

**Bid documents for, “Repairing Work of 80 MLD CF-4 at Vav WTP Under Satlasana Group  
of Dharoi RWSS M&R Programme. Ta.Satlasana Di.Mahesana.”**

**DETAILED TECHNICAL SPECIFICATION**

PART A																									
It No. 1:-	<p>Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to seven story height made with 40 mm Dia M.S. tube 1.5 m center to center, horizontal &amp; vertical tubes joining with cup &amp; lock system with M.S. tubes, M.S. tube chollies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it thereafter .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc. wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding.</p> <p>➤ Cup Lock is a unique node point connection allows up to four horizontal members to be connected to a vertical member in one single action - without the use of nuts and bolts or wedges. The locking device is formed by two cups Top &amp; Bottom Cup. Single node point action of unique locking make Cup lock a fast, versatile and optimized systems of scaffolding. Cup lock Scaffolding for variety of applications just like, Slab, Façade, any work of Outer side of building &amp; Plastering Work, Support wall formwork ,demolition and maintenance projects throughout the glob</p> <table> <tr> <th colspan="2">Technical Specification</th></tr> <tr> <td>Cup Lock Vertical</td><td>3.00</td></tr> <tr> <td>Cup Lock Vertical</td><td>2.50</td></tr> <tr> <td>Cup Lock Vertical</td><td>2.00</td></tr> <tr> <td>Cup Lock Vertical</td><td>1.50</td></tr> <tr> <td>Cup Lock Vertical</td><td>1.00</td></tr> <tr> <td>Cup Lock Ledger</td><td>2.00</td></tr> <tr> <td>Cup Lock Ledger</td><td>1.80</td></tr> <tr> <td>Cup Lock Ledger</td><td>1.50</td></tr> <tr> <td>Cup Lock Ledger</td><td>1.20</td></tr> <tr> <td>Cup Lock Ledger</td><td>0.90</td></tr> <tr> <td>Cup Lock Ledger</td><td>0.60</td></tr> </table>	Technical Specification		Cup Lock Vertical	3.00	Cup Lock Vertical	2.50	Cup Lock Vertical	2.00	Cup Lock Vertical	1.50	Cup Lock Vertical	1.00	Cup Lock Ledger	2.00	Cup Lock Ledger	1.80	Cup Lock Ledger	1.50	Cup Lock Ledger	1.20	Cup Lock Ledger	0.90	Cup Lock Ledger	0.60
Technical Specification																									
Cup Lock Vertical	3.00																								
Cup Lock Vertical	2.50																								
Cup Lock Vertical	2.00																								
Cup Lock Vertical	1.50																								
Cup Lock Vertical	1.00																								
Cup Lock Ledger	2.00																								
Cup Lock Ledger	1.80																								
Cup Lock Ledger	1.50																								
Cup Lock Ledger	1.20																								
Cup Lock Ledger	0.90																								
Cup Lock Ledger	0.60																								

	<ul style="list-style-type: none"> <li>➤ Cup lock systems-Erect easy to stand-say no to nuts and bolts or wedges.</li> <li>➤ Just a simple locking Top cup allows locking and resists sabotage at each node point on the standards enables connection of the ends of up to four members in one locking action.</li> <li>➤ Cup lock systems - Versatile for staging and access around any structures, best. suitable for access or formwork support.</li> <li>➤ It can be erected by unskilled labor. It's very easy to work, handle it and move very fast.</li> <li>➤ Cup lock Systems-timely tested and proven design with safety accessories cu lock systems has a proven performance history on an extensive number of sites meeting the requirements of the various statutory bodies.</li> <li>➤ Cup lock standard has cup joints welded at every 500mm or 1000mm interval thus offering levels for working &amp; also for bracing the standards while using the slab support when loaded.</li> <li>➤ These ledgers have forged blade ends which fit in the cup joint on the standard. They can be used in variety of Ledger size combinations to suit required bay size &amp; loading conditions.</li> <li>➤ The payment shall be made on Sq.mtr Basis.</li> </ul>
It No. 2:-	<p>Providing and supplying Structural steel work (Confirming to IS 4293-1997) riveted, bolted or welded in built up for all type sections in framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete as per the structural designs and direction of Engineer in charge</p> <ul style="list-style-type: none"> <li>➤ General requirements relating to the supply of steel sections shall conform to IS 1387.</li> <li>➤ It consists of channel section ISA 50 mm *50mm*5mm, 100 mm *75 mm*06 mm, 45 mm *45 mm *5 mm size.</li> <li>➤ Also batten plat plate of required size.</li> <li>➤ Rates includes fabrication charge, labour charge, material charge, equipment charge needed for successful completion of above work.</li> <li>➤ Contractor have to manage bolt, nut any equipment needed above work at his own cost.</li> <li>➤ During performing above operation highest standard of safety is essential. For that contractor has to manage all safety precaution along with safety kit at his at</li> </ul>

	<p>his own cost.</p> <ul style="list-style-type: none"> <li>➤ During performing above operation any casualty occurs than department will not responsible for any casualty.</li> <li>➤ Work shall be executed as per instruction of Eng.-in-charge.</li> <li>➤ Payment will be made on Kg. basis.</li> </ul>
It No. 4:-	<p>Triplex chain With Pitch 32mm, Width 19 mm Standard Company</p> <ul style="list-style-type: none"> <li>➤ All required welding/riveting work should be carried out by the contractor@ his own cost.</li> <li>➤ All required miscellaneous required Electrical/Mechanical/materials for the work should be procured by the contractor as his own cost.</li> <li>➤ All mention material must be of standard company.</li> <li>➤ Rate includes all transportation, loading, unloading charges.</li> <li>➤ Scrapped material will have to bought by contractor at his own cost at departmental store located in premises.</li> <li>➤ Contractor at his own cost will have to manage his store at site any material theft/damaged from site department is not liable for it.</li> <li>➤ Triplex chain of standard company as per relevant Is code.</li> <li>➤ Payment shall be made on material mention in Schedule B of this DTP.</li> </ul>
It No. 5:-	<p>EPDM Rubber Pad for Scrapper for CF.</p> <p>1. Scope of Work</p> <p>Providing and fixing EPDM rubber blades / liners / wipers for Clari flocculator scraper arms, complete with fastening arrangement, suitable for continuous sludge scraping duty in water / wastewater treatment units.</p> <p>→ The scraper mechanism continuously removes settled sludge from tank bottom using rake arms</p> <p>2. Material Specification</p> <p>(A) Base Material</p> <p>Material: EPDM (Ethylene Propylene Diene Monomer) Rubber Type: Virgin / high-grade industrial EPDM (not low-grade reclaim unless specified) Colour: Black (standard)</p> <p>(B) Physical Properties</p>

Property Requirement Hardness is  $60 \pm 5$  Shore A Tensile Strength is  $\geq 8$  MPa  
Elongation at Break  $\geq 300\%$  Specific Gravity 1.10 – 1.20 Compression Set  $\leq 50\%$   
(24 hrs. @ 150°C) Abrasion Resistance High Tear Strength Good Typical EPDM  
scraper rubber values fall in this range for industrial applications Harp screen  
(C) Thermal & Chemical Properties Property Requirement Temperature Range  
-20°C to +120°C (continuous) Water Resistance Excellent Ozone Resistance  
Excellent UV Resistance Excellent Chemical Resistance Resistant to acids, alkalis,  
sewage Oil Resistance Moderate

### 3. Dimensions & Design

Thickness: 6 mm to 20 mm (as per design) Width: As per scraper arm design  
Length: Continuous strip or segment type Edge Type: Straight edge / beveled  
edge / flexible lip Mounting: Bolted with MS/SS flat & bolts Clamping plate  
arrangement

### 4. Functional Requirements

Should ensure: Proper sludge sweeping without damaging tank floor  
Flexible contact with bottom surface No vibration or chatter during operation  
Scraper shall: Maintain continuous contact with tank bottom  
Withstand continuous rotation and abrasion  
Work effectively in submerged condition

→ Scrapers move settled sludge towards central sump for removal  
PCI Africa

### 5. Installation Requirements

Proper alignment with scraper arms  
Uniform pressure distribution along length  
Bolts:  
SS 304 / GI (minimum)  
Easily replaceable design  
Jointing:  
Overlap / butt joint with proper sealing

### 6. Workmanship & Finish

Surface: Smooth, crack-free  
Free from:  
Blisters  
Air pockets  
Foreign impurities  
Edges: Clean cut, uniform thickness

### 7. Testing & Quality Control

Hardness Test (Shore A)  
Tensile Strength Test  
Elongation Test  
Visual Inspection

	<p>8. Standards (Recommended)  IS 638 / IS 3400 (Rubber testing)  ASTM D2000 (Rubber materials)  CPHEEO Manual (for WTP/STP components)</p> <p>9. Typical Application  Water Treatment Plants (WTP)  Sewage Treatment Plants (STP)  Effluent Treatment Plants (ETP)</p> <p>10. Optional Enhancements (If required)  Reinforced EPDM with fabric backing  SS clamping strips  Oil-resistant grade (if industrial effluent)  Replaceable segmented blades.</p>
It No. 6:-	<p>Hiring of Hydra / Crane with Driver (8 working Hours in Day) 12 Tone.</p> <p>1. Scope of Work</p> <p>Providing and hiring of Hydraulic Mobile Pick &amp; Carry Crane (Hydra) of 12 Ton capacity along with skilled driver/operator, for material handling, loading, unloading, shifting, erection, and other site works as directed by Engineer-in-charge.</p> <p>2. Machine Specifications</p> <p>(A) General Details</p> <p>Type: Hydraulic Mobile Pick &amp; Carry Crane (Hydra) Rated Capacity: 12 Ton (12,000 kg) Boom Type: Telescopic / 3-part boom, Boom Length: Approx. 10–12 meters (30–40 ft)</p> <p>Application: Construction, industrial handling, pipeline works, etc.</p> <p>(B) Engine &amp; Power</p> <p>Engine Type: Diesel Engine</p> <p>Power Output: Approx. 45–50 HP</p> <p>MachanX +1</p>

Cooling: Water cooled

Fuel: High-speed diesel

Fuel consumption: As per manufacturer standard

(C) Lifting & Performance

Maximum Lifting Capacity: 12 Ton

Synfra

Safe Working Load (SWL): As per load chart

Hoisting Speed: Approx. 50 m/min (single line)

Scribd

Operating Radius: Up to 8–10 m depending on load

Turning Radius: Approx. 10–13 m

Imimg

(D) Hydraulic System

Fully hydraulic operated boom, steering & hoisting

Double acting hydraulic cylinders

Hydraulic winch with steel wire rope

Smooth and precise control system

(E) Transmission & Mobility

Transmission: Heavy-duty manual / constant mesh

Gear: 4–8 forward, 2 reverse gears

Imimg

Drive: 2-wheel drive

Maximum Speed: Approx. 25–30 km/hr. (without load)

Imimg

	Steering: Articulated hydraulic steering
	(F) Tyres & Chassis
	Front Tyres: 11.00 × 20 (4 Nos.)
	Rear Tyres: 13.00 × 24 (2 Nos.)
	Imimg
	Chassis: Heavy-duty fabricated structure
	Stability: Suitable for pick & carry operations
	(G) Safety Features
	Safe Load Indicator (SLI) / overload alarm
	Hoist safety brakes
	Hose failure protection system
	Emergency cut-off system
	Rear view mirrors, lights, reverse alarm
	Fire extinguisher (recommended)
	Scribd
	3. Driver / Operator
	Skilled and experienced licensed operator
	Valid driving license as per MV Act
	Minimum 2–3 years' experience
	Responsible for safe operation of crane
	4. Documents Required
	Contractor shall provide:
	Registration Certificate (RC)
	Insurance (valid comprehensive policy)

	<p>Pollution Certificate (PUC)</p> <p>Fitness Certificate</p> <p>Road Tax receipt</p> <p>Load Test Certificate</p> <p>Driver License</p> <p>Bharat Heavy Electricals Limited</p> <p>5. Working Conditions</p> <p>Working Hours: 8 hours per day (normal shift)</p> <p>Bharat Heavy Electricals Limited</p> <p>Availability: Daily / monthly / yearly basis</p> <p>Breakdown: Contractor responsible for immediate replacement</p> <p>Maintenance: Contractor's scope</p> <p>Fuel: As per contract (with or without fuel basis)</p> <p>6. Operational Requirements</p> <p>Crane shall be in good running condition</p> <p>Model Year: Preferably not older than 8–10 years</p> <p>Should be capable of continuous operation</p> <p>Suitable for rough terrain and site conditions</p> <p>7. Measurement &amp; Payment</p> <p>Basis: Per hour / per day / per month</p> <p>Idle time: As per contract conditions</p> <p>Overtime: Extra payable if applicable</p>
It No. 7:-	<p>Demolition including stacking of serviceable materials and disposal of unserviceable with all lead and lift.</p> <p>A)Complete RCC Work</p>



	<p>1. Scope of Work</p> <p>The work includes complete demolition of Reinforced Cement Concrete (RCC) structures such as:</p> <p>Slabs, beams, columns, footings</p> <p>RCC walls, lintels, chajjas, staircases</p> <p>Any other RCC components</p> <p>Including:</p> <p>Careful dismantling</p> <p>Stacking of serviceable materials</p> <p>Disposal of unserviceable debris</p> <p>All leads and lifts</p> <p>2. Method of Demolition</p> <p>Demolition shall be carried out manually or mechanically using:</p> <p>Jack hammers</p> <p>Chisels and hammers</p> <p>Concrete cutters</p> <p>Hydraulic breakers (if required)</p> <p>Work shall proceed in a controlled manner to avoid damage to adjacent structures.</p> <p>Cutting of RCC shall be done in manageable sections.</p> <p>3. Handling of Reinforcement Steel</p> <p>Reinforcement bars shall be:</p> <p>Carefully separated from concrete</p> <p>Straightened (if required)</p> <p>Cleaned of mortar/concrete</p> <p>Steel shall be:</p> <p>Stacked properly at designated location</p> <p>Measured and recorded as serviceable material</p> <p>4. Stacking of Serviceable Materials</p> <p>Serviceable materials include:</p> <p>Reinforcement steel</p> <p>Structural members (if reusable)</p> <p>Stacking requirements:</p> <p>At site or departmental store as directed by Engineer-in-Charge</p> <p>Properly sorted and labeled</p> <p>Protected from damage and corrosion</p> <p>5. Disposal of Unserviceable Materials</p> <p>Debris such as broken concrete, mortar, unusable steel shall be:</p> <p>Loaded manually/mechanically</p> <p>Transported to approved dumping site</p> <p>Disposal includes:</p> <p>All leads (horizontal distance)</p> <p>All lifts (vertical handling)</p> <p>Contractor must follow local authority rules for dumping</p> <p>6. Safety Requirements</p> <p>Barricading of demolition area</p> <p>Use of PPE:</p> <p>Helmets, gloves, safety shoes, goggles</p> <p>Dust control measures:</p>
--	--

	<p>Water sprinkling Proper scaffolding/support before demolition No uncontrolled collapse allowed</p> <p>7. Protection of Existing Structures Adjacent structures/services shall be protected No damage to: Water lines Sewer lines Electrical installations Any damage shall be repaired at contractor's cost</p> <p>8. Measurement Measured in cubic meters (m<sup>3</sup>) of RCC demolished Volume calculated based on original dimensions</p> <p>9. Rate Includes The rate shall include: Labour, tools, and machinery Cutting and breaking of RCC Separation of reinforcement Stacking of serviceable materials Loading, transportation, unloading Disposal of debris at any lead and lift Safety measures and barricading All taxes, royalties, and incidental charges</p> <p>10. Mode of Payment Payment will be made based on: Actual quantity of RCC demolished Verified by Engineer-in-Charge</p> <p>11. Relevant Standards (Indicative) CPWD Specifications IS 456 (for RCC reference) IS 1200 (Measurement)</p>
It No.- 8	<p>C.C. M-30 Control concrete for water retaining structures Providing and cast in situ C.C. in grade M-30 proportions of ingredients as per mix design by weigh batching using granite, quartzite trap metal of size 12 mm to 20 mm and or 6 mm to 12 mm including scaffolding centering formwork, needle vibrated consolidation, curing and hydraulic testing etc. complete (excluding cost of reinforcement) with centering and shuttering/DE shuttering etc. comp. up to 6 meters height /depth Av. G.L.for all water retaining structures. (Beams/Ring Beam/Girders)</p> <p>1. Scope of Work Providing and casting in-situ controlled cement concrete of Grade M-30 for water-retaining structures including beams, ring beams, girders, etc., complete with: Design mix concrete Centering, shuttering, and scaffolding Batching, mixing, placing Compaction using vibrators</p>

	<p>Curing and testing All lifts up to 6 m height/depth from average ground level (A.G.L.) (Excluding cost of reinforcement steel)</p> <p>2. Materials</p> <p>2.1 Cement Ordinary Portland Cement conforming to IS 8112 / IS 12269 Fresh, free from lumps Same brand throughout the work</p> <p>2.2 Fine Aggregate (Sand) Clean, well-graded river sand / crushed sand Conforming to IS 383 Free from silt, clay, organic impurities</p> <p>2.3 Coarse Aggregate Crushed angular aggregate (granite / quartzite / trap) Size: 12 mm to 20 mm 6 mm to 12 mm (combined grading) Conforming to IS 383 Clean, hard, durable</p> <p>2.4 Water Potable quality Free from harmful salts, oils, acids Conforming to IS 456</p> <p>2.5 Admixtures (if used) Plasticizers / super plasticizers conforming to IS 9103 Required for workability and reduced permeability</p> <p>3. Concrete Mix Design Design mix for M-30 grade (Characteristic strength = 30 MPa at 28 days) Mix design as per IS 10262 Target mean strength shall consider standard deviation Low water-cement ratio (generally <math>\leq 0.45</math> for water-retaining structures)</p> <p>4. Batching and Mixing Weigh batching mandatory Machine mixing (batching plant or mechanical mixer) Mixing time: minimum 1.5–2 minutes after all materials added No hand mixing permitted</p> <p>5. Formwork (Centering &amp; Shuttering) Steel / plywood formwork Leak-proof, rigid, properly aligned Capable of withstanding concrete pressure Treated with shuttering oil Includes: Staging Bracing Supports</p>
--	---

6. Placing of Concrete

Concrete shall be placed within 30 minutes of mixing

No segregation during transport and placing

Free fall not more than 1.5 m

Layer thickness: 300–450 mm

7. Compaction

Mechanical compaction using needle vibrators

Proper insertion spacing to avoid honeycombing

Avoid over-vibration

8. Construction Joints

Located as per drawings or engineer's instructions

Joints shall be:

Roughened

Cleaned

Treated with cement slurry before next pour

9. Curing

Minimum 14 days curing (preferably 21 days for water-retaining structures)

Methods:

Ponding

Wet hessian covering

Continuous curing to ensure impermeability

10. Water Tightness / Hydraulic Testing

Structure shall be tested for water tightness after curing

No leakage or damp patches permitted

Rectification if leakage observed

11. Quality Control & Tests

11.1 Workability

Slump test as per IS 1199

Typical slump: 75–120 mm

11.2 Strength

Cube compressive strength test as per IS 516

7-day and 28-day testing

11.3 Frequency

Minimum 1 set of cubes per 5 m<sup>3</sup> or per day

12. Tolerances

As per IS 456

Alignment, level, and dimensions within permissible limits

13. Measurement

Measured in cubic meters (m<sup>3</sup>)

Includes:

Formwork

Scaffolding

Mixing, placing, curing

Reinforcement measured separately

	<p>14. Rate Includes All materials, labour, tools, plants Centering, shuttering, scaffolding Mixing, placing, vibration Curing Testing All leads and lifts up to 6 m</p> <p>15. Rate Excludes Reinforcement steel Embedded items (if specified separately)</p>
It No. 9:-	<p>Dewatering for CF. In all sorts of soil and soft murrum, hard murrum and boulders, soft rock, hard rock, up to 1.5 Mt. of Depth from G.L.</p> <p>1. Scope of Work The work includes designing, providing, installing, operating, maintaining and removing temporary dewatering systems for construction of Clari flocculator structures in: All types of soil -soft soil, Soft murrum, Hard murrum, Boulders, Soft rock Up to depth of 1.5 meters below ground level (BGL). The objective is to keep excavation dry and stable during construction.</p> <p>2. Purpose of Dewatering Lower groundwater table below excavation level Prevent inflow of seepage and rainwater Avoid soil softening, slope failure, and bottom heaving Enable construction "in dry condition" .</p> <p>3. Applicable Standards (General) IS codes / CPHEEO / GWSSB specifications Section 31 23 19 (Dewatering) – International reference Local authority / project engineer approval mandatory.</p> <p>4. Method of Dewatering Depending on soil condition: (a) For Soft Soil / Murrum Open sump pumping Peripheral drains Shallow well points (if required) (b) For Hard Murrum / Boulders / Soft Rock Sump with submersible pumps Drilled holes for seepage control Drain channels and trench drains (c) General Requirement System shall be adequate to lower water table at least 1.0 m below excavation bottom Scribd Continuous operation until completion</p> <p>5. Equipment &amp; Materials Contractor shall provide: Submersible / centrifugal dewatering pumps Well point system (if required) PVC / MS delivery pipes Suction pipes, strainers Standby pumps (minimum 1 no.) Power supply (diesel generator if needed) Observation wells / piezometers (if required)</p> <p>6. Execution Requirements 6.1 pre-construction Submit dewatering plan showing: Pump capacity Layout of sumps/wellpoints Disposal system 6.2 During Execution</p>

	<p>Excavation area shall be kept completely dry Provide: Peripheral drains Collection sumps All water (ground + rain) shall be removed immediately . 6.3 Control Measures Prevent: Soil erosion, Piping or boiling of soil, Collapse of excavation sides ECM</p> <p>7. Operation &amp; Maintenance Dewatering shall be continuous (24x7) Skilled operator to be available at all times Standby pump must be ready for emergency Daily monitoring of: Water level Pump discharge.</p> <p>8. Disposal of Water Water shall be discharged to: Approved drainage system / storm water drain No flooding or damage to: Nearby structures ,Roads / utilities. Follow environmental and local authority norms</p> <p>9. Safety Measures Barricading around excavation, Proper electrical safety for pumps, No stagnation of water and Safe access for workers</p> <p>10. Measurement Measured in per day / per unit / lump sum basis as per tender Includes: Pumping, Equipment, Labour, Power/fuel, Maintenance</p> <p>11. Rate Includes All materials, labour, T&amp;P, Installation, operation, and removal of system, Disposal of water, Standby arrangements All leads and lifts.</p>
It No. 10:-	<p>Steel</p> <p>Supplying cutting, bending and placing in position steel as per plan and design ad as per ISS 2502 including cost of steel and binding wire for reservoirs/structures only including lift up to 5-meter height or depth below G.L. for all diameters Do- Deformed (TMT) bars confirming to relevant IS Fe-500 grade for all Diameters.</p> <p>1. Materials</p> <p>Reinforcement shall be High Yield Strength Deformed (HYSD) bars / TMT bars of Fe-500 grade conforming to:</p> <p>IS 1786 (latest revision)</p> <p>Binding wire shall be: 16 to 18 gauge annealed mild steel wire conforming to IS 280</p>

	<p>Steel shall be free from: Loose rust, oil, grease, paint, mud, or any deleterious material</p> <p>2. Cutting and Bending</p> <p>Cutting and bending shall be done as per: IS 2502 – Code of Practice for Bending and Fixing of Bars</p> <p>Bars shall be: Cold bent (no heating allowed unless approved) Bending dimensions, hook lengths, cranks, and shapes shall be strictly as per: Approved bar bending schedule (BBS) &amp; Tolerances shall comply with IS standards</p> <p>3. Placing and Fixing</p> <p>Reinforcement shall be placed in position as per: Approved drawings and design</p> <p>Bars shall be: Properly tied with binding wire at all intersections Maintained in correct position using: Cement concrete cover blocks Chairs, spacers, and supports Lapping of bars shall be: As per IS 456 provisions or design requirements Adequate cover shall be ensured using: Precast cover blocks of same grade concrete.</p> <p>4. Splicing and Anchorage Laps shall be staggered and provided as per: IS 456 guidelines Anchorage length, development length shall be: As per design specifications, Welding of reinforcement shall not be permitted unless specified</p> <p>5. Transportation, Handling &amp; Storage</p> <p>Steel shall be stored: Above ground level on platforms Protected from moisture and corrosion Proper care shall be taken to: Avoid bending, damage, or contamination</p> <p>6. Lifting - Rate shall include: Lifting of materials up to 5.0 m height or depth below Ground Level (G.L.)</p> <p>7. Measurement</p> <p>Measurement shall be: Based on theoretical weight (kg/MT) as per IS standard tables No wastage shall be paid separately Binding wire, chairs, spacers, overlaps, etc. shall be: Included in the rate</p> <p>8. Rate Includes</p>
--	--

	<p>Cost of: Steel (Fe-500 TMT) Binding wire Cutting, bending, placing, and fixing Labour, tools, plants, scaffolding, Transportation, Loading, unloading. All leads and lifts up to 5 m Complete in all respects as per drawings and specifications</p> <p>9. Applicable Standards</p> <p>IS 1786 – TMT Bars, IS 2502 – Bending &amp; Fixing, IS 456 – Plain &amp; Reinforced Concrete Code.</p> <p>10. Mode of Payment</p> <p>Payment shall be made: Per kilogram or metric ton of reinforcement steel fixed in position.</p>
--	--

Signature of Contractor

Executive Engineer  
Public Health Dharoi Project Division  
Mahesana