



Bill of Material for Fire protection system work at DAFFPL - New Delhi

Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for supply of items in all respects, inclusive of transportation, handling and safe custody at site & all incidental cost.	Total Amount for Supply (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
1	Supply of Pipes as per technical specification				
i)	C.S. Pipes (Refer Piping Material Specification no.150C02).				
a	15 NB	RM	6		
b	25 NB	RM	6		
c	80 NB	RM	24		
d	100 NB	RM	416		
e	150 NB	RM	98		
f	200 NB	RM	194		
g	250 NB	RM	76		
h	300 NB	RM	15		
i	350NB	RM	12		
j	500 NB	RM	51		
k	600 NB	RM	61		
ii)	S.S. Pipes (Refer Piping Material Specification no. 150H01)				
a	15 NB	RM	6		
b	20 NB	RM	6		
c	25 NB	RM	6		
d	40 NB	RM	6		
e	50 NB	RM	1050		
2	Supply of Pipe fittings as per technical specification.				
i)	Fittings for C.S Pipes (Refer C.S.Piping Material Specification no.150C02).				
a	90 Deg. Elbows				
1	80NB	Nos.	6		
2	100NB	Nos.	138		
3	150NB	Nos.	14		
4	200 NB	Nos.	28		
5	250 NB	Nos.	13		
6	300NB	Nos.	5		
7	500 NB	Nos.	4		
8	600 NB	Nos.	3		



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
b	45 Deg. Elbows				
1	600NB	Nos.	2		
c	Equal Tee				
1	15NB	Nos.	7		
2	100NB	Nos.	5		
3	150NB	Nos.	4		
4	200 NB	Nos.	8		
5	250 NB	Nos.	1		
6	500 NB	No.	1		
7	600 NB	No.	1		
d	Un Equal Tee				
1	100x80	Nos.	12		
2	150x100	Nos.	8		
3	300x100	Nos.	14		
4	200X100	Nos.	10		
5	250X100	Nos.	6		
6	500x200	Nos.	2		
7	500x300	Nos.	5		
8	600x350	Nos.	5		
e	Concentric Reducer				
1	100X80	Nos.	22		
2	100x50	Nos.	2		
3	250x200	Nos.	2		
4	300x200	Nos.	5		
5	300x250	Nos.	1		
6	500x400	Nos.	2		
f	Eccentric Reducer				
1	150x80	Nos.	2		
2	350X250	Nos.	5		
3	150x65	Nos.	U.R.		



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
4	350X200	Nos.	U.R.		
5	150x100	Nos.	U.R.		
6	350X300	Nos.	U.R.		
g	Companion Flange				
1	80NB	Nos.	6		
2	100NB	Nos.	122		
3	150NB	Nos.	17		
4	200NB	Nos.	25		
5	250NB	Nos.	5		
6	300NB	Nos.	20		
7	350NB	Nos.	20		
8	500NB	No.	1		
9	600NB	Nos.	3		
h	Blind Flanges				
1	150NB	No.	1		
2	200NB	No.	3		
3	500NB	No.	1		
4	600NB	Nos.	3		
i	Half Coupling				
1	15NB	Nos.	7		
ii)	Fittings for S.S Pipes (S.S. Piping Material Specification no. 150H01)				
a	90 Deg. Elbows				
1	50NB	Nos.	40		
b	45 Deg. Elbows				
1	50NB	Nos.	13		
c	Equal Tee				
1	50NB	Nos.	5		
d	Companion Flange				
1	50NB	Nos.	4		
e	Blind Flanges				



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
1	50 NB	Nos.	2		
f	Half Coupling				
1	15NB	Nos.	11		
2	20NB	Nos.	14		
3	25NB	Nos.	2		
3	Supply of Valves as per Technical Specification.				
i)	Valves for C.S Pipes (Refer Valve Specification for Fire water services Spec. no. 150C02)				
a	Gate valve				
1	80 NB	Nos.	2		
2	100 NB	Nos.	52		
3	150 NB	Nos.	10		
4	300 NB	Nos.	5		
5	350 NB	Nos.	5		
b	Non- Return valve				
1	100 NB for Jockey pump disch.	Nos.	2		
2	300 NB for main pump disch.	Nos.	5		
c	Ball valve				
1	15 NB	Nos.	68		
2	25 NB	Nos.	7		
d	Safety relief valve				
1	200 NB	No.	1		
e	Butterfly valve				
1	50NB	No.	1		
2	200NB	Nos.	8		
ii)	Valves for S..S Pipes (Refer Valve Specification Foam concentrate services Spec no. 150H01)				
a	Gate valve				
1	15 NB	Nos.	11		
2	20 NB	Nos.	14		
3	25 NB	Nos.	2		
5	50 NB	No.	1		



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
4	Supply of Dual type Pressure Switch as per Technical Specification.				
i)	suitable for 1-20 Kg/cm ²	Nos.	7		
5	Supply of Dial type Pressure Gauge with isolation cock (Refer specification & Drg. no. 322538-RLA-0903-04).				
i)	Dial diameter 100 mm calibration 0 – 16 kg / cm ²	Nos.	7		
6	Supply of 'Y' OR Basket type suction Strainer with M.S. flanged connection suitable for 80 to 400 mm dia., fabricated from 8 mm thick M.S. plate / cast c.s. and stainless steel 20 mesh complete including companion flanges etc. (Refer specification & Drg. no. 322538-RLA-0903-04).				
i)	150 NB 'Y' type strainer.	Nos.	2		
ii)	350 NB 'Basket' type strainer.	Nos.	5		
7	Supply of 2 mm thick PYPKOTE anti-rust pipe protection including primer as per drawing, technical specification (Refer specification & Drg. no. 322538-RLA-0902-01).				
i)	200 NB	RM	32		
ii)	250 NB	RM	26		
iii)	500 NB	RM	18		
iv)	600 NB	RM	18		
8	Supply of NP3 class RCC Pipe sleeve for road crossing as per IS 458 including hume pipes. (Refer specification & Drg. no. 322538-RLA-0902-01).				
i)	100 mm dia for 50NB service pipe.	RM	116		
ii)	300 mm dia for 100/150NB service pipe.	RM	20		
iii)	500 mm dia for 200/250NB service pipe.	RM	45		
iv)	900 mm dia for 500/600NB service pipe.	RM	24		
9	Supply of SS 304 (confirming to IS 3444) Double headed hydrant landing valve as per technical specification conforming to IS-5290, Type-B with 63 mm dia. instantaneous female coupling on the outlet SS metal blank cap and chain, necessary companion flanges, nuts, bolts, washer and gasket complete as per specification. (ISI marked). All parts and body shall be of SS as per IS:5290. (Refer specification for Stainless steel double headed hydrant valve).	No.	U.R.		



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				Unit Rate for supply of items in all respects, inclusive of transportation, handling and safe custody at site & all incidental cost.	Total Amount for Supply (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
10	Supply of standpost type manually operated 75mm size Water cum foam Monitor as per UL /FM having 100NB inlet and Variable flow nozzle & capable to 500 GPM & 1000 GPM complete as per technical specification. (Refer specification for Water cum foam monitor)				
i)	1750 LPM	No.	1		
ii)	3500 LPM	Nos.	3		
11	Supply of 63 mm dia. 15m long Rubberized lined Hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to IS 636 Type-B and coupling to IS 903 -1975 (ISI marked). (Refer specification for RRL Hose).				
i)	15m for field hydrant	Nos.	U.R.		
12	Supply of standard short size SS branch pipe with S.S. nozzle 20 mm dia. outlet with standard instantaneous type 63 mm dia. coupling. (ISI marked) (Refer specification for Stainless steel branch pipe).	No.	U.R.		
13	Supply of Fire hose cabinet as per specification. (Refer specification & Drg. no. 322538-RLA-0902-01).	No.	U.R.		
14	Supply of 13KL AFFF Foam concentrate storage tank with transfer pumps as per technical specification (Foam concentrate to be used shall confirm to IS: 4989 2006 / UL-162 as per OISD-117) for HVLR system. Atmospheric tank as per specification / datasheet no. 322538-RIC-0101-01. Including 2 nos. S.S. foam pump (Q=11KL / Hr.x 25mH ; 1 no. motor driven + 1 no. diesel engine driven with 1 + 1 suitable battery back-up and charger) including control Panel for above pumps and necessary cabling with associated piping, isolation valve, strainer, control valve etc. as a vendor package as per P & I D no. 322538-RIA-0900-01. and layout for foam tank drg. no. 322538-RPB-0906-01.	No.	1		
i)	3% AFFF Foam concentrate confirm to IS: 4989 2006 / UL-162 as per OISD-117)	KL	13		
15	Supply of complete SS304 3% AFFF Inline balance foam concentrate pressure proportioners set with flange connection confirm to ANSI B16.5 Class 150# for stainless steel with manual override valve including appropriate In-line inductor as per drg. no. 322538-RPA-0905-01				
i)	3" for water Flow range 270- 3000LPM	No.	11		



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
ii)	4" for water Flow range 650- 5700LPM	No.	14		
iii)	6" for water Flow range 1200 - 9500LPM	No.	2		
16	Supply of Fire extinguishers (If required) as per OISD-117/235, (Contractor should submit test certificate form manufacturer along with serial number of every extinguishers supplied.)				
i)	Supply of Carbon-di-oxide fire extinguishers consisting of welded M.S cylindrical body, squeeze lever discharge valve fitted with internal discharge tube, 30cms long high pressure discharge hose, discharge nozzle, suspension bracket (confirming to IS: 2878, suitable for B,C Class & Electrical Fire, (i.e. Flammable Liquids and Gases) finished externally with red enamel paint and fixed to wall with brackets with rawl plug/dash fasteners complete with internal charge.				
a	4.5 kg Co2	Nos.	U.R.		
ii)	Supply of Dry Chemical Powder (Sodium Bi Carbonate) type Fire Extinguishers, confirming to IS:10658, suitable for B,C Class & Electrical Fire (i.e. Petrol, Paints & Gases) finished externally with red enamel paint and fixed to wall with brackets with rawl plug/dash fasteners complete with internal charge.				
a	9 Kg	Nos.	U.R.		
b	25 Kg	Nos.	U.R.		
c	75 Kg.	Nos.	U.R.		
17	Supply of 9 ltrs. capacity Sand Bucket (If required) with its cover; MS, 24 G, painted with two coats of primer & enamel paint on a structural stand complete. The cost shall also include @ 12.5 kg of dry rever sand for fire fighting purpose.	Nos.	U.R.		
18	Supply of structural steel for HVLR, Fixed foam and MVWS system's all type of piping support with all materials as per technical specification, drawings and as per instruction of EIC.	kg.	1500		
19	Design, Engg., Manufacturing, supply of Gas Suppression system for Control room in sub station bldg. (control room Size 9.7 x 5 x @ 4 m as per Drg. no. 322538-RPB-0907-01) areas by FM200 / NOVEC 1230, an Environmentally friendly gas as per NFPA 2001 comprise of fire detection by provision of heat / smoke detector & response indicator as per NFPA-75.	M3	194		
Sub Total (A)					



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)	
				VAT *	% on	% of Sub total (A)
Total Amount (A)(inclusive of taxes - including Freight & Insurance - FOR Site)						
Total Amount in word:						
Notes:						
1	Construction Water, loading and boarding, Site Storage with watch and ward, receipt, unloading, shifting material to store and internal shifting to site shall be included in Vendor's scope.					
2	The unit rates as quoted to arrive at above total price shall be firm and inclusive of all taxes, duties, levies, transportation etc. No separate payment shall be made for site mobilization / demobilization, insurance etc.					
3	The Schedule of Rates should be read with all the other sections of the tender.					
4	The tenderer shall be deemed to have studied the drawings, specifications and the details of work to be done within the time schedule and to have acquainted with the conditions prevailing at site. Site visit is mandatory.					
5	The quantities shown against the various items are only indicative of the quantum of work and it may vary to any extent. Billing will be done as per actual.					
6	The rate quoted shall be inclusive of all work as mentioned in the scope of work (Technical Specifications).					
7	All the items of work in the schedule of rates shall be carried out as per specifications, drawings and instructions of the Engineer-in-Charge.					
8	The rates quoted by tenderers shall be inclusive of all costs for removal and re-installation, should any defects occur or modifications are required during testing, calibration and loop tests and no extra claims for such works shall be entertained.					

Signature of Bidder along with company seal



PART-B INSTALLATION



Delhi Aviation Fuel Facilities Pvt. Ltd.

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Bill of Material - Installation of Fire protection system work at DAFFPL - New Delhi					
Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
1	Installation of Pipes with all required (Structural/civil) supports including painting of above ground pipes as per technical specification with cutting and making good walls complete. Including all tools and tackles and misc. work e.g. making opening in wall etc. including hydrotesting of pipe as required. Including all tools, tackles, labours required to complete the job and as per instruction of Engineer In-charge (EIC).				
i)	C.S. Pipes (Refer Piping Material Specification no.150C02).				
a	15 NB	RM	6		-
b	25 NB	RM	6		-
c	80 NB	RM	24		-
d	100 NB	RM	416		-
e	150 NB	RM	98		-
f	200 NB	RM	194		-
g	250 NB	RM	76		-
h	300 NB	RM	15		-
i	350NB	RM	12		-
j	500 NB	RM	51		-
k	600 NB	RM	61		-
ii)	S.S. Pipes (Refer Piping Material Specification no. 150H01)				
a	15 NB	RM	6		-
b	20 NB	RM	6		-
c	25 NB	RM	6		-
d	40 NB	RM	6		-
e	50 NB	RM	1050		-
2	Installation of Pipe fittings including painting of above ground fittings as per technical specification. (Including all tools, tackles, labours required to complete the job and as per instruction of Engineer In-charge).				
i)	Fittings for C.S Pipes (Refer C.S.Piping Material Specification no.150C02).				
a	90 Deg. Elbows				
1	80NB	Nos.	6		
2	100NB	Nos.	138		-
3	150NB	Nos.	14		-



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				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
4	200 NB	Nos.	28		-
5	250 NB	Nos.	13		-
6	300NB	Nos.	5		-
7	500 NB	Nos.	4		-
8	600 NB	Nos.	3		-
b	45 Deg. Elbows				
1	600NB	Nos.	2		-
c	Equal Tee				
1	15NB	Nos.	7		-
2	100NB	Nos.	5		-
3	150NB	Nos.	4		-
4	200 NB	Nos.	8		-
5	250 NB	Nos.	1		-
6	500 NB	No.	1		-
7	600 NB	No.	1		-
d	Un Equal Tee				
1	100x80	Nos.	12		-
2	150x100	Nos.	8		-
3	300x100	Nos.	14		-
4	200X100	Nos.	10		-
5	250X100	Nos.	6		-
6	500x200	Nos.	2		-
7	500x300	Nos.	5		-
8	600x350	Nos.	5		-
e	Concentric Reducer				
1	100X80	Nos.	22		-
2	100x50	Nos.	2		-
3	250x200	Nos.	2		-
4	300x200	Nos.	5		-
5	300x250	Nos.	1		-
6	500x400	Nos.	2		-
f	Eccentric Reducer				



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
1	150x80	Nos.	2		-
2	350X250	Nos.	5		-
3	150x65	Nos.	U.R.		
4	350X200	Nos.	U.R.		
5	150x100	Nos.	U.R.		
6	350X300	Nos.	U.R.		
g	Companion Flange				
1	80NB	Nos.	6		-
2	100NB	Nos.	122		-
3	150NB	Nos.	17		-
4	200NB	Nos.	25		-
5	250NB	Nos.	5		-
6	300NB	Nos.	20		-
7	350NB	Nos.	20		-
8	500NB	No.	1		-
9	600NB	Nos.	3		-
h	Blind Flanges				
1	150NB	No.	1		-
2	200NB	No.	3		-
3	500NB	No.	1		-
4	600NB	Nos.	3		-
i	Half Coupling				
1	15NB	Nos.	7		-
ii)	Fittings for S.S Pipes (S.S. Piping Material Specification no. 150H01)				
a	90 Deg. Elbows				
1	50NB	Nos.	40		-
b	45 Deg. Elbows				
1	50NB	Nos.	13		-
c	Equal Tee				
1	50NB	Nos.	5		-
d	Companion Flange				
1	50NB	Nos.	4		-



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
e	Blind Flanges				
1	50 NB	Nos.	2		-
f	Half Coupling				
1	15NB	Nos.	11		-
2	20NB	Nos.	14		-
3	25NB	Nos.	2		-
3	Installation of Valves, including all tools, tackles, labours required to complete the job and as per instruction of Engineer In-charge and as per specification.				
i)	Valves for C.S Pipes (Refer Valve Specification for Fire water services Spec. no. 150C02)				
a	Gate valve				
1	80 NB	Nos.	2		-
2	100 NB	Nos.	52		-
3	150 NB	Nos.	10		-
4	300 NB	Nos.	5		-
5	350 NB	Nos.	5		-
b	Non- Return valve				
1	100 NB for Jockey pump disch.	Nos.	2		-
2	300 NB for main pump disch.	Nos.	5		-
c	ball valve				
1	15 NB	Nos.	68		-
2	25 NB	Nos.	7		-
d	Safety relief valve				
1	200 NB	No.	1		-
e	Butterfly valve				
1	50NB	No.	1		-
2	200NB	Nos.	8		-
ii)	Valves for S..S Pipes (Refer Valve Specification Foam concentrate services Spec no. 150H01)				
a	Gate valve				
1	15 NB	Nos.	11		-



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
2	20 NB	Nos.	14		-
3	25 NB	Nos.	2		-
4	50 NB	No.	1		-
4	Installation & commisioning of Fire water pumps in proposed pump house, including all tools, tackles, machinery, labours required to complete the job and as per instruction of Engineer In-charge. All Main Fire pumps "on start", shall have provision of cabling to start alarm at security cabin & an electric siren kept at Pump house/main plant bldg./security cabin. (Foundation by client as per GAD of Bidder based on manufacturer's data.) Refer drg. no. 322538-RLA-0901-01 (FIM = Free Issue Material)				
i)	Jockey Pump (single stage) horizontal back pull out type centrifugal pump (55m3/hr each). (FIM = Free Issue Material)	Each	2		-
ii)	Diesel Engine Driven Fire Pump, horizontal split casing pumping set inclusive of 3 working + 2 stand by with battery sets. (610m3/hr each). (FIM = Free Issue Material)	Each	5		-
5	Installation of dual type Pressure Switch including electrical connections setting of Cut-In and cut-Off pressure signal complete in all respects. 1 each for main fire hydrant pump. (Refer specification).				
i)	suitable for 1-20 Kg/cm ²	Nos.	7		-
6	Installation of dial type Pressure Gauge with isolation cock and copper pipe at hydrant station. (Refer specification & Drg. no. 322538-RLA-0903-04).				
i)	Dial diameter 100 mm calibration 0 – 16 kg / cm ²	Nos.	7		
7	Installation of 'Y' OR Basket type suction Strainer with M.S. flanged connection suitable for 80 to 400 mm dia., fabricated from 8 mm thick M.S. plate / cast c.s. and stainless steel 20 mesh complete including companion flanges etc. (Refer specification & Drg. no. 322538-RLA-0903-04).				
i)	150 NB 'Y' type strainer.	Nos.	2		-
ii)	350 NB 'Basket' type strainer.	Nos.	5		-
8	Fixing of two coat of 2 mm thick PYPKOTE anti-rust pipe protection including primer and lap of 25mm on buried pipe including surface preparation, complete in all respects with tools tackles and as per drawing, technical specs. and as per instruction of E.I.C..(Refer specification & Drg. no. 322538-RLA-0902-01).				
i)	200 NB	RM	32		-



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(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
ii)	250 NB	RM	26		-
iii)	500 NB	RM	18		-
iv)	600 NB	RM	18		-
9	Installation of NP3 class RCC Pipe sleeve for road crossing as per IS 458 including 3" PCC (1:2:4) bed below hume pipe required as per instruction of EIC. (Refer specification & Drg. no. 322538-RLA-0902-01).				
i)	100 mm dia for 50NB service pipe.	RM	116		-
ii)	300 mm dia for 100/150NB service pipe.	RM	20		-
iii)	500 mm dia for 200/250NB service pipe.	RM	45		-
iv)	900 mm dia for 500/600NB service pipe.	RM	24		-
10	Installation of SS 304 (confirming to IS 3444) Double headed hydrant landing valve as per technical specification conforming to IS-5290, Type-B with 63 mm dia. instantaneous female coupling on the outlet SS metal blank cap and chain, necessary companion flanges, nuts, bolts, washer and gasket complete as per specification. (ISI marked). All parts and body shall be of SS as per IS:5290. (Refer specification for Stainless steel double headed hydrant valve).	No.	U.R.		
11	Installation of standpost type manually operated 75mm size Water cum foam Monitor as per UL /FM having 100NB inlet and Variable flow nozzle & capable to 500 GPM & 1000 GPM complete as per technical specification. Including all tools, tackles, labours required to complete the job and as per instruction of Engineer In-charge. (Refer specification for Water cum foam monitor)				
i)	1750 LPM	No.	1		-
ii)	3500 LPM	Nos.	3		-
12	Installation of 63 mm dia. 15m long Rubberized lined Hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to IS 636 Type-B and coupling to IS 903 -1975 (ISI marked). (Refer specification for RRL Hose).				
i)	15m for field hydrant	Nos.	U.R.		
13	Installation of standard short size SS branch pipe with S.S. nozzle 20 mm dia. outlet with standard instantaneous type 63 mm dia. coupling. (ISI marked) (Refer specification for Stainless steel branch pipe).	No.	U.R.		



PART-B INSTALLATION



Delhi Aviation Fuel Facilities Pvt. Ltd.

SOR-FF/01_Rev. C_16.01.2016

Bill of Material - Installation of Fire protection system work at DAFFPL - New Delhi					
Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
14	Installation of Fire hose cabinet including all tools, tackles, labours required to complete the job and as per instruction of Engineer In-charge. as per specification. (Refer specification & Drg. no. 322538-RLA-0902-01).	No.	U.R.		
15	Excavation of trenches of required width for pipes. in any type of soil including (breaking road, R.C.C. etc. if reqd.) excavation for sockets and dressing of sides ramming of bottom, depth upto 1.5 M including taking out the excavated soil, and then back filling the soil as required in layers not exceeding 10 cms / 20cms (sand / soil) in depth including consolidating. Sets deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed within a lead of 1.0 km. (supply of sand is in bidders scope)				
i)	For 100 NB pipe	RM	24		-
ii)	For 200 NB pipe	RM	34		-
iii)	For 250 NB pipe	RM	24		-
iv)	For 500 NB pipe	RM	15		-
v)	For 600 NB pipe	RM	20		-
16	Laying the 3" thick PCC bed required below RCC NP3 class pipe sleeve including ramming, levelling etc. with all material, tools, tackles and labour as per instruction of EIC.				
i)	For 100 NB pipe	RM	24		-
ii)	For 200 NB pipe	RM	34		-
iii)	For 250 NB pipe	RM	24		-
iv)	For 500 NB pipe	RM	15		-
v)	For 600 NB pipe	RM	20		-
17	Installation of 13KL AFFF Foam concentrate storage tank with transfer pumps as per technical specification (Foam concentrate to be used shall confirm to IS: 4989 2006 / UL-162 as per OISD-117) for HVLR system. Atmospheric tank as per specification / datasheet no. 322538-RIC-0101-01. Including 2 nos. S.S. foam pump (Q=11KL / Hr.x 25mH ; 1 no. motor driven + 1 no. diesel engine driven with 1 + 1 suitable battery back-up and charger) including control Panel for above pumps and necessary cabling with associated piping, isolation valve, strainer, control valve etc. as a vendor package as per P & I D no. 322538-RIA-0900-01. and layout for foam tank drg. no. 322538-RPB-0906-01.	No.	1		-



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Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
i)	3% AFFF Foam concentrate confirm to IS: 4989 2006 / UL-162 as per OISD-117)	KL	13		-
18	Installation of complete SS304-3% AFFF Inline balance foam concentrate pressure proportioners set with flange connectin confirm to ANSI B16.5 Class 150# for stainless steel with manual override valve including appropriate In-line inductor. Including all material, tools, tackles and labour as per instruction of EIC. and as per drg. no. 322538-RPA-0905-01				
i)	3" for water Flow range 270- 3000LPM	No.	11		-
ii)	4" for water Flow range 650- 5700LPM	No.	14		-
iii)	6" for water Flow range 1200 - 9500LPM	No.	2		-
19	Installation of Fire extinguishers (If required) as per OISD-117/235, (Contractor should submit test certificate form manufacturer along with serial number of every extinguishers supplied.) Instalation shall be as per OISD-117/235 & as per instruction of EIC.				
i)	Installation of Carbon-di-oxide fire extinguishers consisting of welded M.S cylindrical body, squeeze lever discharge valve fitted with internal discharge tube, 30cms long high pressure discharge hose, discharge nozzle, suspension bracket (confirming to IS: 2878, suitable for B,C Class & Electrical Fire, (i.e. Flammable Liquids and Gases) finished externally with red enamel paint and fixed to wall with brackets with rawl plug/dash fasteners complete with internal charge. Instalation shall be as per OISD-117 & as per instruction of EIC.				
a	4.5 kg Co2	Nos.	U.R.		
ii)	Installation of Dry Chemical Powder (Sodium Bi Carbonate) type Fire Extinguishers, confirming to IS:10658, suitable for B,C Class & Electrical Fire (i.e. Petrol, Paints & Gases) finished externally with red enamel paint and fixed to wall with brackets with rawl plug/dash fasteners complete with internal charge. Instalation shall be as per OISD-117 & as per instruction of EIC.				
a	9 Kg	Nos.	U.R.		
b	25 Kg	Nos.	U.R.		
c	75 Kg.	Nos.	U.R.		



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Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
20	Installation of 9 ltrs. capacity Sand Bucket (If required) with its cover; MS, 24 G, painted with two coats of primer & enamel paint on a structural stand complete. The cost shall also include @ 12.5 kg of dry rever sand for fire fighting purpose. Instalation shall be as per instruction as per OISD-117 & as per instruction of EIC.	Nos.	U.R.		
21	Dismantalling and re-installation of existing fire hydrant line with fittings, valves, supports etc. including (If required) excavation & backfilling the same for sizes as mentioned here in below with required all tools, tackles, labours and machinery. Pipes after removal, to be stored at appropriate location / store as per instruction of engineer in charge and re-installation of the same pipes at the requisite location with all tools, tackels, etc. as per the drawing and as per the instruction of E.I.C.				
i)	100NB	RM	90		-
ii)	150NB	RM	240		-
iii)	200NB	RM	152		-
iv)	400NB	RM	30		-
22	Fabrication and erection of structural steel for fire hydrant, HVLR, fixed foam and MVWS system's all type of piping support with all materials, labours, tools and tackles as per technical specification, drawings and as per instruction of EIC.	kg.	1500		-
23	Installation & commissioning of Gas Suppression system for Control room in sub station bldg. (control room Size 9.7 x 5 x @ 4 m as per Drg. no. 322538-RPB-0907-01) areas by FM200 / NOVEC 1230, an Environmentally friendly gas as per NFPA 2001 comprise of fire detection by provision of heat / smoke detector & response indicator as per NFPA-75.	M3	194		-



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Bill of Material - Installation of Fire protection system work at DAFFPL - New Delhi					
Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
24	Installation of 6 hours running diesel tank @ 500 Ltrs (net.) for 1 no. of diesel engine driven pump. C.S. horizontal tank single wall mounting with structural support for diesel engine driven fire water pump in proposed fire water pump house as per drawing and as per instruction of EIC, with all tools tackles, labours, machinery required to complete the job. (Refer drg. no. 322538-RLA-0901-01). including installation of 15NB HSD supply & return line @ 10-12 mtrs. for 1 pump, from diesel tank to diesel engine of pump, including associated piping with flanges, fittings, valves etc. required to complete the job as per good engineering practice and instruction of EIC.. However, piping materials will be ree issue, coming with tank. (FIM = Free Issue Material)	Each	5		-
25	Installation of 100NB Vent line @ 10-12mtrs. long with fittings/fixtures for 1 no. of diesel engine driven pump from diesel tank to atmosphere including flanges, fittings etc. required to complete the job as per drg. No. 322538-RPA-0903-04, good engineering practice and instruction of EIC. (FIM = Free Issue Material)	Each	5		-
26	Installation of 1 x 150NB Exhaust duct line from 1 expansion joint, 1 silencer of diesel engine to atmosphere including flanges, fittings etc. required to complete the job as per drg. No. 322538-RPA-0903-04, good engineering practice and instruction of EIC. (1 Expansion jt. & 1 silencer (FIM = Free Issue Material)	Each	5		-
26 (Opt.)	Installation of 2 x 125NB Exhaust duct line for 01 no. of pump, from 2 expansion joint, 2 silencer of diesel engine to atmosphere including flanges, fittings etc. required to complete the job as per drg. No. 322538-RPA-0903-04, good engineering practice and instruction of EIC.(free issue (2 expansion jts. & 2 silencers. (FIM = Free Issue Material)	Each	5		-
27	Demolishing & dismantling of existing Fire water pump room (Sized 23m x 7.3m x @5.0m) including existing pumps with piping, civil/structural supports diesel tanks with piping etc. & required fire water hydrant header form existing pump house including all tools, tackles, labours, machinery required to complete the job and as per instruction of EIC (Engineer in-charge). Removal & storing of mechanical items as per EIC. Disposal of surplus dbries from site within a lead of 1km as per instructio of EIC.	LSTK	1		-



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Bill of Material - Installation of Fire protection system work at DAFFPL - New Delhi					
Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
28	Dismantling & removal of existing 5KL foam bladder tank with piping, civil/structural supports & required fire water hydrant header form existing tank including all tools, tackles, labours, machinery required to complete the job and as per instruction of EIC (Engineer in-charge). Removal & storing of mechanical items as per EIC. Disposal of surplus dbries from site within a lead of 1km as per instructio of EIC.	LSTK	1		-
29	Constructing (Free issue Bricks) masonry Platform of size 2000mmx800mm and height up to 450mm as per drawing no. 322538-RPA-0905-01 for operating of water monitor. Including excavation, up to 600-750mm depth from FGL, P.C.C., 350mm / 230mm thick foundation brick walls, plinth filling, top concrete grade slab, masonry steps, outside double coat finished plaster, cement paint etc. with all materials, tools, tackles, labours required to complete the job as per drawing and including disposing of surplus excavated soil as directed within a lead of 1.0 km. as per instruction of E.I.C.	Nos.	24		-
30	Preparation of all required drawings / documents to obtaining all statutory approvals from OISD / PESO / local authority (whichever is applicable.) on drawings & required documents as per instruction of E.I.C.	LSTK	1		-
31	Removing from existing hydrant header and re-installation of the same to another location as per drawing, with good engineering practice by welding, cutting, grinding with good finishing and as per instruction of engineer in-charge. Including all tools, tackles , machineries & labours required to complete the job.				-
i)	Double headed hydrant	Nos.	3		-
ii)	Water monitor	Nos.	3		-
Sub Total (B)					
Service Tax* % on Sub Total (B)					
Total Amount (inclusive of all taxes) (B)					
Total Amount in word (.)					
Final Amount (Sub Total (A) + Sub Total (B)) :					
Final Amount in Words:					



PART-B INSTALLATION



Delhi Aviation Fuel Facilities Pvt. Ltd.

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Bill of Material - Installation of Fire protection system work at DAFFPL - New Delhi					
Sr. No.	Item Description	Unit	Qty.	Bidder Name :	
				Unit Rate for Installation	Total Amount for Installation (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)=(4) x (5)
Notes:					
1	Construction water, loading and boarding, Site Storage with watch and ward, receipt, unloading, shifting material to store and internal shifting to site shall be included in Vendor's scope.				
2	The unit rates as quoted to arrive at above total price shall be firm and inclusive of all taxes, duties, levies, transportation etc. No separate payment shall be made for site mobilization / demobilization, insurance etc.				
3	The Schedule of Rates should be read with all the other sections of the tender.				
4	The tenderer shall be deemed to have studied the drawings, specifications and the details of work to be done within the time schedule and to have acquainted with the conditions prevailing at site. Site visit is mandatory.				
5	The quantities shown against the various items are only indicative of the quantum of work and it may vary to any extent. Billing will be done as per actual.				
6	The rate quoted shall be inclusive of all work as mentioned in the scope of work (Technical Specifications).				
7	All the items of work in the schedule of rates shall be carried out as per specifications, drawings and instructions of the Engineer-in-Charge.				
8	The rates quoted by tenderers shall be inclusive of all costs for removal and re-installation, should any defects occur or modifications are required during testing, calibration and loop tests and no extra claims for such works shall be entertained.				
9	Either item no. 26 or 26(Opt.) will be operated & shall be considered in final tender valuation.				