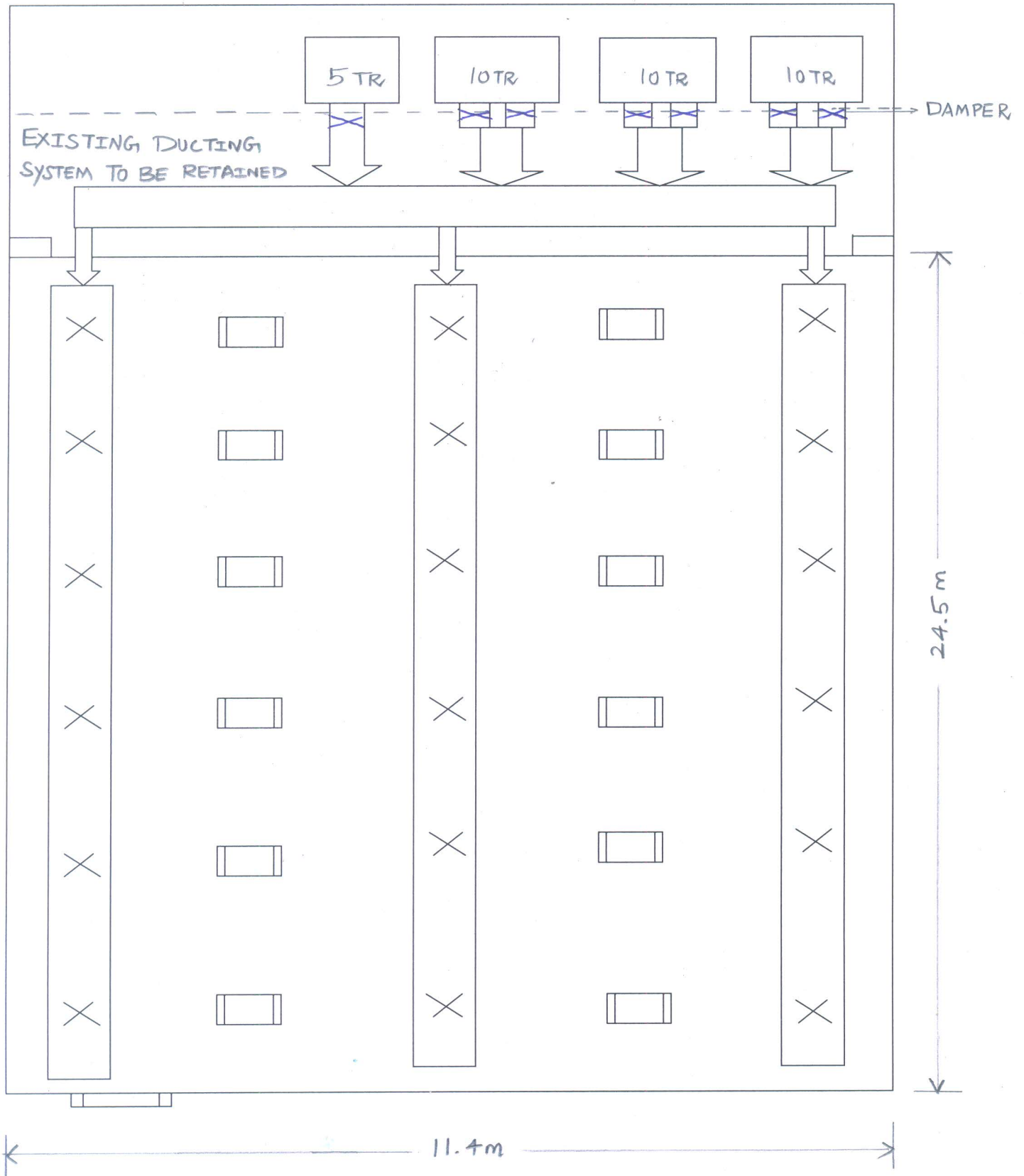




Annexure - C to Tender BAP/CAP/2013-14/OT-01
TECHNICAL SPECIFICATION FOR VRF AC IN MDP HALL
BILL OF QUANTITIES

S.No	DESCRIPTION	VENDOR TO SPECIFY
1	VRF SYSTEM DESCRIPTION	
a	Supply, installation, testing & commissioning of VRF/VRV Air-Conditioning system complete with indoor units, outdoor units, refrigerant, control cabling, earthing, insulation and the required controls for automatic temperature control excluding air distribution ducting in the MDP Hall.	
b	Cooling Range by the VRF unit in the MDP hall shall be 22 ± 2 deg celsius	
2	REFRIGERANT:	
	Refrigerant should be of R410a including full charging of refrigerant gas	
3	INDOOR UNIT:	
a	The total capacity of IDU should be minimum 34TR with multiple units of minimum 03 units of various capacities as per OEM standards	
b	No of indoor units	
c	Indoor unit make and model	
d	Remote Controls for the indoor units	
4	OUTDOOR UNIT:	
a	Variable Refrigerant Flow Outdoor unit consists of inverter driven compressor (combination of constant speed + variable speed or all variable speed, Scroll/DC twin rotary), air cooled condenser, fan motor, stands for outdoor units, vibration isolation pads etc.	
b	The total Output capacity of outdoor unit shall be minimum 42 HP. The Outdoor unit shall have multiple compressors of minimum 03 nos of various capacities (minimum of 10HP & maximum of 24HP) as per OEM standards.	
c	Outdoor Unit make and model	
5	CENTRAL MONITORING UNIT:	
	Central Monitoring Unit shall monitor and control all indoor/outdoor units of the VRF AC system and set the desired temperature, speed of fan etc.	
6	PIPING DETAILS:	
a	The refrigerant piping shall be hard drawn heavy duty copper of various sizes with necessary supports, fittings between condensing unit & indoor units along with suitable insulation.	
b	Necessary drain piping with supports/clamps from indoor unit to the ground level is in the scope of the supplier.	

7	CABLING:	
	All control/communication cables between IDUs and ODUs shall be in the scope of supplier. All power cables for the IDUs and ODUs shall be in the scope of BHEL.	
8	AIR DISTRIBUTION SYSTEM:	
	The vendor has to connect each outlet of IDU to the common duct of the existing Air distribution system. The necessary dampers, flexible joints required for connection with the existing duct is in the scope of the supplier. The existing distribution system drawing is enclosed in the annexure.	
9	DISMANTLING OF THE EXISTING PAC UNITS:	
	Dismantling of existing Package AC units at AHU room consist of following equipments. (10TR x 3 Nos and 5TR x 1 No = 35 TR)	
a	Indoor compressor units	
b	Cooling tower with connected pipings	
10	GUARANTEE PERIOD:	
	Guarantee period should be for a period of 24 months from the date of commissioning.	
11	DOCUMENTATION (To be furnished along with supply): Three sets of Operating & Maintenance Manuals (Hard copies) in English language should be supplied along with the VRF unit	
12	ERECTION & COMMISSIONING:	
a	Supplier shall be responsible for carrying out dismantling of the existing Package AC units, erection, testing and commissioning of the VRF AC system.	
b	Indoor units are to be mounted/fixed in the AHU room in the appropriate location as instructed by Engineer-in-charge.	
c	Outdoor units shall be mounted/fixed in pedestal on the roof of the building as instructed by Engineer-in-charge. Necessary civil works shall be carried out by BHEL.	
d	Wall opening for drain water pipes, refrigerant pipes entry and cable entry shall be done by supplier and shall be closed and finished with white cement after installation work is completed.	
e	The indoor units and outdoor units shall be factory assembled, tested and filled with first charge of refrigerant before delivering at site. Final acceptance will be given after the equipment is installed and tested at site to give satisfactory performance.	
13	TIME PERIOD FOR ERECTION & COMMISSIONING:	
	The erection and commissioning time period shall be 30 days from the date of handing over of site by BHEL.	

EXISTING PACKAGE AIRCONDITIONING UNIT IN MDP HALL



-  → SUPPLY AIR
-  → RETURN AIR