Supply, erection, testing and Commissioning of Lifts including Annual Maintenance Contract (AMC) for 5(five) years after expiry of the guarantee period for OCAC Tower at Acharya Vihar, Bhubaneswar.

MINUTES OF PRE-BID MEETING

Date: 20.04.2011
Venue: OCAC Tower, Acharya Vihar, Bhubaneswar

Referring to the pre bid meeting held in our office on dt. 20.04.11, we confirm the following changes in the tender document. The pre-bid minutes will be part of the bid documents.

A. TECHNICAL

<table>
<thead>
<tr>
<th>Clause no</th>
<th>As per Bid Document</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 of ITB</td>
<td>No drawings of the typical floor</td>
<td>Typical floor drawing is attached</td>
</tr>
<tr>
<td>7.1 of ITB</td>
<td>Specification for only one type of lifts was included</td>
<td>Subsequent to the pre-bid minutes, it is realized to redefine the technical specifications to include both geared and gearless passenger lifts. Accordingly the Technical Specification is now included in two parts viz Part A for gearless passenger lifts and Part B for geared passenger lifts. The corrected technical specification supercedes the specification appended to the bid document.</td>
</tr>
</tbody>
</table>

B. COMMERCIAL

1. The terms of payment stand modified as follows

<table>
<thead>
<tr>
<th>Clause no</th>
<th>As per Bid Document</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 of ITB</td>
<td>Bid prices</td>
<td>With two different types of deliverable, the bill of quantities is also amended with amendment of BOQ and the preamble. The corrected Financial bid supercedes the Financial bid appended to the bid document.</td>
</tr>
<tr>
<td>25 of ITB</td>
<td>Addendum to sub-clause 25.1 of ITB</td>
<td>a. The financial bid consists of two parts; part A for Gearless Lift and part B for</td>
</tr>
<tr>
<td>Clause no</td>
<td>As per Bid Document</td>
<td>Modification</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Passenger car with gears.</td>
</tr>
<tr>
<td></td>
<td>b. The bidder has the option of bidding for part A or Part B or both. The financial bids for Part A &amp; Part B will be evaluated separately.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. The Client has the option of accepting least evaluated responsive bid from either part.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. The Technical specification and pricing schedule of the accepted Part (either part A or Part B) shall form part of the agreement.</td>
<td></td>
</tr>
</tbody>
</table>

**ITB 25.3 (b) & Period of completion**

Towards installation testing & commissioning in the Tender Call Notice

| Time schedule: Four Calendar Months for Supply, erection, testing and Commissioning of Lifts | Time schedule: Five Calendar Months for Supply, erection, testing and Commissioning of Lifts |

**GCC Clause 12 (Terms of Payment)**

Appendix 1. Terms and Procedures of Payment

<table>
<thead>
<tr>
<th>A. For Commissioning of Plant &amp; Equipment</th>
<th>A. For Commissioning of Plant &amp; Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Sixty percent (60%) of the cost of the respective plant or equipment as per schedule of quantities or the invoice of supplier upon delivery of the plant / equipment at site</td>
<td></td>
</tr>
<tr>
<td>ii. Twenty Five percent (25 %) on successful installation</td>
<td></td>
</tr>
<tr>
<td>iii. Ten percent (10%) after upon issue of the Operational Acceptance Certificate</td>
<td></td>
</tr>
<tr>
<td>iv. Five percent (5%) shall be released after Defect Liability Period.</td>
<td></td>
</tr>
<tr>
<td>v. Necessary deductions towards</td>
<td></td>
</tr>
<tr>
<td>i. Seventy Five percent (75%) of the cost of the respective plant or equipment as per schedule of quantities or the invoice of supplier upon delivery of the plant / equipment at site</td>
<td></td>
</tr>
<tr>
<td>ii. Fifteen percent (15 %) on successful installation</td>
<td></td>
</tr>
<tr>
<td>iii. Ten percent (10%) upon issue of the Operational Acceptance Certificate. This amount can be released after submission of Bank guarantee of equivalent amount provided the issue of Operational Acceptance Certificate is delayed by more than 45 days for reasons not attributable to the agency.</td>
<td></td>
</tr>
<tr>
<td>Clause no</td>
<td>As per Bid Document</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Clause no</td>
<td>Income Tax &amp; cess @1% of the gross bill value shall be effected at source at the time of settlement of the bills.</td>
</tr>
<tr>
<td>GCC Clause 12 (Terms of Payment) Appendix 1. Terms and Procedures of Payment</td>
<td>B. <strong>During Annual Maintenance Contract Period</strong>&lt;br&gt;i. Eligible Payment will be made on quarterly basis.&lt;br&gt;ii. The payment for the quarter shall be derived on the basis of accepted value for the service for the year derived incorporating price escalation&lt;br&gt;iii. Any penalty accrued in the previous quarter due to poor service or other reasons shall be deducted from the eligible payment.&lt;br&gt;iv. Ninety (90%) of the invoice amount raised for the service rendered in the previous quarter shall be paid within 45 days of receipt of invoice&lt;br&gt;v. Ten percent (10%) shall be released after successful handing over of the facility by the Contractor.&lt;br&gt;vi. Necessary deductions towards Income Tax &amp; cess @1% of the gross bill value shall be effected at source at the time of settlement of the bills.</td>
</tr>
<tr>
<td>SCC GCC 13.2.1</td>
<td>The amount of performance security, as a percentage of the Contract Price for the Facility or for the part of the Facility for which a separate time for Completion is provided, shall be: <strong>10 % of the Contract amount</strong></td>
</tr>
<tr>
<td>Clause no</td>
<td>As per Bid Document</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SCC GCC 13.2.2</td>
<td>The performance security shall be in the form of the Bank Guarantee from any nationalized bank or schedule bank with office at Bhubaneswar, Orissa and issued from Bhubaneswar</td>
</tr>
</tbody>
</table>

C. EXTENSION OF BID RECEIPT AND OPENING DATE

<table>
<thead>
<tr>
<th>Relevant clause no.</th>
<th>As per document</th>
<th>Modification/Amendment/Corrigendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last date of receipt of bid: Tender Call Notice, Corrigendum, Clause no 7.3 and 17.1of ITB</td>
<td>Dt.30.04.2011</td>
<td>Dt.06.05.2011 with same time and venue. All other conditions and information notified earlier shall remain unchanged.</td>
</tr>
<tr>
<td>Date of opening of Technical bid: Tender Call Notice, Corrigendum, Clause no 20.1of ITB</td>
<td>Dt.05.05.2011</td>
<td>Dt.12.05.2011 with same time and venue. All other conditions and information notified earlier shall remain unchanged.</td>
</tr>
</tbody>
</table>

D. OTHERS

1. Storage space will be provided in the building. The watch & ward of the material is the Contractor’s risk.

Sd/-
Officer In-Charge,
OCAC Tower, IDCO, Bhubaneswar
TECHNICAL SPECIFICATIONS
PART-A

TECHNICAL SPECIFICATIONS
FOR GEARLESS PASSENGER LIFT
TECHNICAL SPECIFICATION FOR GEARLESS PASSENGER LIFT

1. General Requirements

The installations shall generally be carried out in conformity with the requirements of Indian Electricity Act, 1910 as amended up to date and Indian Electricity Rules, 1956 framed there under, the relevant regulations of the Electric Supply Authority concerned and also with the specifications laid down in the Indian Standard IS: 732/1963 "Code of Practice (Revised) for Electrical Wiring Installations (System Voltage not exceeding 650V)". The work shall be executed as per National Electrical Code and if any item is not covered there under or there is any doubt, the specification approved by the Engineer-in-charge will be final and binding.

Ambient Conditions

All Electrical installations and equipments shall be suitable to work in following ambient conditions.

- Maximum Temperature: 50 degree Celsius
- Relative Humidity: 100%
- In the vicinity of: Bhubaneswar city

System Conditions

The Electrical installations and equipments shall be suitable for operation in following system conditions.

- Supply voltage: 433 Volts +/-10%
- Supply frequency: 50Hz +/-5%
- Number of Phases: Three

2. DRIVE UNIT

2.1 The machine shall be of the Gearless A.C. permanent magnet type with a single piece main shaft, integral drive sheave and brake disc. The main brake shall be of the Disc type with independent dual action capable of arresting the load on any single caliper. In the event of undetected brake wear, the brake shall not lift and thereby automatically prevent further lift operation.

2.2 An AC Closed Loop, Variable Frequency, motion control and velocity profile shall be provided. The micro-computer based speed control system shall incorporate a digital closed loop feedback system ensuring the actual elevator speed is in line with a dictated pattern during all phases of travel, namely acceleration, full running speed and deceleration. All phases of travel shall be controlled regardless of load or direction of travel.
2.3 The acceleration and deceleration values shall be easily adjustable on site by qualified personnel and shall be initially set at 1.2m/s squared.

2.4 The stopping accuracy shall be no more than +/- 5 mm before loading or unloading the car. The mechanical brake shall not be operative before the car has been electrically stopped and at speed zero.

2.5 To compensate for rope stretch under various load conditions, an automatic re-leveling system is to be furnished to ensure the car stays within the floor leveling zone at all times.

3. **CONTROLLER:**

3.1 The control switchgear shall comprise mini-relays and solid-state devices. It shall incorporate the following:

> - Smooth acceleration and deceleration.
> - Smooth start/stop.
> - Accurate floor leveling of ± 5 mm.
> - Landing floor position.
> - Adjustable timer for car doors.
> - Automatic re-leveling.
> - Car overload cut-out.
> - Over load device
> - Fireman's Switch at Main Lobby with Stainless Steel Signal Fixtures.
> - Speed Governor System for Over Speeding

4. **LIFT CAR**

4.1 The lift shall be suitable for carrying 13 passengers i.e. 884-Kg at a speed of 1.5-mps. It shall travel from Ground floor to 6th floor. Each floor height is 3.8m. and the building section drawing enclosed for reference. It shall have seven stops and seven openings. All the openings shall be on same side. The machine room shall be located on the top.

4.2 The lift car and car frame shall be constructed fully of metal. Special precautions shall be observed so that drumming is eliminated by use of the application of anti-drumming paint to the outside of the car wall panels.

4.3 A non-slip vinyl floor covering shall be provided in the lift car.

4.4 The car roof shall be of sufficiently robust construction and design to withstand, without deformation, the weight of two men and tools.
4.5 Ventilation shall be provided at the top and bottom of the car operating panel.

4.6 Car doors shall have the minimum clear opening of 900 wide x 2100 high and during travel the car door shall be mechanically locked.

4.7 One 18-watt CFL lamp luminary with louvers and one 300-mm sweep ceiling fan shall be provided in the car.

4.8 An emergency alarm unit shall be located within the lift-well at the main level served, the push for which should be clearly labeled in the car operating panel.

5. LIFT CONTROL

5.1 The operation shall be Simplex Full Collective Automatic, with one button in the car for each landing and one button at each landing. All stops registered by the momentary pressure of the car buttons shall be made in the order in which the landings are reached after the buttons have been pressed but irrespective of the sequence in which calls were registered.

5.2 Stops registered by the momentary pressure of the buttons at the landings shall be made in the order in which the landings are reached in the down direction of travel after the buttons have been pressed. All landing calls shall be answered when the car is traveling in the down direction, except in the case of the terminal floor calls which shall be answered as soon as it is reached.

5.3 Load Non-Stop Option - The landing calls shall be bypassed but not cancelled if the load in the car is approximately 80% of the contract load.

6. CAR AND LANDING EQUIPMENT

6.1 Landing equipment, mounted to the side of each door, contained within a flush mounted stainless steel panel, shall comprise a call illuminated push.

6.2 Car equipment, mounted in a stainless steel finish, flush panel, shall comprise:

- Call pushes, illuminated, for each floor.
- Car position indicator, illuminated, for each floor, to indicate car position.
- Alarm push.
- A door open push to re-open the doors when closing.
- Key operated Priority call in the car

6.3 A digital dot matrix display shall be incorporated; Character heights shall be 25 mm.

6.4 The Car Operating Panel shall be of convex design located within the car wall in accordance with the requirements of the Building Regulations to ensure it is also suitable for use by disabled persons.
6.5 The car panel shall include circular (micro movement) halo illumination of the button, which will indicate that it has been pressed. Buttons (Tactile in compliance with Building Regulations) shall be provided for entering floor calls, door open and alarm.

6.6 A position indicator providing a digital display shall be included. The panel shall also include:

> Emergency Car Lights.
> Passenger inter-communication units
> Independent service key switch.
> Car overloaded indicator.

7. **CAR & LANDING DOORS.**

7.1 The landing doors, at each level, shall be two hour fire rated, two panel, center opening power operated fully automatic. Doors shall be stainless steel, not less than 16 s.w.g. to EN 81, part 1, 2 or 3 as appropriate, and shall be silent in operation.

7.2 All doors shall be fitted with a combined mechanical and electrical interlock, to EN 81, part 1, 2 or 3 as appropriate, with dust protection screen and with inspection panel.

7.3 The landing door locks shall be configured such that it shall not be possible to open the doors from the landing side, unless the car is at the particular landing level. Nor shall it be possible to start the lift, or keep it in motion, unless all landing doors are closed.

7.4 Provision shall be incorporated for opening the landing doors by emergency key, irrespective of car position. The key shall comply the EN 81, part 1, 2 or 3 as appropriate.

7.5 An electric infrared screen curtain type detector shall be provided (Curtain of light). This shall provide protection across the full width and height of the entrance. Interruption of the curtain beams shall cause the doors to reopen. An adjustable timer shall be provided, to adjust the opening and closing time of the car, and of the landing doors.
8. Specification for 13 Person Gearless Passenger Lift
Electric Gearless Traction Machine room-less passenger lift

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract load</td>
<td>13 person (884kg)</td>
</tr>
<tr>
<td>Lift speed</td>
<td>1.5 m/s</td>
</tr>
<tr>
<td>Number of floors served</td>
<td>G+ 6 floors</td>
</tr>
<tr>
<td>Position of openings</td>
<td>Single entry or through car configuration</td>
</tr>
<tr>
<td>Door type</td>
<td>900 (w) x 2100 (h),</td>
</tr>
<tr>
<td>Control system</td>
<td>Full Collective</td>
</tr>
<tr>
<td>Lift machine</td>
<td>Gearless with integral drive sheave &amp; brake disk</td>
</tr>
<tr>
<td>Lift motor</td>
<td>3 phase permanent magnet type</td>
</tr>
<tr>
<td>Speed Control</td>
<td>Variable frequency</td>
</tr>
<tr>
<td>Clear internal lift well dimensions</td>
<td>As per drawing</td>
</tr>
<tr>
<td>Pit depth</td>
<td>1550 (1.6m/s)</td>
</tr>
<tr>
<td>Headroom</td>
<td>3800 to underside of lifting beam</td>
</tr>
<tr>
<td>Power supply</td>
<td>415/230V (+/-6%) 3 phase and Neutral 50 Hz</td>
</tr>
</tbody>
</table>

**Lift Car Specification**

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front wall</td>
<td>Brushed stainless steel</td>
</tr>
<tr>
<td>Side &amp; Rear walls</td>
<td>Clear glass with five panes</td>
</tr>
<tr>
<td>Car operating panel</td>
<td>Full height stainless steel cabinet</td>
</tr>
<tr>
<td>Car flooring</td>
<td>Dark Grey non-slip vinyl Composite stone</td>
</tr>
<tr>
<td>Car ceiling</td>
<td>Suspended modular panels finished in white skin plate or brushed stainless steel</td>
</tr>
<tr>
<td>Lighting</td>
<td>Fluorescents or Halogen spotlights</td>
</tr>
</tbody>
</table>

**Other features to be included**

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilation</td>
<td>Natural, ventilation slots at high &amp; low levels</td>
</tr>
<tr>
<td>Handrail</td>
<td>Brushed stainless steel to rear wall</td>
</tr>
<tr>
<td>Car operating panel</td>
<td>Digital Dot matrix with direction Indicators</td>
</tr>
<tr>
<td></td>
<td>Micro movement pushes</td>
</tr>
<tr>
<td></td>
<td>Door open push</td>
</tr>
<tr>
<td></td>
<td>Alarm push</td>
</tr>
<tr>
<td></td>
<td>All pushes to have tactile indication</td>
</tr>
<tr>
<td></td>
<td>Emergency light unit</td>
</tr>
<tr>
<td></td>
<td>Auto dialer Unit</td>
</tr>
<tr>
<td></td>
<td>Dedicated phone line to be provided by others</td>
</tr>
<tr>
<td></td>
<td>Power operated doors with full height pressure sensitive door reversal.</td>
</tr>
<tr>
<td></td>
<td>Curtain of light, full height safety edge</td>
</tr>
<tr>
<td></td>
<td>Two-hour fire certified entrances at All floors.</td>
</tr>
<tr>
<td></td>
<td>Stainless steel landing pushes, with Tactile indication, to be located Within the doorframe.</td>
</tr>
<tr>
<td></td>
<td>Landing aprons and toe guards</td>
</tr>
<tr>
<td></td>
<td>Audible alarm to be located within The liftwell at the main level served.</td>
</tr>
<tr>
<td></td>
<td>Pit ladder</td>
</tr>
<tr>
<td></td>
<td>Sound insulation</td>
</tr>
<tr>
<td></td>
<td>Buffer steelwork</td>
</tr>
<tr>
<td></td>
<td>Tactile pushes to both car and Landing pushes.</td>
</tr>
<tr>
<td></td>
<td>12 month warranty.</td>
</tr>
</tbody>
</table>
9. **Additional Features available which add Safety, Security and Passenger Comfort:**

9.1 **Safety:**
Safety features protect passengers from experiencing any danger or discomfort due to failures in the elevator or power supply system, or due to external emergencies such as earthquake or fire. Some safety features provide means of communication for passengers in the car during emergency situations.

9.2 **Emergency battery drive (EBDA)**
This feature is intended to move automatically the car to the nearest floor when the car has stopped between floors because of a failure of power supply. The car emergency operation is performed at low speed and all safety functions are working. The resetting into normal operation is made automatically when the power supply returns. Both battery unit (36 V) and control module are located in the shaft.

9.3 **Fire detection of the whole building, doors open/closed (FID BC/BO)**
The Fire detection feature returns all the elevators to a specified floor and lets passengers out of the car when there is a fire detected in the building. The elevators remain on the specified floor until the fire situation is resolved. The fire signal can come to the elevator either from the fire protection system of the building or from a separate switch. The fire signal should be a potential-free contact and it should be wired to the machine room by the builder or by the fire protection company. The detection concerns fire in the whole building. The elevator returns non-stop to the Fireman's floor (or to the main floor, if no fireman's floor is specified) and is available at that floor for fireman's use, if an FRD feature is specified. The doors are first opened at the specified floor, then closed and kept closed (DOB remains operative).

9.4 **Water Sensor Contact (WSCO)**
When this contact has been activated, the car will not serve the top and bottom floors to avoid the car or the counterweight coming into contact with water. If the car is standing at the bottom or top floor, it will move away from that floor and move to the main floor with the doors closed.

9.5 **Emergency Intercom from car to MAP (Maintenance Access Panel) and lobby (ISE C)**
Intercom telephone connection between the car, the MAP and the lobby for further connection to control station, door keeper.
9.6 **PASSENGER COMFORT (Entering and Exiting)**

Passenger comfort features improve the interface between passengers and elevator equipment to make the elevator journey (entering/traveling / exiting) more comfortable. Some features classified as passenger comfort are parallel safety measures and improve the transportation capacity of the elevator group. A superior ride comfort is built in. Most passenger comfort features are concerned with entering and exiting, some are supervision to avoid inconvenience caused by vandalism and misuse of elevators.

9.7 **Voice Announcer & Speaker:**

This feature within the control panel enables a computerised voice to inform passengers of floor arrivals and car departures. To comply with the Building regulations there is a requirement that the lift car should provide both visual and voice indication of the floor reached if it serves more than three floors.

9.8 **Advanced door opening. (ADO)**

Advanced door opening ensures that it is safe to start opening the doors when coming to a floor while the elevator is still moving at a very slow speed (0.3 m/s, 140 mm default). ADO offers the passengers a chance to exit the car immediately after landing. Opening of the doors while still moving at a slow speed enhances the transportation capacity. The passenger pushes the Door Open Button, the door will be re-opened. The Quick Close feature saves time especially if only one passenger enters the car.

9.9 **Nudging Service, shortened time (NUD S)**

The doors are closed with limited speed and a buzzer is operated if someone has been standing in between the car doors for a long period of time. The buzzer sound is intended to warn people that they are preventing the doors from closing. The doors are naturally closed in a safe manner: The closing force is limited to a safe level (150N) and the nudging time is shortened depending on how many times this feature is used.

9.10 **Quick close from car call (QCC)**

To save passengers time, doors will start to close when a passenger inserts a car call. If any of the door devices (safety ray, curtain of light) detects another passenger entering or exiting, or a passenger pushes the Door Open Button, the door will be re-opened. The Quick Close feature saves time especially if only one passenger enters the car.
9.11 **Curtain of light (SRC RNC)**

The Curtain of Light consists of a series of invisible light beams across the car door entrance. The curtain of light detects if there are passengers between the doors and so prevents the doors from closing. The Curtain of Light is used for the same function as the Safety Ray but the Curtain of Light has the advantage of detecting an obstacle in any location between the door opening. (Included as standard)

9.12 **False car call canceling (FCC C)**

The option is used to cancel car calls if there is nobody entering or leaving the elevator car or if the elevator car is empty. It protects elevator service against abuse, done by for example playing children pushing a lot of car calls and then leaving the car. The detection of false car calls is based on either the load in the car or passengers cutting the safety ray or both.

10. **SECURITY & PRIORITY SERVICES**

Security features assist the building management and tenants to secure their property against unauthorized use by restricting the access to specified floors only to specified people. Some special features assist guards to prevent unwanted people entering the building.

10.1 **Provision for card reader**

We can provide the wire in the lift car, travelling cable and option board for the client's software company to install a swipe card or card reader in the car to restrict access to certain floors.

10.2 **Compulsory stopping at main floor (CSM)**

This feature allows the guard at the main floor to check the passengers who are travelling past that floor in the elevator. The elevator can either continue its travel automatically after stopping on the floor or the guard can let the elevator continue by pressing a release button.

10.3 **Locking of car calls (LOC E)**

This feature prevents the entering of a car call to the locked floor. E = re-opening devices are inoperative in closed doors. The feature LOA is used to keep doors locked mechanically. Locking control device can be key switch or badge reader unit (badge reader unit by others).

10.4 **Corridor Illumination Control (CIC)**

When the car has started to decelerate, a signal is given to illuminate the stopping hall in the floor where the lift will be stopping. A separate potential free contact per floor is required.
10.5 Door open with extended door time (DOE B)
The extended door open time is used in elevators where loading situations are common. The extended door open time can be initiated by a button. When the button is used the doors will stay open for a specified period of time allowing loading of the elevator car.

10.6 Parking at main floor, doors closed (PAM C)
When the elevator becomes free, it will be automatically dispatched to the main floor. At the main floor the elevator remains with doors closed. In a group only the first vacant car will be dispatched to main floor parking. The PAM parking is used to give better service for incoming passengers at all times of the day. During low traffic, there will be, in practice, one elevator parked at the main floor at all times.

10.7 Priority operation (PRC)
The Priority operation can be used to drive the elevators from car call buttons only. The landing calls are not served. Possible situations where this might be useful are bringing VIP persons directly to their destination floor in a hotel without stopping on the way. Another situation might be transporting bulky goods directly to the correct floor. A key switch inside the elevator car can initiate the priority service. The switch sets the particular elevator to priority service for as long as the switch is on.

10.8 Disturbance alarm (DAL GP)
Disturbance monitoring of elevator. G = Disturbances are:

- Power failure
- Drive time supervision
- Emergency stop
- Not able to start

11. STANDARD:-

11.1 Unless otherwise specified, all materials covered under this specification shall be designed, manufactured, tested and installed in conformity with the latest Indian Standard Specifications. In case such Indian Standard Specifications are not published equivalent British Standard Specifications shall be followed. All equipments shall confirm to latest Indian Electricity Rules, PWD and Local/State laws or byelaws as regards to safety, earthing and other essential provisions specified therein.

11.2 All equipments and materials selected shall also be supplied and installed taking into consideration the Factories Act, Fire Regulations and Local laws or byelaws. All light fittings and equipments selected shall be of well tied out design. All
materials used in the assembly of fittings and their accessories shall be of high quality and manufactured in accordance with the best modern practice.

11.3 All the materials supplied by the contractor according to the contract conditions will be subject to inspection and approval by the Consultant or/and Engineer-in-charge or their authorised representative from time to time. The contractor shall extend all required facilities for such inspection free of cost. At the time of inspection, the inspecting officer shall have full liberty to reject any such material, which does not confirm to specifications or the requirements. The owner shall not entertain any claim for the rejected materials. The contractor shall remove all rejected materials from the site at his own cost.

11.4 The owner shall not accept any surplus material procured by the contractor.

11.5 The contractor will be responsible to get electrical installations inspected by the Electrical Inspector of the State Government and to obtain the statutory clearance for energisation. The owner will reimburse the necessary inspection fees on production of documentary evidences.

11.6 The contractor should possess valid electrical contract licence and labour licence issued by the appropriate statutory authority of the State Government during the execution of the contract.

11.7 The contractor shall be registered with Provident Fund Department for engagement of Labours/ Employees.

12. **Inspection and Approval**

The contractor shall put up samples of all major items for inspection and testing by the Consultant and/or Engineer-in-charge for which the contractor shall furnish minimum 10 days clear notice in advance to enable them to depute their Inspecting Officer. Similar procedure shall be adopted for the approval of samples of minor materials/ accessories to be used for the work.

13. **Performance Guarantee**

The supplied equipments shall be guaranteed for a trouble free operation against any bad workmanship; bad quality of material used and/or faulty design for a minimum period of 12 months from the date of commissioning by the owner or 18 months from the date of supply, whichever is earlier. The Supplier shall rectify the defects, if any, found during this period and replace all faulty materials free of cost.
TECHNICAL SPECIFICATION FOR ANNUAL MAINTENANCE CONTRACT (AMC)
FOR GEARLESS PASSENGER LIFTS

1. To maintain the elevator in proper and safe working condition.
2. To regularly examine, lubricate and adjust the equipment and carry out planned maintenance in systematic and controlled manner by employing only qualified, trained and skilled persons.
3. The renew all wire ropes and chains (where fitted) as required to maintain an adequate factor of safety to equalities the tension on all hoisting ropes, repair replace conductor cables and hoist way and machine room elevator wiring.
4. To furnish lubricants as per manufacturers specification.
5. To examine periodically all safety device and governors and make all customary safety tests and to submit a certificate regarding the safety.
6. To systematically examine and adjust the following components:- Machine, Worm, Gear Thrust Bearing, Drive Sheave bearings, break contract, linings and components, Motor generator, Motor Windings, Rotating Element's Commutation, Brushes, Brush Holders Bearings Coil Resistance for operating and motor circuits magnet frames and other mechanical part, Controller, Selector Leveling devices cames relays solid state components eg. PCB:s Transducers, Resistors, Condensers, Power Amplifiers transformers, Contacts, Lads Dashpots, Timing Devices, Steel Selector Tapes and Mechanical and Electrical Driving Equipments, Governor, Sheave, Shaft Assembly, Bearings, Contacts and Governor Jaws Car and Hall Mechanical Buttons, Car and Hall Position Indicators, Hall Lanterns, Car Direction Indicators and all other Car and Landing Signal Fixtures as installed by Manufacturer
7. Deflector or secondary sheave, bearing car and counterweight guide rails and buffers top and bottom limit switches governor tension sheave assembly compensating sheave assembly car counterweight and counterweight guide shoes including rollers and gibes. Interlocks on hoist way door hangers, guides automatic power operated door operator car door contact safety shoe. Load weighing equipment car frame. Car safety mechanism and platform.
8. To repair or replace parts mentioned Para 6 (above) considered as defective.
9. To maintain the performance characteristics of the equipment as originally designated and installed by manufacturer
10. To maintain a reasonable stock of genuine and original spare parts for replacement so that these are made available at the time of breakdown.

11. The following items of elevator equipment are not included:

12. Car enclosure, door panels, hung ceilings car gates, light diffusers, light bulbs, fluorescent tubes, handrails, starters, chokes, mirror floor covering carpets, other architectural features, hoist way enclosures, hoist way gates, door frames, doors skills batteries, security system external wiring to elevators hoist way machine room.

Terms & Condition:

1. The material/parts required for maintenance/servicing from time to time shall be arranged by the contractor at his own cost and nothing extra shall be paid.

2. The spare parts used for repair/maintenance/servicing of the lifts shall be of original make.

3. The maintenance/servicing of the lifts shall be done as per guidelines of manual of the manufacturer.

4. The contractor shall intimate the name/address/telephone number of his own service representative/service Centre with whom complaint is to be lodged in case of breakdown.

5. All normal/minor complaints shall be attended within 4 hours of lodging complaint however in case of major breakdown, the lifts shall be made operational within 24 hours. However, if the contractor fails to put the lift in operation within 24 hours, then the contractor shall be liable to pay compensation at the rate of double the amount payable per day exceeding 24 hours. The minimum unit for deduction shall be one day even if the time is less than 01 (one) day.

6. The complaints shall be attended on all working days including Saturdays, Sundays, Gazetted Holidays, National Holidays between 7 a.m. - 10 p.m. normally.

7. At the time of attending of the complaint, breakdown, the mechanic of the contractor shall prepare a service report in which he shall clearly mention the fault occurred in the lift, spare part replaced (name of the spare parts) in his report. The report should have name of the mechanic, date and timing of attending the complaint. In case the service report is not signed by the J.E./Supervisor In-charge, the complaints shall be assumed unattended for which recovery shall be made. One copy of the service report will be handed over to the maintenance wing for record.
8. A log book shall be maintained by the contractor to record the behaviour of the working of these lifts. Every visit/repair servicing replacement of any damaged part shall be accorded in the Log Book with the name of mechanic, date and time. The log book will be available in the maintenance department of the hotel.

9. The spare parts used for replacement shall be got checked from the J.E./Supervisor In-charge before their use.

10. All unserviceable/replaced parts shall be taken by the contractor at his own cost conditional tenders are likely to be rejected.
PART-B

TECHNICAL SPECIFICATIONS
FOR PASSENGER LIFT WITH GEAR
1. **General Requirements**

   The installations shall generally be carried out in conformity with the requirements of Indian Electricity Act, 1910 as amended up to date and Indian Electricity Rules, 1956 framed there under, the relevant regulations of the Electric Supply Authority concerned and also with the specifications laid down in the Indian Standard IS: 732/1963 "Code of Practice (Revised) for Electrical Wiring Installations (System Voltage not exceeding 650V)". The work shall be executed as per National Electrical Code and if any item is not covered there under or there is any doubt, the specification approved by the Engineer-in-charge will be final and binding.

2. **Ambient Conditions**

   All Electrical installations and equipments shall be suitable to work in following ambient conditions.

   - **Maximum Temperature**: 50 degree Celsius
   - **Relative Humidity**: 100%
   - **In the vicinity of**: Bhubaneswar city

3. **System Conditions**

   The Electrical installations and equipments shall be suitable for operation in following system conditions.

   - **Supply voltage**: 433 Volts +/-10%
   - **Supply frequency**: 50Hz +/-5%
   - **Number of Phases**: Three

2. **DRIVE UNIT**

   2.1 **Materials**: All materials, fittings, appliances used in electrical installations shall confirm to Indian Standard Specifications wherever these exist. A list of approved materials is attached in annexure-I. Materials not included in the list as well as any particular make not included in the list should be approved by the Consultant or Engineer-in-charge before use. All required materials covered under this specification shall be supplied and installed by the contractor complete in all respect except in cases where it is clearly mentioned otherwise. The materials and accessories required for completing the work will form part of the work although they have not been specified separately.

   2.2 **Selection of materials and installation work shall be such as to simplify operation, inspection, maintenance and testing. The work shall include all**
reasonable precautions and provisions for safety of operation and maintenance personnel.

2.3 The stopping accuracy shall be no more than +/- 5 mm before loading or unloading the car. The mechanical brake shall not be operative before the car has been electrically stopped and at speed zero.

2.4 To compensate for rope stretch under various load conditions, an automatic re-leveling system is to be furnished to ensure the car stays within the floor leveling zone at all times.

3. **CONTROLLER:**

3.1 The control switchgear shall comprise mini-relays and solid-state devices. It shall incorporate the following:-

- Combined Hall Button with Seven Segment Digital Display at all Floors.
- Car Operating Panel with Micro-stroke Push Button with Seven Segment Car Position Indicator, Car Direction Indicator.
- Fireman’s Switch at Main Lobby with Stainless Steel Signal Fixtures.
- Infra Red Light Curtain Door Safety.
- Provision for intercom in LAN
- Battery Operated Alarm bell and Emergency Light.
- Voice Synthesizer.
- Car Chime.
- Speed Governor System for Over Speeding.
- Protection against Over Speeding at the time of deceleration at Terminal Floor.
- Final Limit Switch at both Terminal Point.
- Reverse Phase Relay.
- MCB in Controller.
- Electro-mechanical Lock at all Landing Doors.
- Safety Edge at Car Doors.
- Emergency Key at all Landing Doors.
- Emergency Stop Switch in Car.
- Buffer for Car and Counter Weight.
- Braille Button for visually impaired
- Battery Operated Automatic Rescue Device, to bring the Elevator safely to the nearest floor in the event of Power Failure and Control Failure.
- Car overload cut-out.
- Over load device
4. **LIFT CAR**


4.2 The lift shall be suitable for carrying 13 passengers i.e. 884-Kg at a speed of 1.5-mps. It shall travel from Ground floor to 6th floor. Each floor height is 3.8m. and the building section drawing enclosed for reference. It shall have seven stops and seven openings. All the openings shall be on same side. The machine room shall be located on the top.

4.3 The car enclosure shall be fabricated with stainless steel finish panels, round shaped stainless steel handrail and stainless steel finish ceiling. The car flooring shall be carpet design vinyl tiles.

4.4 The car entrance and the landing entrance shall be provided with power operated centre opening automatic sliding steel door of size 900-mm width x 2100-mm height in stainless steel finish. The door shall be operated by automatic VF door operator and electronic door protection device. One 18-watt CFL lamp luminary with louvers and one 300-mm sweep ceiling fan shall be provided in the car.

4.5 Alarm bell, UP / Down direction indication at all landings, Digital floor position indicator in car and all floors, Pre-announcing indicator with arrival / going, Over- load indicator in car signals shall be provided. All signal fixtures shall be in stainless steel face plates.

4.6 The car roof shall be of sufficiently robust construction and design to withstand, without deformation, the weight of two men and tools.

4.7 Ventilation shall be provided at the top and bottom of the car operating panel.

5. **LIFT CONTROL**

5.1 Electrical power of 3-phase, 4-wire 415-volt shall be provided at one point in the machine room. The main power supply to the motors and the auxiliary power supply shall be tapped from there. The main motors shall be controlled by AC variable voltage variable frequency (VVVF) drive. The operation shall be Micro Computer based Simplex Full Collective (without Attendant suitable for AC VVVF) type.

5.2 All stops registered by the momentary pressure of the car buttons shall be made in the order in which the landings are reached after the buttons have been pressed but irrespective of the sequence in which calls were registered.
5.3 Stops registered by the momentary pressure of the buttons at the landings shall be made in the order in which the landings are reached in the down direction of travel after the buttons have been pressed. All landing calls shall be answered when the car is traveling in the down direction, except in the case of the terminal floor calls which shall be answered as soon as it is reached.

5.4 Load Non-Stop Option - The landing calls shall be bypassed but not cancelled if the load in the car is approximately 80% of the contract load.

6. CAR AND LANDING EQUIPMENT

6.1 Landing equipment, mounted to the side of each door, contained within a flush mounted stainless steel panel, shall comprise a call illuminated push.

6.2 Car equipment, mounted in a stainless steel finish, flush panel, shall comprise:

- Call pushes, illuminated, for each floor.
- Car position indicator, illuminated, for each floor, to indicate car position.
- Alarm push.
- A door open push to re-open the doors when closing.
- Key operated Priority call in the car

6.3 A digital dot matrix display shall be incorporated; Character heights shall be 25 mm.

6.4 The Car Operating Panel shall be of convex design located within the car wall in accordance with the requirements of the Building Regulations to ensure it is also suitable for use by disabled persons.

6.5 The car panel shall include circular (micro movement) halo illumination of the button, which will indicate that it has been pressed. Buttons (Tactile in compliance with Building Regulations) shall be provided for entering floor calls, door open and alarm.

6.6 A position indicator providing a digital display shall be included. The panel shall also include:

- Emergency Car Lights.
- Passenger inter-communication units
- Independent service key switch.
- Car overloaded indicator.
7. **CAR & LANDING DOORS.**

7.1 The landing doors, at each level, shall be two hour fire rated, two panel, center opening power operated fully automatic. Doors shall be stainless steel, not less than 16 s.w.g. to EN 81, part 1, 2 or 3 as appropriate, and shall be silent in operation.

7.2 All doors shall be fitted with a combined mechanical and electrical interlock, to EN 81, part 1, 2 or 3 as appropriate, with dust protection screen and with inspection panel.

7.3 The landing door locks shall be configured such that it shall not be possible to open the doors from the landing side, unless the car is at the particular landing level. Nor shall it be possible to start the lift, or keep it in motion, unless all landing doors are closed.

7.4 Provision shall be incorporated for opening the landing doors by emergency key, irrespective of car position. The key shall comply the EN 81, part 1, 2 or 3 as appropriate.

7.5 An electric infrared screen curtain type detector shall be provided (Curtain of light). This shall provide protection across the full width and height of the entrance. Interruption of the curtain beams shall cause the doors to reopen. An adjustable timer shall be provided, to adjust the opening and closing time of the car, and of the landing doors.

8. **Specification for 13 Person Gear Passenger Lift**

Contract load: 13 person (884kg)
Lift speed: 1.5 m/s
Number of floors served: G+ 6 floors
Position of openings: Single entry or through car configuration
Door type: 900 (w) x 2100 (h),
Control system: Full Collective
Lift machine: With Gear
Lift motor: 3 phase permanent magnet type
Speed Control: Variable frequency
Clear internal lift well dimensions: As per drawing
Pit depth: 1550 (1.6m/s)
Headroom: 3800 to underside of lifting beam
Power supply: 415/230V (+/-6%) 3 phase and Neutral 50 Hz

**Lift Car Specification**

- Front wall: Brushed stainless steel
- Side & Rear walls: Clear glass with five glass panes
- Car operating panel: Full height stainless steel cabinet
- Car flooring: Dark Grey non-slip vinyl Composite stone
- Car ceiling: Suspended modular panels finished in white skin plate
9. Additional Features available which add Safety, Security and Passenger Comfort:

9.1 Safety:

Safety features protect passengers from experiencing any danger or discomfort due to failures in the elevator or power supply system, or due to external emergencies such as earthquake or fire. Some safety features provide means of communication for passengers in the car during emergency situations.

9.2 Emergency battery drive (EBDA)

This feature is intended to move automatically the car to the nearest floor when the car has stopped between floors because of a failure of power supply. The car emergency operation is performed at low speed and all safety functions are working. The resetting into normal operation is made automatically when the power supply returns. Both battery unit (36 V) and control module are located in the shaft.
9.3 Fire detection of the whole building, doors open/closed (FID BC/BO)
The Fire detection feature returns all the elevators to a specified floor and lets passengers out of the car when there is a fire detected in the building. The elevators remain on the specified floor until the fire situation is resolved. The fire signal can come to the elevator either from the fire protection system of the building or from a separate switch.
The fire signal should be a potential-free contact and it should be wired to the machine room by the builder or by the fire protection company.
The detection concerns fire in the whole building. The elevator returns non-stop to the Fireman's floor (or to the main floor, if no fireman's floor is specified) and is available at that floor for fireman's use, if an FRD feature is specified. The doors are first opened at the specified floor, then closed and kept closed (DOB remains operative).

9.4 Water Sensor Contact (WSCO)
When this contact has been activated, the car will not serve the top and bottom floors to avoid the car or the counterweight coming into contact with water. If the car is standing at the bottom or top floor, it will move away from that floor and move to the main floor with the doors closed.

9.5 Emergency Intercom from car to MAP (Maintenance Access Panel) and lobby (ISE C)
Intercom telephone connection between the car, the MAP and the lobby for further connection to control station, door keeper.

9.6 PASSENGER COMFORT (Entering and Exiting)
Passenger comfort features improve the interface between passengers and elevator equipment to make the elevator journey (entering/traveling / exiting) more comfortable. Some features classified as passenger comfort are parallel safety measures and improve the transportation capacity of the elevator group. A superior ride comfort is built in. Most passenger comfort features are concerned with entering and exiting, some are supervision to avoid inconvenience caused by vandalism and misuse of elevators.

9.7 Voice Announcer & Speaker:
This feature within the control panel enables a computerised voice to inform passengers of floor arrivals and car departures.
To comply with the Building regulations there is a requirement that the lift car should provide both visual and voice indication of the floor reached if it serves more than three floors.
9.8 **Advanced door opening. (ADO)**
Advanced door opening ensures that it is safe to start opening the doors when coming to a floor while the elevator is still moving at a very slow speed (0.3 m/s, 140 mm default). ADO offers the passengers a chance to exit the car immediately after landing. Opening of the doors while still moving at a slow speed enhances the transportation capacity. The passenger pushes the Door Open Button, the door will be re-opened. The Quick Close feature saves time especially if only one passenger enters the car.

9.9 **Nudging Service, shortened time (NUD S)**
The doors are closed with limited speed and a buzzer is operated if someone has been standing in between the car doors for a long period of time. The buzzer sound is intended to warn people that they are preventing the doors from closing. The doors are naturally closed in a safe manner: The closing force is limited to a safe level (150N) and the nudging time is shortened depending on how many times this feature is used.

9.10 **Quick close from car call (QCC)**
To save passengers time, doors will start to close when a passenger inserts a car call. If any of the door devices (safety ray, curtain of light) detects another passenger entering or exiting, or a passenger pushes the Door Open Button, the door will be re-opened. The Quick Close feature saves time especially if only one passenger enters the car.

9.11 **Curtain of light (SRC RNC)**
The Curtain of Light consists of a series of invisible light beams across the car door entrance. The curtain of light detects if there are passengers between the doors and so prevents the doors from closing. The Curtain of Light is used for the same function as the Safety Ray but the Curtain of Light has the advantage of detecting an obstacle in any location between the door opening. (Included as standard)

9.12 **False car call canceling (FCC C)**
The option is used to cancel car calls if there is nobody entering or leaving the elevator car or if the elevator car is empty. It protects elevator service against abuse, done by for example playing children pushing a lot of car calls and then leaving the car. The detection of false car calls is based on either the load in the car or passengers cutting the safety ray or both.
10. **SECURITY & PRIORITY SERVICES**

Security features assist the building management and tenants to secure their property against unauthorized use by restricting the access to specified floors only to specified people. Some special features assist guards to prevent unwanted people entering the building.

10.1 **Provision for card reader**

We can provide the wire in the lift car, travelling cable and option board for the client's software company to install a swipe card or card reader in the car to restrict access to certain floors.

10.2 **Compulsory stopping at main floor (CSM)**

This feature allows the guard at the main floor to check the passengers who are travelling past that floor in the elevator. The elevator can either continue its travel automatically after stopping on the floor or the guard can let the elevator continue by pressing a release button.

10.3 **Locking of car calls (LOC E)**

This feature prevents the entering of a car call to the locked floor. E = re-opening devices are inoperative in closed doors. The feature LOA is used to keep doors locked mechanically. Locking control device can be key switch or badge reader unit (badge reader unit by others).

10.4 **Corridor Illumination Control (CIC)**

When the car has started to decelerate, a signal is given to illuminate the stopping hall in the floor where the lift will be stopping. A separate potential free contact per floor is required.

10.5 **Door open with extended door time (DOE B)**

The extended door open time is used in elevators where loading situations are common. The extended door open time can be initiated by a button. When the button is used the doors will stay open for a specified period of time allowing loading of the elevator car.

10.6 **Parking at main floor, doors closed (PAM C)**

When the elevator becomes free, it will be automatically dispatched to the main floor. At the main floor the elevator remains with doors closed. In a group only the first vacant car will be dispatched to main floor parking. The PAM parking is used to give better service for incoming passengers at all times of the day. During low traffic, there will be, in practice, one elevator parked at the main floor at all times.

10.7 **Priority operation (PRC)**

The Priority operation can be used to drive the elevators from car call buttons only. The landing calls are not served. Possible situations where this might be useful are
bringing VIP persons directly to their destination floor in a hotel without stopping on the way. Another situation might be transporting bulky goods directly to the correct floor. A key switch inside the elevator car can initiate the priority service. The switch sets the particular elevator to priority service for as long as the switch is on.

10.8 Disturbance alarm (DAL GP)
Disturbance monitoring of elevator. G = Disturbances are:
- Power failure
- Drive time supervision
- Emergency stop
- Not able to start

11. STANDARD:-
11.1 Unless otherwise specified, all materials covered under this specification shall be designed, manufactured, tested and installed in conformity with the latest Indian Standard Specifications. In case such Indian Standard Specifications are not published equivalent British Standard Specifications shall be followed. All equipments shall confirm to latest Indian Electricity Rules, PWD and Local/State laws or byelaws as regards to safety, earthing and other essential provisions specified therein.

11.2 All equipments and materials selected shall also be supplied and installed taking into consideration the Factories Act, Fire Regulations and Local laws or byelaws. All light fittings and equipments selected shall be of well tied out design. All materials used in the assembly of fittings and their accessories shall be of high quality and manufactured in accordance with the best modern practice.

11.3 All the materials supplied by the contractor according to the contract conditions will be subject to inspection and approval by the Consultant or/and Engineer-in-charge or their authorised representative from time to time. The contractor shall extend all required facilities for such inspection free of cost. At the time of inspection, the inspecting officer shall have full liberty to reject any such material, which does not confirm to specifications or the requirements. The owner shall not entertain any claim for the rejected materials. The contractor shall remove all rejected materials from the site at his own cost.

11.4 The owner shall not accept any surplus material procured by the contractor.

11.5 The contractor will be responsible to get electrical installations inspected by the Electrical Inspector of the State Government and to obtain the statutory clearance for energisation. The owner will reimburse the necessary inspection fees on production
of documentary evidences.

11.6 The contractor should possess valid electrical contract licence and labour licence issued by the appropriate statutory authority of the State Government during the execution of the contract.

11.7 The contractor shall be registered with Provident Fund Department for engagement of Labours/ Employees.

12. **Inspection and Approval**

The contractor shall put up samples of all major items for inspection and testing by the Consultant and/or Engineer-in-charge for which the contractor shall furnish minimum 10 days clear notice in advance to enable them to depute their Inspecting Officer. Similar procedure shall be adopted for the approval of samples of minor materials/ accessories to be used for the work.

13. **Performance Guarantee**

The supplied equipments shall be guaranteed for a trouble free operation against any bad workmanship; bad quality of material used and/or faulty design for a minimum period of 12 months from the date of commissioning by the owner or 18 months from the date of supply, whichever is earlier. The Supplier shall rectify the defects, if any, found during this period and replace all faulty materials free of cost.

14. **List of Approved Make**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Material Description</th>
<th>Make of materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Capsule Lifts/ Normal Lifts</td>
<td>Thyssenkrupp/ Kone/OTIS/MITSHUBISI</td>
</tr>
</tbody>
</table>

**Note:**

1. Make for any other material not mentioned above but required for completion of the work shall be provided as per the approval of the Engineer-in-charge/ Consultant.

2. Makes of materials other than as specified above can be considered only after the approval of IDCO/ Consultant.
TECHNICAL SPECIFICATION FOR ANNUAL MAINTENANCE CONTRACT (AMC)

a) The “Vendor” will deploy qualified, trained and adequately skilled personnel either directly employed or supervised by it. The manpower so deployed will keep the equipment properly adjusted and render all care to maintain the equipment to the contracted specifications and safe operating condition.

b) Regular inspection, examination and ensuring lubrication and adjustment of THE EQUIPMENTs and to plan out general maintenance in a systematic and controlled manner using their developed techniques and expertise. The normal frequency of examination will be depending on type of equipment to keep the lifts fit and healthy for operation.

c) The “Vendor” will at his own option and costs will repair or replace any defective part/parts by corresponding suitable part/parts. The defective part so replaced by the vendor shall be the property of the vendor.

d) The vendor shall check all wire ropes and chains (where fitted) as often as required to maintain an adequate factor of safety, to equalize the tension on all hoisting ropes and replace if required including repair and replacement of traveling conductor cables.

e) The vendor shall systematically examine, adjust maintain and repair the following components: - Machine, worm Gear, Trust Bearing, Drive Sheave, Drive Sheave Bearings, Break Contact Lining and Components Motor, Motor Generator, Motor Winding, Rotating Elements, Commutator, Brushes, Brush Holders, Bearings, Coils, Resistance for Operating and Motor Circuits, magnet Frames and other Mechanical parts; Governor, Governor Sheaves, Shaft Assembly, Bearing, Contacts and Governor Jaws; Controller, Selector, Leveling Devices, Cam, Relays, Solid State Components e.g. PCBs, Transducers, Resistors, Condensors, Power Amplifiers, Transformers, Contacts, Leads, Timing Device, Steel Selector Tapes and Mechanical and Electrical Driving Equipment; Car and Hall Push Buttons, Car and Hall Position Indicators, Hall Lanterns, Car Direction Indicators and all other Car and Landing Signal Fixtures as installed by the “manufacturer”. Deflector Sheave, Bearing, Car and Counterweight Guide Rails and Buffers, Top and Bottom Limit Switched, Governor, Tension Sheaves Assembly, Car Counterweight Guide Shoes, Interlocks on Hoist way Door, Hoist way Door Hangers, Guides, Automatic Power Operated Door Operator, Car Door Hanger, Car Door Contact, Safety Shoe, Load Weighing Equipment, Car Frame, Car Safety Mechanism and Platform.

f) To Furnish lubricants conforming to the manufacturer’s stringent specifications. The scope of this comprehensive AMC comprises that the vendor shall constructively comply to the following.
g) The vendor shall examine periodically all safety devices and governors and make all customary safety test.

h) The “Vendor” will during the term of this contract maintain, in its local Service Centre/ Response centre, a reasonable supply of frequently used replacement parts and lubricants selected by them

i) **Quality Control** :
   They will perform an annual TECHNICAL AUDIT of the EQUIPMENTS to verify that those conform to the approved repairment’s of the manufacturer.

j) **Safety Tests** :
   The vendor will periodically examine safety devices and governor of the equipments and ensure user safety.

k) **Work Timing** :
   All works and services contemplated in this contract are to be performed during normal working hours on normal working days.

l) **Call Back Service** :
   **Emergency Minor Adjustment Call Back Service** :
   The “Vendor” will provide emergency minor adjustment and CALL BACK service at no extra charge under this contract. The CALL BACK service will be extended on all working days as well as holidays for elevators.
BID DOCUMENT

For the work

Supply, erection, testing and Commissioning of Lifts including Annual Maintenance Contract (AMC) for 5(five) years after expiry of the guarantee period for OCAC Tower at Acharya Vihar, Bhubaneswar.

FINANCIAL BID

ORISSA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION
BHUBANESWAR
ISO 9001 & 14001 CORPORATION
ORISSA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION
IDCO, IDCO TOWER, JANPATH, BHUBANESWAR - 751007

Name of work : Supply, erection, testing and Commissioning of Lifts including Annual Maintenance Contract (AMC) for 5(five) years after expiry of the guarantee period for OCAC Tower at Acharya Vihar, Bhubaneswar.

Sold to Sri/ Smt/ M/s. : ...........................................................................................................

ON PAYMENT OF : Rs.10, 400/- (Rupees ten thousand four hundred) only

Vide Money Receipt : No. Dtd.

<table>
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<tr>
<th>Divisional Head, IDCO, G.A. Qtr Divn. Bhubaneswar</th>
<th>Dy. General Manager, OCAC, Bhubaneswar</th>
<th>Officer in Charge, OCAC Tower, IDCO, Bhubaneswar</th>
</tr>
</thead>
</table>

PREAMBLE

1. The Schedules do not generally give a full description of the plant and equipment to be supplied and the services to be performed under each item. Bidders shall be deemed to have read the Technical Specifications and other sections of the bidding documents and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling in the rates and prices. The entered rates and prices shall be deemed to include for the full scope as aforesaid, including overheads and profit.

2. The financial bid consists of two parts; part A for Gearless Lift and part B for Passenger car with gears.

3. The bidder has the option of bidding for part A or Part B or both. The financial bids for Part A & Part B will be evaluated separately.

4. The Client has the option of accepting least evaluated responsive bid from either part.

5. The Technical specification and pricing schedule of the accepted Part (either part A or Part B) shall form part of the agreement.

6. If bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with the Instructions to Bidders in the bidding documents prior to submitting their bid.

Pricing

7. Prices shall be filled in indelible ink, and any alterations necessary due to errors, etc., shall be initialed by the Bidder.

8. As specified in the Bid Data Sheet and Special Conditions of Contract, prices shall be fixed and firm for the duration of the Contract for prices shall be subject to adjustment in accordance with the corresponding Appendix (Price Adjustment) to the Contract Agreement.

9. Bid prices shall be quoted in the manner indicated and in the currencies specified in the Instructions to Bidders in the bidding documents.

10. Prices given in the Schedules against each item shall be for the scope covered by that item as detailed in the Technical Specifications, Drawings or elsewhere in the bidding documents.
11. Where there are errors between the total of the amounts given under the column for the price breakdown and the amount given under the Total Price, the former shall prevail and the latter will be corrected accordingly.

12. Where there are errors between the total of the amounts of Schedule Nos. 1 to 4 and the amount given in Schedule No. 5 (Grand Summary), the former shall prevail and the latter will be corrected accordingly.

13. Where there are discrepancies between amounts stated in figures and amounts stated in words, the amounts stated in words shall prevail.

14. Items left blank will be deemed to have been included in other items. The TOTAL for each Schedule and the TOTAL shall be deemed to be the total price for executing the Facilities and sections thereof in complete accordance with the Contract, whether or not each individual item has been priced.
PART-A
## PART-A

### Bill of Quantities for Supply, erection, testing and Commissioning of Lifts including Annual Maintenance Contract (AMC) for 5(five) years after expiry of the guarantee period for OCAC Tower at Acharya Vihar, Bhubaneswar

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Work</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate in</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Design, supply, delivery at site, installation, testing and commissioning of 13 passengers lifts with three side five pane clear glass capsule without machine room &amp; gearless machine for G+6 floors with AC VVVF drive control for constant load of 884 Kg respectively traveling @ 1.5 mps with Simplex operation with out attendant, car position indicators, battery operated alarm bell and emergency light, stainless steel finish car interior, power operated centre opening automatic sliding stainless steel doors for car entrance and hoistway entrance etc. including all steel, civil and electrical materials as specified such as machine beams, buffer support channels, facia plates, landing sills, pit ladder metal screen in elevator pit etc., as per the specification including cost of all civil and electrical works required for installation of elevator in the existing lift well and machine room, scaffolding, cutting holes, grouting and making good to damages in wall, floor, ceiling etc. for fixing accessories, foundation bolts etc., hoistway wiring and other associatedWirings including Fireman's switch complete in all respect as per direction of Engineer-in-charge.</td>
<td>Set</td>
<td>4</td>
<td></td>
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<tr>
<td>2.</td>
<td>Supply of all required spares and Annual Comprehensive Maintenance Contract (AMC) beyond the expiry of the guarantee period including cost, conveyance, loading, unloading, royalties, taxes all materials and cost all labours, sundries, T&amp;P required as per the direction of the Engineer-in-charge. (4 Sets)</td>
<td>Year</td>
<td>5</td>
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</tbody>
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TOTAL(PART-A)
PART-B
**PART-B**

Bill of Quantities for Supply, erection, testing and Commissioning of Lifts including Annual Maintenance Contract (AMC) for 5(five) years after expiry of the guarantee period for OCAC Tower at Acharya Vihar, Bhubaneswar

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<td><strong>1.</strong> Design, supply, delivery at site, installation, testing and commissioning of 13 passengers lifts with three side five pane clear glass capsule with geared machine for G+6 floors with AC VVVF drive control for constant load of 884 Kg respectively traveling @ 1.5 mps with Simplex operation with out attendant, car position indicators, battery operated alarm bell and emergency light, stainless steel finish car interior, power operated centre opening automatic sliding stainless steel doors for car entrance and hoistway entrance etc. including all steel, civil and electrical materials as specified such as machine beams, buffer support channels, facia plates, landing sills, pit ladder metal screen in elevator pit etc., as per the specification including cost of all civil and electrical works required for installation of elevator in the existing lift well and machine room, scaffolding, cutting holes, grouting and making good to damages in wall, floor, ceiling etc. for fixing accessories, foundation bolts etc., hoistway wiring and other associated Wirings including Fireman's switch complete in all respect as per direction of Engineer-in-charge.</td>
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