

भारतीय विमानपत्तन प्राधिकरण

AIRPORTS AUTHORITY OF INDIA

No. AAM/ENGG/ELEC/AMED-I/902/3/2023-24/A-29

Date: 08.12.2023

M/s. Delite System Engineering (I) Private Limited,
No. 201, Shalaka, Plot No 32, TPS II,
Juhu Road, Santacruz (West),
Mumbai 400 054.

Name of Work : Facility Management Contract of GLF, Apron Flood Lighting, Perimeter Lighting System etc., at Chennai Airport for Year 2023-2025.

Reference : Tender Id- 2023_AAI_163181_1

Dear Sir(s),

1. Your e-tender for the above mentioned work has been accepted by the Competent Authority on behalf of the Chairman, Airports Authority of India, at the item rates quoted by you totaling to ₹ 3,65,75,019.00 (Rupees Three Crore Sixty-Five Lakh Seventy-Five Thousand and Nineteen Only) excluding GST which is 19.26% (Nineteen Decimal Two Six Percent) below the Estimated cost of ₹ 4,53,00,158.00 excluding GST put to tender.
2. Joint General Manager (Engg-Elect.), AAI, Chennai Airport, Chennai - 600 016 shall be the Engineer-in-Charge of the work. You are requested to attend to the Office of Joint General Manager (Engg-Elect.), AAI, Chennai Airport by 18.12.2023 to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value ₹ 100.00 (Rupees One Hundred only) and the cost of the stamp paper shall be borne by you.
3. Please deposit an amount of ₹ 36,57,502.00 (Rupees Thirty-Six Lakh Fifty-Seven Thousand Five Hundred and Two Only) towards Security Deposit within 10 days from the date of issue of this letter, failing which, the same will be deducted as per Clause 1A of Contract Document. Earnest Money Deposit amount will be returned back to your account after deducting equal amount of EMD against Security Deposit from your bill.
4. You are requested to comply with the provision of Contract Labour (Regulation and Abolition) Act 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971 and Minimum Wages Act and Rules there of Central and State Governments.
5. Please note that the time allowed for carrying out the work shall be 24 (Twenty-Four Months) and the same shall be reckoned from 01.01.2024.
6. You are also directed to contact Asst. Gen. Manager Engg. (Elect.), Airport Maintenance Electrical Division-I, Airports Authority of India, Operational Offices, Chennai Airport immediately for the execution of the above mentioned work.

Contd...2/-



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AIRPORTS AUTHORITY OF INDIA

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7. Any further correspondence in connection with the contract should normally be addressed to the Engineer-in-Charge.

8. Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

Yours faithfully,

(A. Mariappan)
Joint General Manager (Engg.-Elect.),
For and on behalf of the Chairman,
Airports Authority of India.

Encl: Schedule of Work

AIRPORTS AUTHORITY OF INDIA
CHENNAI AIRPORT
CHENNAI 600016
Schedule of Work

Name of Work: Facility Management Contract of GLF, Apron Flood Lighting, Perimeter Lighting System etc., at Chennai Airport for Year 2023-2025.

Sl.No	Description of Work / Item(s)	Qty	Rate	Unit	Amount
1.00	SH-I: MONITORING AND MAINTENANCE OF GLF, AFL & PERIMETER LIGHTING SYSTEM ETC.				
1.01	Monitoring and Maintenance of Utility Services for complete Runway Ground Lighting Facilities in the Operational Area and CCR Hall (As per Annexure A - List of Inventories) round the Clock 24 x 7 Basis (Three Shift Basis - 8 Hours For One Shift) for 100% Serviceability i/c providing consumable material like cotton waste, oil, grease, LT and HT Insulation Tapes and other Sundry Material required for cleaning etc., attending faults / breakdown of Equipments / Repairs / Replacement of defective components of GLF System with AAI Supplied Components, ensuring satisfactory working condition of the Systems, Routine and General Preventive Maintenance on Daily / Weekly / Monthly / Quarterly / Half Yearly / Yearly Basis as per Standard Manufacturers' Practices and as per Techno Commercial Specifications (TCS), Maintenance of Records and Log Books and reporting as and when required, complete Upkeeping of the GLF Installations etc., on all days including Sundays & Holidays as specified and as directed by Engineer-In-Charge as required.	24.00	457483.00	Months	1,09,79,592.00
1.02	Monitoring and Maintenance of Utility Services for Apron Flood Lighting covering High Masts and connected Power Supply System etc., Perimeter Lighting System covering Perimeter Lights and connected Power Supply System, Sliding / Swing Gates etc., in the Operational Area at Various Locations (As per Annexure B - List of Inventories) round the Clock 24 x 7 Basis (Three Shift Basis - 8 Hours For One Shift), for 100% Serviceability including co-ordination with co-existing Stakeholders i/c providing consumable material like cotton waste, oil, grease, Insulation Tape and other sundry materials required for maintenance/cleaning etc., attending faults / breakdown of Equipments / Repairs / Replacement of defective components of Apron Lighting, Perimeter Lighting and Sliding / Swing Gates with AAI Supplied New Components, driving Vehicle, ensuring satisfactory working condition of the Systems, Routine and General Preventive Maintenance on Daily / Weekly / Monthly / Quarterly / Half Yearly / Yearly Basis as per Standard Manufacturers' Practices and as per Techno Commercial Specifications (TCS), Maintenance of Records and Log Books and reporting as and when required, complete Upkeeping of the Apron Flood Lighting / Perimeter Lighting System etc., on all days including Sundays & Holidays as specified and as directed by Engineer-In-Charge as required.	24.00	321752.00	Months	77,22,048.00
1.03	Hire Charges for providing one Vehicle without Driver (4 Wheeler, Non-AC Bolero or Equivalent) for attending maintenance of Perimeter Lighting System, Apron Flood Lighting System and other E&M Installations as required for round the Clock 24X7 Basis complete with required fuel, oil, insurance, road tax etc., in good condition, on all days including Sundays & Holidays as specified and as directed by Engineer-In-Charge as required.	24.00	29999.00	Months	7,19,976.00
Total of SH-I					₹ 1,94,21,616.00

Sl.No	Description of Work / Item(s)	Qty	Rate	Unit	Amount
2.00	SH-II: MONITORING OF BMS/ALCMS AT AOCC				
2.01	Providing Supervisory Engineering Services for Monitoring of the BMS/ALCMS at AOCC on round the Clock 24 x 7 Basis (Three Shift Basis - 8 Hours for One Shift) including Saturdays, Sundays and Holidays. Reporting and Co-ordinating with Electrical Department & AOCC on functioning of All E&M Installations as observed in the BMS/ ALCMS, Maintaining Records and Log books etc., as per the directions of Engineer- In- Charge as required.	24.00	155826.00	Months	37,39,824.00
Total of SH-II					₹ 37,39,824.00
3.00	SH-III: WORKS OF GLF SYSTEM				
3.01	Supply of following size Connector kit suitable for use in the 5KV grade AFL copper conductor cable.				
3.02	(a) 1 x 6 mm ²	60.00	420.00	Each	25,200.00
3.03	(b) 1 x 16 mm ²	60.00	430.00	Each	25,800.00
3.04	(c) 1 x 25 mm ²	20.00	550.00	Each	11,000.00
4.00	Fabrication and Supply of MS Transformer Housing Box of size 330x330x300 mm, made out of 8mm thick MS sheet on four sides and bottom, 10mm thick MS sheet for top cover having clear hole of 216 mm dia with 6 Nos. M10 size threaded holes on the top for fixing of fixture base plate, 01 No. 25 mm dia drain hole in bottom and entry hole on two/three/four sides suitable to receive 40/50/63mm dia of GI/HDPE pipes entry for incoming and outgoing cables, Two Nos. of cadmium plated earthing bolts with nuts and washers etc., including painting with one coat of red oxide paint and two coats of black enamel paint finish etc., as required.	20.00	5900.00	Each	1,18,000.00
5.00	Installation of MS Transformer Housing Box of size 330mm X 330 mm X 300 mm in runway / taxiway shoulder of concrete/bitumen surface including dismantling of concrete/bitumen to the required size, providing 75mm thick cement concrete of ratio 1:2:4 on all around the transformer housing box with required slope on the top to match with the original bitumen / concrete surface etc., as required.	14.00	1200.00	Each	16,800.00
6.00	Installation of MS Transformer Housing Box of size 330mm X 330 mm X 300 mm in soil surface providing 75mm thick cement concrete of ratio 1:2:4 on all around the transformer housing box with required slope on the top to match with the original surface etc., as required.	6.00	1500.00	Each	9,000.00
7.00	Supply of Internally Illuminated LED based Mandatory / Information Guidance Sign Boards of various sizes and depth not less than 150mm made out of 4mm thick glare free polycarbonate sheet at front facia having the required details (letters and symbols) screen printed on self adhesive film of 3M make/equivalent and pasted inside of the polycarbonate sheet and body made of 2mm thick anodised aluminium profile reinforced by 50mmX50mm Aluminium/Aluminium Alloy Structure on other five sides with sufficient No. of 50mm dia aluminium legs of 5.5mm thick fixed with Al brackets of 5mm thick and frangible couplings, uniformly internally illuminated with adequate No. of LED Modules of LED of burning hours not less than 50,000 spacing not more than 100mm with suitable rated weather proof Power Converter (IP 67) to achieve required illumination level, suitable for operation on airfield series circuit input source of 2.8A-6.6A to give constant brightness for all current variation without flickering, with all other accessories such as MS base plate of 10 mm thick with 16mm dia 250mm length foundation bolts and nuts of SS Materials etc., complete as required and conforming to ICAO/FAA Requirements etc., as required.	30.00	39999.00	Sq Mtr	11,99,970.00

Sl.No	Description of Work/ Item(s)	Qty	Rate	Unit	Amount
8.00	Supply of 4mm thick glare free polycarbonate sheet at front facia, the letters & symbols made out of 3M/equivalent make film, made by computerized cutting and pasting on the polycarbonate sheet, pasted from inside/outside with required colouring to make mandatory / informatory guidance signage on existing sign boards installed in operational area as per ICAO Annex - 14 Volume 1 and as approved by Engineer-In-Charge complete as required.	40.00	2599.00	Sq Mtr	1,03,960.00
9.00	Installation, Testing and Commissioning of Airport Operational Mandatory / Information Guidance Signboards having 2 Legs of various sizes by providing suitable strength Cement Concrete Cuboid (1:2:4) of minimum size 300x300x450mm, fixing foundation bolts of minimum length 250mm & nuts with spring washer i/c excavation, supplying and laying of 40mm OD HDPE (PN6 ; PE80) pipe upto 1m for cable entry, fixing breakable couplings, providing cement concrete of ratio 1:2:4 all around the guidance sign board upto 1 mtr on the four sides of the guidance sign board for a depth of 150 mm, connection, earthing etc., complete as required.	12.00	999.00	Each	11,988.00
10.00	Installation, Testing and Commissioning of Airport Operational Mandatory / Information Guidance Signboards having 3 Legs of various sizes by providing suitable strength Cement Concrete Cuboid (1:2:4) of minimum size 300x300x450mm, fixing foundation bolts of minimum length 250mm & nuts with spring washer i/c excavation, supplying and laying of 40mm OD HDPE (PN6 ; PE80) pipe upto 1m for cable entry, fixing breakable couplings, providing cement concrete of ratio 1:2:4 all around the guidance sign board upto 1 mtr on the four sides of the guidance sign board for a depth of 150 mm, connection, earthing etc., complete as required.	8.00	999.00	Each	7,992.00
11.00	SITC of outdoor type sloped top feeder pillar box made out of MS sheet of size 18"x18"x9" of 3 mm thick suitable for 5KV grade AFL Cable End terminations, with hinged door, locking arrangement, cable entry holes, mounted on 1 No. 2" dia. B Class GI pipe of 150 mm length with breakable coupling on 10mm thick MS base plate, fixing the feeder pillar box on the existing MS Transformer housing box and painting the box with 2 coats of polyurethane paint of suitable colour along with initial coat of zinc chromate primer etc., as required.	80.00	8599.00	Each	6,87,920.00
12.00	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 5 KV grade upto 25 Sq.mm. AFL cable in the existing RCC/HUME/METAL/HDPE Pipe as required.	2000.00	18.00	Mtr	36,000.00
13.00	Supply and making straight through cable joint with 11KV grade heat shrinkable cable jointing kit including ferrules and other jointing materials for PVC / XLPE insulated PVC sheathed armoured Aluminium conductor AFL cable of 5 KV grade and of size 2Cx25 Sq.mm etc., as required.	60.00	3999.00	Set	2,39,940.00
14.00	Fabrication and Supply of 10 mm thick MS dummy plate of 260 mm dia suitable for isolation transformer box with 06 Nos. of threaded holes including supply of 6 Nos. of M-10 SS Bolts with washers etc., complete as required.	200.00	1790.00	Set	3,58,000.00
15.00	Fabrication and Supply of 10 mm thick MS dummy plate of size 150mm x 300mm suitable for double pocket isolation transformer housing box with 10 Nos. of threaded holes including supply of 10 Nos. of M-10 SS Bolts with washers etc., complete as required.	500.00	1700.00	Set	8,50,000.00
16.00	Supply of EPR self-amalgamating HT rubber tape of water proof, moisture proof, corrosion and chemical resistive features suitable for 5KV grade AFL cables (Size 25mmx0.76mmx9.1M. (Stanvac Plysafe W963)) as required.	500.00	1200.00	Each	6,00,000.00

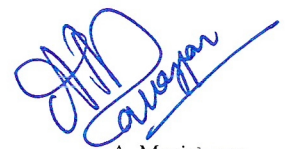
Sl.No	Description of Work / Item(s)	Qty	Rate	Unit	Amount
17.00	Providing cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) to make platform including excavation to required depth and plastering around the installed sign boards/transformer housing boxes/junction boxes etc., to required depth, as per the direction of Engineer-in-charge as required.	20.00	5999.00	m ³	1,19,980.00
18.00	Removal of old isolation transformer housing box/junction box of different sizes located at different locations in runway/taxiway/edge area after dismantling from concrete foundation, refilling with cement concrete of 1:2:4 and quick setting sealant, making good the runway/taxiway surface to the original shape/finish, removal of all the debris from site, transportation of box to AAI store, stacking etc., as per the direction of Engineer in Charge complete as required.	10.00	300.00	Job	3,000.00
19.00	Removal of old isolation transformer housing box/junction box of different sizes located at different locations in earth/soil after dismantling from concrete foundation, refilling the earth, making good the surface to the original shape/finish, removal of all the debris from site, transportation of box to AAI store, stacking etc., as per the direction of Engineer in Charge complete as required.	10.00	300.00	Job	3,000.00
20.00	Providing one Skilled Wireman and One Unskilled Khalasi for duty of 8 Hrs to attend any urgent Preventive Maintenance / Breakdown Maintenance / Emergency / NOTAM Work at Electrical Installations provided in OPS Area/CCR Hall with necessary T&P as and when required.	208.00	1200.00	Job	2,49,600.00
Total of SH-III					₹ 46,77,150.00
21.00	SH-IV: WORKS OF AFL & PERIMETER LIGHTING SYSTEM				
22.00	Providing and fixing of loop in loop out SMC Box of Sintex GSJB 2520/Hensel make having hinged single door with locking arrangements and consisting of Bakelite connector etc., as required.	100.00	700.00	Each	70,000.00
23.00	Supply, Installation, Testing and Commissioning of new winch with motor with suitable bracket including necessary welding and drilling required with fasteners, making connections of lantern carriage with existing iron rope, providing and fixing all accessories and sundries complete etc., as required.	10.00	19000.00	Each	1,90,000.00
24.00	Supply of following size of XLPE insulated PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade conforming to IS-7098 Part-I amended upto date etc., complete as required.				
24.01	(a) 4C x 10 mm ²	4000.00	132.00	Mtr	5,28,000.00
24.02	(b) 4 Cx 16 mm ²	1000.00	199.00	Mtr	1,99,000.00
24.03	(c) 3.5C x 95 mm ²	1000.00	599.00	Mtr	5,99,000.00
25.00	Supply of 3C 1.5 mm ² flexible copper conductor HFFR PVC insulated PVC round sheathed, 1100 Volts conforming to IS:694 of approved make (1 No. = 1 coil of 100m length)	20.00	7999.00	Each	1,59,980.00
26.00	Supply of 3C 2.5 mm ² flexible copper conductor HFFR PVC insulated PVC round sheathed, 1100 Volts conforming to IS:694 of approved make (1 No. = 1 coil of 100m length)	20.00	12000.00	Each	2,40,000.00
27.00	Supply of LED Traffic Signal Light Fitting of Size 200 / 300mm dia, poly carbonate body, visible upto 500m and suitable for operation on 230V, 50Hz single phase supply. Colour Red - Static	8.00	5000.00	Each	40,000.00
28.00	Supply of LED Traffic Signal Light Fitting of Size 200 / 300mm dia, poly carbonate body, visible upto 500m and suitable for operation on 230V, 50Hz single phase supply. Colour Green - Static	2.00	5000.00	Each	10,000.00
29.00	Supply of LED Traffic Signal Light Fitting of Size 200 / 300mm dia, poly carbonate body, visible upto 500m and suitable for operation on 230V, 50Hz single phase supply. Colour Amber-Flashing.	8.00	5000.00	Each	40,000.00

Sl.No	Description of Work/ Item(s)	Qty	Rate	Unit	Amount
30.00	Supply of 350W Integrated LED type flood light luminaire with pressure die cast Al Housing and heat sink in aluminium extrusion with IP65 protection complete with all accessories. (350W LED Bajaj make or Equivalent)	100.00	13400.00	Each	13,40,000.00
31.00	Supply of LED flood light with more than 3500 lm output at the system power consumption range of 35W with pressure diecast aluminium housing body with IP65 protection complete with all accessories. (Make: Crompton Model No. LFLN11-35-CDL/60 or Equivalent).	60.00	2400.00	Each	1,44,000.00
32.00	Supply of Power Contactor 32A, 3 Pole, 230V coil, MNX 32, L&T Make or Equivalent	40.00	2999.00	Each	1,19,960.00
33.00	Supply of Digital Timer Switch L&T make (Crono) or Equivalent suitable for 240 V AC Base DIN 25	40.00	3200.00	Each	1,28,000.00
34.00	Dismantling the highmast of height above 15.0 m and upto 30.0 m from the foundation to replace the damaged pulley / wire rope / trailing cable etc., and reinstallation of the high mast after repair in the same foundation using crane and other appropriate equipments complete as required.	10.00	20000.00	Each	2,00,000.00
35.00	Dismantling the highmast of height above 15.0 m and upto 30.0 m from the foundation to replace the damaged pulley / wire rope / trailing cable etc., including disconnecting of cable, earthing strip etc., and other appropriate equipments complete and shifting of the dismantled high mast to the yard using crane as per E.I.C directions as required.	10.00	20000.00	Each	2,00,000.00
36.00	Re-installation of the highmast of height above 15.0 m and upto 30.0 m after repair work in the existing foundation using crane and other appropriate equipments including connecting cables, earthing etc., complete as required.	10.00	15999.00	Each	1,59,990.00
37.00	Design and Construction of suitable shallow foundation with anchor plates, templates as per the OEM recommendation of high masts i/c fixing of foundation bolts supplied for high mast with M20 grade concrete for following height high masts after testing the soil bearing capacity at site and installation of highmasts on the base using suitable heavy equipments, installation of required No. of LED light fittings / components with switch gear arrangement on the lantern carriage, installation of LED aviation obstruction lights, installation of control panel, interconnecting cables, wiring, testing and commissioning etc., complete as required.				
37.01	(a) 15 m - Upto 20 m	3.00	130000.00	Job	3,90,000.00
37.02	(b) Above 20 m - Upto 30 m	3.00	139000.00	Job	4,17,000.00
38.00	Supply and Laying of 90mm dia PE 100 PN 10 HDPE Pipes by single horizontal drilling of suitable dia in the operational area with depth range of 2.5 to 3.0 Mtr including opening of manholes / pits on both sides, reaming, drilling, jointing of pipes, providing all required machines (HDD machine, mud mixer, earth mover etc.) and specialised manpower, closing of manholes / pits after laying the pipes etc as required.	1500.00	1400.00	Mtr	21,00,000.00
39.00	Supply and Laying of 80 mm dia size 'C' class GI pipe for taxiway/runway/Road crossing at a depth of 150 mm i/c cutting the bituminous/Cement Concrete surface, re-filling with cement concrete mixture of ratio 1:2:4 and making good the surface matching with original finish etc., as required.	500.00	999.00	Mtr	4,99,500.00

Sl.No	Description of Work / Item(s)	Qty	Rate	Unit	Amount
40.00	Fabrication & Supply of 330mmx330mm size MS collar of following height as per site requirement (for increasing the height of the existing isolating transformer housing box) made out of 8mm thick MS sheet on four sides, 10mm thick MS sheet on top & bottom, with a provision of 225mm dia round opening on top & bottom with 06 Nos holes on edges of top & bottom plates, suitable for holding the taxiway/runway edge light fittings on top and bottom bolted to the existing box including painting the collar with one coat of primer & two coats of black enamel paint etc. complete as required.				
40.01	(a) 75mm Height	15.00	2000.00	Each	30,000.00
40.02	(b) 100mm Height	15.00	2000.00	Each	30,000.00
40.03	(c) 125mm Height	15.00	2000.00	Each	30,000.00
40.04	(d) 150mm Height	15.00	2000.00	Each	30,000.00
41.00	Installation of MS collar (Supplied against item No. 41) by providing & fixing of 6 Nos. M-10 SS bolts including minor civil works as per site requirement, making 75mm thick cement concrete all around the box and making suitable slope by providing 1:2:4 cement concrete etc. complete as required.				
41.01	(a) 75mm Height	15.00	200.00	Each	3,000.00
41.02	(b) 100mm Height	15.00	200.00	Each	3,000.00
41.03	(c) 125mm Height	15.00	200.00	Each	3,000.00
41.04	(d) 150mm Height	15.00	200.00	Each	3,000.00
42.00	Fabrication, Supply and Fixing of 10mm thick MS chequered plates including painting and providing suitable lifting hooks etc., as required.	300.00	100.00	Kg	30,000.00
Total of SH-IV					₹ 79,36,430.00
43.00	SH-V: DSR ELECTRICAL - 2022				
44.00	Execution of Items of CPWD Delhi Schedule Rates (DSR) E&M 2022 as and when required for attending Repair and Maintenance, Breakdowns and Upkeep of Internal and External Electrical Installations as per Direction of Engineer-In-Charge at All Locations under Chennai Airport conforming to CPWD General Specifications for Electrical Works Part-I (Internal) 2013, Part-II (External) 1994 and Part -IV (Substation) 2013 and also to relevant BIS Specifications. Note: The Bidder shall quote the Rate in INR only for the Job corresponding to the Base Rate (Rs. 10,00,000.00 as per Proposed Estimate) and Percentage (%) Above/ Below shall be calculated by AAI (Based on Quoted Rate w.r.t Base Rate) and the same % shall be calculated by AAI (Based on Quoted Rate w.r.t Base Rate) and the same % worked out will be applied on DSR Rates while executing the DSR Items and will be paid as per Payment Methodology given in Annexure - A).	1.00	799999.00	Job	7,99,999.00
Total of SH-V					₹ 7,99,999.00
Total of SH-I, SH-II, SH-III, SH-IV & SH-V					₹ 3,65,75,019.00

Rupees Three Crore Sixty Five Lakh Seventy Five Thousand and Nineteen Only

Note: GST Extra as applicable



A. Mariappan
Joint General Manager (Engg.-Elect.)

Signature Not Verified

Digitally signed by RAGHURAMA REDDY DODDA

Date: 2024.04.16 18:57:59 IST

Location: eProcurement System for Central PSUs