



**OIL INDIA LIMITED**  
(A Govt. of India Enterprise)  
P.O. Duliajan-786602, Assam  
**E-mail:**material@oilindia.in, **Fax No.**91-374-2800533

**OIL INDIA LIMITED invites sealed tenders for the following:**

<b>Tender No.</b>	<b>B. C. Date</b>	<b>Material Description</b>
DID2075P12/SH	14.07.2011	SUPPLY, ERRECTION, TESTING AND COMMISSIONING OF30M HIGH MAST LIGHTING SYSTEM = 05 NOS.

**2.0** Bid documents (Non transferable) can be purchased from 14.06.2011 till one day prior to the respective

B.C. Dates on payment of tender fee of Rs.1,000.00 (excepting for PSUs and SSI units registered for the item) each through Crossed Demand Draft in favour of M/s. Oil India Limited payable at the place of purchase of tender document from

- a. Head - Materials, Oil India Limited, P.O. Duliajan, Assam -786602
- b. Head -Calcutta Branch, Oil India Limited, 4,India Exchange Place, Kolkata - 700001
- c. Senior Adviser(Contract & Purchase), Oil India Limited, Plot No. 19, Sector- 16 A, NOIDA-201301
- d. Addl. Chief Materials Manager (Pipeline), Oil India Limited,PO: Udayan Vihar, Guwahati - 781171.

**3.0** Detailed tender document will be available in OIL's website  
[www.oil-india.com](http://www.oil-india.com)

**4.0** To be eligible for issue of tender documents, the applicant must meet the following qualifying criteria (documentary evidence to be provided) :

i. Successful execution of a single order of vlaue not less than the amount shown below for supply of similar items during last five years:

<b>Tender No.</b>	<b>Single Order Value in Lakhs (Rs.)</b>
DID2075P12/SH	18.60

ii. Annual turnover of the firm in any of the last three financial years or current financial year should be more than the amount as below :

<b>Tender No.</b>	<b>Annual Turnover in Lakhs (Rs.)</b>
DID2075P12/SH	37.20

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**Tender No. & Date : DID2075P12/SH 19.05.2011**

Tender Fee : INR 1,000.00  
Bid Security Amount : INR 74,000.00

**Bidding Type : Single Bid (Composite Bid)**

Bid Closing On : 14.07.2011 at 13:00 hrs. (IST)  
Bid Opening On : 14.07.2011 at 13:00 hrs. (IST)

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Press tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
<b>10</b> 0C000264	<p>Supply, erection, testing &amp; commissioning of 30 Meters tall High mast Lighting system with 12 nos. of 2x400 watt SON fittings with Non integral control gear box. Details of specifications are given below :</p> <p><b><u>MAKE : BAJAJ/CROMPTON GREAVES/BP PROJECTS/GE OR EQUIVALENT.</u></b></p> <p><b><u>TECHNICAL SPECIFICATIONS OF 30 MTRS HIGH MAST LIGHTING SYSTEM:</u></b></p> <p><b>1.0 MAST:</b></p> <p>1.1 The high mast shall be continuously tapered, polygonal cross section and 30 meters high above base plate. The mast shall be fabricated from steel plate welded construction in suitable number of sections (not less than 3), telescopically jointed giving a continuous tapered profile and presenting good visual appearances.</p> <p>1.2 Mast sections material shall conform to IS 2062.</p> <p>1.3 The mast sections are hot dipped galvanized both inside and outside conforming to IS: 4759-1984, IS: 2629-1985, IS: 2633-1072. Galvanisation thickness shall be of minimum 80 micron.</p> <p>1.4 Mast structure shall be designed to withstand wind velocity of 180km/hr. with 3 sec. gust conforming IS: 875 part VIII - 1987 and should have wind load factor 1.25 and material factor 1.15.</p> <p>1.5 The base flange shall be provided with gusset and high tensile anchor bolts.</p> <p>1.6 The bottom most section shall accommodate winch electric drive, cable, plug/socket etc. with a proper door opening in order to permit clear access to</p>	1	NO

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Item No./ Mat. Code	Material Description	Quantity	UOM
	<p>the above components. The door shall be dust proof; vermin proof and weather protected (IP 55) and shall be provided with suitable locking arrangement.</p> <p>1.7 Mast shall be provided with lightning protection.</p> <p>1.8 Provisions for suitable Earthing shall be provided.</p> <p>1.9 The mast shaft shall be made with best steel in compliance with BS EN 10025 FE 510 having the guaranteed characteristics.</p> <p>a. Minimum yield strength = 335 N/Sq. mm for thickness &lt; 30mm.  b. Tensile strength ranging from 340 to 470 N/sq. mm.  c. Minimum elongation for thickness between 3 mm and 30 mm.  d. All holding bolts are hot dip galvanized to BS 729.</p> <p>2.0 LANTERN CARRIAGE</p> <p>2.1 The lantern carriage shall be of steel tubular ring type construction designed to accommodate 12 Nos. of HPSV flood light luminaries with necessary C.G. Box in and radically symmetrical fashion.</p> <p>2.2. The complete lantern carriage assembly shall be hot dip galvanized after fabrication.</p> <p>2.3 The carriage shall have proper arrangement to avoid swing and to prevent damage to mast surface or other installed parts during lowering/raising operation of carriage.</p> <p>2.4. All hardware used shall have necessary corrosion protection.</p> <p>2.5 Lantern Carriage/Accessories shall be made with best steel in compliance with BS EN 10025 FE 430 A having the following guaranteed characteristics.  a. Minimum yield strength 225 to 250 N/Sq. mm for thickness &lt; 30mm  b. Tensile strength ranging from 340 to 470 N/Sq. mm.  c. Minimum elongation 23 to 26%.</p> <p>2.6 Galvanization as per IS 4759, minimum thickness of galvanization 80 micron.</p> <p>3.0 WINCH ASSEMBLY:</p> <p>3.1 Winch assembly, meant for hoisting of lantern carriage shall be fixed in the base of the mast and shall have provision to operate both manually and electrically. The double drum winch should be suitably designed to handle the total weight of lantern carriage assembly with all fittings and accessories with required factor of safety.</p> <p>3.2 The winch shall be of self sustaining and self lubricating type with positive locking arrangement. The rope drum is fabricated as per IS-807 and the wire rope is wound/unwound on double drum winch during movement of lantern carriage.</p> <p>3.3 Particular care shall be exercised in all aspects of design, manufacture, and testing and installation arrangement of the system to ensure optimum safety under all operating condition to give a minimum 25 years of operating life.</p> <p>3.4 Test certificates shall be provided with each winch stating clearly the</p>		

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	<p>capacity, speed and recommended lubricant.</p> <p>3.5 The material of construction for top pulley block shall be non corrosive and preferably made of die cast LM-6 aluminum /brass alloy with self lubricating bearing.</p> <p>3.6 The design shall ensure that the operation of pulley is maintenance free Pulley should be provided with weather proof cover.</p> <p>4.0 WIRE ROPE:</p> <p>4.1. The wire ropes are flexible marine grade and non corrosive stainless steel.</p> <p>4.2. A minimum 8 turn of wire ropes shall be on the drum when the lantern carriage is fully lowered.</p> <p>4.3. The stainless steel wire is of minimum 6mm diameter, 7x19 constructions which shall have a factor of safety not less than 5 times the safe working load (SFL) of winch.</p> <p>5.0 WINCH DRIVING POWER TOOL:</p> <p>5.1 The winch drive unit shall be squirrel cage reversible induction motor with following characteristic: - 415V, 3 phase, 50 HZ - Class F insulation and temperature class limited to class B Weather resistant, - IP 55 Protections, Make- Crompton Greaves/ Kirloskar Ltd/ Siemens/ Bharat Bijlee</p> <p>5.2. The capacity of the electric motor used in power tool shall be compatible to handle the design load of lantern carriage (Min 2.0 HP).</p> <p>5.3 The power tool shall be housed at the base of the mast.</p> <p>5.4 For safety reasons and final precision docking of lantern carriage ring, the power tool must have provision to operate manually by using external crank device without removing the drive motor from the winch unit.</p> <p>6.0 CONTROL PANEL (FEEDER PILLAR BOX)</p> <p>6.1. Feeder pillar box made of 14 SWG CRCA sheet metal, self supporting, floor mounted, dust, vermin and weather proof for outdoor use shall be supplied for locally/automatically switching' ON/OFF of luminaries. The enclosure protection shall be IP 55. The control panel comprises the following.</p> <p>6.2. 63 Amps, TPN SFU with 63 A fuse as incomer with silver plated contacts. Make: GE/Siemens/Schneider.</p> <p>6.3. 32 Amps TPN fuse switch unit as isolator for motor starter(Fuse as per motor HP) . Make: GE/Siemens/Schneider.</p> <p>6.4 Earth leakage Relay with separate core balance current transformer Sensitivity: 30 mA to 3A, Time delay: 0 - 5 sec, current and time setting adjustable in steps. Make: Merlin Gerlin/ MDS Legrand</p>		

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	<p>6.5. Triple pole power contactor AC 3 rating min 40A rating for long life for light control. Make: Siemens/Telemmchanique/GEPC</p> <p>Triple pole power contactor AC 3 rating min 16A rating for motor hoisting and lowering, Make: Siemens/Telemmchanique/GEPC</p> <p>6.6. Digital Voltmeter &amp; Ammeter, size-96mm X 96mm, Range 0-600V, Current transformer with CT ratio-50/5 Make- Konzerv / AEI Ltd/L&amp;T LED - 3 nos for R,Y,B phase indication. LED - 2 Nos for :- a) Raising b) Lowering of the mast</p> <p>6.7. Start/Stop push button for locally switching ON/OFF the luminaries - 1 set.</p> <p>6.8. NS 4 type fuses carrier and base for control circuit.</p> <p>6.9. Automatic lighting Switch with digital time switch of DIN rail mounting suitable for astronomical calculations of sun rise and sun set during summer/winter by setting date, time and positions of longitude and latitude, model-Astro Rex-D21 of Legrand, astro-time -switch, 230V AC, 50HZ, Make- MDS legrand/ Merlin Gerin</p> <p>6.10.All power and control wiring shall be done with 1 core, 1100 V grade PVC insulated, IS marked ,flexible copper cable. Power cable size shall be as per IS 8623,control cable 2.5 Sqmm.</p> <p>6.11. Brought out terminals of tinned copper shall be provided at incomer for terminating 4x25 Sqmm PVCA cable.All outgoing connections from 63 A TPN Switch shall be tapped through suitable rectangular copper bars.</p> <p>6.12. Detachable gland plate and copper brought out terminals for incoming and outgoing cable connection</p> <p>6.13. Feeder Pillar box to be cleaned with 7 tank anti rust treatment and then power coated on all sides with DA Paint. (Min thickness of paint 50 micron)</p> <p>6.14. Push button for raising and lowering the mobile part shall operate on "Dead man principal" i.e. action shall cease as soon as the button is released.</p> <p>6.15. Feeder Pillar should be located min. 5meters radial distance from high mast.</p> <p>6.16. A single line diagram for Feeder Pillar shall be submitted along with the offer.</p> <p>6.17. The height of foundation for panel shall be min. 450 mm from the ground level.</p>		

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	<p>7.0 LUMINARIES:</p> <p>7.1. 12 nos. of non-integral type, 2x400 W HPSV flood light luminaries with IP-65 protection similar to RVP 501 of Phillips Make with HPSV tubular lamps complete with external control gear box with all accessories. Cast Aluminium alloy control gear box shall be complete with VPI Electro Magnetic ballast, ignitor PF correction capacitor and individual HRC fuse and shall be as per IP 65. Make of Luminaries shall be restricted to: PHILLIPS/CROMPTON/BAJAJ/GE</p> <p>2 Nos. 4 core, 6sqmm, copper conductor, flexible screen cable, 1100V grade, Make- Nicco/ Incab / Polycab /Finolex shall be used from lantern carriage to terminal block. Terminal block shall be covered to protect it from the entry of insects and dust particles.</p> <p>8.0. EARTHING:</p> <p>8.1. The mast shall be provided with lightning protection system comprising of an Earthing system per following specification:</p> <p>50mmdia, 3 meters Long G.I Pipe with bricks enclosures of size 600mm X 600mm and RCC cover - 4Nos. 30mm X 6mm G.I straps for interconnection of stud at mast 2 nos. each electrodes for lightening arrester and 2Nos. earth electrodes for earthing system of high mast lighting system shall be provided.</p> <p>9.0 TOOL BOX:</p> <p>9.1 A tool box of sheet steel containing a set of general and special purpose tools is to be supplied along with high mast for maintenance job.</p> <p>10.0. AVIATION OBSTRUCTION LIGHTS &amp; LIGHTENING ARRESTER</p> <p>10.1 Medium intensity LED aviation obstruction light similar to neon spiral type fitted in a weather- proof box on body unit of Aluminium alloy shall be supplied. The cover of the light will be glass with rubber gasket IP65 protection). High Luminosity flashing red light emitting diodes having life of 11 years. Power consumption 10 to 15 Watts, 230V AC, 50HZ, 90 candela. LED's are mounted on fire retardant epoxy printed circuit board in five series-parallel circuits. - 1Set Make- Binay Opto Electronics Pvt. Ltd./Bajaj Electricals Ltd/ Philips.</p> <p>10.1 Lightning protection shall be provided on the top of the high mast. 10.2 Lightening arrester shall be connected rigidly to the foot of the mast.</p> <p>11.0. FOUNDATION:</p> <p>11.1 Foundation of high mast shall be designed for Zone V considering the Earth Quake resistance measure. Party shall have to design and furnish the details of foundation of High mast along with the offer for zone V. 11.2 The bearing capacity of the soil is 10 T/m 2</p> <p>12. GENERAL CONDITIONS:</p>		

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	<p>12.1 Supply, erection, testing and commissioning, including civil foundation jobs, of high mast to be done by the party. The civil jobs of the foundation of the high mast shall be done by the party after approval of foundation drawing by OIL. All the materials for foundation shall be supplied by the party including metallic items like site bolts, anchor plate, steel template etc. Curing time and treatment for foundation shall be as directed by OIL before start of foundation work.</p> <p>12.2 All necessary arrangements for erection of mast are to be made by the party including supply of all safety appliances and tools to workman.</p> <p>12.3 Transportation of men and materials to the site will be party's responsibility and M/S. Oil India Limited will not provide any transport or transferring of man and materials to the site.</p> <p>12.4 The persons who are authorized to carry out electrical works should have valid electrical supervising license and work permit as per I.E. Rules. Copy of the license to be submitted along with the offer.</p> <p>12.5 For installation, testing and commissioning of mast, party should have valid electrical license valid for Assam. Copy of the license to be submitted along with the offer.</p> <p>12.6 The party should submit detailed schedule of program of work within 15 days from the award of order.</p> <p>12.7 The whole work should be completed within 3 to 4 month from the date of issue of order to the entire satisfaction of Engineer-in-charge of OIL.</p> <p>12.8 The party will be responsible for their tools, tackle and materials and personnel at site till the towers are finally handed over to OIL.</p> <p>12.9 The party will take all safety measures during the execution of the work. OIL will not compensate to the party in any way for any loss of man and material.</p> <p>12.10 If due to improper execution of the work or due to negligence on the part of the party's workmen, OIL's property is damaged, the parties will compensate for the loss.</p> <p>12.11 The party will submit six set of operation and maintenance instruction manual with each high mast set and on site drawings of all the components of mast.</p> <p>12.12 All the works shall be carried out as per relevant codes, practices rules and regulations. The workmanship will be of very high standard.</p> <p>12.13 Party shall make its own arrangement for boarding and lodging of their working personnel.</p> <p>12.14 The work shall be carried out under direct supervision of the party. The party shall submit monthly progress report of work to the Engineer-in-charge in writing.</p> <p>12.15 If the job is not completed in the stipulated time, the contractor shall be penalized at the rate of 0.01% of the unfinished job per month.</p> <p>12.16 Any deviation shall be clearly spelled out along with the offer.</p> <p>12.17 Verticality and straightness measurement shall be carried out and these should be within the limits as specified by manufacturer for wind velocity, earthquake zone mentioned in Tender.</p> <p>12.18 A separate test certificate of the winch shall be submitted.</p> <p>12.19 Supplier's Test Certificate shall be submitted for each reel of rope.</p> <p>12.20 Test certificate of chemical composition and mechanical properties of Sheets and Flange Plates shall be submitted as per the relevant Standards.</p>		

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	<p>12.21 Test certificate of Head Frame Assembly, Mast sections, Trailing cable and cable connector as per relevant standards shall be submitted.</p> <p>12.22 Welding and Fabrication detail shall be submitted to OIL. These should be as per relevant standard Rules, Regulations and practices.</p> <p>12.23 Principles and details of joints shall be shown on drawings which will be submitted immediately after placement of order.</p> <p>12.24 The thickness of internal and external galvanization shall be as per B5729 and IS 4759 and a test certificate shall be submitted confirming the minimum thickness of galvanization 80 micron.</p> <p>12.25 Detailed dimensional drawing of the complete Mast including the dimensional details of Base door opening, the distance from the Mast Flange plate to the bottom of the door etc. should be submitted after placement of purchase order.</p> <p>12.26 A drawing with details of Head Frame Assembly complete with Pulley, Guides, Ropes, covering to stop access of birds or other objects/rains etc. and power wiring arrangement should also be submitted after placement of purchase order.</p> <p>12.27 Heat resisting cable shall be used between lamp holders and circuit connection points. Manufacture's Test Certificate as per relevant standard shall be submitted after placement of order.</p> <p>12.28 Type of light distribution diagram will be submitted immediately after placement of purchase order.</p> <p>12.29 All components shall be designed to require the minimum of maintenance and skilled attention and also to allow routine maintenance to be carried out quickly and easily with a minimum use of tools.</p> <p>12.30 Every reasonable precaution and provision shall be incorporated in the design of the equipment for the safety and security of the system and of those concerned with its operation and maintenance.</p> <p>12.31 The electrical installation shall comply of all appropriate statutory requirements, rules, regulations, standards and practices.</p> <p>12.32 All metal work including luminaries, control gear units and luminaries carriage shall be bonded to the earth core of the luminaries supply cable. The earth continuity from luminaries carriage shall be via a single core of the multi-core cable.</p> <p>12.33 The Mast shall be ventilated. Details by means of which this is achieved shall be submitted after placement of order.</p> <p>12.34 The average rate of raising and lowering shall be not less than 3 meters per minute. Initial supply of oil for winch shall be given by the party.</p> <p>12.35 High mast and accessories with fitting will be inspected by OIL's, Engineer at the premises of supplier before dispatch.</p> <p>12.36 Party should submit credential to establish that they have executed successfully supply, erection, testing and commissioning of similar type of high mast in at least two Govt, semi-govt or PSU organizations. The manufacturer of the make offered by the party must have the experience of manufacturing of atleast 100 Nos of similar type high mast in last 5 years from the date of enquiry. Party/Authorised dealer must have experience of erection and commissioning of at least 5 Nos of similar high mast lights in Zone V area. Performance certificate of satisfactory completion of jobs and trouble free operation of the high mast offered from those organizations shall be submitted. Offer without any of these documents will be liable for rejection</p> <p>12.37 Test certificate of steel plate, anchor plate, wire rope, Drum winch, wind velocity test and galvanization thickness shall be furnished along with quotation.</p>		

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	<p>12.38 Party should fill up the Data sheet as per Annexure-II failing which offer will be rejected.</p> <p>12.39 High mast should be designed to have maintenance free life of 25years and should be guaranteed for a period of 25 years against any manufacturing / design defects.</p> <p>12.40 The construction of high mast must be of suitable design such that it can withstand the abnormal climatic condition which is normally encountered in this part of the country. It may also be noted that the location comes under Seismic zone V i.e. Earth quake prone area.</p> <p>12.41 Self supporting 4 legged FRP platform ladder of suitable height of 8.10 feet shall be supplied for maintenance of high mast fitting when mast is lowered. Ladder shall be supplied with locking facility with the mast.</p>		
<p><b>30</b> 0C000264</p>	<p>Supply, erection, testing &amp; commissioning of 30 Meters tall High mast Lighting system with 12 nos. of 2x400 watt SON fittings with Non integral control gear box. Details of specifications are same as item no. 10</p> <p><b><u>MAKE : BAJAJ/CROMPTON GREAVES/BP PROJECTS/GE OR EQUIVALENT.</u></b></p>	2	NO
<p><b>50</b> 0C000264</p>	<p>Supply, erection, testing &amp; commissioning of 30 Meters tall High mast Lighting system with 12 nos. of 2x400 watt SON fittings with Non integral control gear box. Details of specifications are same as item no. 10</p> <p><b><u>MAKE : BAJAJ/CROMPTON GREAVES/BP PROJECTS/GE OR EQUIVALENT.</u></b></p>	1	NO
<p><b>70</b> 0C000264</p>	<p>Supply, erection, testing &amp; commissioning of 20 Meters tall High mast Lighting system with 8 nos. of 2x400 watt SON fittings with Non integral control gear box. Details of specifications are given below:</p> <p><b><u>MAKE : BAJAJ/CROMPTON GREAVES/BP PROJECTS/GE OR EQUIVALENT.</u></b></p> <p><b>TECHNICAL SPECIFICATIONS OF 20 MTRS HIGH MAST LIGHTING SYSTEM</b></p> <p>1.0 MAST:</p> <p>1.1 The high mast shall be continuously tapered, polygonal cross section and 20 meters high above base plate. The mast shall be fabricated from steel plate welded construction in suitable number of sections (not less than 2), telescopically jointed giving a continuous tapered profile and presenting good visual appearances.</p> <p>1.2 Mast sections material shall conform to IS 2062.</p> <p>1.3 The mast sections are hot dipped galvanized both inside and outside conforming to IS: 4759-1984, IS: 2629-1985, IS: 2633-1072. Galvanisation thickness shall be of minimum 80 micron.</p> <p>1.4 Mast structure shall be designed to withstand wind velocity of 180km/hr.</p>	1	NO

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	<p>with 3 sec. gust conforming IS: 875 part VIII - 1987 and should have wind load factor 1.25 and material factor 1.15.</p> <p>1.5 The base flange shall be provided with gusset and high tensile anchor bolts.</p> <p>1.6 The bottom most section shall accommodate winch electric drive, cable, plug/socket etc. with a proper door opening in order to permit clear access to the above components. The door shall be dust proof; vermin proof and weather protected (IP 55) and shall be provided with suitable locking arrangement.</p> <p>1.7 Mast shall be provided with lightning protection.</p> <p>1.8 Provisions for suitable Earthing shall be provided.</p> <p>1.9 The mast shaft shall be made with best steel in compliance with BS EN 10025 FE 510 having the guaranteed characteristics.</p> <p>a. Minimum yield strength = 335 N/Sq. mm for thickness &lt; 30mm.  b. Tensile strength ranging from 340 to 470 N/sq. mm.  c. Minimum elongation for thickness between 3 mm and 30 mm.  d. All holding bolts are hot dip galvanized to BS 729.</p> <p>2.0 LANTERN CARRIAGE</p> <p>2.1 The lantern carriage shall be of steel tubular ring type construction designed to accommodate 8 Nos. of HPSV flood light luminaries with necessary C.G. Box in and radically symmetrical fashion.</p> <p>2.2. The complete lantern carriage assembly shall be hot dip galvanized after fabrication.</p> <p>2.3 The carriage shall have proper arrangement to avoid swing and to prevent damage to mast surface or other installed parts during lowering/raising operation of carriage.</p> <p>2.4. All hardware used shall have necessary corrosion protection.</p> <p>2.5 Lantern Carriage/Accessories shall be made with best steel in compliance with BS EN 10025 FE 430 A having the following guaranteed characteristics.  a. Minimum yield strength 225 to 250 N/Sq. mm for thickness &lt; 30mm  b. Tensile strength ranging from 340 to 470 N/Sq. mm.  c. Minimum elongation 23 to 26%.</p> <p>2.6 Galvanization as per IS 4759, minimum thickness of galvanization 80 micron.</p> <p>3.0 WINCH ASSEMBLY:</p> <p>3.1 Winch assembly, meant for hoisting of lantern carriage shall be fixed in the base of the mast and shall have provision to operate both manually and electrically. The double drum winch should be suitably designed to handle the total weight of lantern carriage assembly with all fittings and accessories with required factor of safety.</p> <p>3.2 The winch shall be of self sustaining and self lubricating type with positive</p>		

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	<p>locking arrangement. The rope drum is fabricated as per IS-807 and the wire rope is wound/unwound on double drum winch during movement of lantern carriage.</p> <p>3.3 Particular care shall be exercised in all aspects of design, manufacture, and testing and installation arrangement of the system to ensure optimum safety under all operating condition to give a minimum 25 years of operating life.</p> <p>3.4 Test certificates shall be provided with each winch stating clearly the capacity, speed and recommended lubricant.</p> <p>3.5 The material of construction for top pulley block shall be non corrosive and preferably made of die cast LM-6 aluminum /brass alloy with self lubricating bearing.</p> <p>3.6 The design shall ensure that the operation of pulley is maintenance free Pulley should be provided with weather proof cover.</p> <p>4.0 WIRE ROPE:</p> <p>4.1. The wire ropes are flexible marine grade and non corrosive stainless steel.</p> <p>4.2. A minimum 8 turn of wire ropes shall be on the drum when the lantern carriage is fully lowered.</p> <p>4.3. The stainless steel wire is of minimum 6mm diameter, 7x19 constructions which shall have a factor of safety not less than 5 times the safe working load (SFL) of winch.</p> <p>5.0 WINCH DRIVING POWER TOOL:</p> <p>5.1 The winch drive unit shall be squirrel cage reversible induction motor with following characteristic: - 415V, 3 phase, 50 HZ - Class F insulation and temperature class limited to class B Weather resistant - IP 55 Protections, Make- Crompton Greaves/ Kirloskar Ltd/ Siemens/ Bharat Bijlee</p> <p>5.2. The capacity of the electric motor used in power tool shall be compatible to handle the design load of lantern carriage (Min 2.0 HP).</p> <p>5.3 The power tool shall be housed at the base of the mast.</p> <p>5.4 For safety reasons and final precision docking of lantern carriage ring, the power tool must have provision to operate manually by using external crank device without removing the drive motor from the winch unit.</p> <p>6.0 CONTROL PANEL (FEEDER PILLAR BOX)</p> <p>6.1. Feeder pillar box made of 14 SWG CRCA sheet metal, self supporting, floor mounted, dust, vermin and weather proof for outdoor use shall be supplied for locally/automatically switching' ON/OFF of luminaries. The enclosure protection shall be IP 55. The control panel comprises the following.</p> <p>6.2. 63 Amps, TPN SFU with 63 A fuse as incomer with silver plated contacts. Make: GE/Siemens/Schneider.</p> <p>6.3. 32 Amps TPN fuse switch unit as isolator for motor starter(Fuse as per</p>		

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	<p>motor HP) . Make: GE/Siemens/Schneider.</p> <p>6.4 Earth leakage Relay with separate core balance current transformer Sensitivity: 30 mA to 3A, Time delay: 0 - 5 sec, current and time setting adjustable in steps. Make: Merlin Gerlin/ MDS Legrand</p> <p>6.5. Triple pole power contactor AC 3 rating min 40A rating for long life for light control. Make: Siemens/Telemmchanique/GEPC Triple pole power contactor AC 3 rating min 16A rating for motor hoisting and lowering, Make: Siemens/Telemmchanique/GEPC</p> <p>6.6. Digital Voltmeter &amp; Ammeter, size-96mm X 96mm, Range 0-600V, Current transformer with CT ratio-50/5 Make- Conzerv / AEI Ltd/L&amp;T LED- 3 nos for R,Y,B phase indication. LED-2 Nos for a)Raising b)Lowering of the mast</p> <p>6.7. Start/Stop push button for locally switching ON/OFF the luminaries - 1 set.</p> <p>6.8. NS 4 type fuses carrier and base for control circuit.</p> <p>6.9. Automatic lighting Switch with digital time switch of DIN rail mounting suitable for astronomical calculations of sun rise and sun set during summer/winter by setting date, time and positions of longitude and latitude, model-Astro Rex-D21 of Legrand, astro-time -switch, 230V AC, 50HZ, Make-MDS legrand/ Merlin Gerin</p> <p>6.10.All power and control wiring shall be done with 1 core, 1100 V grade PVC insulated, IS marked ,flexible copper cable. Power cable size shall be as per IS 8623,control cable 2.5 Sqmm.</p> <p>6.11. Brought out terminals of tinned copper shall be provided at incomer for terminating 4x25 Sqmm PVCA cable.All outgoing connections from 63 A TPN Switch shall be tapped through suitable rectangular tinned copper bars.</p> <p>6.12. Detachable gland plate and copper brought out terminals for incoming and outgoing cable connection</p> <p>6.13. Feeder Pillar box to be cleaned with 7 tank anti rust treatment and then power coated on all sides with DA Paint. (Min thickness of paint 50 micron)</p> <p>6.14. Push button for raising and lowering the mobile part shall operate on "Dead man principal" i.e. action shall cease as soon as the button is released.</p> <p>6.15. Feeder Pillar should be located min. 5.0 meters radial distance from high mast.</p> <p>6.16. A single line diagram for Feeder Pillar shall be submitted along with the offer.</p> <p>6.17. The height of foundation for panel shall be min. 450 mm from the ground level.</p> <p>7.0 LUMINARIES:</p> <p>7.1. 8 nos. of non-integral type, 2x400 W HPSV flood light luminaries with IP-65 protection similar to RVP 501 of Phillips Make with HPSV tubular lamps complete with external control gear box with all accessories. Cast Aluminium</p>		

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	<p>alloy control gear box shall be complete with VPI Electro Magnetic ballast, ignitor PF correction capacitor and individual HRC fuse and shall be as per IP 65.</p> <p>Make of Luminaries shall be restricted to: PHILLIPS/CROMPTON/BAJAJ/GE</p> <p>2Nos. 4 core, 6sqmm, copper conductor, flexible screen cable, 1100V grade, Make- Nicco/ Incab / Polycab /Finolex shall be used from lantern carriage to terminal block. Terminal block shall be covered to protect it from the entry of insects and dust particles.</p> <p>8.0. EARTHING:</p> <p>8.1. The mast shall be provided with lightning protection system comprising of an Earthing system per following specification: 50mmdia, 3 meters Long G.I Pipe with bricks enclosures of size 600mm X 600mm and RCC cover - 4Nos. 30mm X 6mm G.I straps for interconnection of stud at mast 2 nos.each electrodes for lightening arrester and earthing system of high mast lighting system shall be provided.</p> <p>9.0 TOOL BOX:</p> <p>9.1 A tool box of sheet steel containing a set of general and special purpose tools is to be supplied along with high mast for maintenance job.</p> <p>10.0. AVIATION OBSTRUCTION LIGHTS &amp; LIGHTENING ARRESTER</p> <p>10.1 Medium intensity LED aviation obstruction light similar to neon spiral type fitted in a weather- proof box on body unit of Aluminium alloy shall be supplied. The cover of the light will be glass with rubber gasket (IP65 protection). High Luminosity flashing red light emitting diodes having life of 11 years. Power consumption 10 to 15 Watts, 230V AC, 50HZ, 90 candela. LED#s are mounted on fire retardant epoxy printed circuit board in five series-parallel circuits.-1Set Make- Binay Opto Electronics Pvt. Ltd./Bajaj Electricals Ltd/ Philips.</p> <p>10.2 Lightning protection shall be provided on the top of the high mast. 10.3 Lightening arrester shall be connected rigidly to the foot of the mast.</p> <p>11.0. FOUNDATION:</p> <p>11.1 Foundation of high mast shall be designed for Zone V considering the Earth Quake resistance measure. Party shall have to design and furnish the details of foundation of High mast along with the offer for zone V. 11.2 The bearing capacity of the soil is 10 T/m<sup>2</sup></p> <p>12. GENERAL CONDITIONS:</p> <p>12.1 Supply, erection, testing and commissioning, including civil foundation jobs, of high mast to be done by the party. The civil jobs of the foundation of the high mast shall be done by the party after approval of foundation drawing by OIL. All the materials for foundation shall be supplied by the party</p>		

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	<p>including metallic items like site bolts, anchor plate, steel template etc. Curing time and treatment for foundation shall be as directed by OIL before start of foundation work.</p> <p>12.2 All necessary arrangements for erection of mast are to be made by the party including supply of all safety appliances and tools to workman.</p> <p>12.3 Transportation of men and materials to the site will be party's responsibility and M/S. Oil India Limited will not provide any transport or transferring of man and materials to the site.</p> <p>12.4 The persons who are authorized to carry out electrical works should have valid electrical supervising license and work permit as per I.E. Rules. Copy of the license to be submitted along with the offer.</p> <p>12.5 For installation, testing and commissioning of mast, party should have valid electrical license valid for Assam. Copy of the license to be submitted along with the offer.</p> <p>12.6 The party should submit detailed schedule of program of work within 15 days from the award of order.</p> <p>12.7 The whole work should be completed within 3 to 4 month from the date of issue of order to the entire satisfaction of Engineer-in-charge of OIL.</p> <p>12.8 The party will be responsible for their tools, tackle and materials and personnel at site till the towers are finally handed over to OIL.</p> <p>12.9 The party will take all safety measures during the execution of the work. OIL will not compensate to the party in any way for any loss of man and material.</p> <p>12.10 If due to improper execution of the work or due to negligence on the part of the party's workmen, OIL's property is damaged, the parties will compensate for the loss.</p> <p>12.11 The party will submit four set of operation and maintenance instruction manual with each high mast set and on site drawings of all the components of mast.</p> <p>12.12 All the works shall be carried out as per relevant codes, practices rules and regulations. The workmanship will be of very high standard.</p> <p>12.13 Party shall make its own arrangement for boarding and lodging of their working personnel.</p> <p>12.14 The work shall be carried out under direct supervision of the party. The party shall submit monthly progress report of work to the Engineer-in-charge in writing.</p> <p>12.15 If the job is not completed in the stipulated time, the contractor shall be penalized at the rate of 0.01% of the unfinished job per month.</p> <p>12.16 Any deviation shall be clearly spelled out along with the offer.</p> <p>12.17 Verticality and straightness measurement shall be carried out and these should be within the limits as specified by manufacturer for wind velocity, earthquake zone mentioned in Tender.</p> <p>12.18 A separate test certificate of the winch shall be submitted.</p> <p>12.19 Supplier's Test Certificate shall be submitted for each reel of rope.</p> <p>12.20 Test certificate of chemical composition and mechanical properties of Sheets and Flange Plates shall be submitted as per the relevant Standards.</p> <p>12.21 Test certificate of Head Frame Assembly, Mast sections, Trailing cable and cable connector as per relevant standards shall be submitted.</p> <p>12.22 Welding and Fabrication detail shall be submitted to OIL. These should be as per relevant standard Rules, Regulations and practices.</p> <p>12.23 Principles and details of joints shall be shown on drawings which will be</p>		

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	<p>submitted immediately after placement of order.</p> <p>12.24 The thickness of internal and external galvanization shall be as per B5729 and IS 4759 and a test certificate shall be submitted confirming the minimum thickness of galvanization 80 micron.</p> <p>12.25 Detailed dimensional drawing of the complete Mast including the dimensional details of Base door opening, the distance from the Mast Flange plate to the bottom of the door etc. should be submitted after placement of purchase order.</p> <p>12.26 A drawing with details of Head Frame Assembly complete with Pulley, Guides, Ropes, covering to stop access of birds or other objects/rains etc. and power wiring arrangement should also be submitted after placement of purchase order.</p> <p>12.27 Heat resisting cable shall be used between lamp holders and circuit connection points. Manufacture's Test Certificate as per relevant standard shall be submitted after placement of order.</p> <p>12.28 Type of light distribution diagram will be submitted immediately after placement of purchase order.</p> <p>12.29 All components shall be designed to require the minimum of maintenance and skilled attention and also to allow routine maintenance to be carried out quickly and easily with a minimum use of tools.</p> <p>12.30 Every reasonable precaution and provision shall be incorporated in the design of the equipment for the safety and security of the system and of those concerned with its operation and maintenance.</p> <p>12.31 The electrical installation shall comply of all appropriate statutory requirements, rules, regulations, standards and practices.</p> <p>12.32 All metal work including luminaries, control gear units and luminaries carriage shall be bonded to the earth core of the luminaries supply cable. The earth continuity from luminaries carriage shall be via a single core of the multi-core cable.</p> <p>12.33 The Mast shall be ventilated. Details by means of which this is achieved shall be submitted after placement of order.</p> <p>12.34 The average rate of raising and lowering shall be not less than 3 meters per minute. Initial supply of oil for winch shall be given by the party.</p> <p>12.35 High mast and accessories with fitting will be inspected by OIL's, Engineer at the premises of supplier before dispatch.</p> <p>12.36 Party should submit credential to establish that they have executed successfully supply, erection, testing and commissioning of similar type of high mast in at least two Govt, semi-govt or PSU organizations. The manufacturer of the make offered by the party must have the experience of manufacturing of atleast 100 Nos of similar type high mast in last 5 years from the date of enquiry. Party/Authorised dealer must have experience of erection and commissioning of at least 5 Nos of similar high mast lights in Zone V area. Performance certificate of satisfactory completion of jobs and trouble free operation of the high mast offered from those organizations shall be submitted. Offer without any of these documents will be rejected.</p> <p>12.37 Test certificate of steel plate, anchor plate, wire rope, Drum winch, wind velocity test and galvanization thickness shall be furnished along with quotation.</p> <p>12.38 Party should fill up the Data sheet as per Annexure-II failing which offer will be rejected.</p> <p>12.39 High mast should be designed to have maintenance free life of 25years and should be guaranteed for a period of 25 years against any manufacturing / design defects.</p>		

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	12.40 The construction of high mast must be of suitable design such that it can withstand the abnormal climatic condition which is normally encountered in this part of the country. It may also be noted that the location comes under Seismic zone V i.e. Earth quake prone area. 12.41 Self supporting 4 legged FRP platform ladder of suitable height of 8.10 feet shall be supplied for maintenance of high mast fitting when mast is lowered. Ladder shall be supplied with locking facility with the mast.		
	<b>Installation &amp; commissioning</b>		
20	Installation & commissioning charges for Item No. 10 per No. basis	1	AU
	<b>Installation &amp; commissioning</b>		
40	Installation & commissioning charges for Item No.30 per No. basis	1	AU
	<b>Installation &amp; commissioning</b>		
60	Installation & commissioning charges for Item No. 50 per No. basis	1	AU
	<b>Inst &amp; Commissioning</b>		
80	Inst and Commissioning charges for Item No. 70 per No. basis	1	AU

Standard Notes: (1) **VALIDITY** : Your offer must be valid for 120 days from the date of bid opening. Offer with inadequate validity will be rejected.

(2) The offer should be submitted in triplicate.

(3) Bidder other than OEM must forward their valid dealership certificate along with their offer; otherwise their offer shall be rejected.

(4) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.

(5) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of a sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).

(6) In the event you authorize your dealer/stockist/channel partner to quote on your behalf, the dealer/stockist/channel partner while submitting bid should mention on the body of the envelope that they are submitting bid on your behalf. In the event the dealer/stockist/channel partner do not mention the name of their OEM/principal on the body of the envelope, the offer shall be treated as unsolicited offer and will not be considered for opening. The dealer/stockist/channel partner should take note of above while submitting bid on behalf of their OEM/principal.

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(7) For order with F.O.R. Destination term, 100% payment against despatch documents will not be entertained. In this regards please refer payment terms in ANNEXURE-MM/TENDER/LP/01/06.

(8) To evaluate the inter-se ranking of the offers, Assam Entry Tax on purchase value will be loaded as per prevailing Government of Assam Guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their bids.

**Special Notes : Make : Philips / Bajaj / Crompton Greaves / BP Projects / GE or equivalent**

1) Supply, Erection, testing and commissioning including Civil foundation jobs of the high mast to be done by the bidder at indicated site.

2) The bidder shall quote as per specification of items.

3) High mast and accessories with fittings will be inspected by OIL's Engineers at the premises of bidder/manufacturer before dispatch.

4) The bidder should submit the documents related to back up services, guarantee and supply of spares from OEM or Original Equipment Supplier.

5) Bidder to quote separately for Radio graphic Tests of the high mast.

6) High mast should be designed to have maintenance free life of 25 years and should be guaranteed for a period of 25 years against any manufacturing/design defects.

7) Zone-V Earthquake protection to be considered during design calculation of foundation.

**BID REJECTION CRITERIA (BRC)/BID EVALUATION CRITERIA(BEC):**

The following documents are to be submitted along with the offer for technical scrutiny failing which offer shall be rejected:

1. RCC foundation details (2 sets) suitable for Zone V
2. Design calculations of foundation of high mast(2 sets)
3. Design calculation of high mast
4. Complete Catalogue of high mast, luminaries and aviation light
5. General Arrangement (GA) diagram and Circuit diagrams of Feeder Pillar.
6. Illumination level chart
7. Test certificate of steel plate, anchor plate, wire rope, Drum winch, wind velocity test and galvanization thickness
8. Quality Assurance Plan for High mast shaft and accessories.
9. Credentials/ Experience certificates indicated as per Para: 12.36
10. Filled in data sheet as per Annexure II