

GUJARAT WATER SUPPLY AND SEWERAGE BOARD

NAME OF SCHEME :- Construction of RCC ESR of 0.28 Lac. Liter Capacity at Sumri Bhalsan Village under 15th finance Commission Programme.

SCHEDULE - " B "

| Qty. | Unit | Item | Rate | Per | Amount |
|--|------|----------------------------------|------------|-----|-------------------|
| | | Item No. 1 | | | |
| <p>Designing structurally and aesthetically, proof-checking, construction, testing and commissioning of Reinforced Cement Concrete (RCC) Elevated Service Reservoir (ESR) on turnkey basis, complying with the provisions of relevant latest Indian Standards, and constructing RCC Elevated Service Reservoir (ESR) of the specified capacity and staging height, based on the latest approved Soil Investigation Report of the proposed site, applicable Seismic Zone, Wind Speed Zone, exposure conditions, groundwater table, and other relevant design parameters, including the following:</p> <p>(1) Container of approved suitable shape/type such as cylindrical, conical, Intze, spherical dome, or any other technically suitable and economical configuration, considering structural safety, durability, seismic performance, hydraulic efficiency, and ease of maintenance. (or as specified in tender document). (2) Staging system consisting of RCC column-brace trestle / shaft / combination of column-brace trestle and shaft, as appropriate and approved, designed with ductile detailing as per relevant latest codes. The staging shall be analysed for gravity loads, wind loads, seismic forces, water mass effects, sloshing effects, and all applicable load combinations. (3) Suitable foundation system such as isolated footing, raft foundation, pile foundation, annular footing, or any other approved system based on geotechnical investigation and structural design. The scope shall include excavation in all types of strata including hard rock, shoring/dewatering if required, disposal of surplus excavated material at all leads and lifts, backfilling with approved selected material in layers with proper compaction, and providing minimum 100 mm thick PCC levelling course in M-10 or higher-grade concrete. Foundation shall also be checked for bearing capacity, uplift, settlement, and differential settlement. (4) Internal waterproofing treatment of the container including walls, floor slab, bottom dome/slab, top slab/dome soffit, and all water-retaining faces by providing smooth cement mortar/plaster in CM 1:3 or approved polymer-modified mortar with integral waterproofing compound, finished tree and even. Additional approved crystalline / food-grade waterproof coating system shall be applied wherever specified. All materials in contact with potable water shall be non-toxic and approved. Crack control and watertightness requirements shall conform to relevant IS codes.</p> <p>(5) Providing all labour, materials, machinery, lowering, laying, erecting, hoisting, fixing, jointing, testing, and commissioning of complete pipe assemblies for inlet, outlet, overflow, washout, bypass, scour, and interconnection arrangements as per approved hydraulic design, including specials, supports, anchor blocks, flexible joints, puddle collars, valves, and all accessories complete. (6) Providing and fixing all specified accessories including CI/DI/FRP/approved manhole frames and covers, digital / float type water level indicator, lightning arrestor with earthing system, hot dip galvanized / stainless steel railings around walkway, roof level, gallery, staircase, and landings, ventilators of cowl / lantern type with stainless steel insect-proof mesh, access ladders, locking arrangements, and safety fittings complete. (7) Scope of work shall include RCC staircase / RCC spiral staircase with adequate tie beams, landing platforms, staircase foundations, handrails, valve chambers, ventilating shaft, ventilators, access doors, internal ladders where required, and stainless-steel grating/screens to outlet pipe openings inside the container for safety and debris prevention. Non-slip finish shall be provided to all stair treads and landings. (8) External finishing of the complete structure Including approved primer and minimum three coats of exterior grade weatherproof acrylic paint / elastomeric coating or equivalent approved system. Internal non-water-contact surfaces shall also be suitably finished. Colour scheme, branding, and lettering shall be as directed by the Engineer-in-Charge or tender document.</p> | | | | | |
| <p>(9) The scope shall include satisfactory hydrostatic water tightness testing of the container as per relevant IS Codes, including staged filling, observation period, leakage checks, and rectification of defects if any. The contractor shall also paint/display the name of scheme, ESR capacity, year of construction, and any identification details on the tank as directed by the Engineer-in-Charge. General Specifications: (1) The Min. concrete grade for RCC shall be M :30. Proportion of concrete ingredients shall be as per Mix design using weigh batching. specification. (2)HYSD (Fe 415)or higher grade reinforcing bars confirming to IS 1786/1139 or CRS /TMT bars shall be used as per detailed specification. (3) In case of column —brace trestle type staging having more than 6 columns internal horizontal "bracing is is obligatory. One bracing shall be at foundation level in case of Individual footings .(4) Min, size/ thickness of various components shall be provided as per design criteria/specifications/IS Code (or as per std. practice) Capacity of the ESR shall be considered excluding free board. (5) Minimum dimensions 'specified for various components in tender data l specifications should be provided.(6) The Safe bearing capacity (SBC) Jallowable pressure on soil shall be referred from latest SBC test report or tender datasheet During execution If poor soil strata or ground water table is encountered, the SBC shall have to be re ascertained and the design should be revised accordingly. (7) Maximum spacing between horizontal bracings shall be 5 m (storey height) (8) The BB Masonry cabin with MS door shall be constructed when spiral staircase is outside the staging. (9) RCC Staircase/ MS Staircase shall be provided and fixed for access to roof when height of roof from G.L. is up to 10 m. For ESR having more than 10 m height proper RCC staircase or suitable RCC spiral staircase shall be constructed. Railing should be provided through out the staircase and around the top ring beam. (10) For ESR-having staging height more than 15 m the spiral staircase shall be provided inside the staging with effective tie beams in more than one direction. (11) Water level indictor shall be provided and fixed float type /electronic (as specified) (12) The rate shall include providing and fixing pipes, "specials, and valves required for inlet, outlet , wash out, over flow and bye pass arrangement. The scope of work includes constructing supporting RC _ pillars, erecting, laying ,fixing and joining pipes and specials etc up to 5m length from face of staging (outer most column). (13) DI pipes & pecials shall only be used (14) The rate shall include cost of dewatering during execution making all arrangement with any 'dewatering technique. (18) The structure shall be designed properly for uplift due to Ground water table specified in data or GWT encountered during execution. No extra payment shall be paid for the same (16) Effective curing shall be carried out up to required period as per specifications (17) Agency shall engage qualified (at least graduate)consulting engineer for designing the structure and he/she shall visit the site for guidance of work at all levels (i.e. below foundation, up to GL, above GL for all lifts up to container) 18) Payment for container concrete, reinforcement, waterproofing/plastering items may be restricted up to 75% until satisfactory hydrostatic water tightness test is completed, or as per tender conditions. Until successful testing and rectification, work shall be treated as incomplete. 19) All concrete shall be subject to quality control including slump tests, cube tests, reinforcement checks, cover checks, and records as per specifications. 20) All exposed MS items, if used, shall be hot dip galvanized or epoxy coated. Preference shall be given to stainless steel / corrosion resistant materials. 21) Lightning protection system with earthing, safety signage, and name board indicating scheme name, capacity, and year of construction shall be provided. 22) Internal surfaces in contact with potable water shall use approved non-toxic materials only. 23) ESR shall be designed for wind load, seismic load, empty tank/full tank/partially full tank conditions, and all applicable load combinations. 24) The above general specifications from Sr. No. 1 to 23 shall form part and parcel of the tender/contract.</p> | | | | | |
| 1.00 | No. | 0.28 LACK LITRE AND 12 MT.HEIGHT | 1003240.89 | No. | 1003240.89 |
| | | Seismic Zone IV | | | |
| | | Total | Rs. | | 1003240.89 |

I/We am/are willing to carry out the work at _____ above/below _____

ESTIMATED AMOUNT PUT TO TENDER

Rs.
Deduct Rs. % Below
Net Rs.
In Words
Dated :-

ESTIMATED AMOUNT PUT TO TENDER

Rs.
Rs. % above
Net Rs.
In Words

Deputy Executive Engineer
P H S Sub Division
Jamnagar

Sign of Contractor

EXECUTIVE ENGINEER
P. H. WORKS Dn. No 1
JAMNAGAR