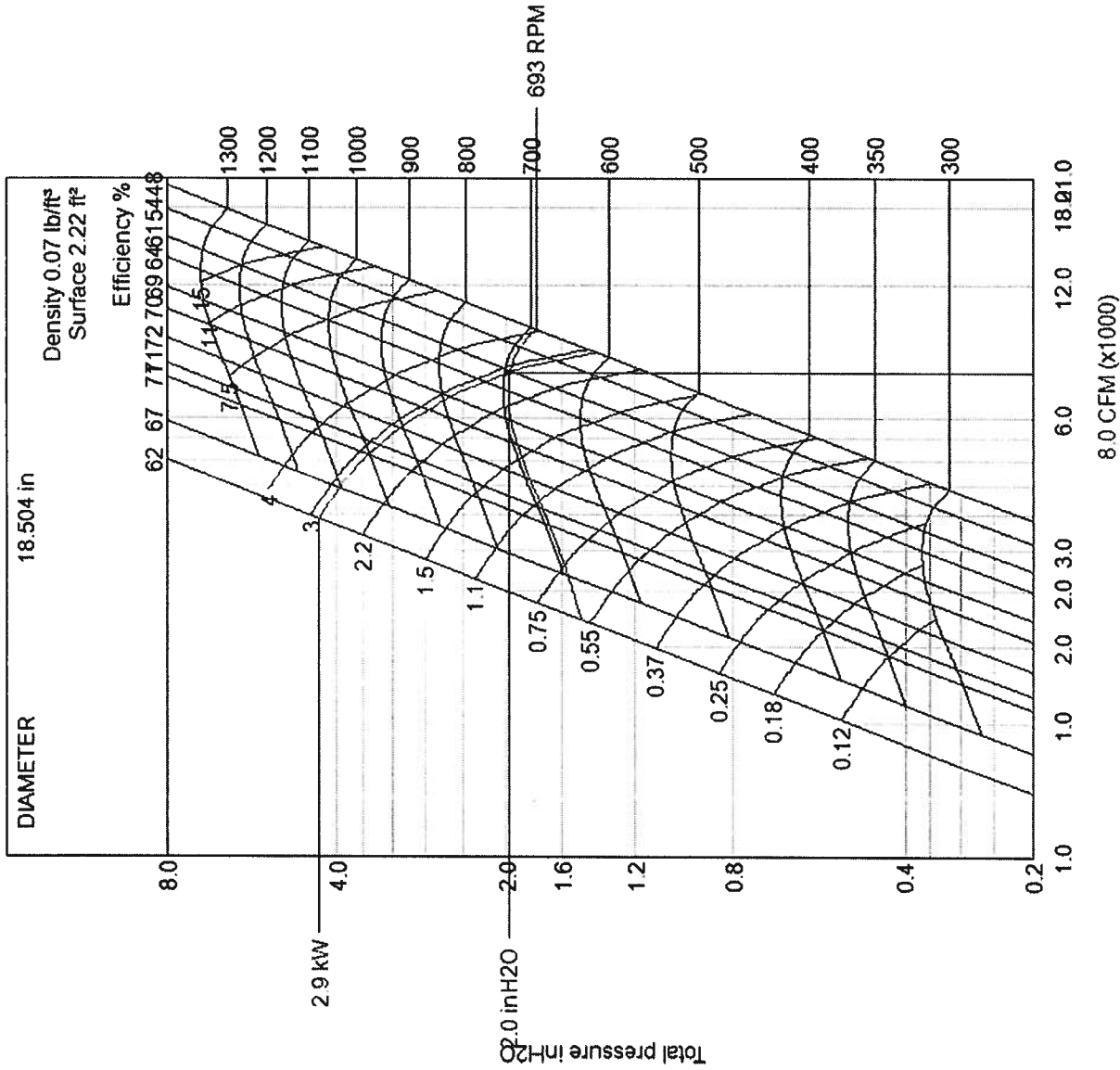
LEGEND

- K = CONTACTOR
- CB = CIRCUIT BREAKER
- CCH = CRANKCASE HEATER
- FLA = FULL LOAD AMPERE
- FLC = FULL LOAD CAPACITY
- HP = MOTOR HORSE POWER
- HLP = HIGH-LOW PRESSURE SWITCH
- LRA = LOCKED ROTOR AMPERE
- MCA = MINIMUM CIRCUIT AMPERE
- MFS = MAXIMUM FUSE SIZE
- MP = MOTOR PROTECTOR
- MRA = MAXIMUM RUNNING AMPERE
- NRA = NOMINAL RUNNING AMPERE
- TR = TIMER DELAY RELAY
- DL = OVERLOAD PROTECTOR
- RC = RUN CAPACITOR
- RLA = RATED LOAD AMPERE
- SW = SWITCH
- TB = TERMINAL BLOCK
- TH = THERMOSTAT
- * = FIELD SUPPLY
- ▲ = MANUAL RESET
- = FIELD WIRING
- ▲ = FACTORY WIRING
- △ = SEE NOTE 'n'

REV.	DESCRIPTION	DATE	DRA. BY	DESIG. BY	CHKD. BY	APPR. BY	PROJECT:	THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SON. BHD. AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF COMPANY	DB DUNHAM-BUSH INDUSTRIES SON. BHD.	
							TYPICAL WIRING DIAGRAM			TITLE: SCHEMATIC WIRING DIAGRAM
							MODEL:	ACC/6ACCS DUCTED SPLIT	DATE:	
							UNIT NO.:		DATE:	
							DATE:		DATE:	
							DATE:		DATE:	
							DRAWING NO.:		F.O. NO.:	
							SHEET	1	OF	1

Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	460V/3/60HZ
Unit nomenclature	6ACCS435-QG + 6EB435D-QG		
Altitude	0	ft	Approval
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	20x25x1(3), 25x25x1(3)		
DX COOLING COIL			
Type	Ø3/8	Number of coil	1
Rows	3	Face area	21.39 ft ²
Fins per inch	13	Face velocity	538 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	377724 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	274677 Btu/h	Leaving air (DB)	57.7 °F
Air pressure drop	0.5 inH2O	Leaving air (WB)	56.3 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor	2 X ZP182		
Type	Scroll, Fixed Speed	Quantity	2
Total LRA	358.0 A	Total Power	31.2 kW
		Total Amps	50.6 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	450
Air Flow	11500 CFM	Fan Speed	763 RPM
External Static Pressure	0.5 inH2O	Absorbed Power	5.4 kW
Total Static Pressure	1.4 inH2O	Motor Horsepower	10 HP
Quantity	1	FLA	14.4 A
		Locked rotor current (LRA)	85.7 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	1 HP
Quantity	1	FLA (each)	1.6 A
Condenser Fan Motor	26" (660MM)	Ambient Temperature	95 °F
Quantity	3		
ELECTRICAL SUMMARY			
Unit FLA	69.8 A	MCA	76.1 A
Total Power Input	39.02 kW	MFS	125 A
EER	9.68	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
NOTES			
Manufacturer reserves the right to change specifications without prior notice.			



SPECIFICATIONS

1 GENERAL

The air-cooled condensing section shall consist of the compressor(s); condenser coil; propeller condenser fan(s) with motor and drive assembly.

The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

4 EVAPORATOR COIL

Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
(only applicable for cooling only models)
- Copper Fin
- Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier (Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class O (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV) (Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non- contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



Air-Cooled Split

Options Guide

(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

**23. BMS Communication Cards
(Micro-Vision or Vision must be selected)
(Model 108 and above)**

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

**28. Electric Heater Starter
(Electric Heater & IEC DOL must be selected)**

Contact and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

**30. Compressor Soft Starter
(IEC DOL must be selected)**

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP : ZR 19D(2) (R407C) /
 ZP 182(2) (R410A)
 COIL SIZE : # 3/8x4R581Hx36FL12FR (SLIT)
 COND. CIR. : 4 T/C. (25+26) IN/OUT
 SUBCOOL. CIR. : 2 T/C. (5+5) IN/OUT
 SUCTION ϕ : 1 3/8x(2)
 LIQUID ϕ : 5/8x(2)
 COND. FAN MTR : 1 HPY(3)
 FAN ϕ : 660MM. x(3)

CONDENSER WITH SLIT FINS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES (MM)

DESIGNED BY	ALYN	DATE	21-09-2012
DESIGNED BY	JOSEPHV	DATE	20/12/2017
CHECKED BY		DATE	
APPROVED BY		DATE	

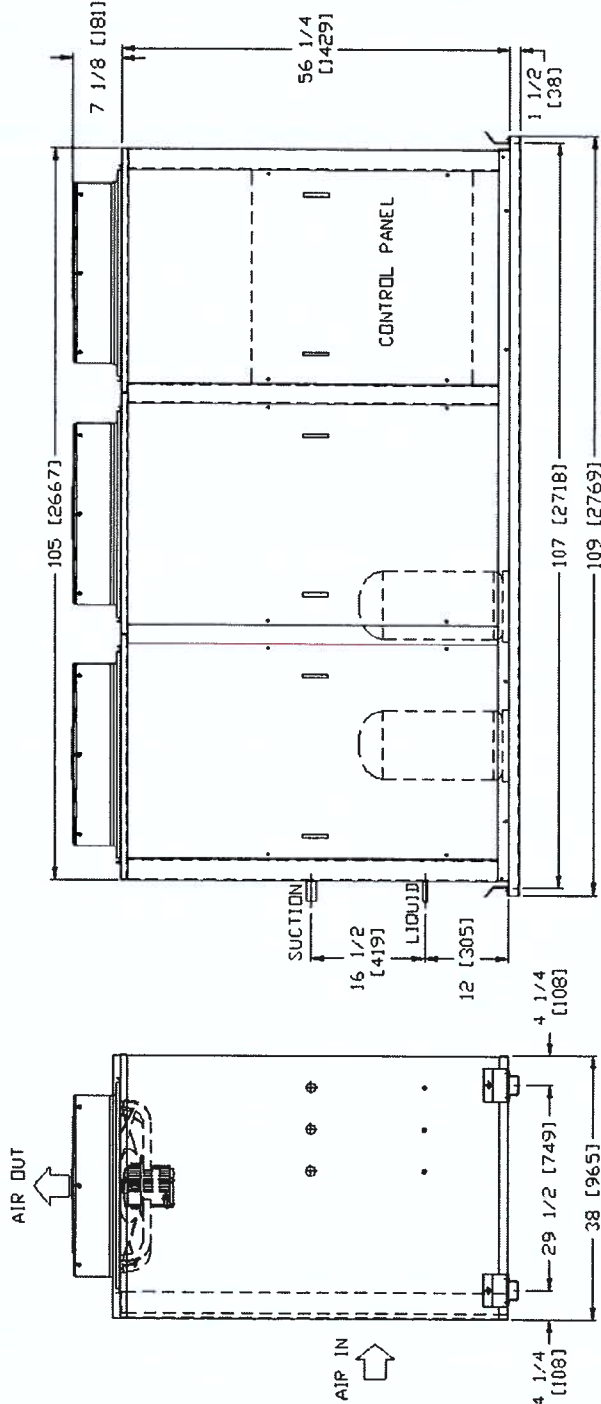
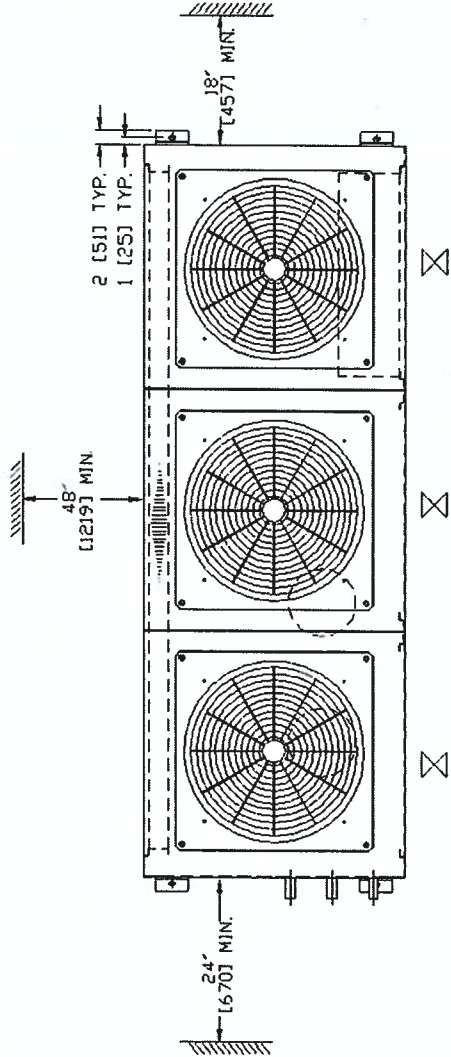
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1.3	UPDATE R410A DATA	28.10.17	JOSPHV
1.2	UPDATE TEXT	19.11.17	N.GIR
1.1	CHANGE FAN TYPE	02.17.17	N.GIR



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LOCATION.	
QTY.	
MODEL	6ACCS 435-P/G
PROJECT	STANDARD
TITLE	A/C CONDENSING UNIT
DRAWING NO	82449A-014
REP	1.3
SCALE :	N.T.S SHEET 1 OF 1



CERTIFIED DRAWING

BLOWER : FDA 450C
 COIL SIZE : ϕ 3/8" x 3/4" x 14" x 13" FPI
 CIRCUMFERENCE : 4 1/8" (16+17) IN/OUT
 SUCTION ϕ : 1 3/8" x (2)
 LIQUID ϕ : 5/8" x (2)
 FILTER SIZE : 20 x 25 x 1 - 3

FILTER ARRANGEMENT

25	25	25
20	25	25

THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT RIGHT HAND PIPING.
 ALL DIMENSIONS ARE IN INCHES (MM)

DATE	BY	DATE	BY
DESIGNED BY		DATE	
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	DRW BY	INSTR BY	DATE



DUNHAM-BUSH INDUSTRIES SON. BRIDGEMAN

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LOCATION.

QTY.

MODEL 6EB 435D

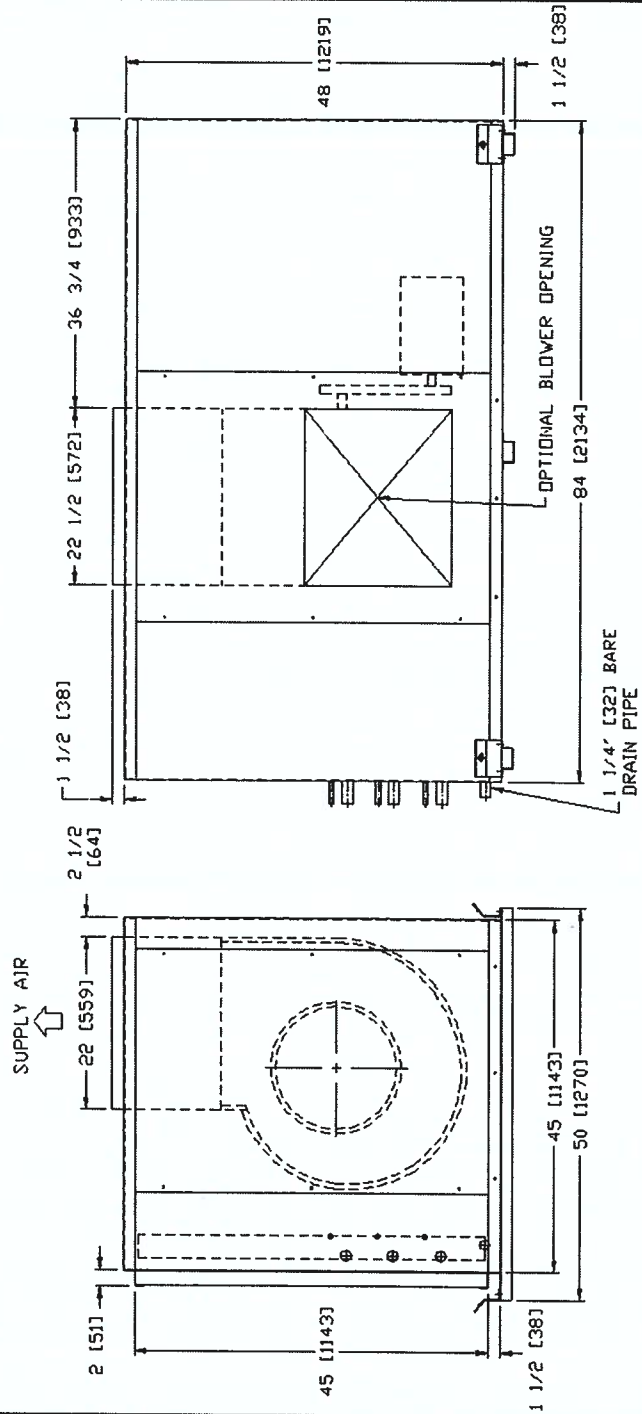
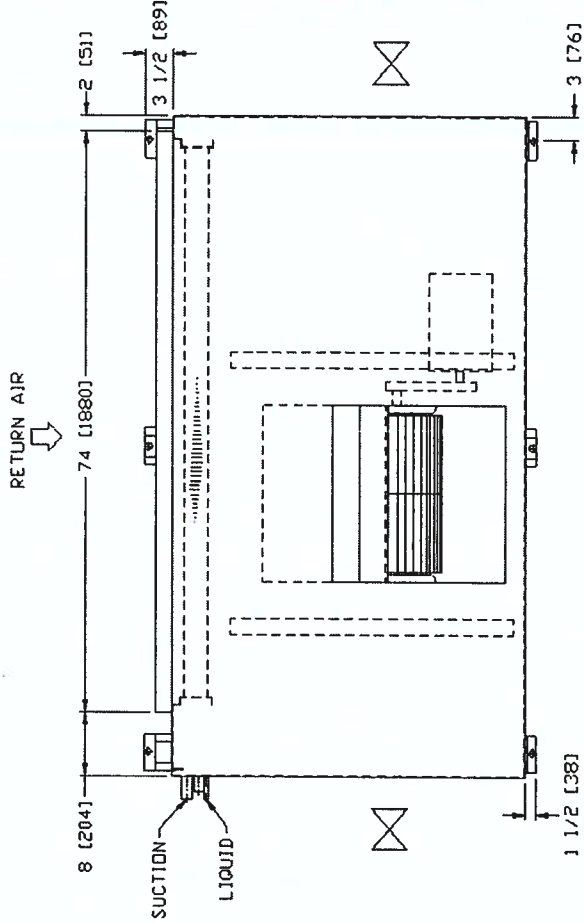
PROJECT STANDARD

TITLE

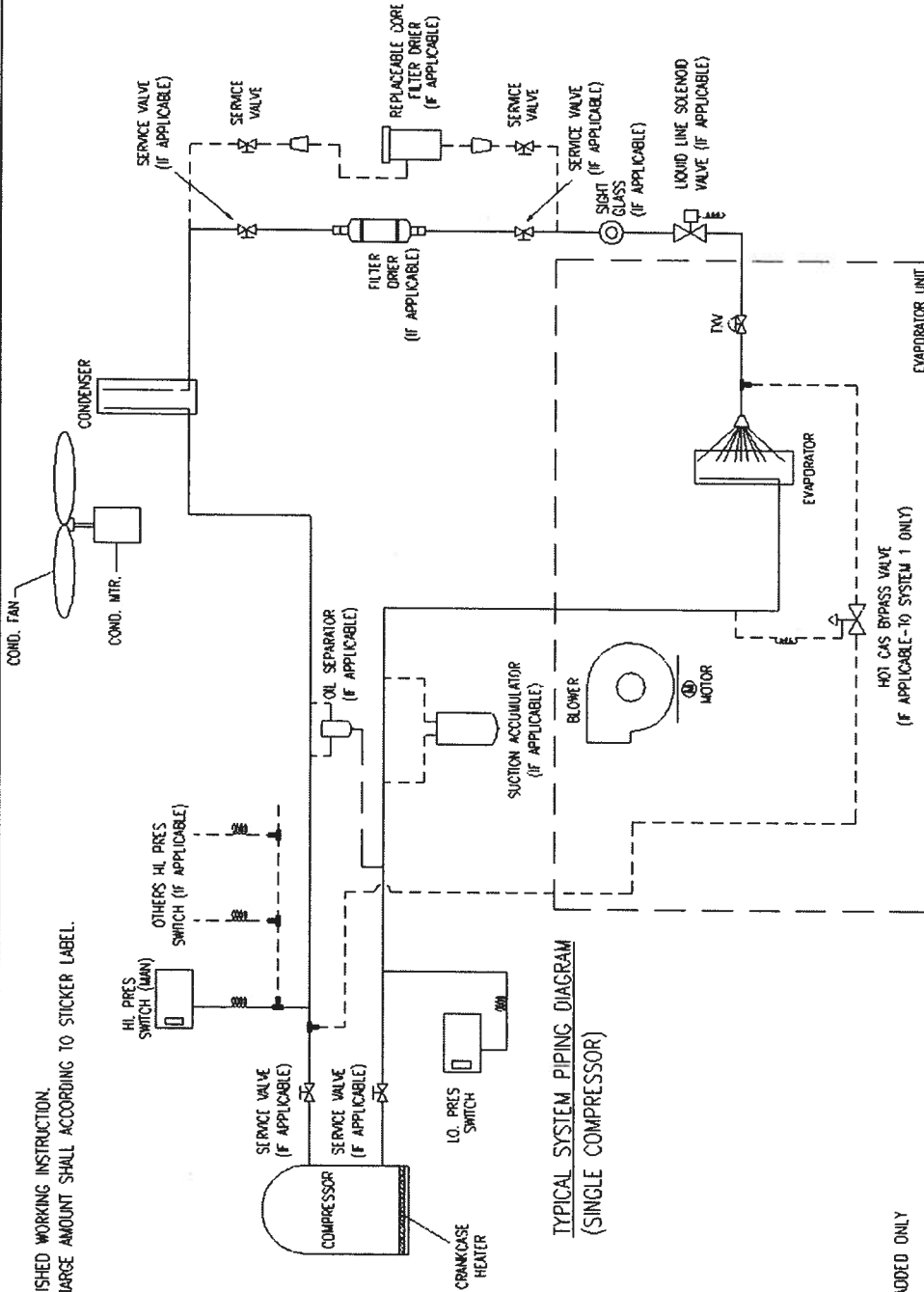
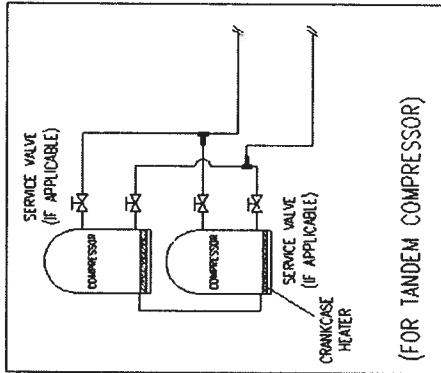
EVAPORATOR BLOWER UNIT

DRAWING NO 80779A-014 A3

SCALE : N. T. S. SHEET 1 OF 1



NOTE:
 1) SYSTEM LEAK TEST SHALL ACCORDING TO DB'S ESTABLISHED WORKING INSTRUCTION.
 2) CHARGE LIQUID REFRIGERANT ONLY AT LIQUID LINE. CHARGE AMOUNT SHALL ACCORDING TO STICKER LABEL.

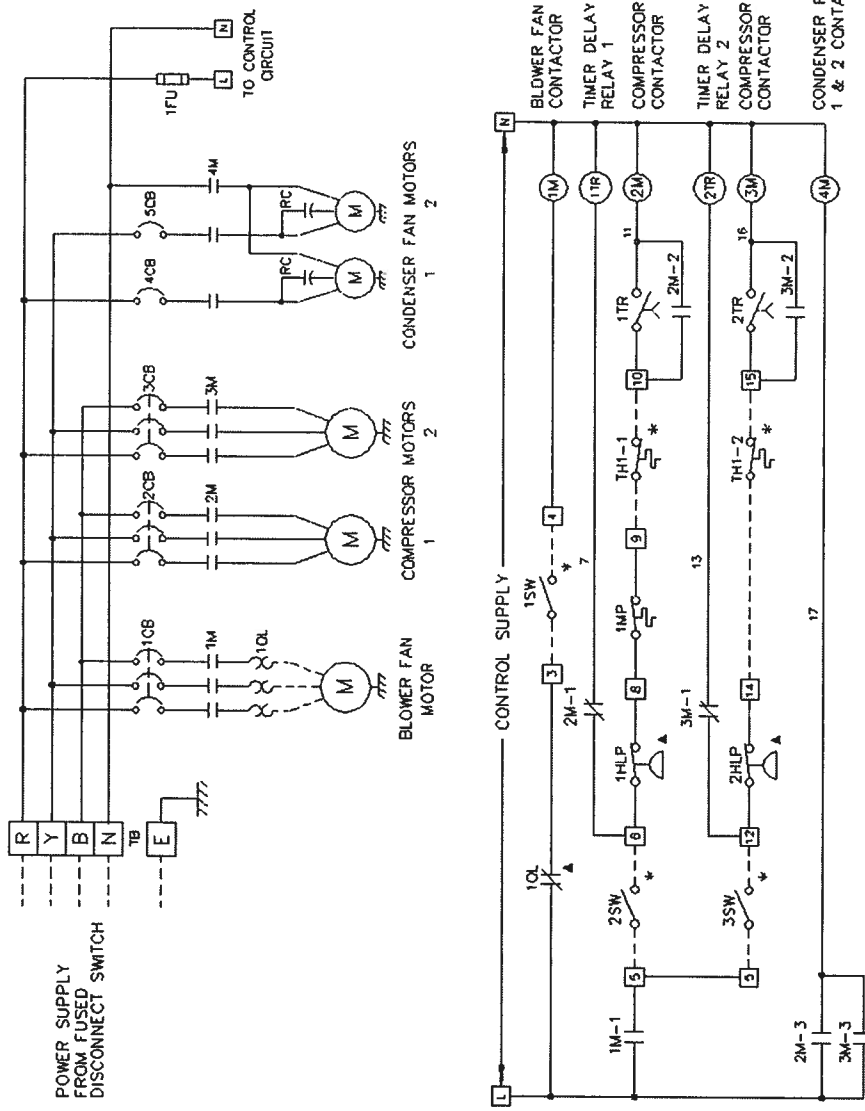


— STANDARD REF LINE
 - - - - - OPTIONAL REF LINE - - FOR OPTIONAL ITEM ADDED ONLY

ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED THIRD ANGLE PROJECTION		THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SDN BHD AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF THE COMPANY.		DB DUNHAM-BUSH INDUSTRIES' SDN. BHD.			
MATERIAL:		TOLERANCES UNLESS OTHERWISE SPECIFIED 0.001 ±0.001 0.002 ±0.002 0.005 ±0.005 ANGLE 1/2°		TITLE: SCHEMATIC PIPING DIAGRAM ACCS/6ACCS DUCTED SPLIT COOLING ONLY			
MATERIAL QUANTITY: PURCHASE:		DRAWN BY: DATE: DESIGNED BY: DATE: CHECKED BY: DATE: APPROVED BY: DATE:		DRAWING NUMBER: STANDARD A3 SCALE: N.T.S. SHEET 1 OF 1			
REV.	ECA NO.	DESCRIPTION	DATE	DRN'D BY	DISC'D BY	CHK'D BY	APP'D BY

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

WITH IEC DIRECT-ON-LINE (DOL) OPTION



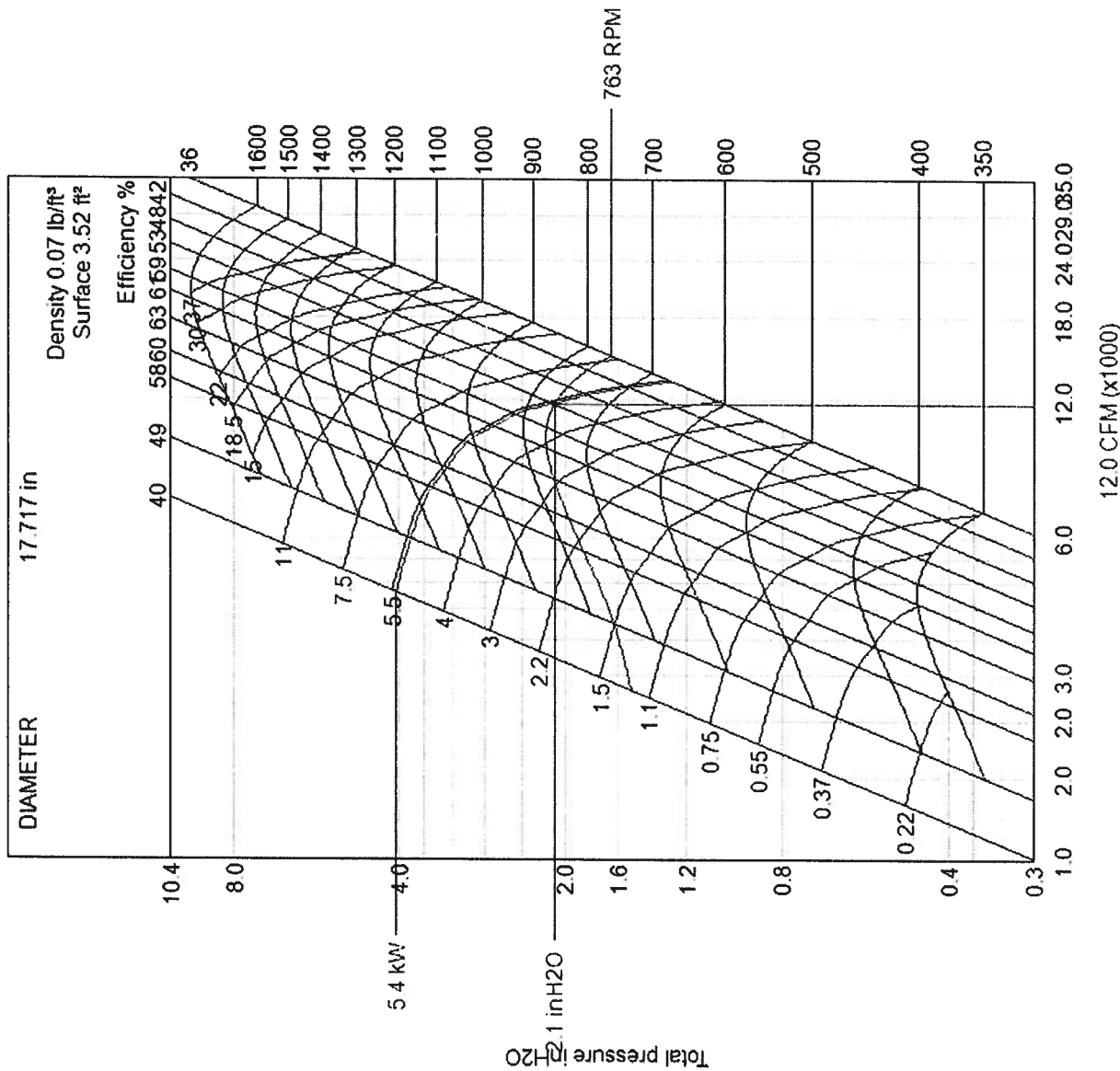
LEGEND

- M = CONTACTOR
- CB = CIRCUIT BREAKER
- CCH = CRANKCASE HEATER
- FLA = FULL LOAD AMPERE
- FU = FUSE
- HP = MOTOR HORSE POWER
- HLP = HIGH-LOW PRESSURE
- SW = SWITCH
- LRA = LOCKED ROTOR AMPERE
- MCA = MINIMUM CIRCUIT AMPERE
- MFS = MAXIMUM FUSE SIZE
- MP = MOTOR PROTECTOR
- MRA = MAXIMUM RUNNING AMPERE
- NRA = NOMINAL RUNNING AMPERE
- TR = TIMER DELAY RELAY
- DL = OVERLOAD PROTECTOR
- RC = RUN CAPACITOR
- RLA = RATED LOAD AMPERE
- SW = SWITCH
- TB = TERMINAL BLOCK
- TH = THERMOSTAT
- △ = FIELD SUPPLY
- = MANUAL RESET
- = FIELD WIRING
- = FACTORY WIRING
- △ = SEE NOTE "n"

DUNHAM-BUSH INDUSTRIES SON. BH04049	
TITLE: SCHEMATIC WIRING DIAGRAM	
PROJECT: TYPICAL WIRING DIAGRAM	THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SON. BHD. AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF COMPANY
MODEL: ACCS/GACCS DUCTED SPLIT	DRAWN BY: _____ DATE: _____ DESIGNED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ APPROVED BY: _____ DATE: _____
UNIT NO: -	DRAWING NO: _____ F.O. NO: _____ SHEET 1 OF 1
REVISIONS:	DESCRIPTION: _____ DATE: _____ DRN. BY: _____ DISC'D BY: _____ CHK'D BY: _____ APP'D BY: _____

Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	208V/3/60HZ
Unit nomenclature	6ACCS435-QG + 6EB435D-QG		
Altitude	0	ft	Approval
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	20x25x1(3), 25x25x1(3)		
DX COOLING COIL			
Type	Ø3/8	Number of coil	1
Rows	3	Face area	21.39 ft ²
Fins per inch	13	Face velocity	538 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	376700 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	273995 Btu/h	Leaving air (DB)	57.7 °F
Air pressure drop	0.5 inH2O	Leaving air (WB)	56.3 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor	2 X ZP182		
Type	Scroll, Fixed Speed	Quantity	2
Total LRA	680.0 A	Total Power	32.1 kW
		Total Amps	103.6 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	450
Air Flow	11500 CFM	Fan Speed	762 RPM
External Static Pressure	0.5 inH2O	Absorbed Power	5.4 kW
Total Static Pressure	1.4 inH2O	Motor Horsepower	10 HP
Quantity	1	FLA	31.8 A
		Locked rotor current (LRA)	190.1 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	1 HP
Quantity	1	FLA (each)	2.9 A
Condenser Fan Motor	26" (660MM)	Ambient Temperature	95 °F
Quantity	3		
ELECTRICAL SUMMARY			
Unit FLA	144.1 A	MCA	157 A
Total Power Input	39.8 kW	MFS	225 A
EER	9.47	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
NOTES			
Manufacturer reserves the right to change specifications without prior notice.			



SPECIFICATIONS

1 GENERAL

The air-cooled condensing section shall consist of the compressor(s); condenser coil; propeller condenser fan(s) with motor and drive assembly.

The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

4 EVAPORATOR COIL

Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
(only applicable for cooling only models)
- Copper Fin
- Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier (Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class O (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV) (Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non- contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

**23. BMS Communication Cards
(Micro-Vision or Vision must be selected)
(Model 108 and above)**

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

**28. Electric Heater Starter
(Electric Heater & IEC DOL must be selected)**

Contactors and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

**30. Compressor Soft Starter
(IEC DOL must be selected)**

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP : ZR 190(2) (R407C) / ZP 182(2) (R410A)
 COIL SIZE : 3/8x4x58Hx96Lx12FP (SLIT)
 COND. CIR. : 4 T/C, (25+26) IN/OUT
 SUBCOOL CIR. : 2 T/C, (5+5) IN/OUT
 SUCTION ϕ : 1 3/8x(2)
 LIQUID ϕ : 5/8x(2)
 COND. FAN MTR : 1 HPx(3)
 FAN ϕ : 660MM, 1(3)

CONDENSER WITH SLIT FINNS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES LMMI

DATE OF	ALYN	DATE	21-09-2012
DESIGNED BY	JOSEPHV	DATE	20/12/2017
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	DRN BY
1.3	UPDATE R410A DATA	20/12/17	ACC
1.2	UPDATE TEXT	19/11/17	N/GR
1.1	CHANGE FAN TYPE	02/17	N/GR



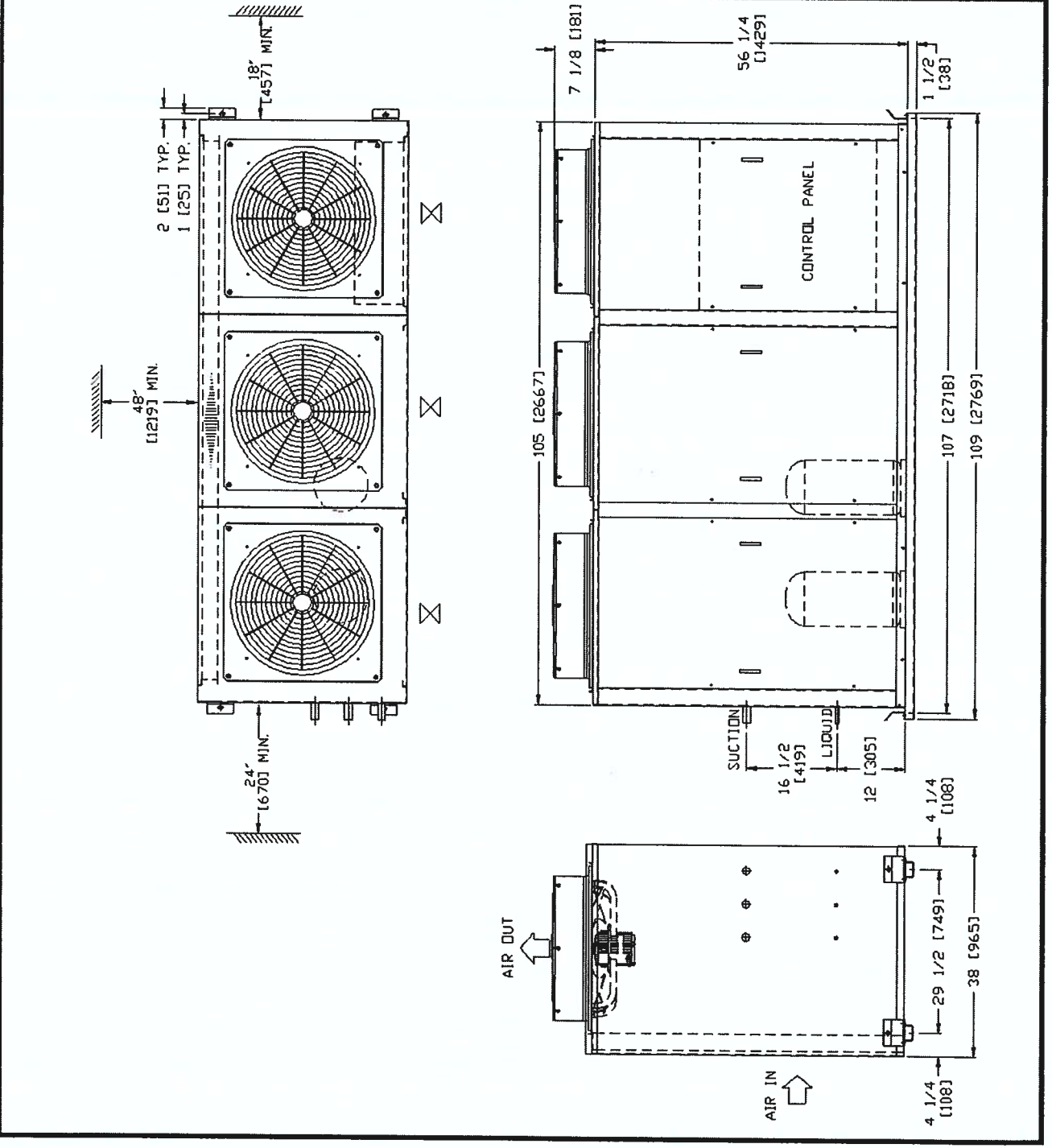
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LOCATION:
 QTY:
 MODEL 6ACCS 435-P/G
 PROJECT STANDARD
 TITLE
 A/C CONDENSING UNIT

DRAWING NO 82449A-014
 1.3

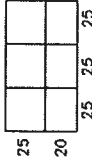
SCALE : N.T.S SHEET 1 OF 1



CERTIFIED DRAWING

BLOWER : FDA 450C
 COIL SIZE : ϕ 3/8" x 3/4" x 4.41m x 1.31m
 CIRCUITRY : 4 T/C (16+17) IN/OUT
 SUCTION ϕ : 1 3/8" x (2)
 LIQUID ϕ : 5/8" x (2)
 FILTER SIZE : 20 x 25 x 1 - 3

FILTER ARRANGEMENT



THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT RIGHT HAND PIPING. ALL DIMENSIONS ARE IN INCHES [MM]

DESIGNED BY	DATE	4/7/2014
CHECKED BY	DATE	
APPROVED BY	DATE	

KEY	DESCRIPTION	DATE	DRN	DATE	CHK	DATE	APP'D



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LOCATION:

QTY.

MODEL 6EB 435D

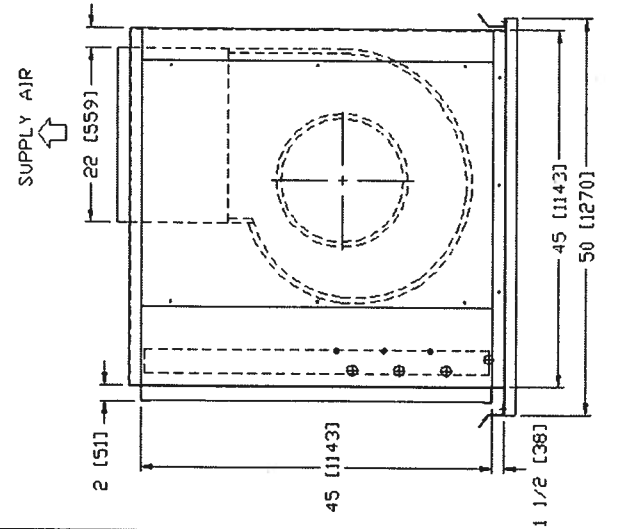
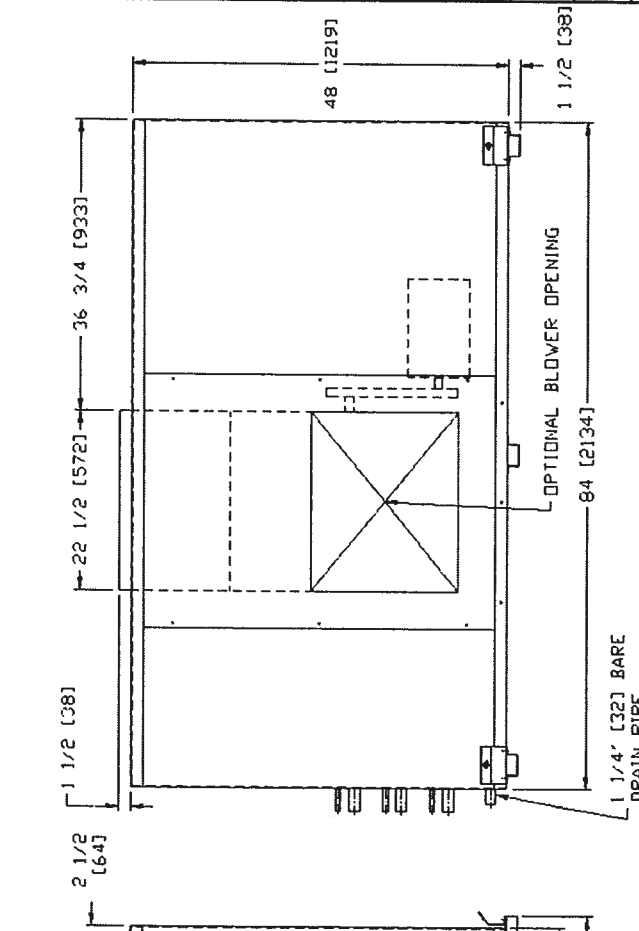
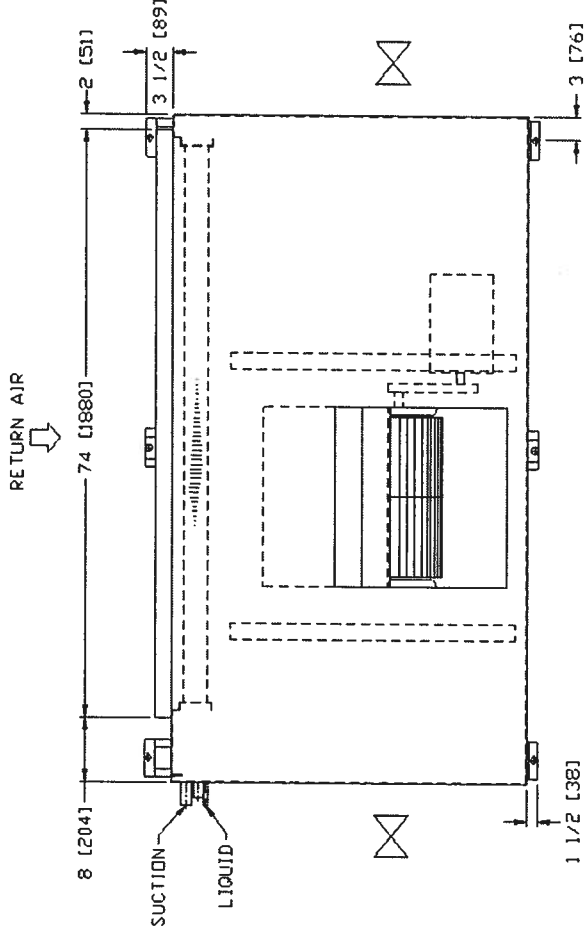
PROJECT STANDARD

TITLE

EVAPORATOR BLOW UNIT

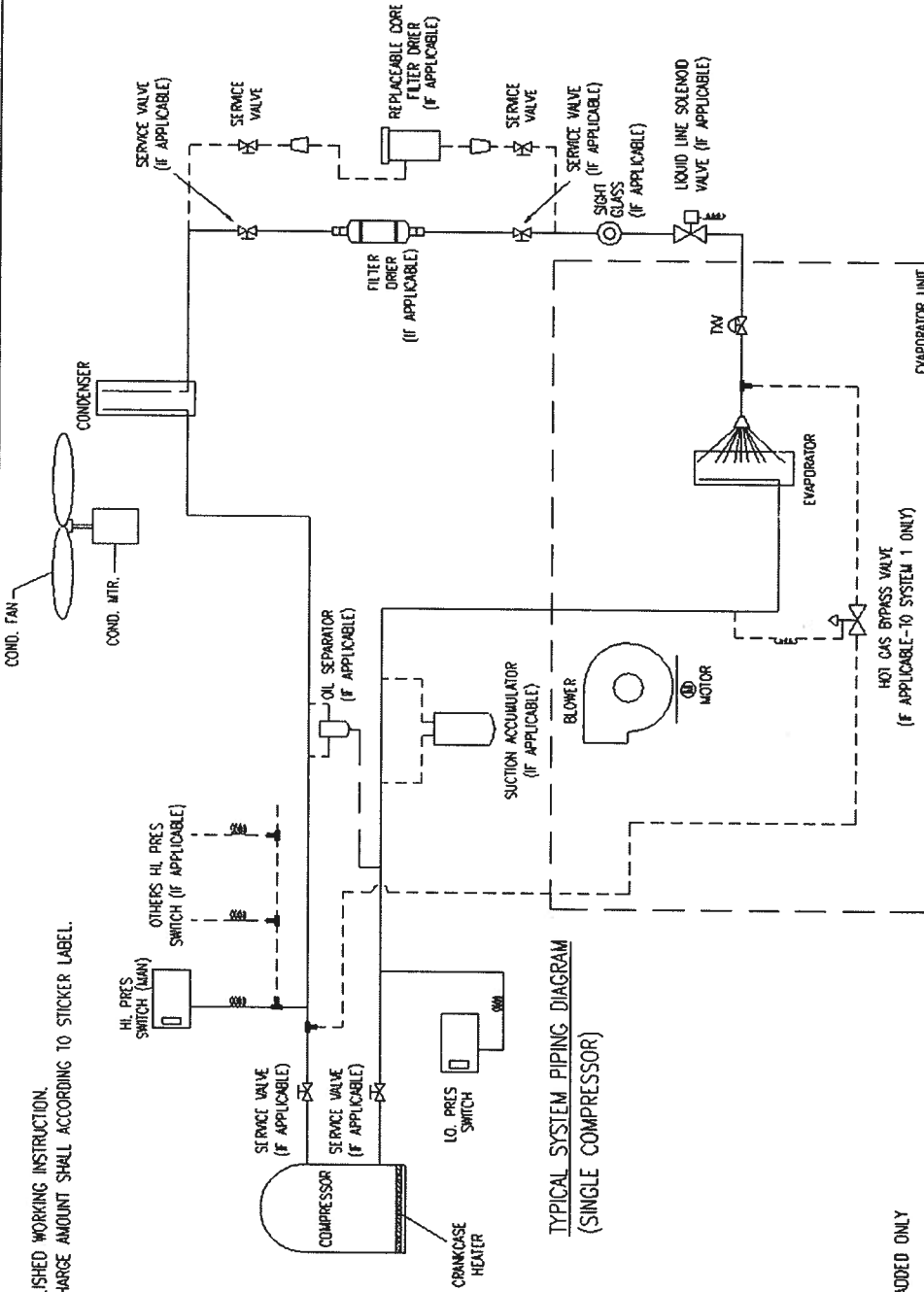
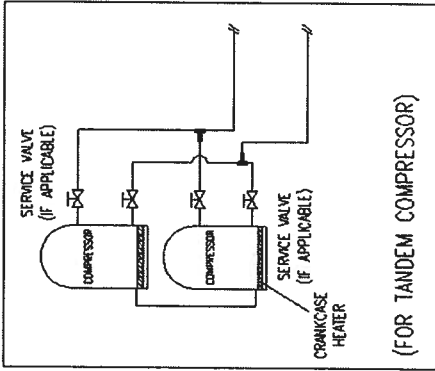
DRAWING NO 80779A-014 A3

SCALE : N. T. S. SHEET 1 OF 1



PIPING DRAWING ACCS435

NOTE:
 1) SYSTEM LEAK TEST SHALL ACCORDING TO DB'S ESTABLISHED WORKING INSTRUCTION.
 2) CHARGE LIQUID REFRIGERANT ONLY AT LIQUID LINE. CHARGE AMOUNT SHALL ACCORDING TO STICKER LABEL.



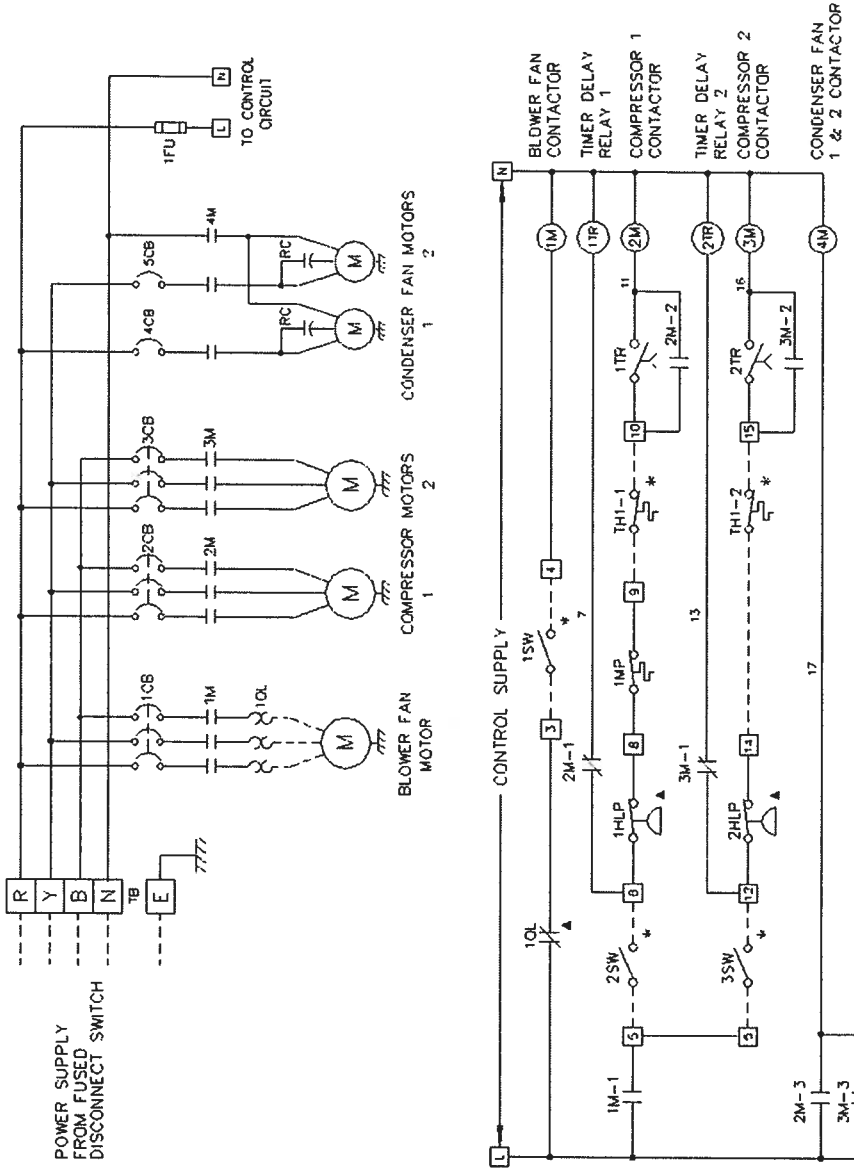
— STANDARD REF LINE

--- OPTIONAL REF LINE - FOR OPTIONAL ITEM ADDED ONLY

<p>ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED</p> <p>THIRD ANGLE PROJECTION</p>		<p>MATERIAL:</p>		<p>THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SDN BHD AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF THE COMPANY.</p> <p>DB DUNHAM-BUSH INDUSTRIES SDN. BHD</p>									
<p>TOLERANCES UNLESS OTHERWISE SPECIFIED</p> <table> <tr><td>0. DEC</td><td>± .1</td></tr> <tr><td>1. DEC</td><td>± .05</td></tr> <tr><td>2. DEC</td><td>± .005</td></tr> <tr><td>ANGLES</td><td>± .1°</td></tr> </table>		0. DEC	± .1	1. DEC	± .05	2. DEC	± .005	ANGLES	± .1°	<p>DRAWN BY:</p>		<p>DATE:</p>	
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1. DEC	± .05												
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<p>MATERIAL QUANTITY:</p>		<p>DESIGNED BY:</p>		<p>DATE:</p>									
<p>PURCHASE:</p>		<p>CHECK'D BY:</p>		<p>DATE:</p>									
<p>PROJECT: STANDARD</p>		<p>APPROVED BY:</p>		<p>DATE:</p>									
<p>MODEL:</p>		<p>DATE:</p>		<p>SHEET 1 OF 1</p>									
<p>REV/ECO NO.</p>		<p>DESCRIPTION</p>		<p>DRAWING NUMBER: STANDARD A3</p>									

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

WITH IEC DIRECT-ON-LINE (DOL) OPTION



LEGEND

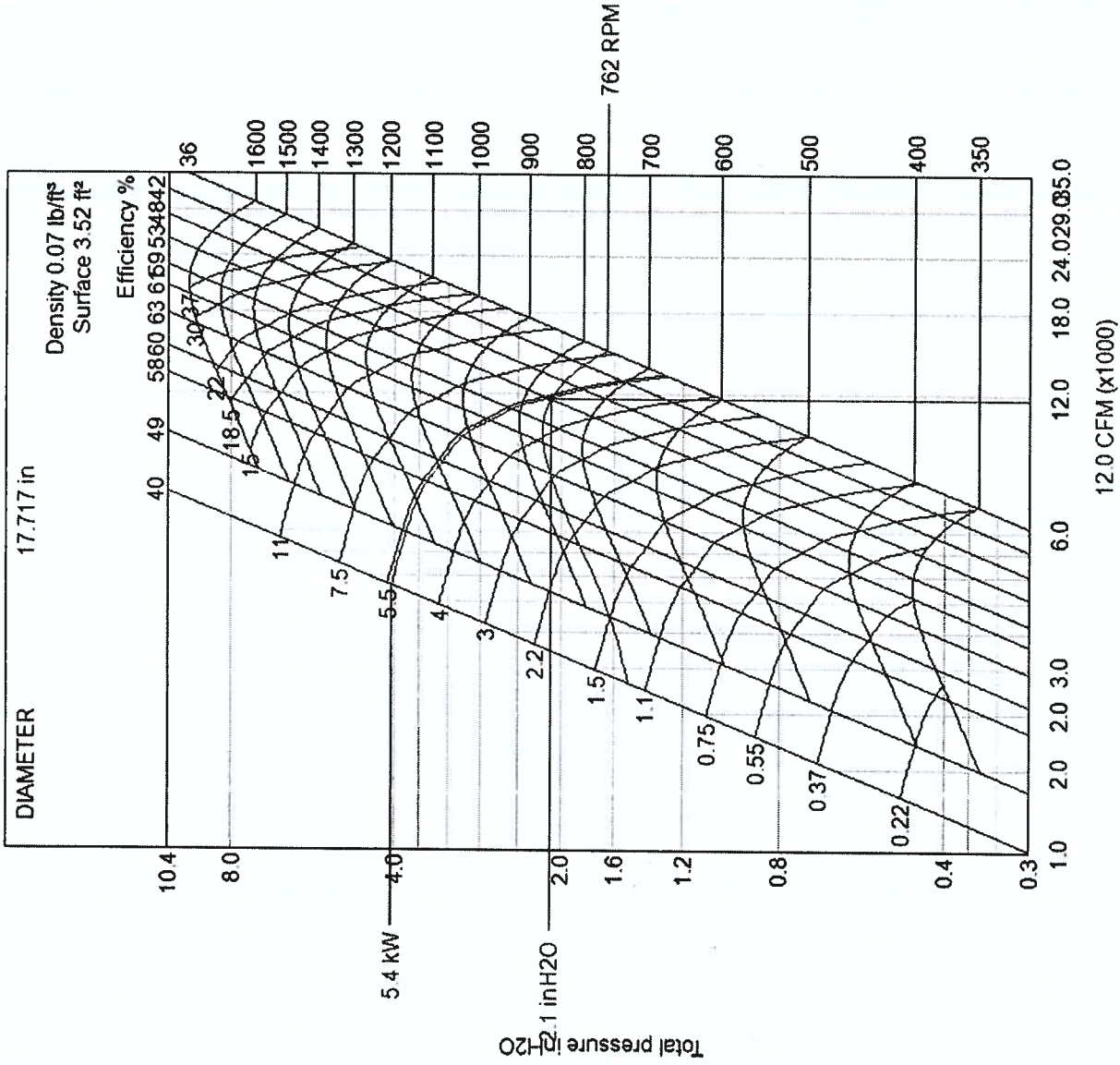
- M = CONTACTOR
- CB = CIRCUIT BREAKER
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- ▲ = MANUAL RESET
- △ = FIELD WIRING
- = FACTORY WIRING
- - - = SEE NOTE 'n'

REV.	DESCRIPTION	DATE	DRN. BY	DSGD BY	CHK'D BY	APP'D BY
PROJECT: TYPICAL WIRING DIAGRAM MODEL: ACCS/6ACCS DUCTED SPLIT UNIT NO.:						
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DRAWN BY: DATE:						
DESIGNED BY: DATE:						
CHECKED BY: DATE:						
APPROVED BY: DATE:						
TITLE: SCHEMATIC WIRING DIAGRAM						F.O. NO.:
SHEET 1 OF 1						-



Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



Fan air flow CFM (x1000)

TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	208V/3/60HZ
Unit nomenclature	6ACCS570-QG + 6EB570D-QG		
Altitude	0 ft	Approval	
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	20x25x1(9)		
DX COOLING COIL			
Type	Ø3/8	Number of coil	1
Rows	3	Face area	29.17 ft ²
Fins per inch	12	Face velocity	514 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	497149 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	357934 Btu/h	Leaving air (DB)	57.7 °F
Air pressure drop	0.5 inH ₂ O	Leaving air (WB)	56.3 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor	2 X ZP154 + ZP182		
Type	Scroll, Fixed Speed	Quantity	3
Total LRA	2x300 1x340 A	Total Power	44.2 kW
		Total Amps	137.4 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	500
Air Flow	15000 CFM	Fan Speed	727 RPM
External Static Pressure	0.5 inH ₂ O	Absorbed Power	7.2 kW
Total Static Pressure	1.4 inH ₂ O	Motor Horsepower	15 HP
Quantity	1	FLA	44.2 A
		Locked rotor current (LRA)	286.1 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	1 HP
Quantity	1	FLA (each)	2.9 A
Condenser Fan Motor	26" (660MM)	Ambient Temperature	95 °F
Quantity	4		
ELECTRICAL SUMMARY			
Unit FLA	193.2 A	MCA	206.2 A
Total Power Input	54.42 kW	MFS	300 A
EER	9.14	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
NOTES			
Manufacturer reserves the right to change specifications without prior notice.			



SPECIFICATIONS

1 GENERAL

The air-cooled condensing section shall consist of the compressor(s); condenser coil; propeller condenser fan(s) with motor and drive assembly.

The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

4 EVAPORATOR COIL

Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- (only applicable for cooling only models)
- Copper Fin
 - Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier (Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class O (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV) (Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non- contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



Air-Cooled Split

Options Guide

(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

**23. BMS Communication Cards
(Micro-Vision or Vision must be selected)
(Model 108 and above)**

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

**28. Electric Heater Starter
(Electric Heater & IEC DOL must be selected)**

Contactors and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

**30. Compressor Soft Starter
(IEC DOL must be selected)**

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP. : ZR190(1) + ZR190(2) (R407C) / ZP182(1) + ZP154(2) (R410A)
 COIL SIZE : ϕ 3/8x4R+54THx130FLx10FPI (SLIT)
 COND. CIR. : 4 T/C, 16 IN/OUTx(3)
 SUBCOOL CIR. : 2 T/C, 4 IN/OUTx(3)
 SUCTION ϕ : 1 3/8x(3)
 LIQUID ϕ : 5/8x(3)
 COND. FAN MTR : 1 HPx(4)
 FAN ϕ : 660MM. x(4)

CONDENSER WITH SLIT FINS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES [MM]

DESIGNED BY	ALYN	DATE	21-09-2012
DESIGNED BY	JOSEPHV	DATE	20/12/2017
CHECKED BY		DATE	
APPROVED BY		DATE	

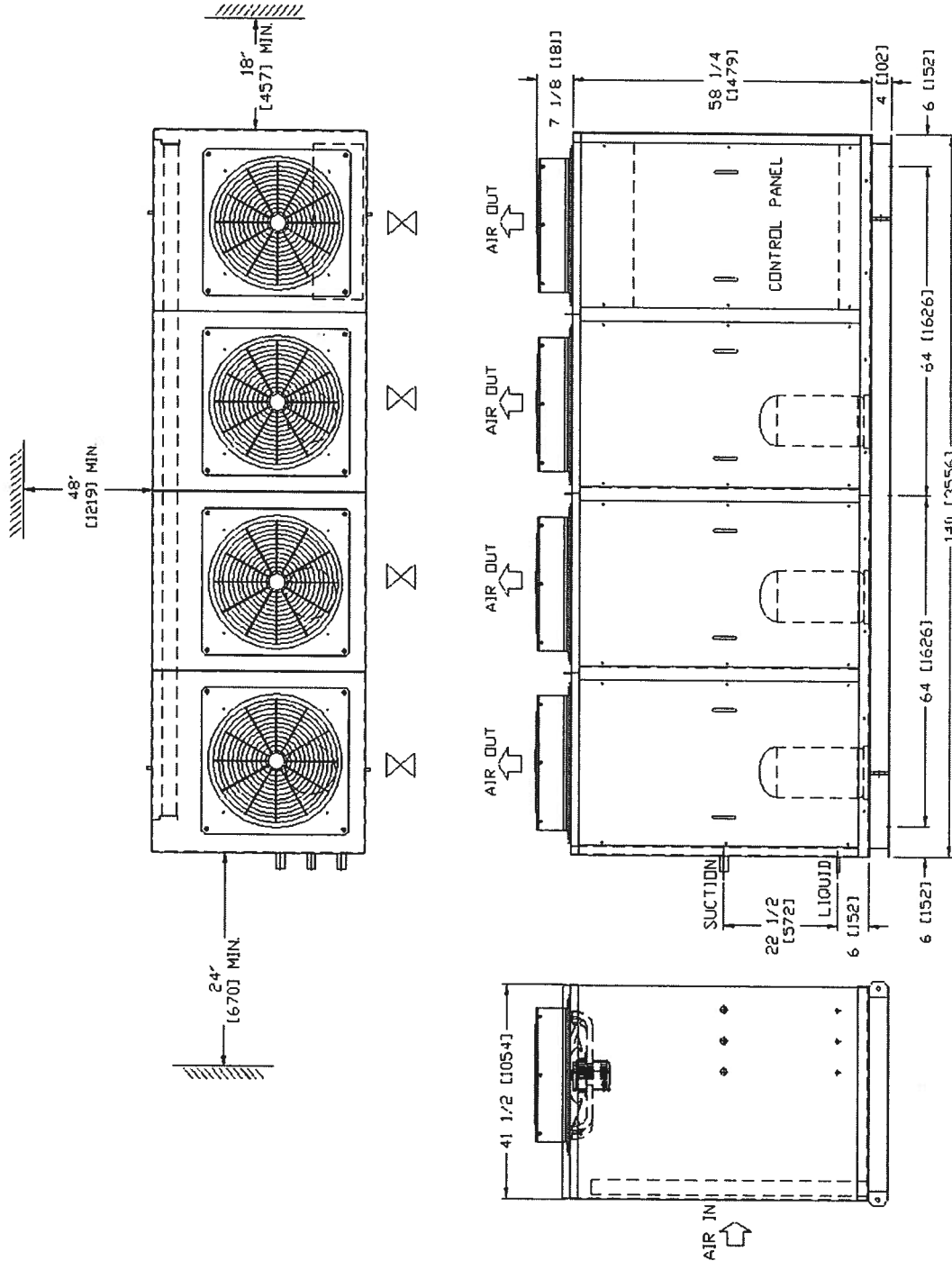
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1.3	UPDATE R410A DATA	20.12.2017	
1.2	UPDATE TEXT	15.11.17 N/da	
1.1	CHANGE FAN TYPE	02.17 N/da	



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LOCATION	
QTY.	
MODEL	6ACCS 570-P/G
PROJECT	STANDARD
TITLE	A/C CONDENSING UNIT
DRAWING NO	82449A-017
SCALE	N.T.S
SHEET	1 OF 1



CERTIFIED DRAWING

BLOWER : FDA 500C
 COIL SIZE : ϕ 3/8x3R60THx70FLx12FPI
 CIRCUITRY : 4 1/C. (15x15+15) IN/OUT
 SUCTION ϕ : 1 3/8 x (3)
 LIQUID ϕ : 5/8 x (3)
 FILTER SIZE : 20 x 25 x 1 - 9

FILTER ARRANGEMENT

20	25	25	25
20			
20			

THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT. RIGHT HAND PIPING. ALL DIMENSIONS ARE IN INCHES (MM)

DATE BY	ALYN	DATE	09-02-2011
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	DRN BY	CHK BY	APP'D BY



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LOCATION.

QTY.

MODEL 6EB 570D

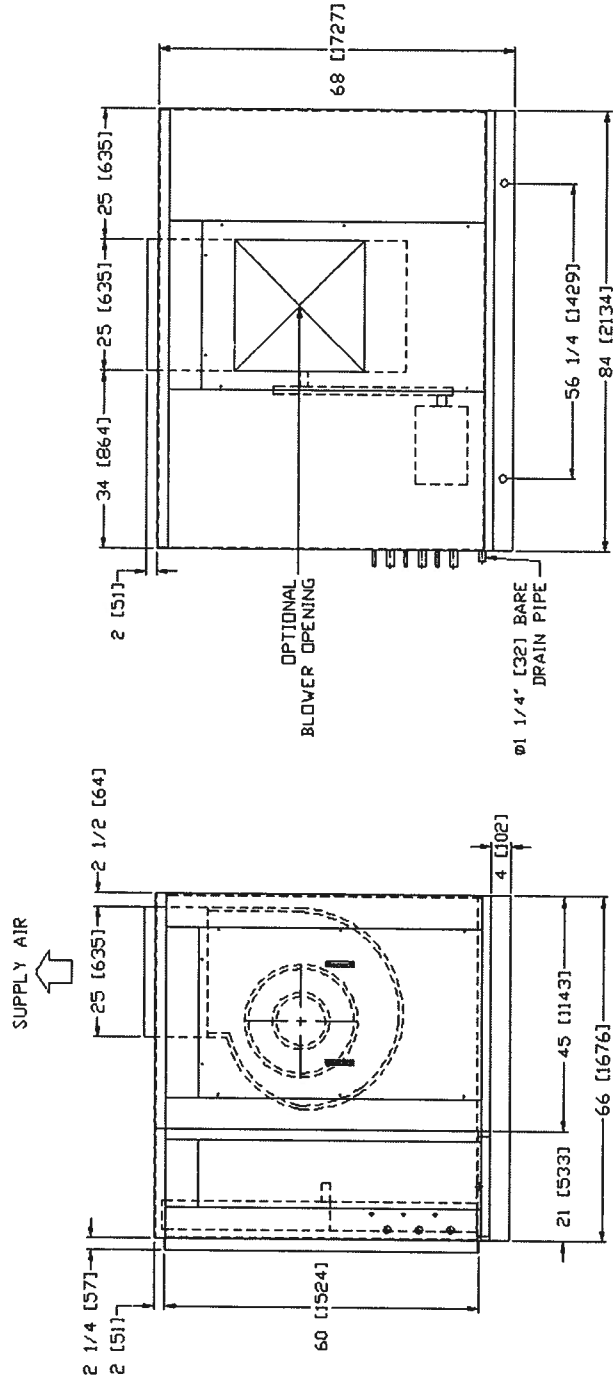
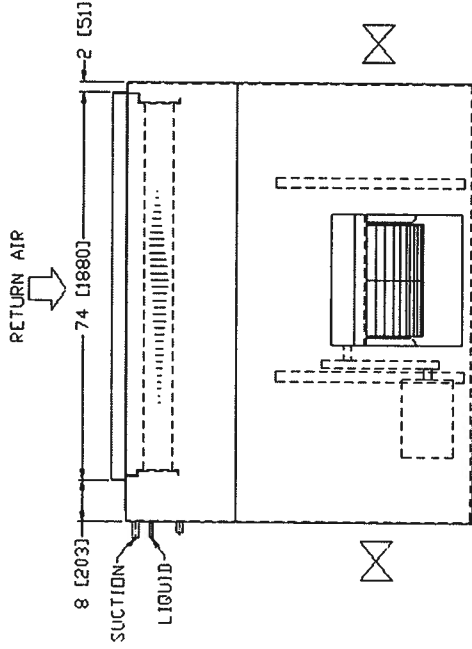
PROJECT STANDARD

TITLE

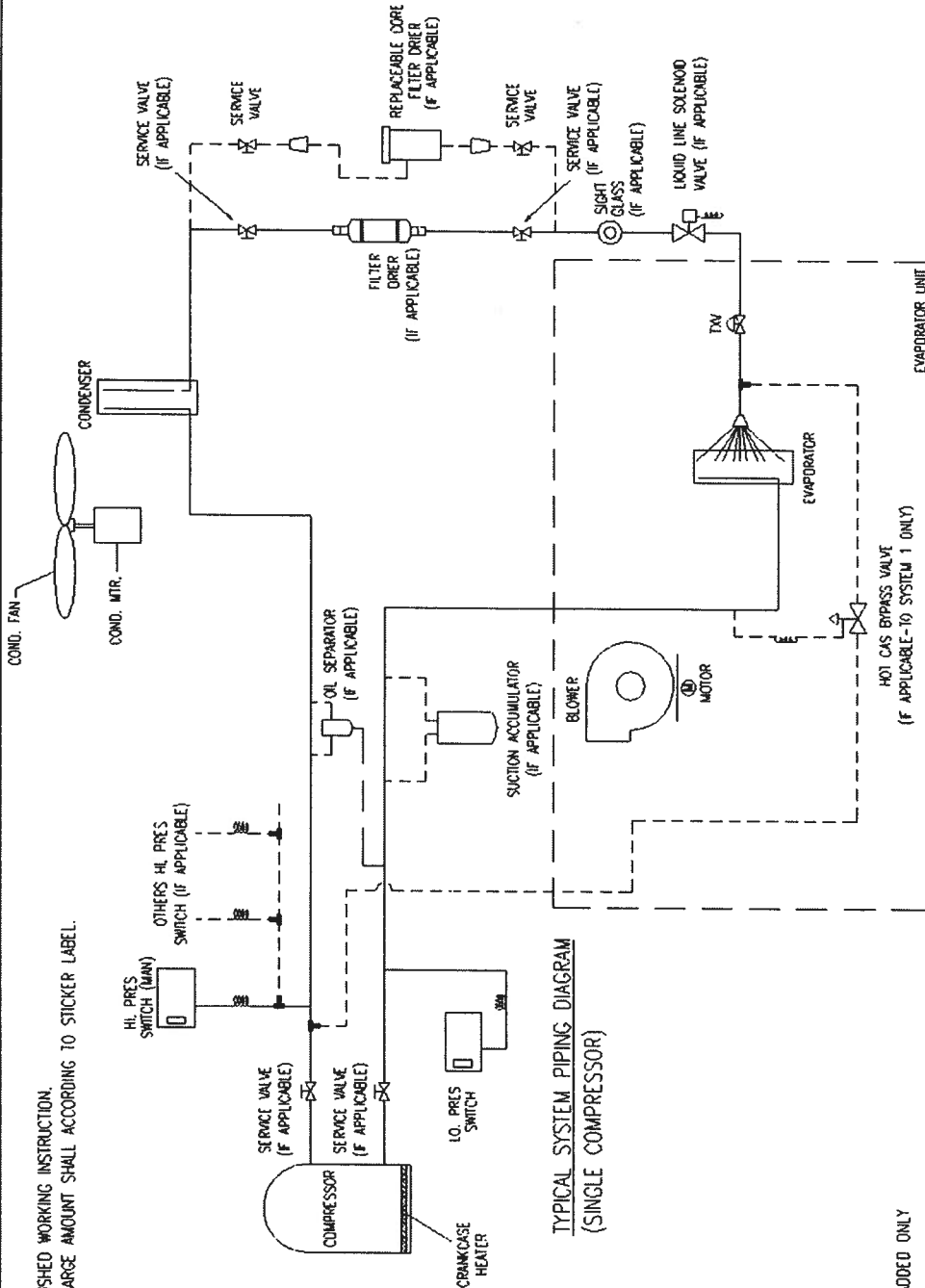
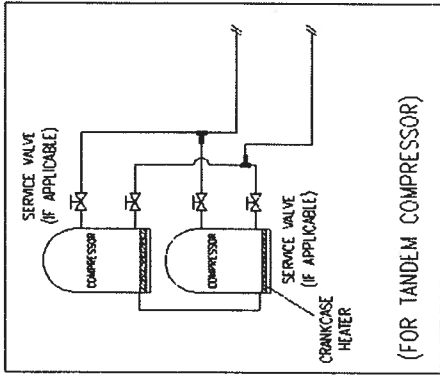
EVAPORATOR BLOW UNIT

DRAWING NO 80779A-017 A3

SCALE : N. T. S. SHEET 1 OF 1



NOTE:
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<p>ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED</p>		<p>MATERIAL:</p>	
<p>THIRD ANGLE PROJECTION</p>		<p>TOLERANCES UNLESS OTHERWISE SPECIFIED 0. DEC ±.1 1. DEC ±0.05 2. DEC ±0.06 ANGLE 1/2°</p>	
REV. ECA NO.	DESCRIPTION	DATE	DATE
DRND BY	DISC'D BY	CHK'D BY	APP'D BY
<p>PURCHASE: STANDARD</p>		<p>MANUFACTURE</p>	
<p>MATERIAL QUANTITY:</p>		<p>DRAWN BY: DATE:</p>	
<p>PROJECT: STANDARD</p>		<p>CHECKED BY: DATE:</p>	
<p>MODEL:</p>		<p>APPROVED BY: DATE:</p>	
<p>DRAWING NUMBER: STANDARD A3</p>		<p>SCALE: N.T.S. SHEET 1 OF 1</p>	

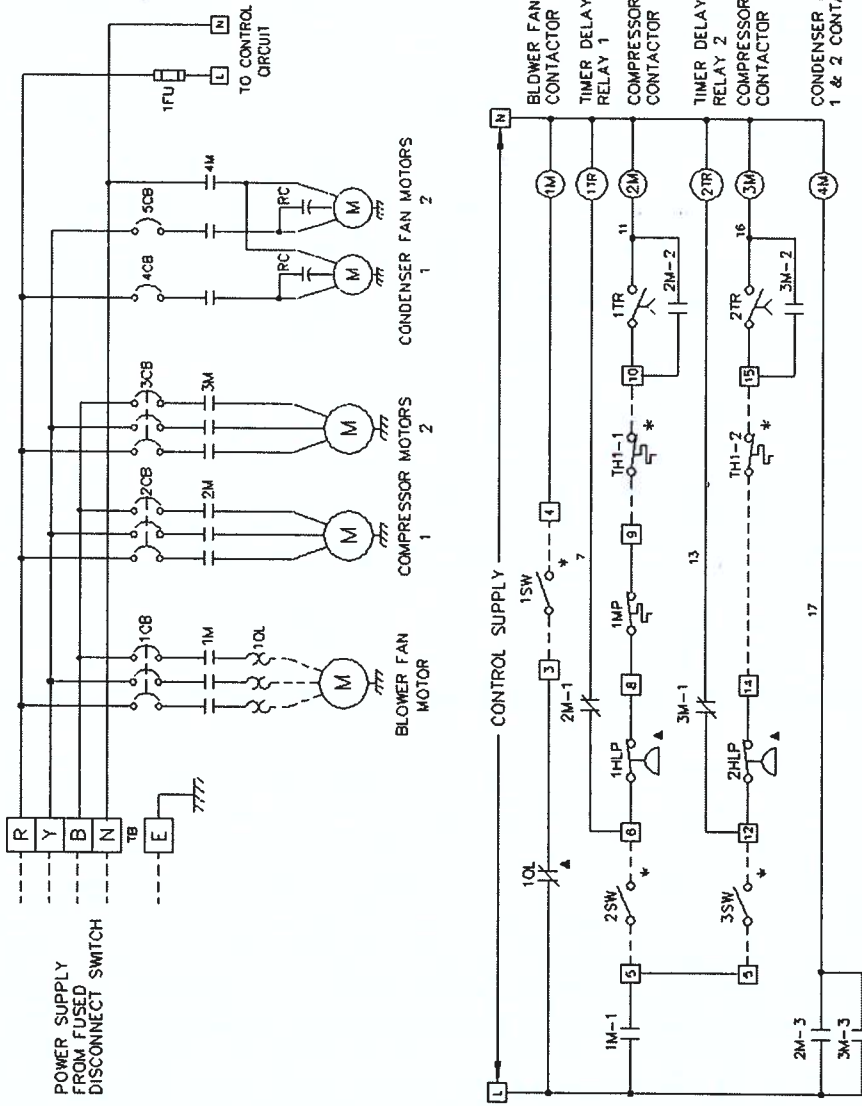
— STANDARD REF LINE
 - - - OPTIONAL REF LINE - FOR OPTIONAL ITEM ADDED ONLY

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

WIRING DRAWING ACCS570

FORM NO. 10/16/20/05 REV. 01/13

WITH IEC DIRECT-ON-LINE (DOL) OPTION



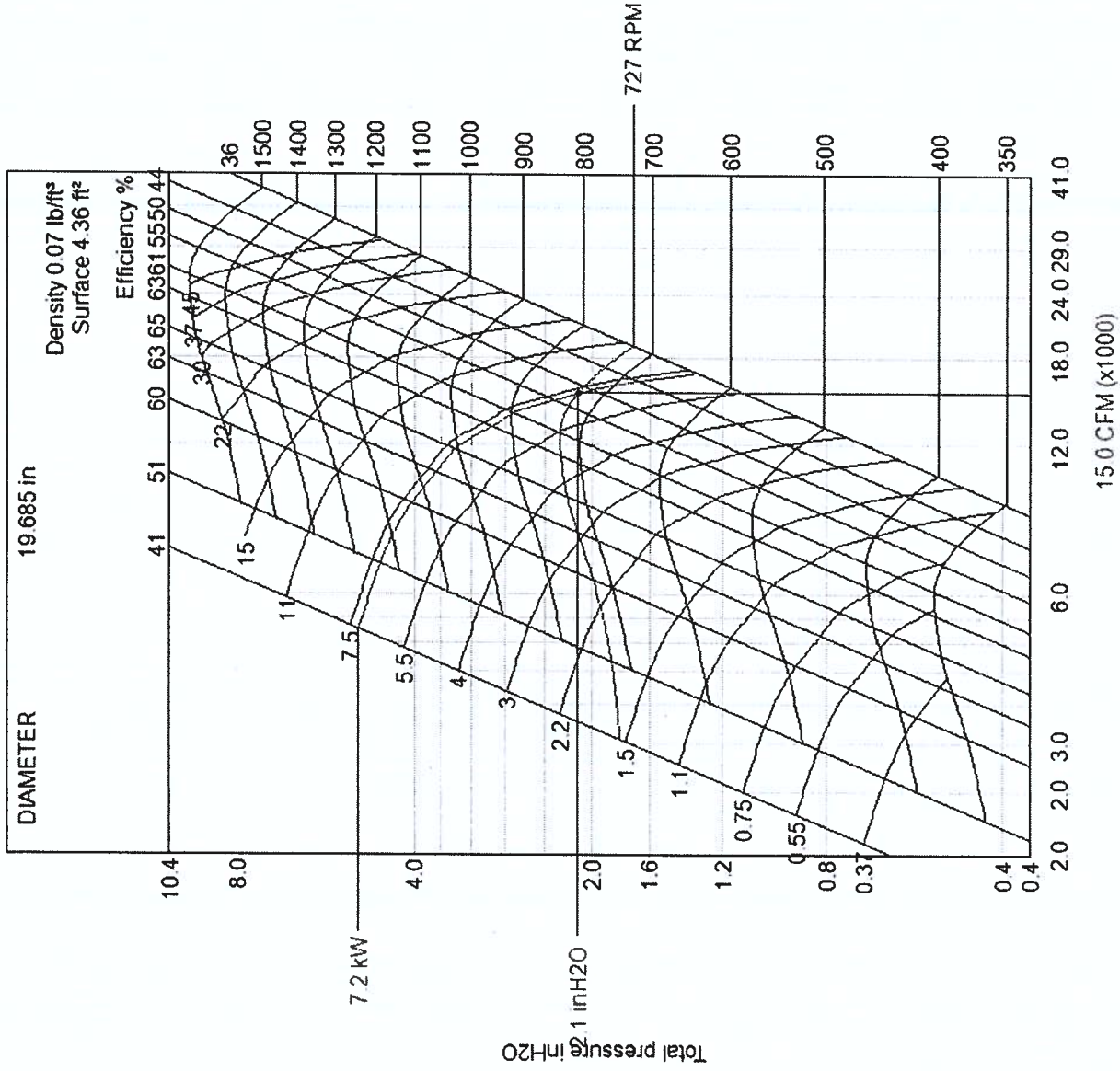
LEGEND

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- ▲ = SEE NOTE 'n'

DUNHAM-BUSH INDUSTRIES SON. BIDDING	
TITLE: SCHEMATIC WIRING DIAGRAM	
PROJECT: TYPICAL WIRING DIAGRAM	THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SON. BRO. AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF COMPANY
MODEL: ACCS/BACCS DUCTED SPLIT	DRAWN BY: DATE:
UNIT NO:	DESIGNED BY: DATE:
DESCRIPTION	CHECKED BY: DATE:
DATE DRN. BY	APPROVED BY: DATE:
DATE DESG'D BY	SHEET 1 OF 1
DATE CHK'D BY	F.O. NO:
DATE APP'D BY	-

Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



Fan air flow CFM (x1000)

15.0 CFM (x1000)

TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	460V/3/60HZ
Unit nomenclature	6ACCS700-QG + 6EB700D-QG		
Altitude	0	ft	Approval
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	20x25x1(3), 25x25x1(6)		
DX COOLING COIL			
Type	Ø1/2	Number of coil	1
Rows	4	Face area	34.03 ft ²
Fins per inch	10	Face velocity	505 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	640800 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	442555 Btu/h	Leaving air (DB)	55.9 °F
Air pressure drop	0.6 inH2O	Leaving air (WB)	54.7 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor	2 X ZP154 TDM		
Type	Scroll, Fixed Speed	Quantity	4
Total LRA	600.0 A	Total Power	49.8 kW
		Total Amps	74.9 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	560
Air Flow	17200 CFM	Fan Speed	630 RPM
External Static Pressure	0.5 inH2O	Absorbed Power	7.2 kW
Total Static Pressure	1.5 inH2O	Motor Horsepower	15 HP
Quantity	1	FLA	19.9 A
		Locked rotor current (LRA)	129.1 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	2 2/3 HP
Quantity	1	FLA (each)	4 A
Condenser Fan Motor	800MM	Ambient Temperature	95 °F
Quantity	3		
ELECTRICAL SUMMARY			
Unit FLA	106.8 A	MCA	111.5 A
Total Power Input	63.68 kW	MFS	150 A
EER	10.06	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
NOTES			
Manufacturer reserves the right to change specifications without prior notice.			



SPECIFICATIONS

1 GENERAL

The air-cooled condensing section shall consist of the compressor(s); condenser coil; propeller condenser fan(s) with motor and drive assembly.

The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

4 EVAPORATOR COIL

Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
(only applicable for cooling only models)
- Copper Fin
- Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier (Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class 0 (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV) (Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non- contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



Air-Cooled Split

Options Guide

(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

**23. BMS Communication Cards
(Micro-Vision or Vision must be selected)
(Model 108 and above)**

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

**28. Electric Heater Starter
(Electric Heater & IEC DOL must be selected)**

Contactors and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

**30. Compressor Soft Starter
(IEC DOL must be selected)**

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP. : ZR 160 TDM(2) (R407C)
 ZP 154 TDM(2) (R410A)
 COIL SIZE : 6 5/8x48x65Hx144Lx12RPI (SLIT)
 COND. CIR. : 4 1/2" (28+2B) IN/OUT
 SUBCOOL CIR. : 4 1/2" 6 IN/OUTx(2)
 LIQUID Ø : 1 5/8x(2)
 COND. FAN MTR : 7/8x(2)
 FAN Ø : 805MMx(3)

CONDENSER WITH SLIT FINS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES (MM)

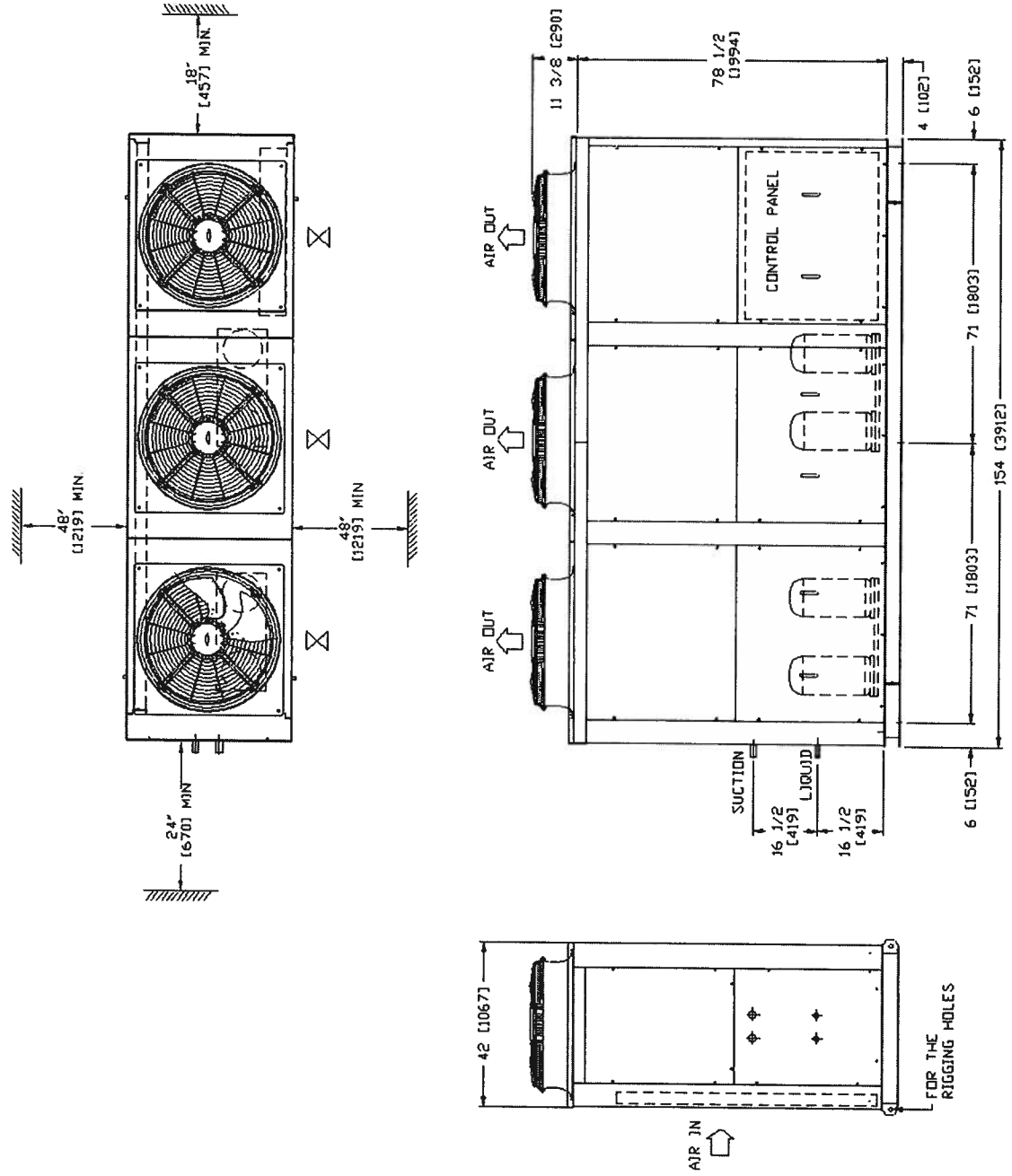
DESIGNED BY	ALYN	DATE	21-09-2012
DESIGNED BY	JOSEPHY	DATE	20/12/2017
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	BY
1.2	UPDATE RAYDA DATA		
1.1	CHANGE CONDENSER FAN TYPE. REVISE DRAWING		



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LOCATION.	
QTY.	
MODEL	6ACCS 700-P/G
PROJECT	STANDARD
TITLE	A/C CONDENSING UNIT
DRAWING NO	82449A-019
SCALE	N.T.S
SHEET	1 OF 1



CERTIFIED DRAWING

BLOWER : FDA 560C
 COIL SIZE : ϕ 1/2"ARx56THx70FLx10FPI
 CIRCUMFERENCE : 4 T/C. (30+26) IN/OUT
 LIQUID ϕ : 1 5/8 x (2)
 FILTER SIZE : 7/8 x (2)
 FILTER SIZE : 25 x 25 x 1 - 3

FILTER ARRANGEMENT

25	25	25
25	25	25
20	25	25

THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT. RIGHT HAND PIPING. ALL DIMENSIONS ARE IN INCHES (MM)

DRAWN BY	ALYN	DATE	09-02-2011
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	DRN BY	CHK BY	APP'D BY



DUNHAM-BUSH INDUSTRIES SON. B.H. (Quantity)

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LOCATION:

QTY.

MODEL 6EB 700D

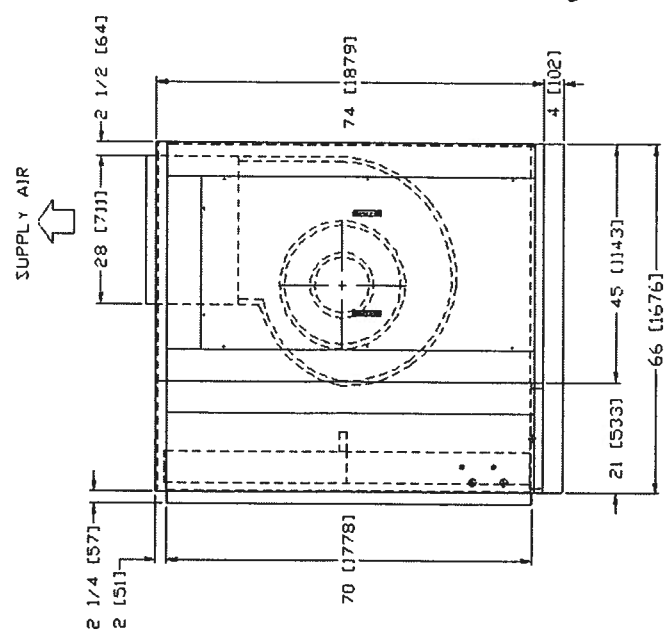
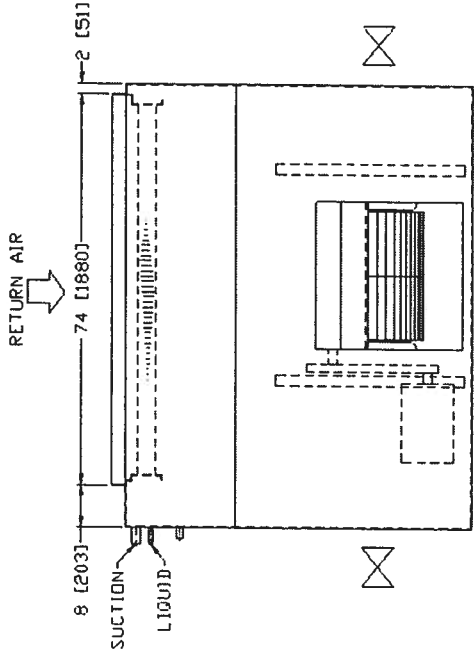
PROJECT STANDARD

TITLE

EVAPORATOR BLOW UNIT

DRAWING NO 80779A-019 A3

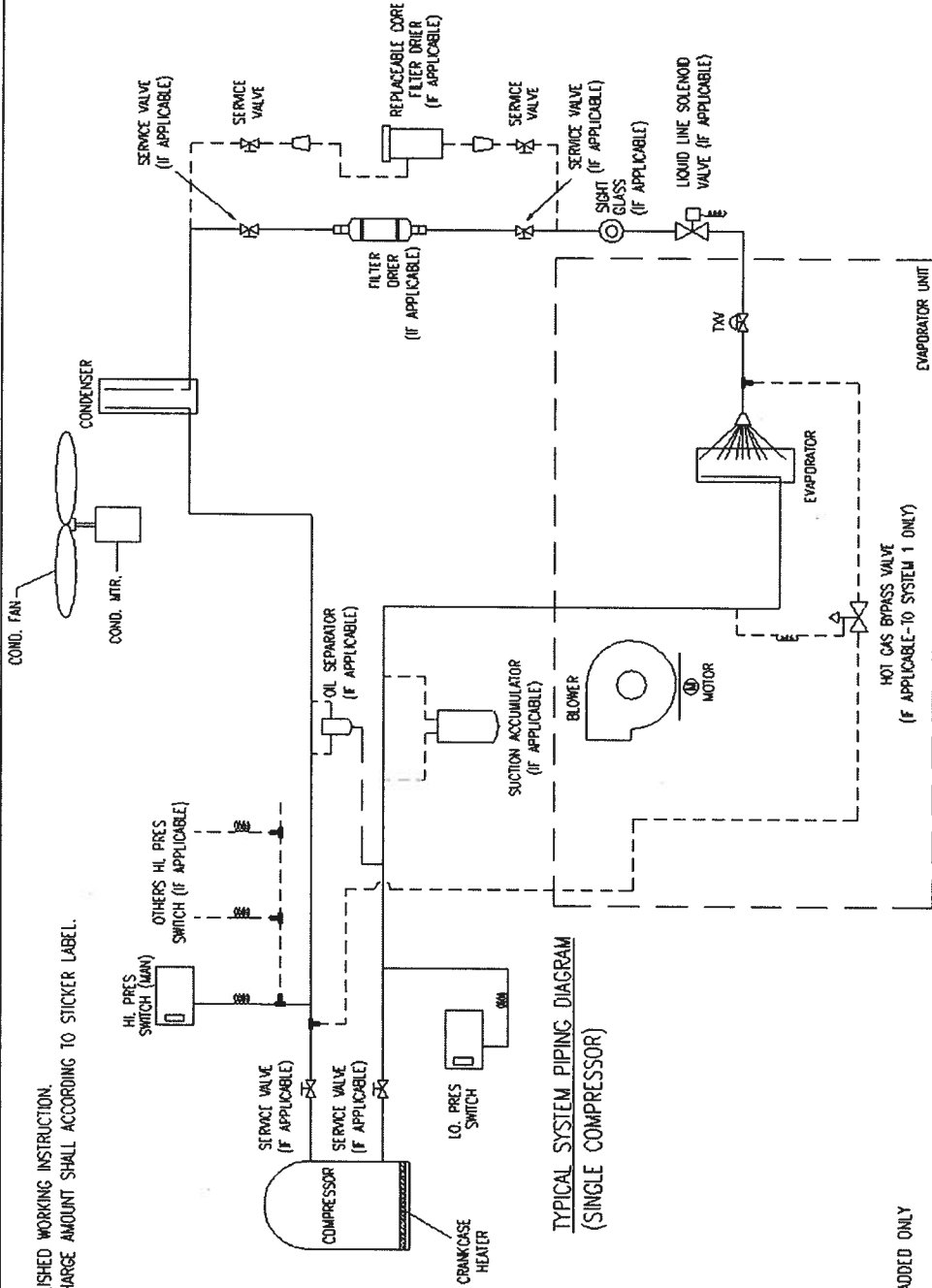
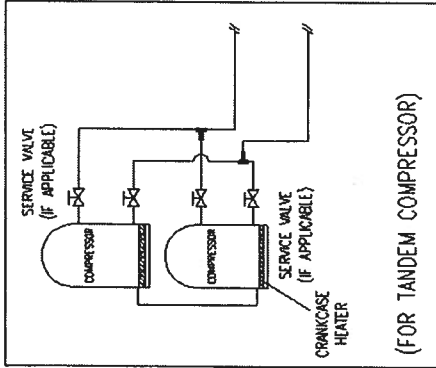
SCALE : N.T.S SHEET 1 OF 1



PIPING DRAWING ACCS700

TG/ENG/ED/04 REV07 09/13

NOTE:
 1) SYSTEM LEAK TEST SHALL ACCORDING TO DB'S ESTABLISHED WORKING INSTRUCTION.
 2) CHARGE LIQUID REFRIGERANT ONLY AT LIQUID LINE. CHARGE AMOUNT SHALL ACCORDING TO STICKER LABEL.



TYPICAL SYSTEM PIPING DIAGRAM
(SINGLE COMPRESSOR)

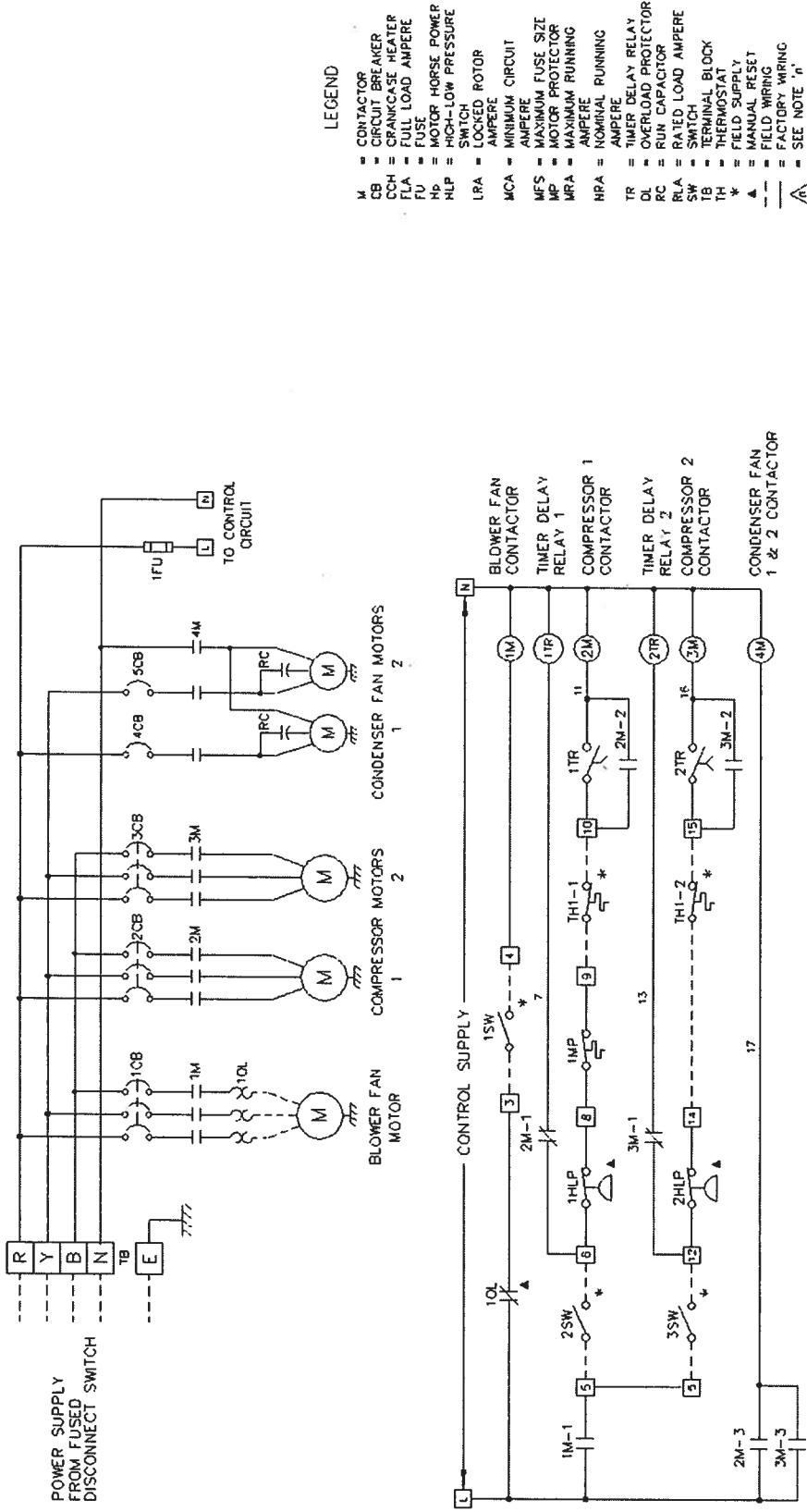
— STANDARD REF LINE

- - - OPTIONAL REF LINE - FOR OPTIONAL ITEM ADDED ONLY

DUNHAM-BUSH INDUSTRIES SDN. BHD. THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SDN BHD AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF THE COMPANY.		TITLE: SCHEMATIC PIPING DIAGRAM ACCS/6ACCS DUCTED SPLIT COOLING ONLY	
ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED THIRD ANGLE PROJECTION		TOLERANCES UNLESS OTHERWISE SPECIFIED 0 DEC ±.1 1 DEC ±.06 2 DEC ±.03 3 DEC ±.015 ANGLE 1°	
MATERIAL:		DRAWN BY: DATE: DESIGNED BY: DATE: CHECKED BY: DATE: APPROVED BY: DATE:	
REV. ECA NO.	DESCRIPTION	DRN'D BY DATE DSG'D BY DATE CHK'D BY DATE APP'D BY DATE	DRAWING NUMBER: STANDARD A3 SCALE: N.T.S. SHEET 1 OF 1

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

WITH IEC DIRECT-ON-LINE (DOL) OPTION



LEGEND

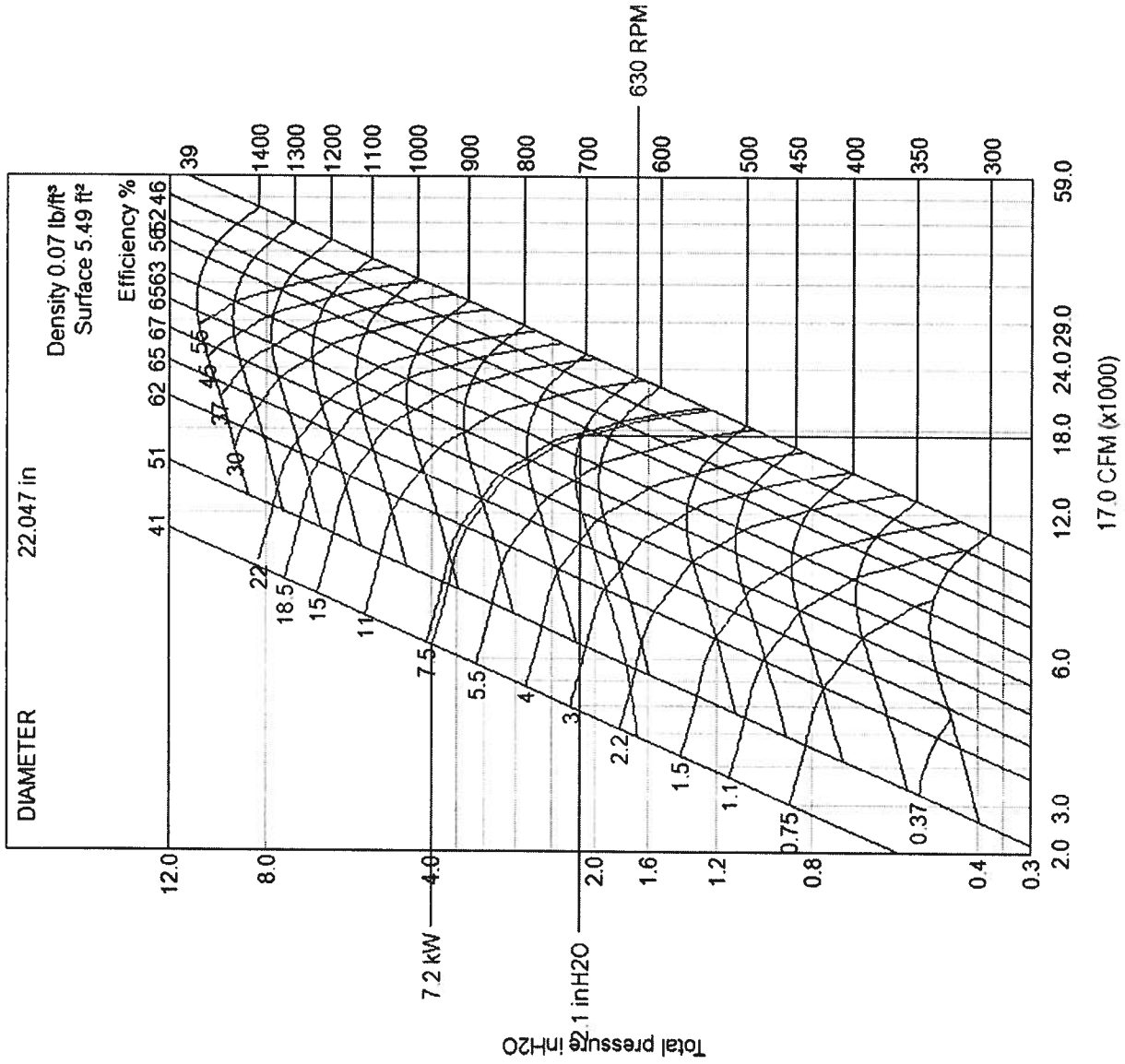
- M = CONTACTOR
- CB = CIRCUIT BREAKER
- CCH = CRANKCASE HEATER
- FLA = FULL LOAD AMPERE
- FU = FUSE
- HP = MOTOR HORSE POWER
- HLP = HIGH-LOW PRESSURE SWITCH
- LRA = LOCKED ROTOR AMPERE
- MCA = MINIMUM CIRCUIT AMPERE
- MFS = MAXIMUM FUSE SIZE
- MP = MOTOR PROTECTOR
- MRA = MAXIMUM RUNNING AMPERE
- HRA = NOMINAL RUNNING AMPERE
- TR = TIMER DELAY RELAY
- DL = OVERLOAD PROTECTOR
- RC = RUN CAPACITOR
- RLA = RATED LOAD AMPERE
- SW = SWITCH
- TB = TERMINAL BLOCK
- TH = THERMOSTAT
- * = FIELD SUPPLY
- Δ = MANUAL RESET
- = FIELD WIRING
- △ = FACTORY WIRING
- = SEE NOTE 'n'

REV.	DESCRIPTION	DATE	DRN. BY	ISS'D BY	CHK'D BY	APP'D BY
PROJECT: TYPICAL WIRING DIAGRAM MODEL: ACCS/6ACCS DUCTED SPLIT UNIT NO.:						
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DRAWN BY: DATE:						
DESIGNED BY: DATE:						
CHECKED BY: DATE:						
APPROVED BY: DATE:						
TITLE: SCHEMATIC WIRING DIAGRAM						F.O. NO.:
SHEET 1 OF 1						



Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



TECHNICAL REPORT



Project name	OOG condensers		
Submitted by	Leo	Date	11/22/2021
Customer	JWS	Quantity	1
OVERVIEW			
System Type	Air-Cooled Split	Refrigerant	R410A
Series	ACCS	Power supply	208V/3/60HZ
Unit nomenclature	6ACCS700-QG + 6EB700D-QG		
Altitude	0	ft	Approval
FILTER			
Type	Filter 1" 70% Eff		
Size (Qty)	20x25x1(3), 25x25x1(6)		
DX COOLING COIL			
Type	Ø1/2	Number of coil	1
Rows	4	Face area	34.03 ft ²
Fins per inch	10	Face velocity	505 ft/min
Refrigerant	R410A	Entering air (DB)	80 °F
Capacity (Total)	639094 Btu/h	Entering air (WB)	67 °F
Capacity (Sensible)	441872 Btu/h	Leaving air (DB)	56.1 °F
Air pressure drop	0.6 inH ₂ O	Leaving air (WB)	54.7 °F
COMPRESSOR (OR EQUIVALENT MODELS)			
Compressor	2 X ZP154 TDM		
Type	Scroll, Fixed Speed	Quantity	4
Total LRA	1200.0 A	Total Power	51.8 kW
		Total Amps	161.3 A
FAN (EVAPORATOR)			
Type	Belt Driven	Model	560
Air Flow	17200 CFM	Fan Speed	630 RPM
External Static Pressure	0.5 inH ₂ O	Absorbed Power	7.2 kW
Total Static Pressure	1.5 inH ₂ O	Motor Horsepower	15 HP
Quantity	1	FLA	44.2 A
		Locked rotor current (LRA)	286.1 A
CONDENSER (AIR COOLED)			
Model	Ø3/8	Motor HP (each)	2 2/3 HP
Quantity	1	FLA (each)	7.5 A
Condenser Fan Motor	800MM	Ambient Temperature	95 °F
Quantity	3		
ELECTRICAL SUMMARY			
Unit FLA	228 A	MCA	238.1 A
Total Power Input	65.26 kW	MFS	300 A
EER	9.79	IEER	n/a
OPTIONS			
DESCRIPTION			
SV: Suction/Discharge/Liquid Line Service Valves			
CU-C: Condenser Coil Fin Materials - Copper			
CG: Condenser Coil Guard			
DOL2: IEC DOL (Non UL)			
MII: Door Interlock Main Incoming Isolator			
PFR: UVR/Phase Failure Protect			
IR33: Controller - IR33			
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The evaporator blower section shall consist of the blower fan and motor assembly; direct expansion coil and a filter frame for flat filters. The units shall be capable to operate up to 115oF [46oC] ambient temperature without failure.

2 CABINET

The unit cabinet shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance up to 1000 hours salt spray test according to ASTM B-117. Evaporator section shall be of 1/2"[13mm] thick x 1 1/2 lb/ft³ [24kg/m³] density (up to model 760) and 1"[25mm] thick x 2 lb/ft³ [32kg/m³] density (model 800 and above) single skin lined with thermal conductivity of 0.0346W/m.K [0.24Btu.in/ft².h.oF] acoustical fiberglass insulation. The insulation shall have fire resistant of Class O (BS 476 Part 6, 7). Access doors shall be provided for easy service and maintenance of unit internal parts.

3 COMPRESSOR & REFRIGERATION PIPING

Compressor(s) shall be scroll, refrigerant gas cooled and mounted on the base via vibration isolators. 1, 2, 3 or 4 refrigeration circuits shall be piped with copper tubing and include expansion valve with external equalizer, suction accumulator (standard for heat pump models), pressure fittings of manual reset high pressure control and auto reset low pressure safety cutouts as well as charging/access ports in each circuit. Each compressor shall have a crankcase heater installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. The compressors comply with the internationally recognized standards CE and UL.

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Evaporator coil shall be of draw through air design for uniform air distribution. The evaporator coil shall be quality construction of staggered row of 3/8"OD (model 68 to 570) and 1/2"OD (model 640 and above) seamless copper tube, mechanically bonded to aluminium fins with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system. A galvanized and painted drain pan shall be provided to cover the entire coil area. The drain pan shall be designed to incorporate sloped gutter for complete condensate removal.

5 EVAPORATOR BLOWER AND MOTOR

Evaporator blower shall be direct-driven (model 68 to 95) and belt driven (model 108 and above), double-inlet-double-width (DIDW) forward curved. All blowers are statically and dynamically balanced to ensure quiet operation and smooth performance. Heavy-duty V-belt fan drive with cast iron pulleys keyed and secured to the blower shaft shall be provided (model 108 and above).

Motors shall be of totally enclosed fan cooled (TEFC) with IP55 enclosure rating, 4-poles with class F insulation. Motors shall be mounted to an adjustable motor frame. Motor pulleys shall be cast iron, keyed and secured to the motor shaft (model 108 and above).

6 CONDENSER COIL

Condenser coil shall be air cooled with integral sub-cooling circuit, constructed from staggered row of 3/8"OD inner grooved seamless copper tube, mechanically bonded to aluminium fins (aluminium coated fin/ hydrophilic fin for heat pump models) with galvanized coil plates. The coil shall be factory leak and pressure tested to 650psig (45 bar) for R410A system, 450psig (31 bar) for R407C system under water.

7 CONDENSER FAN AND MOTOR

Condenser fan shall be direct driven propeller type. Condenser fan motors shall be of totally enclosed air over (TEAO), 6-poles with class F insulation and wired to unit control panel. Condenser fans shall be constructed of corrosion resistant blades and are statically and dynamically balanced (model 68 and above). The condenser fan assembly shall be provided with heavy gauge and rust resistant steel wire fan guard.

8 FILTERS

Evaporator unit shall be provided with 1" thick washable filters having average arrestance efficiency of 70% as per ASHRAE Standard 52.1 (or equivalent).

9 CONTROL PANEL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be wired without starter and control.



OPTIONS

1. Hot Gas Bypass

The refrigerant circuit (applicable to first in last out refrigeration system only) shall be provided with a hot gas bypass system for low load and low ambient condition (evaporator freeze protection).

2. Suction/Discharge/Liquid Line Service Valves

Service valves shall be provided at each refrigerant lines for service convenience.

3. Evaporator Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
- Copper Fin
- Aluminium fin with DB-Coat™

4. Condenser Coil Fin Materials

In lieu of standard aluminium fin, alternative fin material and/or protective coating include,

- Hydrophilic coated aluminium fin
(only applicable for cooling only models)
- Copper Fin
- Aluminium fin with DB-Coat™

5. Stainless Steel Drain Pan

A stainless steel condensate drain pan shall be provided for the evaporator section in lieu of standard galvanized and painted drain pan.

6. Replaceable Core Filter Drier

(Shipped loose, field installed)

Replaceable filter core drier shall be provided for the convenience of filter driers core replacement.

7. Closed Cell Elastomer Insulation

Evaporator section shall be single skin and lined with 1" closed celled insulation (in lieu of fiberglass insulation) with fire resistant of Class O (BS476 Part 6) and Class 1 (BS476 Part 7).

8. Liquid Line Solenoid Valve (LLSV)

(Shipped loose, field installed)

Liquid line solenoid valve shall be provided for each refrigeration circuit.

9. Condenser Coil Guard

Powder coated wire mesh guard shall be provided for better condenser coil protection.

10. Suction accumulator (only applicable for cooling only models)

Suction accumulator shall be provided to prevent liquid refrigerant migration to compressor during system off-cycle.

11. High and Low Pressure Gauges

Each compressor is provided with unit mounted pressure gauges to monitor high and low side operating pressure.

12. Stainless Steel Fasteners

Stainless steel fasteners shall be provided for outdoor condensing unit in lieu of standard fasteners for corrosion resistance application.

13. Belt Guard

Belt guard shall be provided for belt and pulleys non- contact exposure (model 108 and above, not application to free blow type units).

14. Evaporator Blower Isolator

Rubber or spring isolator shall be provided to dampen vibration caused by motor and blower (model 108 and above, not application to free blow type units).

15. Filter Dryer



Air-Cooled Split

Options Guide

(Shipped loose, field installed)

Filter dryer shall be provided for each refrigeration system and shipped loose for field installation.

16. Sight Glass

(Shipped loose, field installed)

Sight glass shall be provided for each refrigeration system and shipped loose for field installation.

17. Oil Separator

Oil separator shall be provided for each refrigeration system.

18. IEC DOL

The unit mounted control panel enclosure shall be constructed from heavy gauge galvanized steel with epoxy painted for excellent finished, weatherability and corrosion resistance. The enclosure shall conform to IP54. Access door shall be provided for easy access and security. The control panel shall be factory wired and shall include compressor, evaporator fan motor and condenser fan motor circuit breaker and contactors, compressor and evaporator fan motor thermal overload relays, anti-recycling time delay relay, control circuit fuse, power and control circuit terminal blocks and features 230V controls with 380-415V/ 3PH/50HZ (+Neutral) power supply or 115V/230V/24V controls with 208V-230V/380/460V-3PH-60HZ power supply.

19. Door Interlock Main Incoming Isolator

(IEC DOL must be selected)

Incoming Isolator is provided for isolate the main incoming power supply to the unit (model 108 and above).

20. Indicating Lights (IEC DOL must be selected)

Indication provided for high-pressure trip and compressor run (model 108 and above).

21. UVR/Phase Failure Protect

(IEC DOL must be selected)

Phase Failure Relay is provided for over voltage, under voltage and phase loss protection.

22. Unit Controller (IEC DOL must be selected)

(Model 108 and above)

(A) IR33 Carel Controller

Panel mounted thermostat is provided for the unit to control and maintain the room temperature at a constant level or set point.

(B) Micro-Vision

The unit shall be provided with Micro-Vision control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Temperature controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status
- Remote start/stop input
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

(C) Vision 2020i

The unit shall be provided with Vision 2020i control system with the following features,

- The control algorithm and parameters shall be stored in flash memory and EPROM of the controller and shall retain even in the event of power failures, without requiring a backup battery
- PGD Display
- Built in memory for data logging
- Temperature and humidity controlled
- Configurable by user
- Alarm status/display
- Analog input/output display
- Digital input/output status



- Remote start/stop input
- Digital input for customer input alarm
- General alarm output (dry contact)
- Self-diagnostics
- Security password access with multiple access level for advanced settings
- Unit status display

**23. BMS Communication Cards
(Micro-Vision or Vision must be selected)
(Model 108 and above)**

BMS communication card shall be factory installed to enable high level interfacing with BMS system.

- (1) Modbus RTU RS485
- (2) LonWorks
- (3) BACNET MSTP
- (4) BACNET TCPIP
- (5) BACNET PTP
- (6) Webgate for TCPIP
- (7) Modbus TCPIP
- (8) SNMP
- (9) GSM Modem

24. Lock Out Stop (IEC DOL must be selected)

Emergency stop switch provided for Blower Fan.

25. Differential Pressure Switch for Evaporator Blower (IEC DOL must be selected)

Differential pressure switch provided to interlock with the control circuit.

26. Voltmeter (IEC DOL must be selected)

Voltmeter and selector switch provided for voltage display (model 108 and above).

27. Ammeter (IEC DOL must be selected)

Ammeter and selector switch provided for current display (model 108 and above).

**28. Electric Heater Starter
(Electric Heater & IEC DOL must be selected)**

Contactors and circuit breaker shall be provided for electric heater (model 480 and above).

29. Low Ambient Kit (standard for Heat Pump unit)

Fan cycling for better performance during low ambient (model 108 and above).

**30. Compressor Soft Starter
(IEC DOL must be selected)**

Soft-Starter for compressors to reduce the starting current (model 108 and above).

31. Electric Heater

Electric heater shall be provided for heating purpose (model 480 and above). Please consult factory for different heater kW.

- 480 / 3Stg / 15 kw
- 510 / 3Stg / 15 kw
- 570 / 3Stg / 15 kw
- 640 / 3Stg / 18 kW
- 700 / 3Stg / 18 kW
- 760 / 3Stg / 18 kW
- 800 / 4Stg / 18 kW
- 890 / 4Stg / 18 kW
- 960 / 4Stg / 18 kW
- 1020 / 4Stg / 21 kw
- 1140 / 4Stg / 21 kw
- 1340 / 5Stg / 21 kW
- 1520 / 5Stg / 21 kW

32. Star Delta Starter Evaporator Motor



Air-Cooled Split

Options Guide

(IEC DOL must be selected)

Star delta starting method available for evaporator motor (model 108 and above).

33. Nominal Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Nominal Evaporator motor (model 108 and above).

34. Max Evaporator Motor Soft Starter

(IEC DOL starter must be selected)

Soft-Starter available to reduce the starting current for Maximum sized Evaporator motor (model 108 and above).

35. VFD for Condenser Motor

(Low ambient kit & IEC DOL must be selected)

Variable Frequency Drive (VFD) on condenser fan motors (base fans) with pressure transducer added for more accurate control (model 108 and above)

36. 24VAC Fire Interlock Relay with Transformer

(IEC DOL must be selected)

24VAC fire relay and transformer shall be added to receive fire signal from fire control panel to trip the unit.

37. Dirty Filter Relay & Indication Light

(IEC DOL must be selected)

Indication on filter status shall be provided as maintenance reminder

38. High and Low Pressure Switches (Adjustable)

Each compressor is provided with unit mounted adjustable pressure switches to monitor high and low side operating pressure.

CERTIFIED DRAWING

COMP. : 2R 160 TDM(2) (R407C)
 : 7P 154 TDM(2) (R410A)
 COIL SIZE : 3/8"R-88Hx44x112PFI (SLIT)
 COND. CIR. : 4 T/C. (28x28) IN/OUT
 SUBCOOL CIR. : 4 T/C. (28x28) IN/OUT
 SUCTION Ø : 1 5/8x(2)
 LIQUID Ø : 7/8x(2)
 COND. FAN MTR : 2 2/5 HPx(3)
 FAN Ø : 805MMx(3)

CONDENSER WITH SLIT FINS
 DOUBLE DOOR CONTROL PANEL
 ALL DIMENSIONS ARE IN INCHES (MM)

DESIGNED BY	ALYN	DATE	21-09-2012
DESIGNED BY	JOSEPHW	DATE	20/12/2017
CREATED BY		DATE	
APPROVED BY		DATE	

1.2 UPDATE REVISION DATA
 1.1 CHANGE CONDENSER FAN TYPE
 REVISION DATE
 15.10.14 DDP

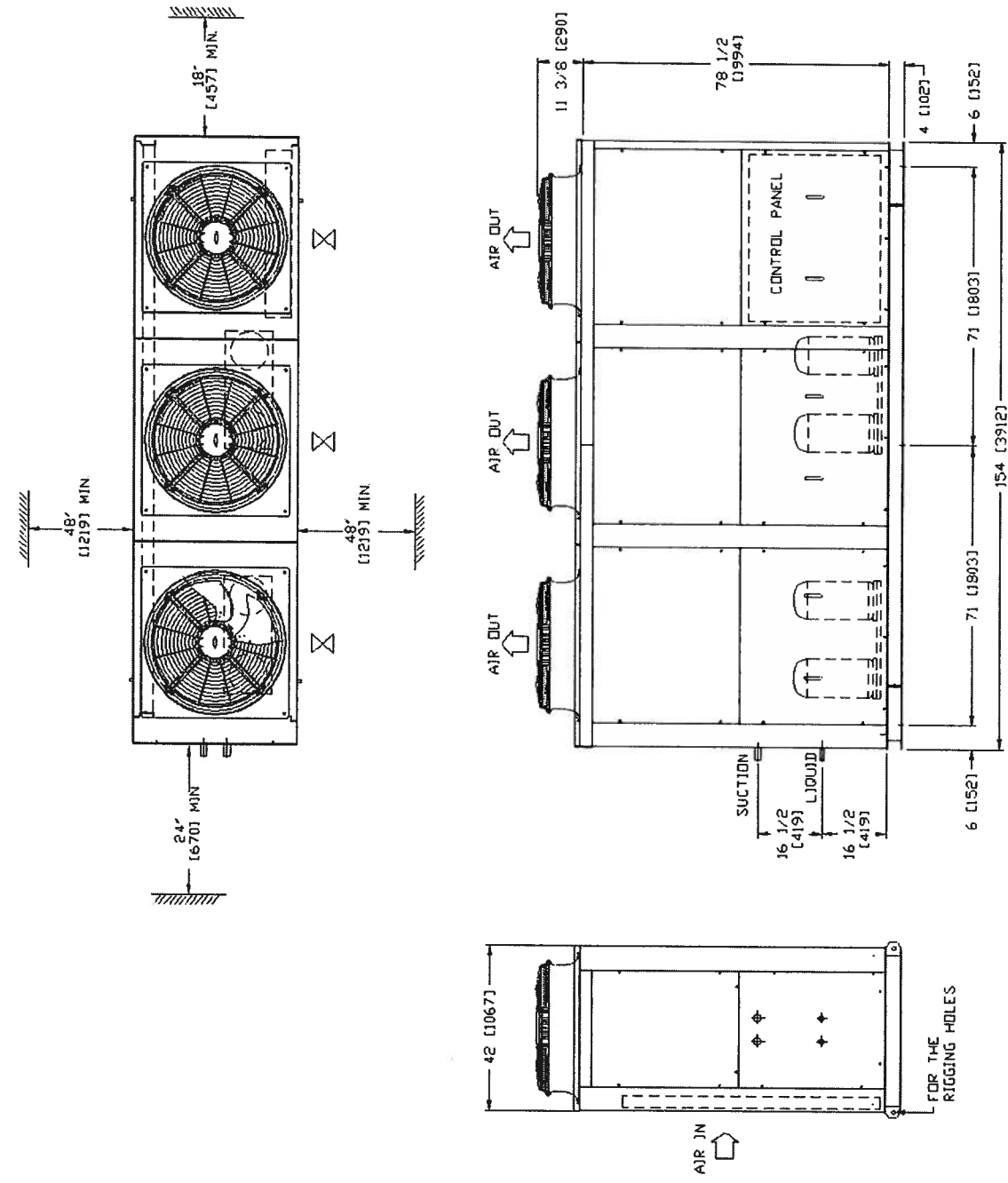
REV	DESCRIPTION	DATE	DRN BY



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LOCATION	
QTY.	
MODEL	6ACCS 700-P/G
PROJECT	STANDARD
TITLE	A/C CONDENSING UNIT
DRAWING NO	82449A-019
SCALE	N.T.S
SHEET	1 OF 1



CERTIFIED DRAWING

BLOWER : FDA 560C
 COIL SIZE : # 1/2-4R*56TH*70FL*10FPI
 CIRCUMFERY : 4 T/C. (30+26) IN/OUT
 SUCTION Ø : 1 5/8 x (2)
 LIQUID Ø : 7/8 x (2)
 FILTER SIZE : 20 x 25 x 1 - 3
 : 25 x 25 x 1 - 6

FILTER ARRANGEMENT

25	25	25	25
25	25	25	25
20	25	25	25

THE PIPES LOCATION SHOWN IN THIS DRAWING MAY NOT BE NECESSARY IDENTICAL TO THE ACTUAL UNIT. RIGHT-HAND PIPING. ALL DIMENSIONS ARE IN INCHES (MM)

DRAWN BY	ALYN	DATE	09-02-2011
CHECKED BY		DATE	
APPROVED BY		DATE	

REV	DESCRIPTION	DATE	DRN BY	CHK BY	APP'D BY



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LOCATION.

QTY.

MODEL 6EB 700D

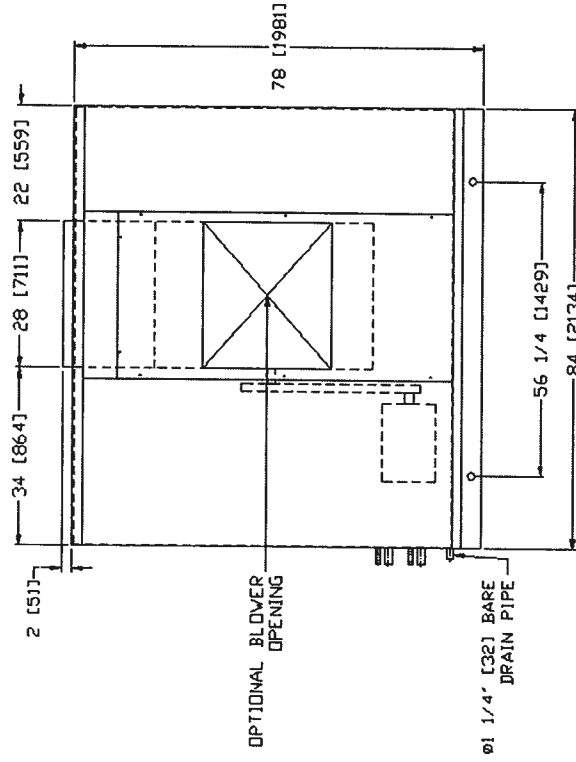
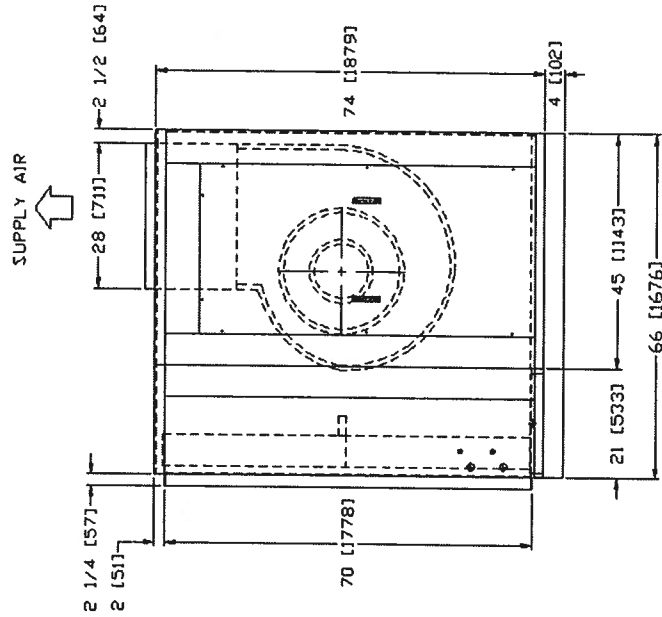
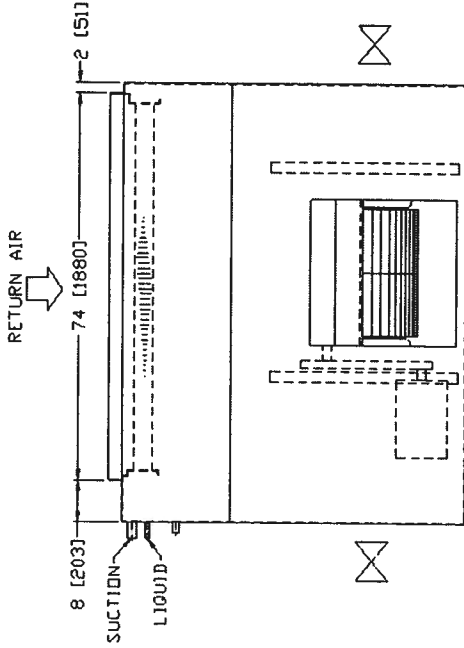
PROJECT STANDARD

TITLE

EVAPORATOR BLOW UNIT

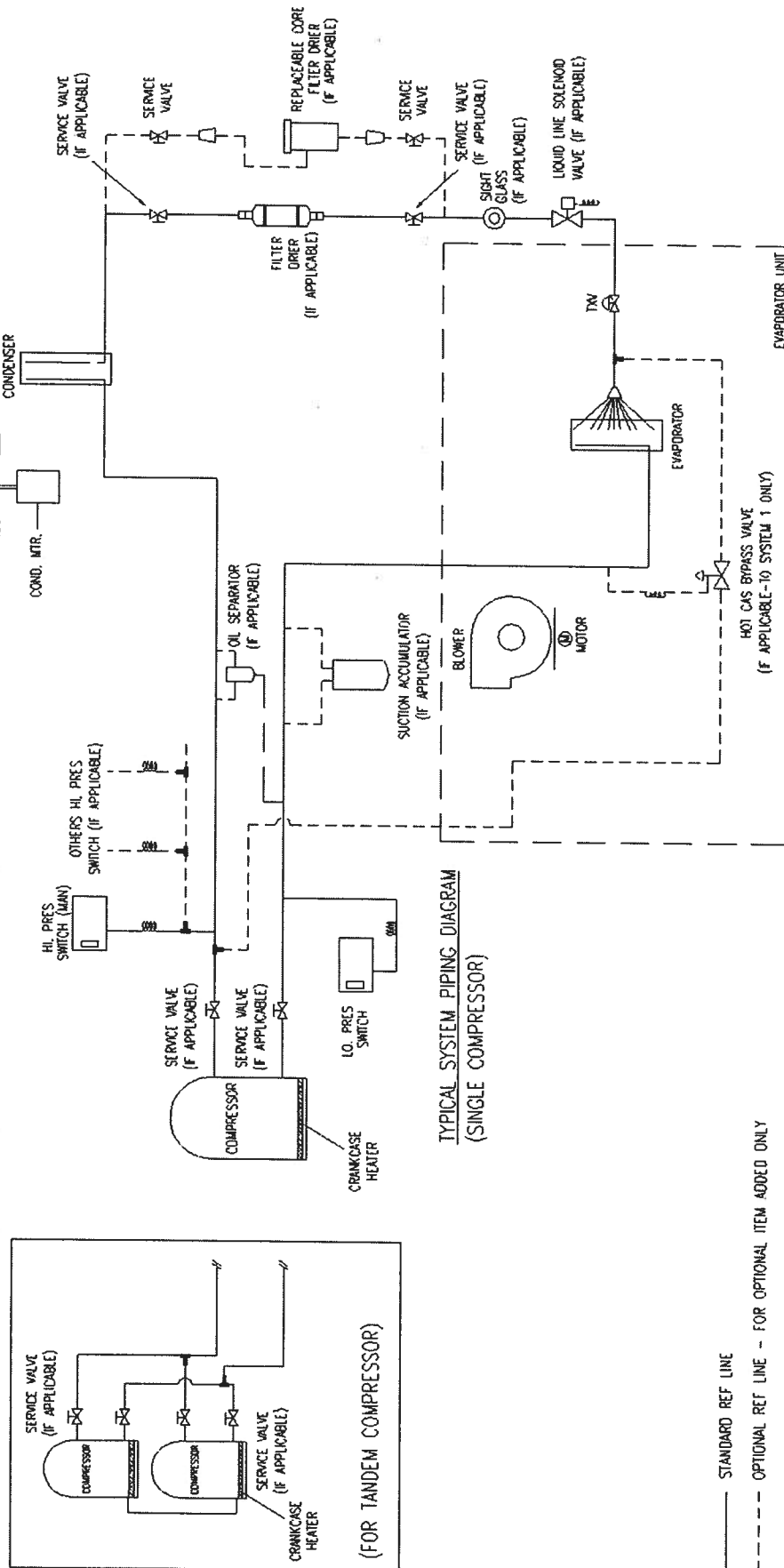
DRAWING NO 80779A-019 A3

SCALE : N. T. S SHEET 1 OF 1



PIPING DRAWING ACCS700

NOTE:
 1) SYSTEM LEAK TEST SHALL ACCORDING TO DB's ESTABLISHED WORKING INSTRUCTION.
 2) CHARGE LIQUID REFRIGERANT ONLY AT LIQUID LINE. CHARGE AMOUNT SHALL ACCORDING TO STICKER LABEL.



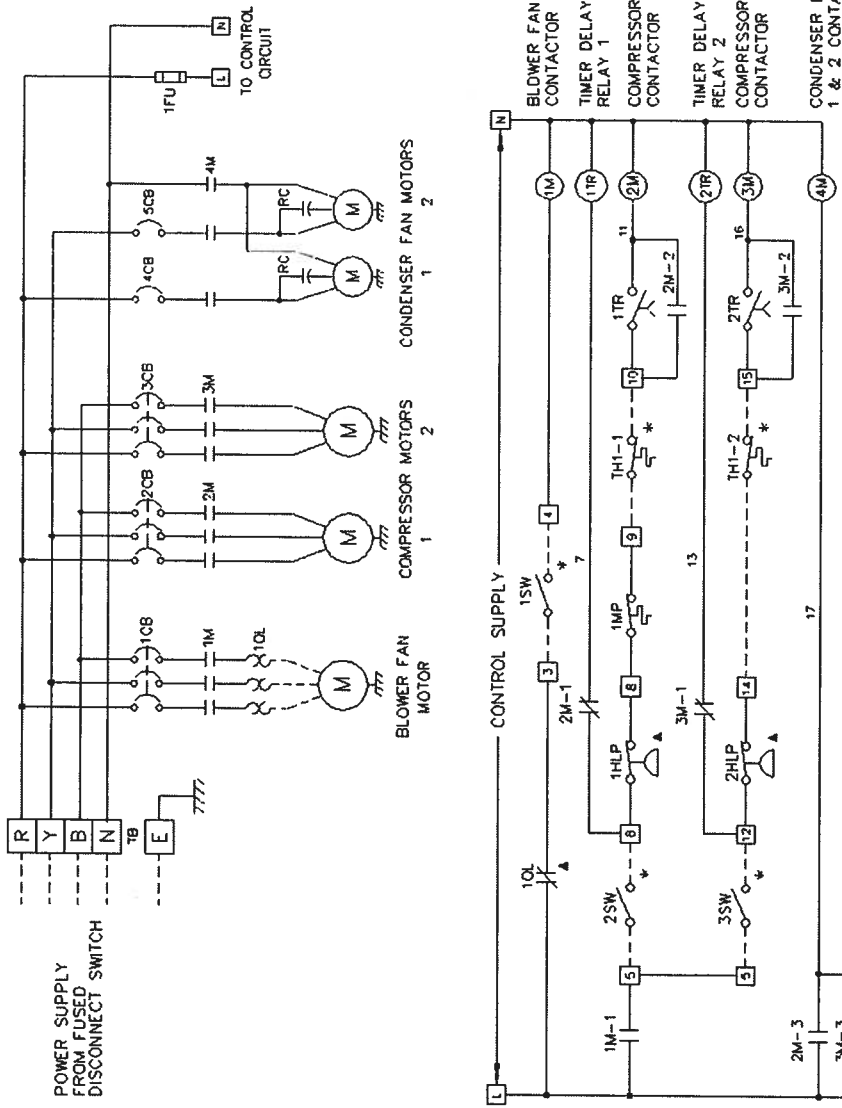
TYPICAL SYSTEM PIPING DIAGRAM
(SINGLE COMPRESSOR)

— STANDARD REF LINE
 - - - OPTIONAL REF LINE -- FOR OPTIONAL ITEM ADDED ONLY

DUNHAM-BUSH INDUSTRIES SDN. BHD.									
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TITLE: SCHEMATIC PIPING DIAGRAM ACCS/6ACCS DUCTED SPLIT COOLING ONLY									
DRAWING NUMBER: STANDARD A3									
SCALE: N.T.S. SHEET 1 OF 1									
MATERIAL:									
TOLERANCES UNLESS OTHERWISE SPECIFIED: <table border="1"> <tr> <td>0. DEC</td> <td>± 0.5</td> </tr> <tr> <td>1. DEC</td> <td>± 0.05</td> </tr> <tr> <td>2. DEC</td> <td>± 0.005</td> </tr> <tr> <td>ANGLE</td> <td>± 1°</td> </tr> </table>		0. DEC	± 0.5	1. DEC	± 0.05	2. DEC	± 0.005	ANGLE	± 1°
0. DEC	± 0.5								
1. DEC	± 0.05								
2. DEC	± 0.005								
ANGLE	± 1°								
THIRD ANGLE PROJECTION									
ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED									
REV. / ECA NO.	DESCRIPTION								
DRN'D BY	DSG'D BY								
CHK'D BY	APP'D BY								
DATE									
PURCHASE: MANUFACTURE									
DRAWN BY: DATE:									
DESIGNED BY: DATE:									
CHECKED BY: DATE:									
APPROVED BY: DATE:									

Piping diagram may differ due to options selected. Please consult factory for actual piping diagram if required.

WITH IEC DIRECT-ON-LINE (DOL) OPTION



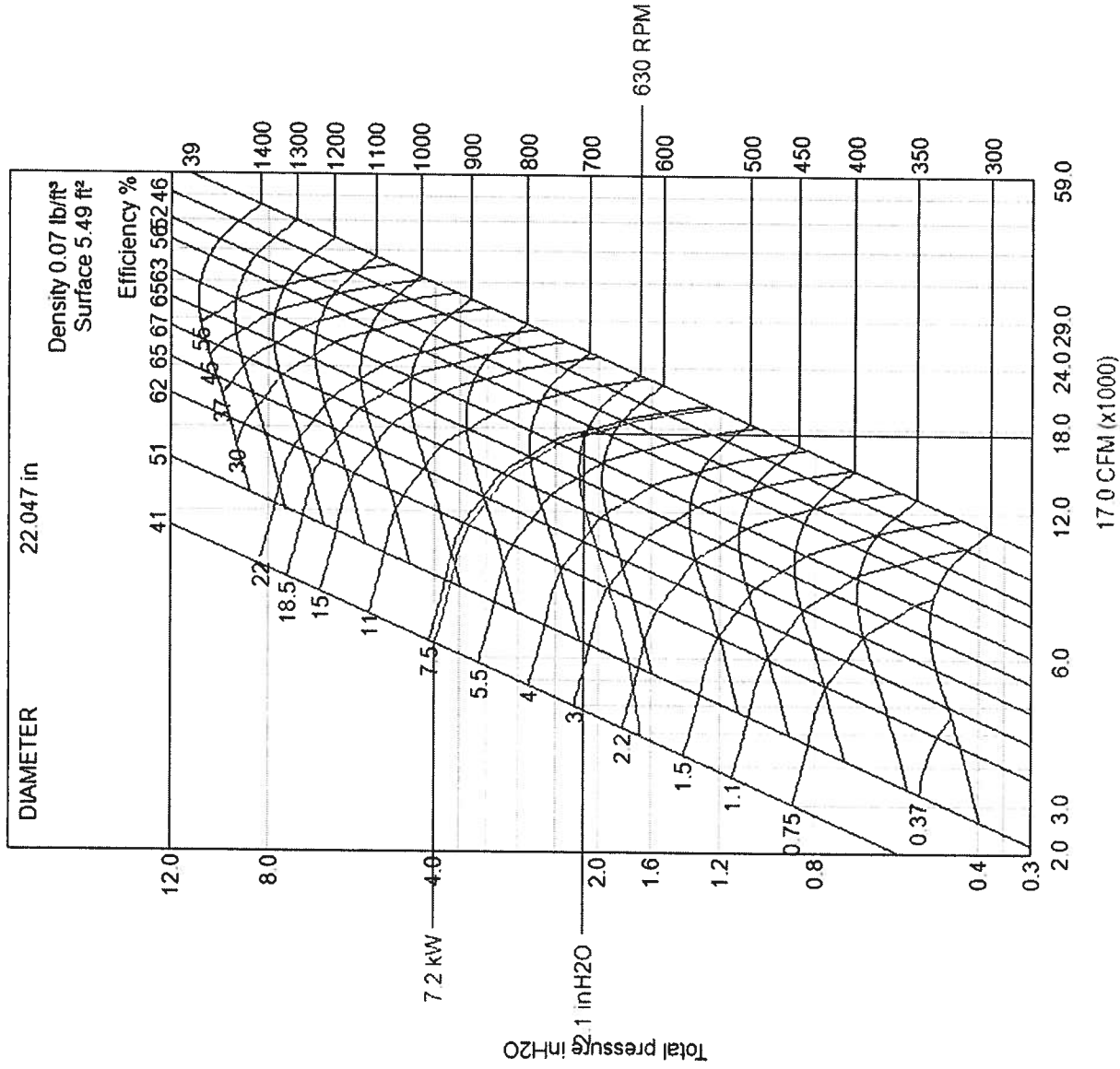
LEGEND

- M = CONTACTOR
- CB = CIRCUIT BREAKER
- CHH = CHAIN HEATER
- FLA = FULL LOAD AMPERE
- FU = FUSE
- Hp = MOTOR HORSE POWER
- HLP = HIGH-LOW PRESSURE SWITCH
- LRA = LOCKED ROTOR AMPERE
- MCA = MINIMUM CIRCUIT AMPERE
- MFS = MAXIMUM FUSE SIZE
- MP = MOTOR PROTECTOR
- MRA = MAXIMUM RUNNING AMPERE
- NRA = NOMINAL RUNNING AMPERE
- TR = TIMER DELAY RELAY
- DL = OVERLOAD PROTECTOR
- RC = RUN CAPACITOR
- RLA = RATED LOAD AMPERE
- SW = SWITCH
- TH = THERMOSTAT
- TS = THERMISTAT
- * = FIELD SUPPLY
- ▲ = MANUAL RESET
- △ = FIELD WIRING
- △ = FACTORY WIRING
- △ = SEE NOTE 'n'

		DUNHAM-BUSH INDUSTRIES SON. BUILDING	
PROJECT: TYPICAL WIRING DIAGRAM		THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SON. BLD. AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF COMPANY	
MODEL: ACCS/6ACCS DUCTED SPLIT	DRAWN BY:	DATE:	DATE:
UNIT NO:	DESIGNED BY:	DATE:	DATE:
DESCRIPTION:	CHECKED BY:	DATE:	DATE:
REV.	DATE	DRN. BY	DESG'D BY
DATE	DRN. BY	CHK'D BY	APP'D BY
TITLE: SCHEMATIC WIRING DIAGRAM		DRAWING NO:	
F.O. NO:		SHEET 1 OF 1	

Wiring diagram may differ due to options selected. Please consult factory for actual wiring diagram if required.

EVAPORATOR SIDE FAN GRAPH



Fan air flow CFM (x1000)

Bid Abstract

Memorandum of Evaluation



ADMINISTRATION & FINANCE
Consolidated Procurement Office

December 7, 2021

TO: for: Dr. Thomas W. Krise, President APPROVED / DISAPPROVED

VIA: Mr. Randall V. Wiegand, Vice President Administration and Finance *[Signature]*
Ms. Abigail Martin, Interim Comptroller *[Signature]*

FROM: Ms. Emily G. Gumataotao, Supply Management Administrator *[Signature]*

RE: UOG BID No. B21-17, "PURCHASING OF HVAC EQUIPMENT"

UOG BID No. B21-17 was issued October 22, 2021. There were seventeen (17) prospective bidders that picked up a bid package. Amendment 1 & 2, issued on 10/29/21, Amendment 3 issued on 11/19/21, Amendment 4 issued on 11/22/21, Amendment 5 issued on 11/24/21, and Amendment 6 issued on 12/03/21. Bid opening was held virtually via ZOOM Conference on 12/06/21 at 315pm. Three (3) bidders submitted their proposal on time.

See Bid details below:

Company	Item	Bid offer	QTY	Description
ALL BUSINESS ENTERPRISE		\$1,456,044.40		
	LOCATION UNIT TONS VOLTAGE TVX			
	RFK BUILDING SECOND FLOOR 1 50 208 / 230 2 EA. - 25			\$120,002.50
	RFK BUILDING FIRST FLOOR 1 40 208 / 230 2 EA. -			\$107,574.60
	RFK BUILDING FIRST FLOOR MAIN ENTRANCE 1 15 208 / 230 2 EA. -			\$67,372.50
	RFK BUILDING FIRST FLOOR AV ROOM 1 15 208 / 230 2 EA. -			\$67,372.50
	RFK BUILDING FIRST FLOOR OFFICES 1 20 208 / 230 2 EA. - 10			\$80,461.60
	PIP SECOND FLOOR 1 20 208 / 230 2 EA. -			\$80,461.60
	SCIENCE BUILDING FIRST FLOOR 1 40 208 / 230 2 EA. -			\$107,574.60
	SCIENCE BUILDING SECOND FLOOR 1 40 208 / 230 2 EA. -			\$107,574.60
	SCIENCE BUILDING THIRD FLOOR 1 20 208 / 230 2 EA. -			\$80,461.60
	ENGLISH COMMUNICATION BUILDING CLASSROOM 1 30 208 / 230 2 EA.			\$983,59.60
	COMPUTER CENTER OIT BUILDING FIRST FLOOR 1 50 208 / 230 2 EA. - 25			\$120,002.50
	LECTURE HALL AUDITORIUM 1 20 277 / 460 2 EA. - 10			\$80,461.60
	HSS BUILDING 2 50 277 / 460 2 EA. - 25			\$240,005.00
	HSS BUILDING 1 30 277 / 460 2 EA. - 15			\$98,359.60
	GRAND TOTAL			\$1,456,044.40

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu
Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913
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ADMINISTRATION & FINANCE
Consolidated Procurement Office

JWS \$658,572.00

LOCATION UNIT TONS VOLTAGE TVX	
RFK BUILDING SECOND FLOOR 1 50 208 / 230 2 EA. - 25	\$74,837.72
RFK BUILDING FIRST FLOOR 1 40 208 / 230 2 EA. -	\$59,870.18
RFK BUILDING FIRST FLOOR MAIN ENTRANCE 1 15 208 / 230 2 EA. -	\$22,451.32
RFK BUILDING FIRST FLOOR AV ROOM 1 15 208 / 230 2 EA. -	\$22,451.32
RFK BUILDING FIRST FLOOR OFFICES 1 20 208 / 230 2 EA. - 10	\$29,935.09
PIP SECOND FLOOR 1 20 208 / 230 2 EA. -	\$29,935.09
SCIENCE BUILDING FIRST FLOOR 1 40 208 / 230 2 EA. -	\$59,870.18
SCIENCE BUILDING SECOND FLOOR 1 40 208 / 230 2 EA. -	\$59,870.18
SCIENCE BUILDING THIRD FLOOR 1 20 208 / 230 2 EA. -	\$29,935.09
ENGLISH COMMUNICATION BUILDING CLASSROOM 1 30 208 / 230 2 EA.	\$44,902.64
COMPUTER CENTER OIT BUILDING FIRST FLOOR 1 50 208 / 230 2 EA. - 25	\$74,837.73
LECTURE HALL AUDITORIUM 1 20 277 / 460 2 EA. - 10	\$29,935.09
HSS BUILDING 2 50 277 / 460 2 EA. - 25	\$74,837.73
HSS BUILDING 1 30 277 / 460 2 EA. - 15	\$44,902.64
GRAND TOTAL	\$658,572.00

TONY's WORKSHOP \$584,926.51

LOCATION UNIT TONS VOLTAGE TVX	
RFK BUILDING SECOND FLOOR 1 50 208 / 230 2 EA. - 25	\$55,372.32
RFK BUILDING FIRST FLOOR 1 40 208 / 230 2 EA. -	\$52,856.01
RFK BUILDING FIRST FLOOR MAIN ENTRANCE 1 15 208 / 230 2 EA. -	\$17,711.51
RFK BUILDING FIRST FLOOR AV ROOM 1 15 208 / 230 2 EA. -	\$17,711.51
RFK BUILDING FIRST FLOOR OFFICES 1 20 208 / 230 2 EA. - 10	\$24,262.45
PIP SECOND FLOOR 1 20 208 / 230 2 EA. -	\$24,262.45
SCIENCE BUILDING FIRST FLOOR 1 40 208 / 230 2 EA. -	\$52,856.01
SCIENCE BUILDING SECOND FLOOR 1 40 208 / 230 2 EA. -	\$52,856.01
SCIENCE BUILDING THIRD FLOOR 1 20 208 / 230 2 EA. -	\$24,262.45
ENGLISH COMMUNICATION BUILDING CLASSROOM 1 30 208 / 230 2 EA.	\$36,503.19

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 Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913
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ADMINISTRATION & FINANCE
Consolidated Procurement Office

COMPUTER CENTER OIT BUILDING FIRST FLOOR 1 50 208 / 230 2 EA. - 25	\$55,372.32
LECTURE HALL AUDITORIUM 1 20 277 / 460 2 EA. - 10	\$24,262.45
HSS BUILDING 2 50 277 / 460 2 EA. - 25	\$110,134.64
HSS BUILDING 1 30 277 / 460 2 EA. - 15	\$36,503.19
GRAND TOTAL	\$584,926.51

The Procurement Office has reviewed and analyzed the three (3) bid submissions and recommends **TONY's WORKSHOP** for the award. TONY's WORKSHOP bid submission is found to be responsible and responsive. It is in compliance with the bid specifications and UOG Procurement Regulations Article 3.9.3.

UOG Attendees

Emily G. Gumataotao – SUPPLY MGT ADMINISTRATOR
 Kaimana Terlaje – PROPERTY CONTROL OFFICER

Vendors:

1. Nelia Bangayan	All Business Enterprises Corporation	ONLINE ZOOM
2. Michael Ecalnea	Tony's Workshop	ONLINE ZOOM
3. Gene Bangayan	All Business Enterprises Corporation	ONLINE ZOOM
4. Anthony Scragg	JWS	ONLINE ZOOM

Award is subject to availability of funds.
 Attachment: Bid abstract analysis
 cc: Procurement Files / FMS

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu
 Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913
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**ABSTRACT ANALYSIS
UOG IFB BID NO. B21-17**

Title: PURCHASING OF HVAC EQUIPMENT

Date Issued: 10/22/2021 Date/Time Opened: 12/06/2021/ 3:15 p.m.

**Amendments Issued: Amendment 1 10/29/2021, Amendment 2 10/29/2021, Amendment 3 11/19/2021,
Amendment 4 11/22/2021, Amendment 5 11/24/2021, & Amendment 6 12/03/2021**

This Bid is requested for: Lowest Responsive and Responsible Bidder

	VENDORS/BIDDERS		
	ALL BUSINESS ENTERPRISE	JWS	TONY'S WORKSHOP
Date Bid Submitted	12/06/2021	12/06/2021	12/06/2021
Time Bid Submitted	11:31	11:33	1:21 PM
Business License	X	NOT INCLUDED	NOT INCLUDED
Contact for Contract Administration (B)	X	X	X
Bidder's Qualifications (C)	X	X	X
BID SECURITY (D)	CC - \$218,410.00	CC - \$98,785.80	BB
Major Shareholder Affidavit (E)	X	X	X
Non-Collusion Affidavit (F)	X	X	X
Gratuities, Kickbacks Favors (G)	X	X	X
Ethical Standards (H)	X	X	X
DOL Wage Determination (I)	X	X	X
Contingent Fees (J)	X	X	X
Amendment 1	X	X	X
Amendment 2	X	X	X
Amendment 3	X	X	X
Amendment 4	X	X	X
Amendment 5	X	X	X
Amendment 6	X	X	X

Table 1.0

RFK BUILDING SECOND FLOOR	\$120,002.50	\$74,837.72	\$55,372.32
RFK BUILDING FIRST FLOOR	\$107,574.60	\$59,870.18	\$52,856.01
RFK BUILDING FIRST FLOOR MAIN ENTRANCE	\$67,372.50	\$22,451.32	\$17,711.51
RFK BUILDING FIRST FLOOR AV ROOM	\$67,372.50	\$22,451.32	\$17,711.51
RFK BUILDING FIRST FLOOR OFFICES	\$80,461.60	\$29,935.09	\$24,262.45
PIP SECOND FLOOR	\$80,461.60	\$29,935.09	\$24,262.45
SCIENCE BUILDING FIRST FLOOR	\$107,574.60	\$59,870.18	\$52,856.01
SCIENCE BUILDING SECOND FLOOR	\$107,574.60	\$59,870.18	\$52,856.01
SCIENCE BUILDING THIRD FLOOR	\$80,461.60	\$29,935.09	\$24,262.45
ENGLISH COMMUNICATION BUILDING CLASSROOM	\$983,59.60	\$44,902.64	\$36,503.19
COMPUTER CENTER OIT BUILDING FIRST FLOR	\$120,002.50	\$74,837.73	\$55,372.32
LECTURE HALL AUDITORIUM	\$80,461.60	\$29,935.09	\$24,262.45
HSS BUILDING	\$240,005.00	\$74,837.73	\$110,134.64
HSS BUILDING	\$98,359.60	\$44,902.64	\$36,503.19
GRAND TOTAL	\$1,456,044.40	\$658,572.00	\$584,926.51

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

The University of Guam is a U.S. Land Grant Institution accredited by the Western Association of Schools and Colleges Senior College and University Commission and is an equal opportunity provider and employer.

DELIVERY	18-20 WEEKS	9-12 WEEKS	24 WEEKS
----------	-------------	------------	----------

TABLE 2.0

Service for Maintenance and upkeep	\$51,000.00	\$1,275.00 QUARTER \$5,100.00 ANNUAL	\$26,000.00 QUARTER
Services for disposal	\$11,250.00	INCLUSIVE	\$54,148.63
Replacement/trade in program	TO BE DISCUSSED UPON AWARD.	1 YEAR WARRANTY	\$196,766.42

Attendees: (Print name & sign opposite the firm you represent)

Company/Firm Name	Representative (Print Name)	Signature
All Business Enterprises Corporation	Nelia Bangayan	ONLINE ZOOM
Tony's Workshop	Michael Ecalnea	ONLINE ZOOM
All Business Enterprises Corporation	Gene Bangayan	ONLINE ZOOM
JWS	Anthony Scragg	ONLINE ZOOM

Tabulators:

Emily G. Gumataotao	SMA	ONLINE ZOOM
Kaimana K. Terlaje	Property Control Officer	ONLINE ZOOM

T: +1 671.735.2925 F: +1 671.735.3010 W: www.uog.edu E: uog.bids@triton.uog.edu

Mailing Address: 303 University Drive UOG Station Mangilao, Guam 96913

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


B21-17 ANALYSIS MEMO TO PRES-1

Final Audit Report

2021-12-13

Created:	2021-12-13
By:	Christine Mababayag (ckamm@triton.uog.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAFGtXgqice31osmahUMqtvIn9UD26azq

"B21-17 ANALYSIS MEMO TO PRES-1" History

-  Document created by Christine Mababayag (ckamm@triton.uog.edu)
2021-12-13 - 10:15:18 PM GMT- IP address: 168.123.224.248
-  Document emailed to Anita Borja Enriquez (abe@triton.uog.edu) for signature
2021-12-13 - 10:17:21 PM GMT
-  Email viewed by Anita Borja Enriquez (abe@triton.uog.edu)
2021-12-13 - 11:01:51 PM GMT- IP address: 168.123.224.214
-  Document e-signed by Anita Borja Enriquez (abe@triton.uog.edu)
Signature Date: 2021-12-13 - 11:02:35 PM GMT - Time Source: server- IP address: 168.123.224.214
-  Agreement completed.
2021-12-13 - 11:02:35 PM GMT

BERMAN LAW FIRM

Attorneys at Law

111 W Chalan Santo Papa Ste 503
Hagåtña, Guam 96910
Tele. 671-477-2778
Fax 671-477-4366
Website: www.pacificlawyers.law
Email: djberman@pacificlawyers.law

December 8, 2021

VIA EMAIL [uog.bids@triton.uog.edu];
AND, CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Emily G. Gumataotao
Supply Management Administrator
University of Guam
303 University Drive
UOG Station
Mangilao, Guam 96913

Re: Freedom of Information Act Request for Documents
UOG Invitation for Bid No. B21-17: Purchase HVAC Equipment
Award dated December 7, 2021

To Whom It May Concern:

This is a Freedom of Information Act and Sunshine Law Request.

Your response is due within four (4) days. 5 G.C.A. §10111.

I request that both you and the University of Guam ("UOG") produce a copy of every document, record, letter, notes, e-mail or any other wiring that constitutes the following:

1. The bid submissions and all correspondence and documents of all kind and nature related to bid submissions for the bidders for IFB No. B21-17.
2. All documents that show or relate to the actions of UOG to score, evaluate and rank the No. 1, No. 2, No. 3 and No. 4 bidder.
3. Any correspondence to and from all bidders as concerns the documents in paragraphs 1 and 2 above.



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www.pacificlawyers.law

B21-17976

Emily G. Gumataotao
Supply Management Administrator
University of Guam
December 8, 2021
Page 2

Failure to cooperate and produce the required documents may expose you to civil liability for not complying with the law. 5 G.C.A. § 10112 (\$1,000 fine payable by the employee, not the Government).

Failure to provide the documents requested could be considered criminal, which creates an inherent conflict of interest that would prevent the Attorney General from intervening on your behalf. 5 G.C.A. § 10112(c).

Unless I receive the requested documents pursuant to applicable law on or before **December 15, 2021**, we will assume that you are unwilling to comply with the law unless and until ordered to do so by a court of law under the threat of contempt or criminal sanction.

If the request is not satisfied, we will be constrained to file an expedited proceeding with the Court to seek an in camera review of our petition. In addition to a civil fine, we will request that our costs of court and attorneys' fees be awarded to us and against you for having to take this extraordinary and unnecessary measure. 5 G.C.A. § 10112(d).

Please be governed accordingly.

Sincerely,



Daniel J. Berman

Certification of Procurement Record

CERTIFICATION of COMPLETED PROCUREMENT RECORD

Instructions: After ascertaining the statement's accuracy and truthfulness, the agency's procurement officer (director or head of agency) must sign the Certification below to indicate that the agency has kept a complete procurement record of all documents required by law. The checklist below is provided to ensure that the record is complete, and must be filled out by the procurement officer or administrator. The checklist is comprised of every item that is required by law for an invitation for bid (IFB) or a request for proposal (RFP), and therefore every item, except as noted below, must be checked for the resulting contract to be considered legally sufficient. Please assemble the procurement record in the order stated below and place it in a three-ring binder, with visible tabs for each of the items below appearing in numerical order.

IFB/RFP No: B21-17 Contractor: TONY's WORKSHOP

- 1. Published notice in newspaper of general circulation
- 2. Procurement package (IFB or RFP) issued to bidders or offerors
- 3. Log of distribution of procurement package
- 4. Amendments to IFB or RFP, if any were issued
- 5. Logs of distribution of amendments to IFB or RFP, but only if amendments were issued
- 6. Minutes or summary of pre-submission conferences, but only if conferences were held
- 7. Logs of attendees of pre-submission conferences, but only if conferences were held
- 8. Written questions from bidders or offerors, but only if any questions were received
- 9. Written answers, but only if any questions were received
- 10. Proof that written answers were provided to all potential bidders or offerors, but only if any questions were received
- 11. Log of bids or registry of proposals received
- 12. Each bid or proposal received
- 13. Evaluation of proposals or analysis of bids (bids are not required by law to be analyzed, but may be)
- 14. Tabulation of evaluations or analysis (tabulations are not required by law but recommended)
- 15. Letters to bidders concerning outcome of bid; for offerors, letters informing them of ranking and letter to best qualified offeror inviting negotiations
- 16. Memorandum of evaluations and negotiations (only required for RFP's)
- 17. Notice of intent to award
- 18. Any and all communications from or to anyone concerning any part of ITB or RFP
- 19. Contract, including all draft versions
- 20. Bid protests, if any, and responses thereto
- 21. Any determination required by law as may fit the circumstances

CERTIFICATION: Pursuant to 5 G.C.A. §5250, I hereby certify under penalty of perjury that I am the procurement officer responsible for administering the solicitation of the acquisition referenced above, and that I have caused to be prepared and now maintain a full and complete record of the procurement as required by law.

Signature:  _____

Print Name: Emily Gumataotao Date: 12/15/21

Notice of Award

Purchase Order

Sedfrey Linsangan Complaint



On Mon, 6 Dec 2021 at 10:10, GPE INC <guampacific@gmail.com> wrote:

----- Forwarded message -----
From: **GPE INC** <guampacific@gmail.com>
Date: Mon, 6 Dec 2021 at 10:05
Subject: Notice of Protest, Bid 21-17
To: <uogbids@triton.uog.edu>

Dear Ms. Gumataotao and Procurement Team

I am respectfully filing a protest on the subject Bid due to violations of Buy Americana Act Law and Executive Order of President Biden on Made in America Act.

My protest is due to the imposition of the 15% Bid bond which is a Guam law. The bid bond is inconsistent with the intent and purpose of Section 1 and Section 3 of President Biden's Executive Order. The funds being used is from CARE'S Act which is a federal financial assistance award.

Federal Law supersedes Guam law, therefore Bid bond should not be implemented because it substantially burdens American small business owners, workers and manufacturers. We participated on Military bids here for the last 34 years and the Navy and US Air Force do not require Bid bonds.

Stay of Procurement is warranted due to this Notice of Protest. Please take note that I only received the response last Friday.

Very Respectfully,
Sedfrey M. Linsangan
President
GPEINC

Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/7/8



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Guam Pacific Enterprise, Inc.

Tel: (671) 649-6994/7/8



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Guam Pacific Enterprise, Inc.

Tel: (671) 649-6994/7/8



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Guam Pacific Enterprise, Inc.

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Suite 401 DNA Building
 238 Archbishop Flores St.
 Hagåtña, Guam 96910



FAX

To:	Ms. Emily G. Gumataotao Supply Management Administrator University of Guam UOG Station Mangilao, Guam 96923 Phone: (671) 735-2925 Fax: (671) 735-3010 Email: eggumataotao@triton.uog.edu ; uog.bids@triton.uog.edu	From:	Benjamin J.F. Cruz Hearing Officer Office of Public Accountability
	Mr. Anthony R. Camacho, Esq. Legal Counsel University of Guam UOG Station Mangilao, Guam 96923 Email: arcamacho@triton.uog.edu	Pages:	9 (including cover page)
CC:	Mr. Sedfrey Linsangan President Guam Pacific Enterprise, Inc. Phone: (671) 649-6994/7/8 Email: guampacific@gmail.com	Date:	December 9, 2021
		Phone:	(671) 475-0390 x. 204
		Fax:	(671) 472-7951

Re: OPA-PA-21-015 Notice of Receipt of Appeal

- For Review
 Please Comment
 Please Reply
 Please Recycle

Comments:

Please acknowledge receipt of this transmittal by re-sending this cover page along with your firm or agency's receipt stamp, date, and initials of receiver.

Thank you,
 Jerrick Hernandez, Auditor
jhernandez@guamopa.com

This facsimile transmission and accompanying documents may contain confidential or privileged information. If you are not the intended recipient of this fax transmission, please call our office and notify us immediately. Do not distribute or disclose the contents to anyone. Thank you.



OFFICE OF PUBLIC ACCOUNTABILITY

Suite 401 Pacific News Building, 238 Archbishop Flores St., Hagåtña, Guam 96910
Phone: (671) 475-0390 / FAX: (671) 472-7951

December 9, 2021

Ms. Emily G. Gumataotao
Supply Management Administrator
University of Guam
UOG Station
Mangilao, Guam 96923

VIA FACSIMILE: (671) 735-3010

Re: Notice of Receipt of Appeal – OPA-PA-21-015

Dear Ms. Gumataotao,

Please be advised that Guam Pacific Enterprises Inc. (hereinafter referred to as “GPE INC” filed an appeal with the Office of Public Accountability (OPA) on December 8, 2021, regarding the University of Guam’s (UOG) bid UOG-IFB-21-17 for Purchasing HVAC Equipment. OPA has assigned this appeal case number OPA-PA-21-015.

Immediate action is required of UOG pursuant to the Rules of Procedure for Procurement Appeals, found in Chapter 12 of the Guam Administrative Regulations (GAR). Copies of the rules, the appeal, and all filing deadlines are available at OPA’s office and on its website at www.opaguam.org. The first eight pages of the notice of appeal filed with OPA is enclosed for your reference.

Please provide the required notice of this appeal to the relative parties with instructions that they should communicate directly with OPA regarding the appeals. You are also responsible for giving notice to the Attorney General or other legal counsel for your agency. Promptly provide OPA with the identities and addresses of interested parties and a formal entry of appearance by your legal counsel.

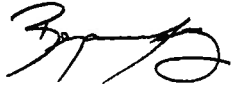
Pursuant to 2 GAR, Div. 4, Ch. 12, §12104(3), the submission of one complete copy of the procurement record for the procurement solicitation above, as outlined in Title 5, Chapter 5, §5249 of the Guam Code Annotated is required no later than **Thursday, December 16, 2021**, five work days following this Notice of Receipt of Appeal. We also request one copy of the Agency Report for each of the procurement solicitations cited above, as outlined in 2 GAR, Div. 4, Chap. 12, §12105, by **Thursday, December 23, 2021**, ten work days following receipt of this notice.

When filing all other required documents with our office, please provide one original and one copy to OPA (electronic filings will be acceptable), and serve a copy to GPE INC. Although the Guam Procurement Law and Regulations require only one copy of the procurement record, OPA respectfully asks that UOG provide one original and one electronic file of the said record, which

will be distributed as follows: Copy-1: Master File; and Copy-2: Public Auditor and/or Hearing Officer.

Thank you for your prompt attention to this matter. Please contact Jerrick Hernandez at 475-0390 ext. 204 or jhernandez@guamopa.com should you have any questions regarding this notice.

Sincerely,



Benjamin J.F. Cruz
Public Auditor

Enclosure: First Six Pages of the Notice of Appeal – OPA-PA-21-015

Cc: Sedfrey M. Linsangan, GPE Inc. President



**Appendix A: Notice of Appeal Form
PROCUREMENT APPEAL**

PART I- To be completed by OPA

In the Appeal of)
)

NOTICE OF APPEAL

Guam Pacific Ent. Inc.)
)

(Name of Company), APPELLANT)
)

Docket No. OPA-PA _____

PART II- Appellant Information

Name:

Guam Pacific Ent. Inc.

Mailing Address:

P.O. Box 23128 Bai

Business Address:

Krigada Guam 96921
Harmon Guam

Email Address:

glampacific@gmail.com

Daytime Contact No:

649-6997-8-4

Fax No.:

649-6988

PART III- Appeal Information

A) Purchasing Agency: University of Guam

B) Identification/Number of Procurement, Solicitation, or Contract: IFB 21-17

C) Decision being appealed was made on Dec. 6 (date) by:

Chief Procurement Officer Director of Public Works Head of Purchasing Agency

Note: You must serve the Agency checked here with a copy of this Appeal within 24 hours of filing.

D) Appeal is made from:

(Please select one and attach a copy of the Decision to this form)

Decision on Protest of Method, Solicitation or Award

Decision on Debarment or Suspension

Decision on Contract or Breach of Contract Controversy

(Excluding claims of money owed to or by the government)

E) Names of Competing Bidders, Offerors, or Contractors known to Appellant:

Tony's Workshop _____
JWS Guam _____
All Business Enterprise _____
Guam Pacific Ent. Inc. _____

PART IV- Form and Filing

In addition to this form, the Rules of Procedure for Procurement Appeals require the submission together with this form of additional information, including BUT NOT LIMITED TO:

1. A concise, logically arranged, and direct statement of the grounds for appeal;
2. A statement specifying the ruling requested;
3. Supporting exhibits, evidence, or documents to substantiate any claims and the grounds for appeal unless not available within the filing time in which case the expected availability date shall be indicated.

Note: Please refer to 2 GAR § 12104 for the full text of filing requirements.

PART V- Declaration Re Court Action

Pursuant to 5 GCA Chapter 5, unless the court requests, expects, or otherwise expresses interest in a decision by the Public Auditor, the Office of Public Accountability will not take action on any appeal where action concerning the protest or appeal has commenced in any court.

The undersigned party does hereby confirm that to the best of his or her knowledge, no case or action concerning the subject of this Appeal has been commenced in court. All parties are required to and the undersigned party agrees to notify the Office of Public Accountability within 24 hours if court action commences regarding this Appeal or the underlying procurement action.

Submitted this 8 day of Dec 2021

By: Guam Pacific Ent. Inc.
APPELLANT

or

By: [Signature]
Appellant's Duly Authorized Representative
(Address) Hatmon, Guam



**Appendix D: Hearing Request/Waiver Form
PROCUREMENT APPEAL**

In the Appeal of)
)
)
)
)
)
)
)
)
)
)

(Name of Company), APPELLANT

Colan Pacific Ent. Inc.

**HEARING
REQUEST/WAIVER**

Docket No. OPA-PA _____

Please select one:

Pursuant to 2 GAR § 12108(a), the undersigned party does hereby request a hearing on the appeal stated above.

Pursuant to 2 GAR § 12108(a), the undersigned party does hereby waive his/her right to a hearing and is submitting the appeal stated above on record without a hearing.

Submitted this 8 day of Dec, 2021

By: (Please select one)

APPELLANT

Chief Procurement Officer

Director of Public Works

Head of Purchasing Agency

Signature

Print Name

Dec. 8, 2021

Statement of the grounds
for appeal

I raised the 15% Bid bond requirement because VOG confirmed that federal financial assistance award will be used to purchase the HVAC equipments. Please see Exh 5, dated Nov. 5, 2021. However I only got a response on Dec. 3, 2021 after 5:00 pm which is a Friday and Bid is already on Monday (Dec. 6) Please see Exh. 13. I also followed up with them why my bid bond concern is not being answered. Please see Exh. 15 and 16

I filed a protest on Dec. 6 in the morning. I received a decision on the same day, around 3:05 pm. Please see Exh. 8 (Protest) and Exh. 9 (VOG Decision on Protest)

In my Protest, I am requesting a Stay of Procurement but instead was criticised by the Procurement that my Protest has deficiencies. Please see Exh. 10 on my reply to their decision. Their response is a Protest Decision because they are denying my protest even they do not regard it as a protest. They are doing it to go ahead with the scheduled Bid Opening on Dec. 6. There's still sufficient time to issue a Stay of Procurement but they did not adhere to the Procurement Chg. 5 Law on the process of handling the protest.

My other concern is the lowest bidder did not submit the literature or specs for his offer. It is not being evaluated yet but VOG issued already a Notice

of Intent of Award in the same day of the bid. Please see Exh. 17. How could they award it on the same day since it could take a week to examine all the brochures or literature for the 15 units and also if it complies with Buy American Act? Then they have to evaluate too the offer of the 2 bidders that participated before making a determination.

I am requesting a ruling that 15% Bid bond which is a Local Law does not apply to Federal Financial assistance awards. Chura was not implementing 15% Bid bond for 30 years until the Procurement officer Mr. Lastimosa retired then the new one changes the policy which is wrong and a rebid.

RE: Documents Needed

Gumataotao, Emily <eggumataotao@triton.uog.edu>

Thu 12/16/2021 1:15 PM

To: Cynthia Guerrero <cguerrero@triton.uog.edu>

📎 5 attachments (4 MB)

IFB B21-17 COMMUNICATION LOG.pdf; Response to Protest Email - GPEa.pdf; Response from GPE.pdf; OPA-PA-21-015 Notice of Appeal_B21-17.pdf; Response to Protest Email - GPE.pdf;

Cyn,

- 1) Log attached
- 2) Emails and responses to email on protest
- 3) Copy of appeal

~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'ase' & Have a nice day!,

gpe



UNIVERSITY OF
GUAM
OFFICE OF THE CHIEF OF ADMINISTRATION

Respectfully,

Emily G. Gumataotao

SUPPLY MANAGEMENT ADMINISTRATOR

PROCUREMENT | ADMIN & FINANCE

Office: 671-735-2925

Fax: 671-735-3010

eggumataotao@triton.uog.edu

[mailto:gumataotaoemilyg@triton.uog.edu%0dProcurementoffice@triton.uog.edu]Procurementoffice@triton.uog.edu

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From: Cynthia Guerrero

Sent: Wednesday, December 15, 2021 1:24 PM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>

Cc: Camacho, Anthony <arcamacho@triton.uog.edu>

Subject: Documents Needed

Emily:

I need the following documents to complete the package:

1. Determination of Need
2. Log of Communication
3. Copies of Communication
4. IFB Bid Packet
5. Submission by Vendors
6. Bid Abstract
7. Memorandum of Evaluation
8. Certification of Procurement Record

9. Notice of Award
10. Purchase Order
11. Sedfrey Linsangan Protest
12. Protest Decision

--
Si Yu'os ma'åse',



Cynthia T. Guerrero, MPA

Office of the Legal Counsel

Office: +1 (671) 735-2992

cguerrero@triton.uog.edu

<https://www.uog.edu/administration/office-of-the-president/legal-counsel>

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Re: Notice of Protest, Bid 21-17

GPE INC <guampacific@gmail.com>

Mon 12/6/2021 3:38 PM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank you for your reply. Please forward me a copy of Section 9.2.3.1 and Section 9.2.3.3 because it is not provided in the IFB. Whether my protest does not comply with your standard it is still a protest and you were notified. Only OPA or the court will be the right body to make that determination. But I am willing to do it, however, Stay of Procurement is warranted.

Your procurement people did not address my complaint which I emailed to them ever since. Only last Friday, December 3, I received the response around 5.00 pm plus after working hours. They knew there is a question but they did not extend the bid.

If the bid was not postponed and Stay of Procurement is not issued then I do not need to comply with your regulations. I will just wait for your Protest decision after 14 days. The Executive Order of President Biden is 14005(Section 1 and 3) which you have a copy from my OPA case.



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On Mon, 6 Dec 2021 at 15:05, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Håfa Adai & Good Afternoon Mr. Linsangan,

Please comply with the requirements of Section 9.2.3.1 and Section 9.2.3.3, UOG Procurement Regulations if you desire to file a protest. Until you GPE does so, UOG will treat this matter as a complaint and not a Protest. Accordingly, and pursuant to Section 9.2.2, UOG Procurement Regulations, on behalf of UOG's President, there is no merit to your complaint. Specifically, it appears that you are assuming that the President's Biden's Executive Order applies to UOG-IFB-21-17.

However, you do not cite any specific portions of said Executive Order or other federal law specifically making said Executive Order applicable to UOG-IFB-21-17. Further, Guam Procurement Law specifically requires the 15% Bid Bond. Bid security shall be required for all competitive sealed bidding for the procurement of supplies or services when the total price is estimated to exceed Twenty-Five Thousand Dollars (\$25,000.00). 5 G.C.A. §5212(a). Here, the price of the items being solicited for in UOG-IFB-21-17 will likely exceed the amount of Twenty-Five Thousand Dollars (\$25,000.00). Further, Bid security shall be in an amount equal to fifteen percent (15%) of the total amount bid. 5 G.C.A. §5212(b). There is no exception in the aforementioned Guam Procurement Law for solicitations made by Public Corporations, such as UOG, that are federally funded. Finally, if you are concerned that there is a difference between the manner in which the U.S. Navy and the U.S. Air force and UOG conduct their procurement actions, be advised that Federal Procurement Laws and the Federal Acquisition Regulations apply to the U.S. Navy and U.S. Air Procurement, and Guam

Procurement Law and UOG's Procurement Regulations apply to UOG procurements. For UOG-IFB-21-17, UOG must comply with Guam Procurement Law and UOG's Procurement Regulations to include the requirement for the 15% Bid Bond.

Further, you are hereby ON NOTICE that if GPE fails to provide the required Bid Bond for UOG-IFB-21-17, UOG must reject GPE's bid in accordance with 5 G.C.A. §5212(e).

Based on the foregoing, your complaint concerning the 15% Bid Bond required by UOG-IFB-21-17 is hereby DENIED.

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: GPE INC <guampacific@gmail.com>

Sent: Monday, December 6, 2021 10:11 AM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>; UOG Procurement Bids <uog.bids@triton.uog.edu>

Subject: Re: Notice of Protest, Bid 21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Please confirm receipt of this email. (Notice of Protest)

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<uog.bids@triton.uog.edu>

Subject: Re: Notice of Protest, Bid 21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Please confirm receipt of this email. (Notice of Protest)



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On Mon, 6 Dec 2021 at 10:10, GPE INC <guampacific@gmail.com> wrote:

----- Forwarded message -----

From: **GPE INC** <guampacific@gmail.com>

Date: Mon, 6 Dec 2021 at 10:05

Subject: Notice of Protest, Bid 21-17

To: <uogbids@triton.uog.edu>

Dear Ms. Gumataotao and Procurement Team

I am respectfully filing a protest on the subject Bid due to violations of Buy Americana Act Law and Executive Order of President Biden on Made in America Act.

My protest is due to the imposition of the 15% Bid bond which is a Guam law. The bid bond is inconsistent with the intent and purpose of Section 1 and Section 3 of President Biden's Executive Order. The funds being used is from CARE'S Act which is a federal financial assistance award.

Federal Law supersedes Guam law, therefore Bid bond should not be implemented because it substantially burdens American small business owners, workers and manufacturers. We participated on Military bids here for the last 34 years and the Navy and US Air Force do not require Bid bonds.

Stay of Procurement is warranted due to this Notice of Protest. Please take note that I only received the response last Friday.

Very Respectfully,
Sedfrey M. Linsangan
President
GPEINC

Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/7/8

B21-171020



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Re: Notice of Protest, Bid 21-17

GPE INC <guampacific@gmail.com>

Fri 12/10/2021 11:24 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank you for your response. Happy Holidays too to all of you. This is to confirm receipt of your email but it is already in the OPA for their determination.

On Fri, 10 Dec 2021 at 11:14, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

Háfa Adai & Good Morning Mr. Lingsangan,

Attached herein is the portion of the UOG Procurement Regulations containing Section 9.2.3.1 and Section 9.2.3.3 that you requested and which I cited in my earlier email to you. Be advised that your prior emails did not constitute a protest under UOG's Procurement Regulations, as you had yet to file a protest in accordance with those regulations. Further, concerning your allegations that your emails are a protest and that the automatic stay is applicable, be advised that pursuant to Section 9.2.5, UOG Procurement Regulations, only a filed protest, and a protest that is filed within fourteen (14) working days after the protestor knew or should have known of the facts giving rise to the protest will trigger the automatic stay. As stated above, you had not filed a protest at the time your email was sent in accordance with UOG's Procurement Regulations. Further, you knew or should have known that UOG-IFB-21-17 required the bid bond the day you received the IFB which was more than fourteen (14) working days ago. Pursuant to Section 9.2.3.1, UOG Procurement Regulations, UOG is prohibited from considering a protest filed more than fourteen (14) working days after the protestor knew or should of known of the facts giving rise to the protest. Hence, your email dated December 6, 2021 did not trigger the automatic stay.

~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'áse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: GPE INC <guampacific@gmail.com>
Sent: Monday, December 6, 2021 3:38 PM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Re: Notice of Protest, Bid 21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank you for your reply. Please forward me a copy of Section 9.2.3.1 and Section 9.2.3.3 because it is not provided in the IFB. Whether my protest does not comply with your standard it is still a protest and you were notified. Only OPA or the court will be the right body to make that determination. But I am willing to do it, however, Stay of Procurement is warranted.

Your procurement people did not address my complaint which I emailed to them ever since. Only last Friday, December 3, I received the response around 5.00 pm plus after working hours. They knew there is a question but they did not extend the bid.

If the bid was not postponed and Stay of Procurement is not issued then I do not need to comply with your regulations. I will just wait for your Protest decision after 14 days. The Executive Order of President Biden is 14005(Section 1 and 3) which you have a copy from my OPA case.



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On Mon, 6 Dec 2021 at 15:05, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Håfa Adai & Good Afternoon Mr. Linsangan,

Please comply with the requirements of Section 9.2.3.1 and Section 9.2.3.3, UOG Procurement Regulations if you desire to file a protest. Until you GPE does so, UOG will treat this matter as a complaint and not a Protest. Accordingly, and pursuant to Section 9.2.2, UOG Procurement Regulations, on behalf of UOG's President, there is no merit to your complaint. Specifically, it appears that you are assuming that the President's Biden's Executive Order applies to UOG-IFB-21-17. However, you do not cite any specific portions of said Executive Order or other federal law specifically making said Executive Order applicable to UOG-IFB-21-17. Further, Guam Procurement Law specifically requires the 15% Bid Bond. Bid security shall be required for all competitive sealed bidding for the procurement of supplies or services when the total price is estimated to exceed Twenty-Five Thousand Dollars (\$25,000.00). 5 G.C.A. §5212(a). Here, the price of the items being

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For UOG-IFB-21-17, UOG must comply with Guam Procurement Law and UOG's Procurement Regulations to include the requirement for the 15% Bid Bond.

Further, you are hereby ON NOTICE that if GPE fails to provide the required Bid Bond for UOG-IFB-21-17, UOG must reject GPE's bid in accordance with 5 G.C.A. §5212(e).

Based on the foregoing, your complaint concerning the 15% Bid Bond required by UOG-IFB-21-17 is hereby DENIED.

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: GPE INC <guampacific@gmail.com>

Sent: Monday, December 6, 2021 10:11 AM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>; UOG Procurement Bids

<uog.bids@triton.uog.edu>

Subject: Re: Notice of Protest, Bid 21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

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Date: Mon, 6 Dec 2021 at 10:05

Subject: Notice of Protest, Bid 21-17

To: <uogbids@triton.uog.edu>

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Stay of Procurement is warranted due to this Notice of Protest. Please take note that I only received the response last Friday.

Very Respectfully,
Sedfrey M. Linsangan
President
GPEINC

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B21-171032



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Re: Notice of Protest, Bid 21-17

GPE INC <guampacific@gmail.com>

Fri 12/10/2021 11:24 AM

To: UOG Procurement Bids <uog.bids@triton.uog.edu>

Cc: Procurement Office <procurementoffice@triton.uog.edu>

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On Fri, 10 Dec 2021 at 11:14, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:

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~ Merry Christmas & Happy Holidays ~

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

uog.bids@triton.uog.edu

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From: GPE INC <guampacific@gmail.com>
Sent: Monday, December 6, 2021 3:38 PM
To: UOG Procurement Bids <uog.bids@triton.uog.edu>
Subject: Re: Notice of Protest, Bid 21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]

Thank you for your reply. Please forward me a copy of Section 9.2.3.1 and Section 9.2.3.3 because it is not provided in the IFB. Whether my protest does not comply with your standard it is still a protest and you were notified. Only OPA or the court will be the right body to make that determination. But I am willing to do it, however, Stay of Procurement is warranted.

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If the bid was not postponed and Stay of Procurement is not issued then I do not need to comply with your regulations. I will just wait for your Protest decision after 14 days. The Executive Order of President Biden is 14005(Section 1 and 3) which you have a copy from my OPA case.



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On Mon, 6 Dec 2021 at 15:05, UOG Procurement Bids <uog.bids@triton.uog.edu> wrote:
Håfa Adai & Good Afternoon Mr. Linsangan,

Please comply with the requirements of Section 9.2.3.1 and Section 9.2.3.3, UOG Procurement Regulations if you desire to file a protest. Until you GPE does so, UOG will treat this matter as a complaint and not a Protest. Accordingly, and pursuant to Section 9.2.2, UOG Procurement Regulations, on behalf of UOG's President, there is no merit to your complaint. Specifically, it appears that you are assuming that the President's Biden's Executive Order applies to UOG-IFB-21-17. However, you do not cite any specific portions of said Executive Order or other federal law specifically making said Executive Order applicable to UOG-IFB-21-17. Further, Guam Procurement Law specifically requires the 15% Bid Bond. Bid security shall be required for all competitive sealed bidding for the procurement of supplies or services when the total price is estimated to exceed Twenty-Five Thousand Dollars (\$25,000.00). 5 G.C.A. §5212(a). Here, the price of the items being

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For UOG-IFB-21-17, UOG must comply with Guam Procurement Law and UOG's Procurement Regulations to include the requirement for the 15% Bid Bond.

Further, you are hereby ON NOTICE that if GPE fails to provide the required Bid Bond for UOG-IFB-21-17, UOG must reject GPE's bid in accordance with 5 G.C.A. §5212(e).

Based on the foregoing, your complaint concerning the 15% Bid Bond required by UOG-IFB-21-17 is hereby DENIED.

Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

UOG Procurement

Office: 671-735-2925

Fax: 671-735-3010

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From: GPE INC <guampacific@gmail.com>

Sent: Monday, December 6, 2021 10:11 AM

To: Gumataotao, Emily <eggumataotao@triton.uog.edu>; UOG Procurement Bids

Complaint Decision

Notice of Protest, Bid 21-17

UOG Procurement Bids <uog.bids@triton.uog.edu>

Mon 12/6/2021 3:05 PM

To: GPE INC <guampacific@gmail.com>

Cc: Gumataotao, Emily <eggumataotao@triton.uog.edu>; Procurement Office <procurementoffice@triton.uog.edu>

Bcc: Camacho, Anthony <arcamacho@triton.uog.edu>

Håfa Adai & Good Afternoon Mr. Linsangan,

Please comply with the requirements of Section 9.2.3.1 and Section 9.2.3.3, UOG Procurement Regulations if you desire to file a protest. Until you GPE does so, UOG will treat this matter as a complaint and not a Protest. Accordingly, and pursuant to Section 9.2.2, UOG Procurement Regulations, on behalf of UOG's President, there is no merit to your complaint. Specifically, it appears that you are assuming that the President's Biden's Executive Order applies to UOG-IFB-21-17. However, you do not cite any specific portions of said Executive Order or other federal law specifically making said Executive Order applicable to UOG-IFB-21-17. Further, Guam Procurement Law specifically requires the 15% Bid Bond. Bid security shall be required for all competitive sealed bidding for the procurement of supplies or services when the total price is estimated to exceed Twenty-Five Thousand Dollars (\$25,000.00). 5 G.C.A. §5212(a). Here, the price of the items being solicited for in UOG-IFB-21-17 will likely exceed the amount of Twenty-Five Thousand Dollars (\$25,000.00). Further, Bid security shall be in an amount equal to fifteen percent (15%) of the total amount bid. 5 G.C.A. §5212(b). There is no exception in the aforementioned Guam Procurement Law for solicitations made by Public Corporations, such as UOG, that are federally funded. Finally, if you are concerned that there is a difference between the manner in which the U.S. Navy and the U.S. Air force and UOG conduct their procurement actions, be advised that Federal Procurement Laws and the Federal Acquisition Regulations apply to the U.S. Navy and U.S. Air Procurement, and Guam Procurement Law and UOG's Procurement Regulations apply to UOG procurements. For UOG-IFB-21-17, UOG must comply with Guam Procurement Law and UOG's Procurement Regulations to include the requirement for the 15% Bid Bond.

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Si Yu'os ma'åse' & Have a nice day!,



Respectfully,

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Fax: 671-735-3010

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Sent: Monday, December 6, 2021 10:11 AM
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Subject: Re: Notice of Protest, Bid 21-17

[EXTERNAL EMAIL - Please use caution when opening attachments or clicking links.]
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Date: Mon, 6 Dec 2021 at 10:05
Subject: Notice of Protest, Bid 21-17
To: <uogbids@triton.uog.edu>

Dear Ms. Gumataotao and Procurement Team

I am respectfully filing a protest on the subject Bid due to violations of Buy Americana Act Law and Executive Order of President Biden on Made in America Act.

My protest is due to the imposition of the 15% Bid bond which is a Guam law. The bid bond is inconsistent with the intent and purpose of Section 1 and Section 3 of President Biden's Executive Order. The funds being used is from CARE'S Act which is a federal financial assistance award.

Federal Law supersedes Guam law, therefore Bid bond should not be implemented because it substantially burdens American small business owners, workers and manufacturers. We participated on Military bids here for the last 34 years and the Navy and US Air Force do not require Bid bonds.

Stay of Procurement is warranted due to this Notice of Protest. Please take note that I only received the response last Friday.

Very Respectfully,
Sedfrey M. Linsangan
President
GPEINC

Guam Pacific Enterprise, Inc.
Tel: (671) 649-6994/7/8



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