Indian Institute of Management Shillong
Umsawli, Shillong- 793018

Tender No.: Engg(22)/390/I/B/2022 **Dated:10/03/2022**

NOTICE INVITING QUOTATION

Quotations are invited on behalf of Director, IIM Shillong from registered/ reputed dealer, supplier for tentative requirement of works in sealed cover addressed to the Director, IIM Shillong, Umsawli, Shillong 793018 with the words **" Construction of 30.5 Mtr. (100 feet) High National Flag Mast at Indian Institute of Management Shillong, Umsawli Campus",** Enquiry No. with due date boldly superscribed on the top of the envelope and the offer be sent by registered cover/ speed post/ dropped in and must reach to the Office of The Chief Administrative Officer, Indian Institute of Management Shillong, Umsawli, Shillong 793018 **latest by 21st March 2022 at 12.00 noon**

1. The work is estimated to cost around Rs.7,89,000/-.This estimate, however, is given merely as a rough guide.

2. Agreement shall be drawn with the successful Tenderer as per prescribed Format.
3. The time allowed for carrying out the work will be 30 **(Thirty days)** from the issue of work order/LOI.
4. The site for the work is available for immediate commencement of the work.
5. The contractor, whose tender is accepted, will be required to furnish performance guarantee of 3% (Three percent) of the contract amount. In case the contractor fails to deposit the said performance guarantee within the period SD equivalent to 3% of the contract value shall be deducted from the bill, refundable after 1 year from work completion.
6. The description of the work is as follows:
   Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Electricity will be provided by the Institute free of cost. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other

factors having a bearing on the execution of the work.

6.1 The Institute does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assigning of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.

6.2 Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

6.3 The Institute reserves the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.

6.4 The bid for the work shall remain open for acceptance for a period of 180 days from the date of opening of the financial bid.

6.5 The bid document shall form a part of the contract document. The successful tenderer/ contractor, on acceptance of his bid by the Accepting Authority, shall, within the stipulated date of start of the work, sign the contract consisting of:-

i) The bid documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of bid and acceptance thereof together with any correspondence leading thereto.

ii) Standard C.P.W.D Form **8 -** 2014 edition with up to date correction slip issued up to the last date of issue of tender.

Sd/-
Chief Administrative Officer
IIM Shillong

INSTRUCTIONS TO CONTRACTORS FOR SUBMISSION OF QUOTATION

TENDERERS TO ENSURE THAT:-

1. The contractor shall quote his rates keeping in mind the specifications, terms and conditions, additional / particular and special conditions etc and nothing shall be payable extra whatsoever, unless otherwise specified.

Documents to be accompanied along with Bid

1. Attested copy of Registration certificate, PAN no. &GST No.
2. Self-attested list of clients along with their contact numbers and the copies of the works orders executed of similar nature (50 Feet and above Mast).
3. Experience Certificates of satisfactorily completion of atleast three similar nature (50 Feet and above Mast) work in last five years 2016-2021.
   Enlistment Certificate/ Order of the CPWD/ Meghalaya PWD or similar Government Department.

ADDITIONAL CONDITIONS

1. Electricity will be provided free of cost during execution of the work.
2. Some restrictions may be imposed by the security staff etc. on the working and for movement for labour materials etc**. The contractor should arrange accommodation for the labours/workers at his own cost, space for the same may be provided by the Institute.** The contractor shall be bound to follow all such restrictions / instructions and nothing extra shall be payable on this account.
3. The work will be carried out in the manner complying in all respects with the requirements of relevant bye laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer in charge and nothing extra will be paid on this account.
4. The contractor shall give a performance test of the entire installation (s) as per standing specification before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.
5. Samples of various materials required for testing shall be provided free of charges by the contractor. Testing charges, if any, unless otherwise provided shall be borne by the department. All other expenditure required to be incurred for taking the samples, conveyance, packing etc. shall be borne by the contractor himself.
6. **The contractor should submit the design & drawings before commencement of the work which shall be approved by IIM Shillong. The drawings shall at all times be properly correlated before executing work**. However, in case of any discrepancy in the in items given in the schedule of quantities appended with the tender and Architectural drawings related to the relevant item, the former shall prevail unless otherwise given in writing by the Engineer in charge.
7. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department.
8. The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer in charge. Nothing extra shall be paid on this account.

9. **No payment will be made to the contractor for damage caused by rains, or other natural calamities during the execution of the works and no such claim on this account will be entertained.**

10. Wherever work is specified to be done or material procured through specialized agencies, their names shall be got approved well in advance from Engineer in charge. charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work, contractor should negotiate with concerned specialist agencies and send their names for approval to Engineer in charge. Any material procured without prior approval of Engineer in charge in writing is liable to be rejected. Engineer in charge reserves right to get the materials tested in laboratories of his choice before final acceptance. Non standard materials shall not be accepted.

11. The contractor shall maintain the time bound progress for the execution of work and got it approved by the Engineer in charge.

12. The contractor shall take instruction from the Engineer in charge of the Institute for stacking of materials at any place. No excavated earth or building material shall be stacked on areas where other buildings, roads, services or compound walls are to be constructed.

13. The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case, he or his authorized representative is not present or does not associate himself, the results or such tests and consequences thereon shall be binding on the contractor.

14. The contractor shall get the water tested with regard to its suitability of use in the works and get written approval from the Engineer in charge before he proceeds with the use of same of execution of works. If the tube well water is not suitable, the contractor shall arrange Municipal water or from any other sources at his own cost and nothing extra shall be paid to the contractor on this account. The water shall be got tested at frequency specified in latest CPWD specifications/BIS code. In case of non availability of material of the brands specified in the list of approved materials an equivalent brand may be used after getting written approval of T/S Authority giving details to indicate that the brand proposed to be used is equivalent to the brands mentioned in the agreement

SPECIFICATIONS

1.0 GENERAL

1.1 The work in general shall be executed as per the description of the item, specification attached and CPWD's specifications 2009 Vol-I & II with upto date correction slips.

1.2 In case of any variation between different applicable specifications, the following order of precedence will be followed :

I. Nomenclature of item
II. Additional condition, Additional specification and Particular specifications attached with the tender document.
III. CPWD Specifications 2009 Vol-I to II
IV. Indian Standard Specifications of B.I.S.
V. Decision of Engineer in charge.

1.3 The work shall be executed and measured as per metric units given in the schedule of quantities, drawings etc. (F.P.S. units wherever indicated are for guidance only).

SPECIAL CONDITIONS

1. The Agency shall have to engage manpower who has sufficient experience.
2. The work shall be executed strictly accordingly to instruction of the Engineer-in- Charge and conditions of the contract.
3. The contractor shall deploy required number appropriately skilled manpower who will be present during the execution of the work.
4. The contractor shall be responsible their good character; all damage done to the existing structure by the workers shall be made good by the contractor at his risk and cost. If the contractor fails to make good the damage then same shall be made good at risk and cost of the contractor by the Engineer-in Charge.
5. Construction activities are to be carried out on daily basis for all the seven days of the week, if required (normal duty will be all working days except Sundays and Holidays).
6. Under no conditions shall the contractor sublet or appoint any agency. If it found at any stage the contract shall be rescinded after giving a notice of 48 hours and the work for the remaining period shall be got executed from other agency at risk and cost of the contractor.
7. The contractor if required shall be at his own cost take necessary insurance cover in respect of staff and other person to be in service to render to Indian Institute of Management Shillong.
8. He shall comply with all relevant labour laws as applicable to the existing or modified during the contract period. The staff employed will be on the

contractor roll. Complete liabilities will be on part of the contractor for their discipline and normal activities.

9. Any hindrance caused to the above operations will be cleared by the contractor at his own cost.

10. Engineer-in-Charge if notices any discrepancy in use of men & material may impose monetary penalty upto Rs. 5000/- each case.

11. The contractor will issue identity card to the workers as approved by Engineer-in Charge.

12. The contractor will issue uniform/ protective gear etc to all the workers as approved by Engineer-in- Charge and nothing extra shall be paid on this account.

13. Any damage done by the contractor to any existing work during the course of execution of the work tendered for shall be made good by him at his own cost.

14. The contractor shall maintain in good condition all works during the execution till completion of entire work allotted to him.

15. The contractor shall take all precautions to avoid all accidents by exhibiting necessary precaution banners day night.

16. The contractor shall clear the site thoroughly of rubbish scaffolding materials etc. before the completion of the work.

17. Tendered rates are inclusive of all taxes and levies payable under the respective statutes.

18. Rates quoted shall be inclusive of all taxes & duties and nothing extra will be payable on that account.

19. Payment Terms:

a) Payment shall be made on successfully completion of installation, testing and commissioning of work after deduction of TDS- Income-Tax, Labour Cess and TDS GST etc. as per rules.

b) No interim payment shall be made for supply items and partly executed work.

C) The work should be guarantee for a period of 01 year from the date of completion of work and PBG will be refunded after completion of defect liability period of 01 year.

20. Guarantee:

The rates quoted in tender are inclusive of 01 years guarantee and cover maintenance and replacement of defective all items and parts of the high mast flag system, in guarantee period if any defect found then it shall be replaced or rectified by the tenderer at this own cost to the satisfaction of the Institute Engineer in charge within one week after the date of notice, otherwise recovery as decided by Engineer-in-charge shall be made from the security deposit amount.

TECHNICAL SPECIFICATIONS

1. **SCOPE** : The scope of this specification covers the design, manufacture, transport, installation, testing and commissioning of the complete Flag system, using Raising and Lowering type of Flag mast towers, including the civil foundation works. The Indian Institute of Management Shillong, Umsawli, Shillong- 793018 will only provide the feeder cable of required size upto the base compartment of the high mast.

2. **APPLICABLE STANDARDS:**

The applicable codes followed for high mast designs are as follows:

1. TR. No. - 7 : High Masts for Lighting and CCTV (2000 edition) of ILE, UK
2. IS 875 Part – 3 : Wind Loading
3. BS EN 10025:1993 : High Tensile Steel Sheets
4. BS EN ISO 1461 : Galvanization
5. SABS 0225:1991 : High Mast natural frequency calculation
6. IS 2062 Mild Steel
7. IS 3459 /2256 : Stainless Steel Wire Rope
8. IS 325 : Motor

FLAG MAST :

A. **POLE:**

1. Structure details:

The Flag Mast shall be continuously tapered, polygonal cross sections (twenty sided) with the pulley box arrangement at the top. The structure gives good visual appearance and is based on proven design confirming to TR-7, to give assured performance, reliability and service.

The Masts are constructed from steel conforming to IS 2062 or BSEN 10025 and cut and folded to form twenty sided section and is telescopically jointed and fillet welded. Mast section delivered to site shall not have any intermediate joint. The Mast is provided with full-penetrated flange, which is free from any lamination or incursion. The welded connection of the base flange is fully developed to the strength of the entire section. The base flange is provided with supplementary gussets between the bolts to ensure elimination of helical stress concentration. For metal protection of the Mast, the entire fabricated Mast is hot dip galvanized internally and externally in single dip. The external surface of the mast is also applied with suitable Poly Urethane paint. A vandal resistant, weather proof, lockable door of suitable size is provided at the base of high mast to access comfortably the components at the base compartment for normal operation & for maintenance.

2. Dynamic Loading of Mast:

The mast structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed as per IS 875 (3 second gust), and are measured at a height of 10 metres above ground level. The designed life of the mast should be 25 years.

B. **Raising and lowering mechanism:**

1. Winch:

The winch shall be high speed completely self- sustaining without the need for brake shoe, springs or clutches. There is a permanent oil bath for self-lubrication. The drums are to be properly grooved to provide a perfect seat for wire ropes. The raising time of the flag shall not be more than 3 minutes. The winch is normally be operated by an electrical power tool however there should be provision for manual operation also by means of manual handle. The winches are type tested through reputed institutions like IIT as consultants and the type test reports are submitted along with offer. A test certificate is to be submitted along with supplies.

2. Head Frame:

The hot dip galvanized head frame is to be designed as a capping unit of the mast is of welded steel construction and provided with guides and separators between the ropes and cable. The LM6 Aluminium pulleys with bush bearing mounted through stainless steel shaft shall be suitable to accommodate wire ropes and multi core trailing cable. The head frame is provided with guides and stops with PVC buffer for the docking of luminaires carriage. The pulley assembly is covered by a hot dip galvanized canopy.

3. Stainless Steel Wire Ropes:

The stainless steel wire ropes are generally be of 6 mm dia, 7/19 construction with central core being stainless steel only. The grade of wire ropes are in accordance to AISI 316. The breaking load of each rope is not less than 2350 Kg giving a factor of safety of more than 5 for the system at full load as per the Technical Report No -7. The end construction of rope for the winch drum is fitted with copper talurit and for two continuous ropes, the end termination in luminaires carriage are with stainless steel thimble and copper splicing and for others with stainless steel thimble and bull dog grips.

4. Power Tool for Winch:

Three phase, single speed, 6 pole high-powered motor of suitable rating are provided at the base of mast to facilitate raising & lowering operation of luminaires carriage. The motors are to be coupled with the winch shaft through chain & sprocket. A mechanical torque limiter is to be mounted on motor shaft to stop transmission of motion from motor to winch in case of excess load and thus prevent the damage to winch and breakage of rope.

C. **Other Accessories:**

1. Lightening Finial

One number of FRP ornamental finial (DOME) shall be provided for each FLAG mast on the head arrangement is to be provided.

2. Aviation Obstruction Lights:

LED aviation lights are mounted on the lantern carriage to comply to the aviation norms where applicable. The connection for these aviation obstruction lights shall be made using 3C X 2.5 sq mm copper un armoured cables.

3. Earthing Terminals:

Earth terminal using 12 mm diameter hot dip galvanized bolts are provided on the door stiffener of the mast for lightning and electrical earthing of the mast.

4. Feeder Pillar / Control Box

Each Mast shall be provided with a panel box , housing 32A TPN MCB incomer along with 2 no. 9A contactors & switches for forward/ reverse operation of motor & to provide supply to the poles The box is constructed of 14 SWG CRCA sheet finished with two Coates of red oxide primer & grey enamel paint of shade 631 of IS 5.

D. **POLES WITH FLOOD LIGHT FITTINGS:**

Three numbers of 6M or 7M Octagonal poles with flood light fittings shall be provided to illuminate the national flag.

E. **HARDWARES:**

Hardwares play a very important role on the overall performance of high flag mast systems. Hardware materials are to be chosen carefully so that there is no compromise on safety or risk to the human lives. Appropriate grade & size of materials are absolutely necessary to ensure full safety. Single & double grooves clamps & W.G clamps are mandatory to ensure the proper operation of raising & lowering systems.

F : ELECTRICAL SYSTEM, CABLE AND CABLE CONNECTIONS*:*

The power cable from base compartment to junction box at the top shall be 1.1 KV grade PVC insulated, PVC sheathed copper conductor of size minimum 3

core X1.5 sqmm wiring from junction box to aviation light is to be done using 3 core 1.5 sqmm PVC insulated, PVC sheathed, copper conductor flexible cable.

G: Incoming Power Cable :

The power cable of suitable size upto the feeder pillar from supply point shall be provided by the Contractor.

H: Luminaries :

The flood light luminaries (BJEF 215) power coated die cast aluminium housing with frame, heat resistant clear toughened glass fixed to the frame with silicon gasket with electrochemically brightened, polished and anodized aluminium reflector with cast aluminium control gear box copper ballast 400 W MH T Lamp. This fllod light shall be installed on suitable pole on plinth with supply & laying of 3Cx2.5 sqmm copper cable for the individual wiring of the luminaire.

J: PU Painting :

Flag mast shall be finished with polyurethane (PU) paint over galvanized surface after application of primer coat.

K: Flag :

The national Flag of the size 6300 MM x 4200 MM confirming to current Flag Code of India 2002 as issued by Ministry of Home Affairs of Govt of India. The National Flag shall be made of machine made polyester, shall be rectangular in shape. The ratio of the length to height (width) of the flag shall be 3:2. The size of the flag shall be 6300 MM x 4200 MM (Flag size no. 1).

Technical details for 30.5 Mtr. Flag Mast

High Mast system

Make : Bajaj/Philips/KESELEC SCHREDER of approved make
Height of Mast : 30.5 Mtr.
No. of sections : Three
Material construction : BS- EN10025 S 355 grade as per
Base dia. And top diameter (A/F) : Top: 150 mm, Bottom- 540 mm,
Plate thickness: –Top- 3mm, Middle-4mm, Bottom- 4mm

Cross section of Mast standard : 20 side polygon
for of galvanization size of
Opening and door at base : As per BS EN ISO 1461(1400 X 250mm)

Diameter of base plate : 730mm
Thickness of base plate : 30mm

Max. Wind speed : As per IS: 875 (Part-III)

Number of foundation bolts : 12 nos.
Type/diameter/length of foundation bolts : 650mm
: TS 600/30mm dia./850mm long
Power cable cable for Aviation : Copper, 3 core, 2.5Sqmm Armored cable

Winch/Power tool

Type/SWL of winch Method of operation : Double Drum, SWL 70 Kg
(SGDD 30/6 PB): Integral motor
Motor capacity : 2HP
No of speeds : 4 Pole single speed
Torque limitor : With mechanical tripping facility

Wire rope for flag

Grade/construction :Galvanised
No of ropes :100mm long X 1 Nos.
Diameter (mm) : 6 mm

Wire rope for balance weights

Grade/construction Number of ropes :Galvanised
Diameter(mm) : 6mm
Number of ropes : 100 mm long x 1 nos

Wire rope for balance weights

Grade/ construction number of ropes : Galvanised , 32mm long x 3nos.
Diameter(mm) : 6 mm
Control panel : Custom built panel

LED AOL : Binay Make (Or) Equivalent

To,
The Chief Adminstrative Officer
Indian Institute of Management Shillong
Umsawli, Shillong- 793018

Sub: Submission of Quotation for the work of **"Construction of 30.5 Mtr. (100 feet) High National Flag Mast at Indian Institute of Management Shillong, Umsawli, Shillong- 793018."**

I/We acknowledge that Institute is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL and ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by Institute. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, Institute shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid is accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

FINANCIAL Bid Format

Name of Work :- Construction of 30.5 Mtr. (100 feet) High National Flag Mast at Indian Institute of Management Shillong, Umsawli Campus, Shillong - 793018.

S No.	Description of Work (Basic Requirement)	Quantity	Unit	Rate	Amount
1	a. Supply & Erection of 30.5M (100ft) high mast in three sections, hot dip galvanized and suitable for wind velocity as per IS 875, and erection of the flag mast with the help of suitable equipment‟s and assembly of operating system. Supply and erection of system for raising, lowering of flag. It shall have such as head frame double drum winch, stain less steel wire rope and integral power tool foe the raising and lowering of flag.Suitable control panel shall be provided for reversing operation of power tool motor etc. b. Material and labour for PU painting on flag mast shaft over a coating of each primer coat. c. Supply & Installation of Indian National Flag of size 6300 MM x 4200 MM Machine made polyester with reinforced super strong nylon webbing on all three sides & rope /toggle sleeve complete as per relevant IS code. **(Qty 1)** d. Construction of suitable shallow foundation with 1:1.5:3 M25 grade concrete for the high mast considering the safe soil bearing capacity (SBC) at site with all materials and labour. e. Supply and Fixing of foundation bolts manufactured from special steel along with nuts, washers, anchor plates and templates.	1.00	Job		

S No.	Description of Work	Quantity	Unit	Rate	Amount
	e. Supply & Installation of system & Aviation obstruction light with 3C×2.5 sq mm copper cable for connection to each fitting. f. Provision of GI pipe earthing for High mast with 2.5 M long 40mm dia GI pipe including connection to High mast earth terminal with 25 × 3 mm GI flats with all the materials including labour (02 Nos. per mast required). **Quantity- 2 nos.**				
2	**(Optional Requirement)** Supply (only) of Indian National Flag of size 6300 MM x 4200 MMin 100% knitted polyster with reinforced super strong nylon webbing on all three sides & rope /toggle sleeve complete as per relevant IS code.	2	Each		
3	**(Optional Requirement)** Supply and installation of non-integral flood light luminaries type BJEF 21 S with one no. 400 WMHT lamp and its control gear box. Supply and installation of 6 mtrs high Octagonal Poles along with its accessories including fittings & fitted on suitable plinth, supplying & laying of 3C X 2.5 sq mm copper cable for the individual pole and wiring of luminaire etc.	3	Each		

Total Rs. in words:

Date:

Place:

Signature and Seal