

REQUIREMENT SPECIFICATIONS

INVITATION TO QUOTE FOR THE PROPOSED REPLACEMENT OF OFFICE LIGHTING AT SINGAPORE ART MUSEUM'S CORPORATE OFFICE, BLK 39 KEPPEL ROAD, #03-07, TANJONG PAGAR DISTRI PARK

1.0 Background

Singapore Art Museum (SAM) has operated its corporate office at Blk 39 Keppel Road, #03-07, Tanjong Pagar Distripark, since 2022.

SAM has received consistent feedback from staff regarding excessive brightness and glare from the existing suspended linear LED lighting fixtures, particularly within the hot-desking areas. In addition, the orientation of the hot-desking workstations places occupants directly beneath the linear LED lighting fixtures, resulting in direct glare when they raise their line of sight from their computer monitors. This contributes to visual discomfort and eye fatigue during prolonged computer use.

The existing lighting system is also non-dimmable and operates through limited switching arrangements, which do not allow users to adjust lighting levels or control lighting according to designated work zones and occupancy requirements.

To improve visual comfort, enhance operational flexibility and optimise energy efficiency, SAM intends to replace the existing lighting fixtures with dimmable suspended linear LED fittings incorporating anti-glare features and/or recessed louvres. The project will also include the rewiring and reconfiguration of the existing lighting circuits to provide zonal switching and dimming controls for designated work areas.

2.0 Scope of Works

This Invitation to Quote (ITQ) calls for the replacement of the existing suspended linear LED light fittings and the rewiring of the office lighting circuitry within SAM's corporate office at Unit #03-07, Tanjong Pagar Distripark.

The successful vendor shall complete all works, including testing, commissioning and the submission of as-built documentation, within two (2) months from the date of award and/or issuance of the Purchase Order, whichever is later.

3.0 Scope of Works / Technical Specifications

The Contractor shall provide all labour, materials, equipment, tools, transportation, supervision and any other resources necessary to complete the Works, including but not limited to the following:

- a. Conduct a site verification and confirm all existing lighting layouts, wiring routes, switch controls and electrical loadings prior to the commencement of works.
- b. Remove and dispose of all existing suspended linear LED light fittings, accessories and redundant wiring arising from the Works in accordance with prevailing regulations.
- c. Propose and submit technical specifications, catalogues and samples of replacement suspended linear LED light fittings incorporating the following features:
 - i. Dimmable functionality (0–10V, DALI or equivalent approved system);
 - ii. Anti-glare lighting design with Unified Glare Rating (UGR) ≤ 19 ;
 - iii. Micro-prismatic diffuser, louvre optics or equivalent glare-control technology;
 - iv. Correlated Colour Temperature (CCT) tunable between 3000K and 6500K, or equivalent approved range;

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- v. Colour Rendering Index (CRI) ≥ 80 ;
 - vi. Minimum efficacy of 120 lumens/Watt.
- d. Review and propose an appropriate lighting zoning arrangement for the hot-desking areas to allow independent switching and dimming controls for designated work zones.
- e. Supply and install/replace necessary electrical cabling, conduits, trunkings, dimmer modules, switches, controllers and accessories required for the rewiring and modification of the existing lighting circuitry.
- f. Ensure all electrical installation works are carried out by licensed personnel and comply with the latest requirements of the Energy Market Authority (EMA), Singapore Standard CP5/SS638 and all relevant statutory requirements.
- g. Submit revised Single-Line Diagrams (SLD), circuit schedules and as-built drawings endorsed by a Licensed Electrical Worker (LEW) upon completion.
- h. Carry out testing and commissioning of the complete lighting system, including verification of dimming controls, switching zones and lux level measurements.
- i. Conduct a joint inspection with SAM representatives and rectify all defects identified upon completion and during the Defects Liability Period.
- j. Provide a minimum warranty period of two (2) years covering workmanship, LED drivers, controllers and lighting fixtures.

4.0 Installation Period

The contractor shall submit a detailed work schedule within seven (7) calendar days from the date of award.

The entire scope of works shall be completed within two (2) months from the date of Purchase Order issuance, including testing, commissioning and submission of as-built documentation.

To minimise disruption to SAM's operations, all noisy works, electrical rewiring works and installation activities shall be carried out after working hours, between 1900 hours to 0700 hours the following day, unless otherwise approved by SAM.

The contractor shall provide all Workplace Safety and Health (WSH) documents before commencement of work, including but not limited to:

- a. Risk Assessment (RA);
- b. List of workmen;
- c. Safe Work Procedures (SWP)
- d. Work-at-Height Permit (where applicable);
- e. Valid certification and licences for operations of mobile elevating work platform (MEWP), scissor lifts and other specialised equipment;
- f. Evidence of workers' safety training certifications.
- g. The Contractor shall be fully responsible for the protection of existing finishes, furniture, office equipment and surrounding areas during the execution of the Works.
- h. Upon completion of each work shift, the Contractor shall ensure that the work area is clean, safe and free from debris.

5.0 Additional Recommended Requirement

Lighting Performance Requirements

Upon completion of the Works, the Contractor successful vendor shall achieve the following minimum performance requirements:

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- a. Average illumination level at hot-desking workstations shall be between 300 and 500 lux measured at desk level.
- b. Lighting distribution shall be reasonably uniform with minimal glare and direct line-of-sight discomfort.
- c. Dimming controls shall be fully functional and allow adjustment of lighting levels to suit operational requirements.
- d. Lighting zones shall operate independently as indicated in the approved zoning plan.
- e. Contractor shall submit post-installation lux measurement reports for SAM's acceptance.

6.0 Payment Schedule

The Contractor shall deem to have included in the Contract Sum all costs necessary for the satisfactory completion of the works in accordance with the Contract requirements. No additional claims shall be entertained unless otherwise approved in writing by Singapore Art Museum (SAM).

The Contractor shall ensure that the following requirements are included in the quoted price: -

- a. The Contractor shall provide all labour, supervision, materials, equipment, tools, transportation, consumables and any other resources necessary for the proper execution, testing, commissioning and completion of the Works. The quoted price shall be deemed to include all temporary works, access equipment, safety provisions, protective measures, barricades, warning signages, permits, licences, statutory submissions and compliance with all applicable regulations and requirements of the relevant authorities.
- b. The Contractor shall make good and reinstate any affected finishes, fixtures, fittings, services or building elements disturbed during the execution of the Works to match the existing condition, at no additional cost to SAM.
- c. All materials, equipment, components and accessories supplied under this Contract shall be new, unused and sourced from authorised manufacturers, distributors or suppliers. Such materials shall comply with all relevant Singapore Standards, Codes of Practice and statutory requirements.
- d. The Contractor shall submit relevant product catalogues, technical specifications, certifications, test reports and warranties for SAM's review and approval prior to procurement and installation.
- e. Where applicable, the Contractor shall provide Material Safety Data Sheets (MSDS), product samples and mock-ups for SAM's review and approval before commencement of installation works.
- f. Payment shall be made upon satisfactory completion of the Works, submission of all required documentation, and certification by SAM's representative that the Works have been completed in accordance with the Contract requirements.
- g. No upfront payment shall be made. Payment shall be made within thirty (30) days upon receipt of invoice and satisfactory completion of the Works.

Price Schedule

S/N	Description	Unit	Qty	Unit Rate (\$\$)	Amount (\$\$)
1	Supply, deliver and install suspended linear LED lighting fittings c/w LED drivers, suspended kits, mounting accessories, connectors and all necessary accessories. Lighting fittings shall be minimum 4ft length, black finish, minimum 3,300 lumens, CRI ≥80, PF ≥0.9, suitable for 230V AC supply	nos.			
2	Supply and install dimming control system c/w wall-mounted dimmer switches, control modules, wiring, accessories and integration with lighting circuits	lot	1		
3	Removal and disposal of existing linear light fittings, accessories and redundant materials from site	lot	1		
4	Modification and/or supply, delivering and rewiring of existing and/or new lighting circuits, conduits, junction boxes and associated electrical accessories required for the new lighting system	lot	1		
5	Testing, commissioning and setting-to-work of complete lighting and dimming systems, including Submission of operation manuals, product catalogues, warranties, as-built drawings	lot	1		
6	Making good of all affected surfaces, ceilings and finishes disturbed during the execution of works	lot	1		
Sub-total (subject to 9% GST or prevailing rate)					
GRAND TOTAL (including GST)					

IMPORTANT NOTES:

All Prices submitted are in accordance with the Requirement Specifications, and Conditions of Contract. All details must be verified by the Tenderer during Site Briefing or before Tender Submission.

Vendor Declaration:

I/We fully understand and agree that notwithstanding the fact that the Contract Sum as herein quoted by us is applicable to the Annexes specified.

Dated this _____ day of _____ 2026.

NAME AS in NRIC/FIN

AND SIGNATURE

(AUTHORISED

REPRESENTATIVE)

DESIGNATION

DATE

COMPANY NAME AND

COMPANY STAMP

NAME AND

SIGNATURE

(WITNESS)

DESIGNATION

DATE

: _____

: _____

: _____

: _____

: _____

7.0 Schedule of Rates

The Schedule of Rates (SOR) shall be used solely for the valuation of variations, omissions, additions and ad-hoc works instructed by SAM during the Contract Period.

The Contractor shall be deemed to have included in the Schedule of Rates all costs necessary for the proper execution and completion of the Works, including but not limited to all labour, supervision, materials, equipment, tools, plant, transportation, temporary works, access equipment, testing, commissioning, protection of existing works, making good, disposal of debris, permits, licenses, statutory submissions, overheads, profit and all other incidental costs necessary for the complete execution of the work unless otherwise stated.

The rates shall also be deemed to include compliance with all applicable statutory requirements, Codes of Practice and the requirements of the relevant authorities necessary for the satisfactory execution and completion of the Works. No additional claims arising from the omission of any such items in the Schedule of Rates shall be entertained.

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Proposed Schedule of Rates

S/N	Description	Unit	Unit Rate	Remarks
Lighting Fixtures				
1	4ft Suspended Linear LED Light Fitting c/w LED Driver, Suspension Kit & Accessories	no.		30W/35W/40W Tunable
2	5ft Suspended Linear LED Light Fitting c/w LED Driver	no.		40W/45W/50W Tunable
3	6ft Suspended Linear LED Light Fitting c/w LED Driver	no.		Longer work-stations
4	8ft Suspended Linear LED Light Fitting c/w LED Driver	no.		
5	Replacement LED Driver only	no.		Same brand / model
6	Mounting Brackets / Ceiling Fixings	set		Including anchors
7	Flexible Wiring Connection Set	set		Complete termination
Dimming & Control System				
8	Wall-mounted Dimmer Switch	no.		DALI / 0-10V
9	Dimming Control Module	no.		Per module
10	Lighting Controller / Gateway	no.		Including programming
Electrical Installation				
11	Laying of Lighting Cable (PVC Cu Cable)	per meter		
12	Supply & Install PVC Conduit (20mm)	per meter		Concealed / exposed
13	Supply & Install GI Conduit	per meter		
14	Supply & Install PVC Trunking	per meter		
Labour Rates				
15	Licensed Electrician	hour		Normal hours
16	Licensed Electrician (after office hours)	hour		1900-0700 hrs
17	Electrical Technician	hour		Normal hours
18	LEW Attendance	visit		Testing / endorsement