STTelemedia Global Data Centres | cta COMMTECH ASIA | Gaa Group Company Limited

REQUEST FOR INFORMATION (RFI)

PROJECT :	BKK2	**R.F.I. NO. :**	523213-01-RFI-ME-0007
TO :	CTA	**ATTENTION :**	CTA
SUBMITTED DATE	12-Jan-26	**NEED REPLY BY DATE :**	19-Jan-26

SUBMISSION OF : ■ Q&A ■ Drawing ☐ Document ☐ Others *(as specified below)*

SUBJECT : **Request for Confirmation - PAHU Supply Air Confilct 1st FL**

Total Page (s) : **2** **(Including this page)**

FUNCTION :
☐ Structural (ST) ☐ Electrical & Communication (EL) ■ Mechanical (ME) ☐ Vertical Transport (VT)
☐ Achitectural (AR) ☐ Fire Protection (FI) ☐ Hydraulic & Sanitary (HY) ☐ Other (O)

(1) CONTRACTOR REQUEST FOR INFORMATION :

With reference to DWG No. 523213-02-DRG-ME-0204, in the Pre-cooled Air Handling Units schedule (TH-BKK2-02-01-PAHU-001), the supply air is listed as 930 L/s.

However, in DWG No. 523213-02-DRG-ME-1001 summary, the supply air is conflicting. Could you please confirm the correct supply air for this unit?

'NOTE : It would be an additional cost some for items.

Requested by : _____ *Engineering Manager*

Reviewed by : _____ *Project Manager*

(2) ATTN : Commtech Asia (Thailand)

☐ For Approval ☐ See Note ■ Please Clarify

Note : Aurecon to confirm the correct supply air rate.

From : GAA Group
By :
Name / Position Mr. Itsarate Trachuengtong/ Project Manager
Date : 12-Jan-26

Reviewed By : Commtech Asia (Thailand)
Name / Position Finlay Coady Sr. Project Manager
Date : 22nd January 2026

(3) ATTN : AURECON

☐ For Approval ■ See Note ☐ Please Clarify

Note : AUR:
Please see the material approved document for the PAHU.

From : Commtech Asia (Thailand)
By :
Name / Position ( )
Date :

Reviewed By : AURECON
Name / Position (Kritchalat Onratn)
Date : 09/02/2026

(4) ATTN : STT GDC

☐ Clarification only ☐ Not Approved
☐ Approved for proceeding work
☐ Approved with comments, proceeding work in cpmpliance with comments
☐ Approved with comments, not for proceeding work and need to re-submit

Note :

From : AURECON
By :
Name / Position ( )
Date :

Reviewed By : STT GDC
Name / Position
Date :

CONTRACTOR DOCUMENT REVIEW
☐ ACCEPTED
☐ REJECTED
☒ MAKE CORRECTIONS NOTED & PROCEED
☐ REVISE AND RESUBMIT
Aurecon Consulting (Thailand) Co., Ltd.
By Kritchalat Onratn
Date issued 09/02/2026
Project No 523213
Date received
This review is only for general conformation with the design concept of the project and general compliance with the information given in the contract documents, Any action shown is subject to the requirements of the contract document.
This review does not relieve the Contractor of his contractual obligations nor of his responsibilities of ensuring the work is complete accurate & correct.
Any amendment does not constitute an order or authority for a price variation to the contract

CC : ■ STT GDC ■ AURECON ■ Commtech Asia (Thailand) ■ GAA ☐ OTHERS.....

PRE-COOLED AIR HANDLING UNITS SCHEDULE

UNIT NO.			TH-BKK2-02-01-PAHU-001			TH-BKK2-02-07-PAHU-(001-003)			TH-BKK2-02-07-PAHU-004			TH-BKK2-02-07-PAHU-005		
AREA SERVED			LEVEL 1			ROOF			ROOF			ROOF		
QUANTITY		SET (S)	1			3			1			1		
PAU. TYPE			HH,DOUBLE SKIN			HH,DOUBLE SKIN			HH,DOUBLE SKIN			HH,DOUBLE SKIN		
			COOLING COIL	DX COIL 1	DX COIL 2	COOLING COIL	DX COIL 1	DX COIL 2	COOLING COIL	DX COIL 1	DX COIL 2	COOLING COIL	DX COIL 1	DX COIL 2
UNIT POWER CONSUMPTION		kW	7.7			19.3			19.3			19.3		
COIL COND.	DX COMPRESSOR TYPE		-	FIXED	INVERTER	-	FIXED	INVERTER	-	FIXED	INVERTER	-	FIXED	INVERTER
COIL COND.	COMPRESSOR MIN C.O.P		-	6.7	5.6	-	6.7	5.6	-	6.7	5.6	-	6.7	5.6
COIL COND.	COMPRESSOR POWER	kW	-	2.9	3.3	-	7.2	8.1	-	7.2	8.1	-	7.2	8.1
COIL COND.	NO OF ROWS		9	4	5	9	4	5	9	4	5	9	4	5
COIL COND.	TOTAL CAPACITY	kW	51.2	19.5	18.3	126.7	48.3	45.2	126.7	48.3	45.2	126.7	48.3	45.2
COIL COND.	SENSIBLE CAPACITY	kW	19.1	5.8	6.5	47.2	14.4	16.0	47.2	14.4	16.0	47.2	14.4	16.0
COIL COND.	CHW FLOW RATE	L/s	1.53	0.78	0.73	3.79	1.92	1.80	3.79	1.92	1.80	3.79	1.92	1.80
COIL COND.	ENT. AIR TEMPT	°CDB/°CWB	40.5/32.7	23.4/23.1	18.2/18.1	40.5/32.7	23.4/23.1	18.2/18.1	40.5/32.7	23.4/23.1	18.2/18.1	40.5/32.7	23.4/23.1	18.2/18.1
COIL COND.	LEAVING AIR TEMP.	°CDB/°CWB	23.4/23.1	18.2/18.1	12.4/12.3	23.4/23.1	18.2/18.1	12.4/12.3	23.4/23.1	18.2/18.1	12.4/12.3	23.4/23.1	18.2/18.1	12.4/12.3
COIL COND.	ENT. WATER TEMPT	°C	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
COIL COND.	LEAV. WATER TEMPT	°C	26.0	-	-	26.0	-	-	26.0	-	-	26.0	-	-
SUPPLY AIR		L/s	930			2300			2300			2300		
OUTDOOR AIR		L/s	930			2300			2300			2300		
DRAIN PIPE SIZE		Ømm	40			50			50			50		
CHW COIL	CONNECTION SIZE	Ømm	50	50		80	80		80	80		80	80	
CHW COIL	TYPE OF CONTROL VALVE		2W-P	2W-O/F		2W-P	2W-O/F		2W-P	2W-O/F		2W-P	2W-O/F	
BLOWER	EXTERNAL ST. PR.	Pa	500			600			600			600		
BLOWER	APPROX.	kW	1.5			4.0			4.0			4.0		
BLOWER	STARTER TYPE		EC Fan			EC Fan			EC Fan			EC Fan		
BLOWER	V / PH / Hz		400/3/50			400/3/50			400/3/50			400/3/50		
AIR FILTER	TYPE		PF-2/MF-3			PF-2/MF-3			PF-2/MF-3			PF-2/MF-3		
AIR FILTER	MANOMETER	SET (S)	2			2			2			2		
AIR FILTER	DIFFERENTIAL PRESSURE SWITCH FOR FILTER CLOG ALARM	SET (S)	2			2			2			2		
CDU TYPES			UNIT INTEGRATED - WATER COOLED UNIT (WCU). FIXED COMP REJECTS TO CHW CIRCUIT. INVERTER COMP REJECTS TO CHW CIRCUIT			UNIT INTEGRATED - WATER COOLED UNIT (WCU). FIXED COMP REJECTS TO CHW CIRCUIT. INVERTER COMP REJECTS TO CHW CIRCUIT			UNIT INTEGRATED - WATER COOLED UNIT (WCU). FIXED COMP REJECTS TO CHW CIRCUIT. INVERTER COMP REJECTS TO CHW CIRCUIT			UNIT INTEGRATED - WATER COOLED UNIT (WCU). FIXED COMP REJECTS TO CHW CIRCUIT. INVERTER COMP REJECTS TO CHW CIRCUIT		
FACE VELOCITY			1.8 m/s			1.8 m/s			1.8 m/s			1.8 m/s		
PHASE			PHASE I			PHASE II			PHASE III			PHASE IV		
ELECTRICAL PANEL BOARD NO.			TH-BKK02-02-01-MCP-026			TH-BKK02-02-07-MCP-(001,002,003)			TH-BKK02-02-07-MCP-004			TH-BKK02-02-07-MCP-005		
SERVE BY TES			-											

NOTES :

1. MAX. SUPPLY AIR TEMPERATURE SHALL BE THE CONDITION OF SUPPLY AIR WHICH IS MEASURED AT AIR TERMINAL OR AIR OUTLET. THE CONTRACTOR SHALL COMPENSATE THE HEAT GENERATED FROM FAN'S MOTOR TO ACHIEVE THAT DESIRED SUPPLY AIR TEMPERATURE.
2. COOLING COIL FACE VELOCITY SHALL NOT EXCEED 2.5 m/s. AHU FAN OUTLET VELOCITY SHALL NOT EXCEEDING 12 m/s.
3. WATER PRESSURE DROP OF COOLING COIL SHALL NOT EXCEED 45 kPa
4. EXTERNAL STATIC PRESSURE OF BLOWER SHOWN IN SCHEDULE SHALL BE THE SUM OF ALL SYSTEM COMPONENT PRESSURE LOSSES EXCEPT COOLING COIL AND CASING OF AHU OR FCU.
5. TYPE OF AHU & FCU
   - 5.1 FOR AHU :
     - V V- x = VERTICAL MOUNTED, VERTICAL DISCHARGE
     - V H- x = VERTICAL MOUNTED, HORIZONTAL DISCHARGE
     - H V- x = HORIZONTAL MOUNTED, VERTICAL DISCHARGE
     - H H- x = HORIZONTAL MOUNTED, HORIZONTAL DISCHARGE
     - **X**
     - S = SINGLE SKIN TYPE
     - D = DOUBLE SKIN TYPE
6. TYPE OF CONTROL VALVE (PIBCV-PRESSURE INDEPENDENT BALANCING CONTROL VALVE)
   - 2W-O/F = 2-WAY MOTORIZED VALVE ; ON-OFF TYPE
   - 2W-P = 2-WAY MOTORIZED VALVE ; PROPORTIONAL TYPE
   - 3W-O/F = 3-WAY MOTORIZED VALVE ; ON-OFF TYPE
7. TYPE OF AIR FILTERS
   - 7.1 TYPE "PF-1" PRE FILTER, PANEL FILTER, POLYESTER SYNTHETIC FIBER, 9mm.
   - 7.2 TYPE "PF-2" PRE FILTER, PANEL FILTER, POLYESTER SYNTHETIC FIBER, 50mm. EU2 RATING OR MERV 4
   - 7.3 TYPE "PF-3" PRE FILTER, PANEL FILTER, GLASS FIBER, 50mm. EU 3 RATING OR MERV 5
   - 7.4 TYPE "PF-4" PRE FILTER, EXTENED SURFACE PLEATED TYPE PANEL FILTER, GLASS FIBER, 100mm. EU4 RATING OR MERV 6-8
   - 7.5 TYPE "PF-5" PRE FILTER, EXTENED SURFACE PLEATED TYPE PANEL FILTER, GLASS FIBER, 100mm. EU5 RATING OR MERV 8-10
   - 7.6 TYPE "MF-1" MEDIUM FILTER, EXTENDED SURFACE POCKET TYPE MEDIUM FILTER, GLASS FIBER, EU6 RATING OR MERV 10-13
   - 7.7 TYPE "MF-2" MEDIUM FILTER, EXTENDED SURFACE POCKET TYPE MEDIUM FILTER, GLASS FIBER, 550mm., EU7 RATING OR MERV 13-14
   - 7.8 TYPE "MF-3" MEDIUM FILTER, EXTENDED SURFACE PLEATED TYPE MEDIUM FILTER, GLASS FIBER EU7 RATING OR MERV 13-14

* SELECTION FOR 0.5 W/CMH MAXIMUM FAN POWER RATING

CHILLERS SCHEDULE (BY LLE CONTRACTOR - FOR INFORMATION ONLY)

REQUIRED PERFORMANCES		Unit Data Each	Unit Data Each	Unit Data Each	Unit Data Each
UNIT NO.		TH-BKK2-02-06-CH-01 to 03(Duty 2,St by 1) (Phase 1)	TH-BKK2-02-06-CH-04 (Phase 2)	TH-BKK2-02-06-CH-05 (Phase 3)	TH-BKK2-02-06-CH-06 (Phase 4)
QUANTITY	SET (S)	3	1	1	1
CHILLER ARRANGEMENT		Single Unit Multi-Stage Single Compressor	Single Unit Multi-Stage Single Compressor	Single Unit Multi-Stage Single Compressor	Single Unit Multi-Stage Single Compressor
TYPE OF COMPRESSOR		Centrifugal with oil lubricant bearing or Oil Free Bearing	Centrifugal with oil lubricant bearing or Oil Free Bearing	Centrifugal with oil lubricant bearing or Oil Free Bearing	Centrifugal with oil lubricant bearing or Oil Free Bearing
TYPE OF CONDENSER		Water Cooled	Water Cooled	Water Cooled	Water Cooled
TYPE OF REFRIGERANT		R-1233 zd(E) or R-514A or 1234ZE	R-1233 zd(E) or R-514A or 1234ZE	R-1233 zd(E) or R-514A or 1234ZE	R-1233 zd(E) or R-514A or 1234ZE
COOLING CAPACITY	kW(REFRIGERATION)	5627 kW Ref (1600 RT)	5627 kW Ref (1600 RT)	5627 kW Ref (1600 RT)	5627 kW Ref (1600 RT)
CHILLED WATER FLOW RATE	L/s	170 L/s (1.67 gpm/ton)	170 L/s (1.67 gpm/ton)	170 L/s (1.67 gpm/ton)	170 L/s (1.67 gpm/ton)
CHILLED WATER TEMP. OUT/IN	oC	18.0/26.0	18.0/26.0	18.0/26.0	18.0/26.0
CONDENSER WATER FLOW RATE	L/s	302	302	302	302
CONDENSER WATER TEMP. OUT/IN	oC	38.7/33.2 (extreme), 36.7/31.2 (Normal)	38.7/33.2 (extreme), 36.7/31.2 (Normal)	38.7/33.2 (extreme), 36.7/31.2 (Normal)	38.7/33.2 (extreme), 36.7/31.2 (Normal)
COOLER FOULING FACTOR (Based on ARI 550/590)	m2.0C/kW	0.0176	0.0176	0.0176	0.0176
CONDENSER FOULING FACTOR (Based on ARI 550/590)	m2.0C/kW	0.044	0.044	0.044	0.044
MAX PRESSURE DROP FOR COOLER	kPa	45 kPa(15 Ft Wg.)	45 kPa(15 Ft Wg.)	45 kPa(15 Ft Wg.)	45 kPa(15 Ft Wg.)
MAX PRESSURE DROP FOR CONDENSER	kPa	60 kPa(20 Ft Wg.)	60 kPa(20 Ft Wg.)	60 kPa(20 Ft Wg.)	60 kPa(20 Ft Wg.)
COOLER WORKING PRESSURE	kPa	1034 KPa.(150 Psig.)	1034 KPa.(150 Psig.)	1034 KPa.(150 Psig.)	1034 KPa.(150 Psig.)
CONDENSER WORKING PRESSURE	kPa	1034 KPa.(150 Psig.)	1034 KPa.(150 Psig.)	1034 KPa.(150 Psig.)	1034 KPa.(150 Psig.)
NO. OF PASS OF COOLER		2 Pass	2 Pass	2 Pass	2 Pass
NO. OF PASS OF CONDENSER		2 Pass	2 Pass	2 Pass	2 Pass
EE.CONSUMPTION	kW	640.0	640.0	640.0	640.0
COEFFICIENT OF PERFORMANCE (COP.) kWREF / kWEE	100% Load	See LLE Chiller Equipment Data Sheet	See LLE Chiller Equipment Data Sheet	See LLE Chiller Equipment Data Sheet	See LLE Chiller Equipment Data Sheet
TYPE OF COMPRESSOR MOTOR STARTER		VSD	VSD	VSD	VSD
ELECTRICAL SUPPLY	V/PH/Hz.	400/3/50	400/3/50	400/3/50	400/3/50
ELECTRICAL PANEL BOARD NO.		TH-BKK2-02-MSSB01 to 03	TH-BKK2-02-MSSB04	TH-BKK2-02-MSSB05	TH-BKK2-02-MSSB06
PHASING		Phase I	Phase II	Phase III	Phase IV

NOTE :

1. EACH CHILLER TO INCLUDE AUTOMATIC BALL FILTRATION SYSTEM
2. CHILLER PERFORMANCE BASED ON ZERO TOLERANCE (REFER AHRI)

COOLING TOWERS SCHEDULE (BY LLE CONTRACTOR - FOR INFORMATION ONLY)

REQUIRED PERFORMANCES	UNIT DATA (EACH)	UNIT DATA (EACH)	UNIT DATA (EACH)	UNIT DATA (EACH)
UNIT NO.	TH-BKK2-02-07-CT-001 to 003	TH-BKK2-02-07-CT-004	TH-BKK2-02-07-CT-005	TH-BKK2-02-07-CT-006
QUANTITY Set(s)	3 Cooling Tower(2-Cells Cooling Tower)(Duty 2, St by 1)	1 Cooling Tower(2-Cells Cooling Tower)	1 Cooling Tower(2-Cells Cooling Tower)	1 Cooling Tower(2-Cells Cooling Tower)
TYPE OF COOLING TOWER	Induce Draft Cross Flow-Super Low Noise	Induce Draft Cross Flow-Super Low Noise	Induce Draft Cross Flow-Super Low Noise	Induce Draft Cross Flow-Super Low Noise
TYPE OF FAN	Propeller Fan Gear Drive or Directed Drive	Propeller Fan Gear Drive or Directed Drive	Propeller Fan Gear Drive or Directed Drive	Propeller Fan Gear Drive or Directed Drive
CONDENSER WATER FLOW RATE (L/s)	302 L/s per cooling tower(151 L/s per cell)	302 L/s per cooling tower(151 L/s per cell)	302 L/s per cooling tower(151 L/s per cell)	302 L/s per cooling tower(151 L/s per cell)
CONDENSER WATER TEMP. OUT/IN (°C)	38.7/33.2 (extreme), 36.7/31.2 (Normal)	38.7/33.2 (extreme), 36.7/31.2 (Normal)	38.7/33.2 (extreme), 36.7/31.2 (Normal)	38.7/33.2 (extreme), 36.7/31.2 (Normal)
AMBIENT WET BULB TEMPERATURE FOR SELECTION (°CWB)	31.4 °CWb (extreme) , 28.4 °CWb (Normal)	31.4 °CWb (extreme) , 28.4 °CWb (Normal)	31.4 °CWb (extreme) , 28.4 °CWb (Normal)	31.4 °CWb (extreme) , 28.4 °CWb (Normal)
SIDE STREAM FILTRATION (L/S)	30	30	30	30
MAXIMUM FAN MOTOR (kW)	22.0 kW per cell x 2 cells per Cooling Tower	22.0 kW per cell x 2 cells per Cooling Tower	22.0 kW per cell x 2 cells per Cooling Tower	22.0 kW per cell x 2 cells per Cooling Tower
MOTOR SPEED (RPM)	1450	1450	1450	1450
TYPE OF MOTOR STARTER	VSD with Motor IE 4	VSD with Motor IE 4	VSD with Motor IE 4	VSD with Motor IE 4
ELECTRICAL SUPPLY (V/PH/Hz.)	400/3/50	400/3/50	400/3/50	400/3/50
NUMBER OF MOTOR STAGE	SINGLE	SINGLE	SINGLE	SINGLE
ELECTRICAL PANEL BOARD NO.	TH-BKK02-02-07-MCC-(019,020,021)	TH-BKK02-02-07-MCC-022	TH-BKK02-02-07-MCC-023	TH-BKK02-02-07-MCC-024
PHASING	Phase I	Phase II	Phase III	Phase IV

ABBREVIATION

NOTE :

1. THE CONTRACTOR SHALL APPLY THE MAXIMUM CONDENSER WATER FLOW RATE 1.25 TIMES OF NORMAL CONDENSER WATER FLOW RATE) FOR THE DESIGN OF HOT WATER & COLD WATER DISTRIBUTION SYSTEM IN ORDER TO PREVENT THE OVERFLOW OF WATER
2. ALL COOLING TOWER SHALL BE EQUIPPED WITH DRIFT ELIMINATOR.
3. EACH COOLING TOWER SHALL BE PROVIDED WITH 1 NO. CHEMICAL TREATMENT SYSTEM

PRINT IN COLOUR

OWNER

STTelemedia Global Data Centres

STT GDC (THAILAND) CO., LTD.
944 Mitrtown Office Tower, 22nd-23rd Floor
Rama 4 Road, Wangmai, Pathumwan, Bangkok 10330

ENGINEERING

aurecon
www.aurecongroup.com
AURECON CONSULTING (THAILAND) CO., LTD.
89 AIA Capital Center Building, 21st Floor, Unit 2104-2107
Ratchadapisek Road, Dindaeng, Dindaeng, Bangkok 10400

STRUCTURAL REVIEWER
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STRUCTURAL
วีรพจน์ ปิตุปกรณ์วุฒิ วย. 1488
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ศิรวิทธ์ เทพสุวรรณ สส. 438
กชกร มันคง ภส. 3502
ปักปืน มีประดิษฐ์ ภส. 3907
รณกร วุทธานันท์ ภส. 4891
พงศ์รพี นิลวัชราภรณ์ ภส. 6968

ELECTRICAL AND COMMUNICATIONS
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เกียรติศักดิ์ ทองอ่อน สฟก. 6447
ชุติกาญจน์ สินโสภา สฟก. 6875
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The Millennia Building, 18th Floor, Unit 1802-1803
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ARCHITECT
ฐากูร สุวรรณสุขุม ว-สถ 603
เฉลิมชัย ประยูรโต ส-สถ 3222

REV	DATE	DESCRIPTION	APP
0	17/10/25	ISSUED FOR CONSTRUCTION	CW
1	31/10/25	ISSUED FOR CONSTRUCTION	CW

SCALE 1 : 1 | SIZE A0 | CONSTRUCTION ISSUE NOT FOR BMA SUBMISSION

DRAWN SP
DESIGNED KC
CHECKED SS
APPROVAL SS DATE 17/10/25

PROJECT
TERRA NORTH
6 STOREY BUILDING
ซอยรามคำแหง 28 ถนนรามคำ แหง
แขวง วหมาก เขตบางกะปิ กรุงเทพมหาคร 10240

DRAWING TITLE
MECHANICAL SERVICES EQUIPMENT SCHEDULE SHEET 4

DRAWING NUMBER
523213 - 02 - DRG - ME-0204 REV 1