

PHE + FF

SI No.	Description	Unit	BOQ Qty.	BOQ Rate	BOQ Amount	NT RATE	RA-2 QTY	RA-2 AMOUNT
	<b>Part II PHE &amp; FF</b>							
	<b>B WATER SUPPLY</b>							
1	<p>Providing and fixing CPVC (Chlorinated Poly Vinyl Chloride) water supply pipes with pipe as per CTS SDR 11 (operating pressure - 7 Bar @ 82 Deg C and 28 Bar @ 23 Deg C) for pipes from 1/2 Inch to 2 Inch. Schedule 40 Pipe to be used from 2-1/2 Inch to 6 Inch. Pipes shall be joined using solvent welded CPVC fittings i.e. Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings (connection between CPVC &amp; metal pipe/GI) i.e. Brass Adaptors (both Male &amp; Female threaded) conforming to ASTM D-2846. ASTM F441 with only CPVC solvent cement conforming to ASTM F-493.</p> <p>Cost shall be inclusive of (a) Making maximum of 7.5 x 7.5 cm chasing in wall and floors for the pipe, making good the same by using 1:1 cement mortar over the wire mesh and providing protection to embedded pipes and fittings (in wall chase) by wrapping two layers of 400 micron polythene sheet including proper overlaps on joints complete as required or (b) Fixing/supporting the pipes (&amp; fittings) at wall/ceiling level supported by galvanized clamps, hangers etc, as per specification. Exposed pipes to be painted of legends with direction arrow. GI pipe sleeves suitable higher size shall be provided wherever the pipes are crossing the fire rated walls / floors slab and sealing the sleeves with glass wool in between and fire sealant compound at either end all as per Project Manager's / Consultant requirement. All termination points for installation of faucets shall have brass termination fittings. Installation shall be to as per Technical Manual of manufacturer of pipes &amp; fittings.</p>							
a)	15 mm dia	RM	30	384.16	11,524.80		6	6050.52
b)	20 mm dia	RM	20	432.18	8,643.60		14.00	1512.63
c)	25 mm dia	RM	10	504.21	5,042.10		3.00	11550.00
d)	32 mm dia	RM	R/o	550			21.00	
2	<p>Providing &amp; fixing full way <b>lever operated forged brass ball valve</b> of brass body with forged brass hard chrome plated steel ball tested to a pressure not less than 15 Kg / sqcm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.</p>							



	110 mm dia								
	75 mm dia	RM	20	960.4	19,208.00		✓ 30.00	28812.00	
	50 mm dia	RM	20	768.32	15,366.40		✓ 6.00	4609.92	
		RM	32	624.26	19,976.32				
2	Providing and fixing of UPVC <b>Floor Traps</b> formed out of bore 'P' trap with 50 mm water seal, setting in 1:2:4 mix cement concrete block or clamping to the wall or suspending with the ceiling including cutting and making good the walls and floors wherever required, With Heavy class SS grating with Cockroach proof SS strainer of approved design including setting in floor with cement motor to match with floor finish as per architect requirement suitable for waster F.D. & F.T.								
a)	110 mm inlet and 110 mm outlet.	Nos.	4	1440.6	5,762.40		✓ 4.00	5762.40	
3	Providing and fixing <b>clean out/floor clean out</b> plug consist of CI bend & GI socket heavy class with cap & key for opening male threaded cap etc. including lead caulked to CI pipes complete in all respects as per drawing/ sample approved by Engineer -in -Charge FCO (Floor clean out plug shall be flushed with floor finish): 100 mm dia. and Matching with Item no.31 or as per Architecture approvals.	Nos.	2	3841.6	7,683.20		✓ 2.00	7683.20	
	<b>Total</b>				<b>67,996</b>			<b>46867.52</b>	
<b>D</b>	<b>FIRE FIGHTING</b>								
1	Supply, installation, testing and commissioning of following sizes of pipes conforming to IS-1239 with all accessories like all fittings ( all pipes & fittings upto 50mm dia threaded shall be the threaded Ductile Iron (ASTM A536) or Cast Iron (ASTM A126) or Forged Steel fittings and for pipes above 50 mm dia MS fitting with welded joint shall be used) including tees, elbows, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on wall /ceiling with clamps, hangers (using anchor fasteners) as per specification, Including synthetic enamel paint of approved shade over a coat of primer. Prior to application of primer the surface should be cleaned for any dirt, rusts, rough substance etc. Including painting of legends both direction arrow as per the approval of the Project Manager								

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pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as per Project Manager's requirements including cutting holes and chases in brick, R.C.C work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc. shall be of galvanized iron unless specified otherwise and the supply of the same shall also be included in rates under this head. Welding of any kind on the galvanized support / hanger shall not be permitted.

For Sprinkler system - MS 'C' Heavy class pipe

a)	25 mm dia	RM	75	1104.46	82,834.50	69.4	
b)	32 mm dia	RM	15	1344.56	20,168.40	57	
c)	40 mm dia	RM	10	1776.74	17,767.40	41.25	
d)	50 mm dia	RM	10	2160.9	21,609.00	36.15	
e)	65 mm dia	RM	10	2737.14	27,371.40		
f)	80 mm dia	RM	10	3121.3	31,213.00		
g)	100 mm dia	RM	10	3601.5	36,015.00		

2 Supply, installation, testing and commissioning of brass quartzoid sprinklers (UL approved) of 15 mm dia size, suitable for sustaining the pressure on the seat & water hammer effect. The type & temperature rating shall be as follows:

- Note :
- i) All sprinkler shall be chrome finish / powder coated.
  - ii) Contractor shall ensure provision of sprinkler guard at no additional cost, as required by the Client.

	Spray recessed (adjustable) rossette (68°C) <b>sprinkler quick response upright type</b>	Nos.	28	960.4	26,891.20	28	26891.20
	Spray recessed (adjustable) rossette (68°C) <b>sprinkler quick response pendent type</b>	Nos.	28	960.4	26,891.20	28	26891.20

3 Providing and fixing fully charged **ABC powder type** (Mono-Ammonium Phosphate - MAP 90) portable fire extinguishers conforming to IS:15683, fixed to wall with brackets complete with initial charge. (Note: The cost for stand of fire extinguisher shall be included in this rate)

	Capacity 6 Kg.	No.	2	7683.2	15,366.40	2	15366.40
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4 Providing and fixing **CO2 type** cylindrical shape fire extinguisher with fixing hangers, hose, brackets, screws to required size etc. complete as per IS:15683:2006 - wall mounted type.

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5	Providing & fixing of butterfly valve (PN 16) with flanges, nut bolts, gaskets and necessary pad locking arrangement complete required.	No.	2	9604	19,208.00		2	19208.00
	80 mm dia	Nos.	1	12005	12,005.00			12005.00
	<b>Total</b>				<b>3,37,341</b>			<b>266943.18</b>
	<b>NON TENDERED ITEMS</b>							
	<b>DRAINAGE</b>							
1	Providing and fixing of clean out chambers with 50 mm water seal, setting in 1:2:4 mix cement concrete block or clamping to the wall or suspending with the ceiling including cutting and making good the walls and floors wherever required, With Heavy class SS grating with Cockroach proof SS strainer of approved design including setting in floor with cement motor to match with floor finish as per architect requirement suitable for waster F.D. & F.T.	Nos.	0				2	14000.00
A	1'x1' SIZE	Nos.	0				2	13000.00
2	Providing & fixing of PRESSURE GUAGE in FF line as required by EIC	Nos.	0				2	13000.00
	<b>Total</b>				<b>5,71,678</b>			<b>27000.00</b>

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JAI PUR AIRPORT (PHE & FF M.B SHEET)

PHE & FF  
WATER SUPPLY

	MOS	L	B	H	Total
<p>1</p> <p>Providing and fixing CPVC (Chlorinated Poly Vinyl Chloride) water supply pipes with pipe as per CI 5 SDR 11 operating pressure - 7 Bar @ 82 Deg C and 28 Bar @ 23 Deg C (Ho pipes from 1/2 inch to 2 inch fittings i.e. Tees, Elbows, Couplers, Unions, Reducers, bushings etc. including transition fittings (connection between CPVC &amp; metal pipe/GI) i.e. Brass Adaptors (both Male &amp; Female threaded) conforming to ASTM D-2846, ASTM F441 with only CPVC solvent cement conforming to ASTM F-493.</p> <p>Cost shall be inclusive of (a) Making maximum of 7.5 x 7.5 cm chasing in wall and floors for the pipe, making good the same by using 1:1 cement mortar over the wire mesh and providing protection to embedded pipes and fittings (in wall chase) by wrapping two layers of 400 micron polythene sheet including proper overlaps on joints complete as required or (b) Fixing/supporting the pipes (&amp; fittings) at wall/ceiling level supported by galvanized c studs, hangers etc. as per specification. Exposed pipes to be painted of legends with direction arrow. GI pipe sleeves suitable higher size shall be provided wherever the pipes are crossing the fire rated walls / floors slab and sealing the sleeves with glass wool in between and fire sealant compound at either end all as per Project Manager's / Consultant requirement. All termination points for installation of faucets shall have brass termination fittings. Installation shall be to as per Technical Manual of manufacturer of pipes &amp; fittings.</p> <p><b>ISMM</b> <i>Rd Line.</i></p>	1.00	6.00 ✓			6.00
b)		1.00	2.00 ✓		2.00
		1.00	6.00 ✓		6.00
					14.00
c)		1.00	3.00 ✓		3.00
					3.00
d)		7.00	3.00 ✓		21.00
					21.00
<b>c</b>					
<b>DRAINAGE</b>					
Providing, Supply, installation, testing and commissioning of UPVC Soil, Waste & Vent system conforming to IS : 13592 - Type B and UPVC fittings (moulded as well as fabricated) like bends, tees, Y-tees, crosses, boss connections, access pieces, saddle pieces, cleanouts, adaptors for connections to other materials, plugs, reducers, cowls, offset and other specials. Joining shall be done with pushfit EPDM ring jointing technique in general. Solvent cement joints may be provided for fittings and specials which are not manufactured with pushfit rubber joints. Pipes may be laid / fixed in sunken floors, under slung from ceiling. The pipes laid in sunken floor shall be encased with 75 mm thick cement concrete (1:2:4) all around. The installation shall be complete in all respects including cutting chases / holes in walls, slabs and making good the same as per specifications.					
Providing GI pipe sleeves of suitable higher size wherever pipes crossing a fire rated wall / floor slab and sealing of space around pipe and pipe sleeve with glass wool in between and fire proof sealant at either end to the satisfaction of the Project Manager / Consultants and making good the same after pipes have been duly laid and testing complete.					
e)					
					110 mm dia

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Kitchen to basement connection from runway (Airbay side)

	<b>Sub Total</b>	5.00	6.00			30.00
b)	75 mm dia					30.00
	Kitchen area					
	<b>Sub Total</b>	1.00	6.00			6.00
2	Providing and fixing of UPVC Floor Traps formed out of bore 'p' trap with 50 mm water seal, setting in 1:2:4 mix cement concrete block or clamping to the wall or wherever required, with Heavy class SS grating with Cockroach proof SS strainer of approved design including setting in floor with cement motor to match with floor finish as per architect requirement suitable for waster F.D. & F.T.					
a)	110 mm inlet and 110 mm outlet.	4.00				4.00
	<b>Sub Total</b>					4.00
3	Providing and fixing clean out/floor clean out plug consist of CI bend & GI socket heavy class with cap & key for opening male threaded cap etc. including lead caulked to CI pipes complete in all respects as per drawing/ sample approved by Engineer -in -Charge FCO (floor clean out plug shall be flushed with floor finish) : 100 mm dia. and Matching with Item no.31 or as per Architecture approvals.	2.00				2.00
	<b>Sub Total</b>					2.00

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**Sprinkler line item**

25mm dia line → 67.4 mtr ✓  
 32 mm dia line → 28 mtr ✓  
 50 mm dia line → 15 mtr ✓  
 Bundles  
 Waster supply. Forwarding + Insulation  
 32 mtr line → geyser 25 Ltr  
 11/7/24

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