.To Date:

The Superintending Engineer

Hyderabad Circle

TGMSIDC, Hyderabad.

Sir,

Sub: TGMSIDC- EE Hyd Div-I - “Design, fabrication, establishing & commissioning of In-Vitro Fertility Centre (IVFC) along with allied services on turnkey basis at MGMH Petlaburj, Hyderabad– Submission of revised estimate- Justification report submitted - Reg

Ref: 1) G.O. Rt. No: 100, HM&FW (C2) Dept., Dt: 22.02.2023

2) Tender No: 35 (6)/TSMSIDC/Tech?2022-23, Dt: 20.03.2023

3) NoA Lr. No. 290/TSMSIDC/IVFCs/Spl.Proj/2022-23, Dt: 01-06-2023

4) Lr. No.\_\_\_\_\_\_\_, Dt. \_\_\_\_\_\_\_\_\_ (Revised estimate)

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Adverting to the subject & ref. (1) cited it is to submit that, the government have accorded Administrative sanction for an amount of Rs. 16.50 crores (Rs. 5.50 crore for each centre) for the work of “Design, fabrication, establishing & commissioning of 3-In-Vitro Fertility Centres (IVFCs) along with allied services on turnkey basis at Gandhi Hospital, Secunderabad, MGMH Petlaburj & MGM Hospital, Warangal”.

The above work was entrusted to M/s Asta Vardhman Consortium vide ref. (3) cited for a total contract value of Rs. 15,34,84,056/-.

The work of establishing & commissioning of In-Vitro Fertility Centre (IVFC) at Gandhi Hospital, Secunderabad was completed in all respects and handed over to the user department on\_\_\_\_\_\_\_\_\_\_.

Further, it is to submit that, revised estimate was submitted vide ref. (4) cited for an amount of Rs. 5,82,54,240.67/- and approved, which is Rs. 32,54,240.67/- more than the sanctioned amount (Rs. 5,50,00,000/-).

In this regard, the following detailed justification report is submitted for kind perusal:

1. The Layout Plan provided in the estimate /tender / agreement drawing did not provide for the Emergency exit. A fire rated emergency exit door is highly essential in an access controlled facility for emergency evacuation at times of any fire hazards etc, as the evacuation through a corridor which has access only through Access controlled doors may become difficult. The IVF Centre layout was revised extending the corridor and providing a Fire Rated Emergency Exit at the end of the corridor on East side of the IVF Centre.
2. Extending the corridor for providing the Emergency Exit passage in the revised layout had substantially reduced the floor area of Embryology Lab. The room available next to the previously planned embryology lab had to be merged to provide adequate space in the Lab.
3. The expert doctors at the time of inauguration of the IVF Centre at Gandhi Hospital has strongly opined that the Manifold Room was to be kept outside the Sterile and Semi Sterile areas of the IVF Centre, as Daily movement of Gas Cylinders sourced from third party vendors was to be avoided to ensure that required sterility levels are not compromised. Therefore, an additional spare room from the Hospital on Eastern side of the IVF Center was added in the revised layout.
4. The electrical panel available on the third floor of the hospital did not have the capacity to cater to the additional electrical load of the IVF Centre. Hence the power supply for IVF could not be connected to the existing electrical panel. A dedicated power cable had to be run directly from the main Transformer on the ground floor of the hospital building and an additional electrical panel was installed for this purpose.
5. The layout plan provided in the estimate / tender / agreement had one common room for an electrical control panel and for the UPS & Batteries. This room was not sufficient for placement of this equipment and also for the additional electrical panel. Hence the separate rooms were planned and provided for UPS & Batteries and for the Electrical panels by adding one additional room next to the originally planned electrical cum ups room.
6. Additional consulting rooms were provided for Embryologist, Anesthetist and Head of Department at the instructions of End User who is also a member of the experts committee. A waiting room for patient waiting his turn for using the sperm collection room was also created at her insistence.
7. Reception area was redesigned in the revised layout as advised by field staff and end user to create the ambience required to comply and smoothly obtain ICMR approval for IVF Centre’s operations. The current waiting area was additionally added from the available area in the corridor leading to IVF Centre. The record room provided behind the receptionist sitting area was moved inside the center to facilitate window provision at the reception as instructed.
8. The increase in area due to changes is as follows:

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| --- | --- | --- |
| **S.No** | **Location of Area** | **Area (m2)** |
| 1 | New Corridor for Emergency Exit | 8.16 |
| 2 | Extra Embryology Lab Area | 25.19 |
| 3 | Electrical Room | 11.5 |
| 4 | New Manifold Room | 22.98 |
| 5 | Waiting area at Entrance | 25.02 |
| 6 | Extra Major-OT Area | 25.19 |
| 7 | Extra Corridor at Emergency Exit | 8.64 |
|  | **Total Area Increased** | **126.68** |
|  | **As Per Agreement** | **465.65** |
|  | **As Per Actual (Revised)** | **592.33** |
|  | **Percentage of Area Increased** | **27%** |

* The Total increase in area is **126.68** m2 i.e, **27%** above the area envisaged in the estimate / tender. This increase in area as largely contributed to increase in quantities of Civil, Electrical and finishing works. The Nos of Air Conditioner/Fans/Lighting also increased due to the increase in floor area.

1. **The revised layout incorporating the above changes was prepared as instructed and submitted by the contractor for approval to Engineer in Charge on 30-10-2023. The same by approved by the Superintending Engineer and Chief Engineer and was issued to the contractor for execution on 01-11-2023 vide lr.no.290/TSMSIDC/Spl.Proj./2022-23/2100.**
2. After approval of revised layout drawing the following detailed drawings were submitted and progressively approved on 07-03-2024 after due scrutiny at respective departments of TGMSIDC.

|  |  |
| --- | --- |
| S.No | Layout Name |
| 1 | Power socket Layout |
| 2 | Power socket section layout |
| 3 | Switch Board Section Layout |
| 4 | Electrical & LV Cable Tray Layout |
| 5 | Earthing Layout |
| 6 | Lighting Layout |
| 7 | FA System Layout |
| 8 | MEP Layout |
| 9 | HVAC Layout, VRV Layout |
| 10 | Terrace Floor HVAC,VRV |
| 11 | HVAC Section Layout |

1. The revised approved layout drawing caused an increase of 27% in floor area resulting in increase of all Civil, Electrical, and Interior & Finishing works of the center resulting in “Authorized extras” of these items. The details as below.
2. Clause 24 of section2 General Instructions to Tenders (Pg No 40). **“Variation of Quantity at the Time of Award/Currency of Contract”,** Provides variation of quantities up to 25% without any change in prices and Terms & Conditions.

**Emergency Fire Exit Door**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| 1 | Emergency Fire Door | 1 | Nos | 55,000.00 | 55,000.00 | This work was executed as per the requirement. Hence executed. |

**Authorized extras for Civil Items**

| **S. No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Dismantling of Old Cement Mortar | 289.14 | Sqm | 13 | 3,759 | The work was taken up as per approved floor plan drawings and in contingent with the main work and hence proposed as supplemental item. |
| 2 | Dismantling of Reinforced Cement Concrete | 0.59 | Cum | 4,424 | 2,610 | The work was taken up as per approved floor plan drawings and in contingent with the main work and hence proposed as supplemental item. |
| 3 | change room Cubicles | 11.3 | Sqm | 9,055 | 1,02,322 | This work was executed as per the requirement. Hence executed. |
| 4 | V-board partitions | 13.7 | Sqm | 1,625 | 22,263 | This work is mandatory in contingent to the main work. Hence, executed. |
| 5 | Thermo Mechanically Treated ( TMT) Bars | 0.3 | MT | 95,386 | 28,616 | This work is executed as per site conditions. |
| 6 | MS Grills to windows. | 39.78 | Sqm | 1,791 | 71,246 | The work was taken up at reception and entrance area as per the instructions issued by the End user.. |
| 7 | Design Mix Concrete M 25 grade | 0.75 | Cum | 14,683 | 11,012 | This work is executed as per site conditions. |
| 8 | Skirting to internal walls to 10 cm height | 174.5 | Rmt | 151 | 26,350 | This work was executed as per the requirement. Hence executed. |
| 9 | UPVC 3 track sliding windows | 15.00 | Sqm | 9,517 | 1,42,755 | As per the site condition & floor plans approved, Qty exceeded and now proposed as AE |
| 10 | Flooring with non-skid full body ceramic floor tiles of size 300mm x 300mm | 0.93 | Sqm | 1,395 | 1,297 | As per the site condition & floor plans approved, Qty exceeded and now proposed as AE |
| 11 | False Ceiling with Mineral Fibre Board. | 138.85 | Sqm | 1,636 | 2,27,159 | As per the site condition & floor plans approved, Qty exceeded and now proposed as AE |
| 12 | Dadoing to walls with glazed full body porcelain wall tiles of size 300 x 600 mm | 228.54 | Sqm | 1,391 | 3,17,899 | As per the site condition and instructions of Higher officials, Dadoing provided in the corridor area. Hence the qty exceeded and proposed as AE |
| 13 | Wall putty | 473.95 | Sqm | 315 | 1,49,294 | As per the site condition & floor plans approved, Qty exceeded and now proposed as AE |
| 14 | Application of one coat water based cement primer | 152.93 | Sqm | 259 | 39,609 | As per the site condition & floor plans approved, Qty exceeded and now proposed as AE |
| 15 | CPVC Pipes 15.90mm OD pipe. | 35.61 | Rmt | 199 | 7,086 | As per the site condition & floor plans approved, Qty exceeded and now proposed as AE |
| 16 | 50mm thick PCGI Ceiling Panels. | 2.66 | sqm | 5,135 | 13,659 | As per the site condition & floor plans approved, Qty exceeded and now proposed as AE |
| 17 | Double leaf clean room Doors of size 1500 x 2100 mm with 300mm X 300mm double glazed view panels | 1.00 | No | 46,000 | 46,000 | As per the instructions of Higher officials Access Control Door Mandates the scientific door, Qty exceeded and now proposed as AE |
| 18 | Single leaf clean room Doors of size 900 X 2100 mm with 300 mm x 300 mm View panel | 3.00 | No | 28,700 | 86,100 | As per the instructions of Higher officials Autoclave Room, UPS Room & Electrical Room Mandates the scientific door, Qty exceeded and now proposed as AE |
| 19 | Extruded Aluminium Coving at MGMH Petlaburj | 9.80 | Rmt | 585 | 5,733 | As per the site condition & floor plans approved, the Qty. exceeded and now proposed as AE |
| 20 | PVC/Vinyl flooring of 2mm thickness | 33.31 | Sqm | 4,070 | 1,35,572 | As per the site condition & floor plans approved, the Qty. exceeded and now proposed as AE |
|  |  |  |  |  | **14,40,341.00** |  |

**Authorized extras for Electrical Items**

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| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| 1 | 56W Clean room Light fixture, 2' x2' (600mm x600mm) | 12 | Nos | 17,241 | 2,06,892 | During site inspection, The TSMSIDC higher officials have instructed to provide 56W lights to attain required illumination. Hence executed. |
| 2 | 48" ( 1200 mm) High Speed Fan | 28 | Nos | 4,317 | 1,20,876 | During site inspection The TSMSIDC higher officials instructed to provide regular high speed fans since maintaining BLDC fans in government instructions is not viable. Hence executed |
| 3 | Labour charges for fixing of ceiling fan and regulator | 28 | Nos | 185 | 5,180 | As per Instructions of the TSMSIDC higher officials during site inspection, regular high speed fans were provided. Hence executed |
| 4 | 2 Nos 6A, 2 in one socket - 2 Nos with 6A switch control | 20 | Nos | 1,178 | 23,560 | 6Amp socket was required as per site conditions. Hence executed |
| 5 | 19/20mm steel tube down rod | 28 | Nos | 162 | 4,536 | As difference in false ceiling one meter down rods are used as per site conditions |
| 6 | 12 Way SPN DB | 2 | Nos | 9,444 | 18,888 | It is mandatory to provide 12 Way SPN DB for UPS Distribution System Hence executed |
| 7 | Cable adopters box with cover for DBs | 8 | Nos | 5,085 | 40,680 | It is mandatory to provide cable adapters to connect RAW power with UPS power. Hence executed |
| 8 | 63A, 10 KA DP MCB | 2 | Nos | 4,203 | 8,406 | It is mandatory required to connect Power supply to autoclave and Air shower unit |
| 9 | 4C x 1.5 Sqmm Copper Flexible Cable | 210 | Rmt | 130 | 27,300 | It is mandatory to provide for AHU Connection System, Hence executed |
| 10 | Outdoor feeder piller box for connecting with 63A, 4 Pole MCB as incomer, 9 Nos 6-32A SP MCBs | 1 | Nos | 30,768 | 30,768 | It is mandatory to provide feeder pillar box to control separate AC units on terrace for maintenance of units |
| 11 | ISI 25mm outer dia PVC pipe concealed in wall. | 263.5 | Rmt | 116 | 30,566 | Qty increased to provide point wiring in all the rooms and corridors. And also to lay and run 2.5,4,6,10 sqmm wire various places necessary and proposed as AE |
| 12 | ISI 25mm outer dia PVC pipe on surface wall. | 902.8 | Rmt | 107 | 96,600 | Qty increased to provide point wiring in all the rooms and corridors. And also to lay and run 2.5,4,6,10 sqmm wire various places necessary and proposed as AE |
| 13 | Wiring with 2 runs of 22/0.3mm 1.5 Sq.mm | 158 | Pts | 945 | 1,49,310 | Qty increased to provide adequate lighting in rooms and corridors including Major OT, Embryology, Andrology, Manifold room, reception area etc. hence proposed as AE |
| 14 | 6A ISI Mark 3/2 pin Modular socket with 6A 1way Modular switch, 3 Module box | 21 | No | 675 | 14,175 | Qty is increased as no of points increased and to provide proper power sockets in all the rooms and proposed as AE |
| 15 | 16A/6A, 2 in one socket - 2 Nos with 16A switch control - 2 Nos modular type | 17 | No | 1,755 | 29,835 | Qty is increased due to extra points are used in Embryology ,Minor OT and other necessary areas and proposed as AE |
| 16 | Run of 1 of 22 /0.3mm 1.5 Sq.mm | 29.6 | Rmt | 40 | 1,184 | Qty is increased to connect all the fans to earthling, for safety of the equipment’s and proposed as AE |
| 17 | 3 of 2.5 sq.mm 36/0.mm phase neutral and earth | 1113.1 | Rmt | 177 | 1,97,019 | Qty is increased due to separate emergency line system is used for emergency light point for convenience of uninterrupted power supply and proposed as AE |
| 18 | 3 runs of 4.0 sq mm 56/0.3 mm phase neutral and earth | 1221 | Rmt | 255 | 3,11,355 | Qty is increased due to separate emergency line system is used for emergency light point for convenience of uninterrupted power supply and proposed as AE |
| 19 | Run of 5 of 6.0 Sqmm 90/0.3 mm 3 phases, neutral and earth | 180.1 | Rmt | 606 | 1,09,141 | Qty is increased due to distribution system are provided at different positions as per site condition and proposed as AE |
| 20 | Run of 5 of 10.0 Sqmm 140/0.3 mm 3 phases, neutral and earth | 244 | Rmt | 967 | 2,35,948 | Qty is increased due to distribution boards are provided at different positions as per site condition and proposed as AE |
| 21 | 4 Way TPN DB | 7 | No | 18,325 | 1,28,275 | Qty is increased due to number of circuit lines are increased hence it was essential to provide separate distribution system for UPS line, and Raw Power line and proposed as AE |
| 22 | 24W edge lit LED Down light | 41 | No | 2,652 | 1,08,732 | Qty increased for better illumination, as per site requirement and proposed as AE |
| 23 | 36W Edge lit, 2 feet x2 feet 600mm x600mm | 60 | No | 4,350 | 2,61,000 | Qty increased for better illumination, as per site requirement and proposed as AE |
| 24 | Modular type Stepped electronic regulator | 28 | No | 827 | 23,156 | Qty increased due to extra fans that are provided in waiting area, UPS room, electrical room, Main fold , and Andrology lab and proposed as AE |
| 25 | 225mm Light duty exhaust fan | 8 | No | 2,203 | 17,624 | Qty increased since provided in auto clave room and proposed as AE |
| 26 | Hot dip galvanized perforated cable tray of 100 mm | 9 | Rmt | 429 | 3,861 | Qty increased due to cable lines provided on terrace for AHU units and proposed as AE |
| 27 | Hot dip galvanized perforated cable tray of 300 mm | 22.5 | Rmt | 1,310 | 29,475 | Qty increased due to separate line system is used for UPS line and proposed as AE |
| 28 | Earth station, with 600X600 X3.15mm Copper Plate at 2500mm | 2 | No | 22,283 | 44,566 | Qty increased since suitable Resistance value was not getting to UPS systems. Hence proposed as AE |
| 29 | 50x6 GI flat for body earthling | 17.3 | Rmt | 329 | 5,692 | Qty increased due to separate earthling line is laid on terrace for AHU units and proposed as AE |
| 30 | 25x3 Copper flat for Neutral earthling of UPS and Equipment | 7.3 | Rmt | 902 | 6,585 | Qty is increased due to distance of earthling to ear thing were difference as per site condition hence proposed as AE |
| 31 | 4 sqmm Copper wire for Earthling of DBs Equipment | 370.6 | Rmt | 83 | 30,760 | Qty increased due to Separate earthling used for Distribution board body as it is necessary for DB's hence Qty increased and proposed as AE |
| 32 | 3.5Cx95 sqmm XLPE Insulated Cable 1100V grade | 60 | Rmt | 1,207 | 72,420 | Qty increased due to incoming supply is drawn from Hospital Main panel board rather than Sub distribution Panel. Which is at a longer distance from the IVF Center and proposed as AE |
| 33 | 3.5CX50 sqmm XLPE Insulated Cable 1100V grade | 110 | Rmt | 722 | 79,420 | Qty increased due to incoming supply is drawn from Hospital Main panel board rather than Sub distribution Panel. Which is at a longer distance from the IVF Center and proposed as AE |
| 34 | 4Cx16 sqmm PVC Insulated Cable 1100V grade | 60.4 | Rmt | 1,483 | 89,573 | Qty increased due to AC unit Control system is fixed in Electrical room for controlling the unit from the site and proposed as AE |
|  |  |  |  |  | **25,63,358** |  |

**Authorized extras for Air Conditioning Items**

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| **S.No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| 1 | MS Angle for Duct Support of size 50 X 50 x 5 mm Thick. | 211.24 | Kg | 190 | 40,136 | It is mandatory required for support duct hence this work is executed as per the instructions of TSMSIDC Higher officials. |
| 2 | MS Angle for Duct Support, Cable Tray Support and Condensing Unit Stand of size 32 x32x5mm Thick. | 74.25 | Kg | 190 | 14,108 | It is mandatory required for support duct hence this work is executed as per the instructions of TSMSIDC Higher officials. |
| 3 | Canvas Connections For AHUS | 2 | Nos | 6,500 | 13,000 | Its mandatory required for support ducts hence this work is executed as per the instructions of TSMSIDC Higher officials. |
| 4 | Cassette Units 2.0 TR – 4 way | 2 | Nos | 40,000 | 80,000 | As per the site condition & floor plans approved, the pre & post-operative ward requires less capacity units. Hence proposed as Supplemental item |
| 5 | Split AC unit 1.5 TR inverter type 3 Star | 2 | No | 48,000 | 96,000 | Qty increased so as to provide AC in UPS room and Reception and proposed as AE |
| 6 | Magnehelic gauges across pre and fine filter | 1 | No | 10,500 | 10,500 | Qty increased as per site condition and proposed as AE |
| 7 | Aluminium powder coated Fresh air and Exhaust Louvers | 0.8 | Sqm | 10,300 | 8,240 | Qty increased as per site condition and proposed as AE |
| 8 | Class O Nitrile rubber 32mm Thick | 45.79 | Sqm | 1,225 | 56,093 | The Qty utilised as per site condition and hence savings |
| 9 | Class O Nitrile rubber 25mm Thick for Exposed Return Air Duct | 103.32 | Sqm | 1,075 | 1,11,069 | The Qty utilised as per site condition and hence savings |
| 10 | Class O Nitrile rubber 25mm Thick for Supply air duct | 76.7 | Sqm | 785 | 60,210 | Qty increased to provide proper covering from Dampness and moisture to copper pipe of IVF units and AHU units and proposed as AE |
| 11 | Class O Nitrile rubber19mm Thick for Return air running inside the building. | 57.49 | Sqm | 660 | 37,943 | Qty increased to provide proper covering from Dampness and moisture to copper pipe of IVF units and AHU units and proposed as AE |
| 12 | VRF Indoor Units: 1.0 TR | 3 | No | 30,700 | 92,100 | Qty increased so as to provide AC in Anaesthetist room, Embryologist room, Sample collection room and proposed as AE |
| 13 | VRF Indoor Units: 1.5 TR | 2 | No | 35,000 | 70,000 | Qty increased so as to provide AC in Senior faculty room & UPS Room and proposed as AE |
| 14 | Refnet joints | 5 | Set | 6,191 | 30,955 | Qty increased as the no of indoor units increased and proposed as AE |
|  |  |  |  |  | **7,20,354** |  |

* Water supply to the autoclave has to mandatorily be supplied from an RO source to prevent scaling on the autoclave chamber in case untreated water is used. A dedicated RO plant had to be installed to supply RO water to the Autoclave as no RO water line was available in the hospital facility.

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| **S. No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| 1 | 50 LPH storage type RO | 1.00 | Nos | 75,000.00 | 75,000.00 | Autoclave needs clean water as per ICMR guidelines, hence this item is procured |

* A 20 KVA UPS was provided as part of the original scope of agreement. In the Agreement 20 Nos 65AH batteries are provided, however the rating of UPS requires 32 Batteries of 65AH to make it operational. Therefore 12 additional Batteries are supplied and installed.

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| **S. No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| 1 | Supply and fixing of 12V 65 AH SMF battery including wire leads. Makes: Quanta / Racket / Exide. at MGMH Petlaburj | 12 | No | 20,584.00 | 2,47,008.00 | As the UPS with isolation transformer requires min 32 no’s of batteries to increase uptime of 60 minutes from 30 minutes considering the load. hence the Qty. exceeded and proposed as AE |

* Certain Hospital furniture & Minor Equipment was not included in the scope of the EPC contract as it was contemplated at the time of estimate/tender that this furniture would be provided by the end user. However, these equipment & furniture were supplied as per the request of end user as supplemental items to the EPC Contract. Such equipment/ furniture are listed below.

| **S. No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 3-Bay Surgical Scrub Station | 1.00 | Nos | 97,000 | 97,000 | This item is mandatorily required for ICMR Clearance, Hence Procured |
| 2 | Stainless Steel 304 grade CSSD Rectangular Working table | 1.00 | Nos | 46,000 | 46,000 | An autoclave needs a CSSD table. Hence Procured |
| 3 | SS-304 working table of size 685 x 685 x 762 mm | 2.00 | Nos | 16,300 | 32,600 | It is necessary to place the equipment’s, hence procured |
| 4 | SS-304 working table of size 457 x 457 x 762 mm | 1.00 | Nos | 14,500 | 14,500 | It is necessary to place the equipment’s, hence procured |
| 5 | SS-304 working table of size 61 x 610 x 762 mm | 1.00 | Nos | 15,100 | 15,100 | It is necessary to place the equipment’s, hence procured |
| 6 | SS-304 working table of size 660 x 610 x 762 mm | 1.00 | Nos | 15,800 | 15,800 | It is necessary to place the equipment’s, hence procured |
|  |  |  |  |  | **2,21,000** |  |

* Good Quality interiors’ work of entrance lobby, reception & waiting area of the Centre was taken up for creating the ambience suited to obtain ICMR certification for operations of IVF Center. Furniture, AC, Display Signs Boards etc., were installed under close guidance and supervision of Field staff. Sofas were supplied as requested by the end user.

| **S. No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Name Plates (Room Names). | 38.00 | Nos | 600 | 22,800 | This work was executed as per the requirement and instructions from higher officials |
| 2 | Hydraulic Door Closer (For ABS Doors) | 15.00 | Nos | 2,819 | 42,285 | This work was executed as per the requirement and instructions from higher officials |
| 3 | WPC Doors | 9.21 | Sqm | 6,734 | 62,020 | To maintain low VOC in Fertility centre, wooden doors are replaced with WPC doors as per MOM dated: 01-08-2023. (copy Attached) |
| 4 | PVC frames on the walls for covering the area over DB Boxes | 0.74 | Sqm | 6,473 | 4,790 | The work was taken up at reception and entrance area as per the instructions issued by the End user and TSMSIDC higher officials. |
| 5 | ABS Doors | 32.08 | Sqm | 9,241 | 2,96,451 | To maintain low VOC in Fertility centre, wooden doors are replaced with ABS doors as per MOM dated: 01-08-2023. (copy Attached) |
| 6 | Track lights at side wall décor frame with 4 fixtures and 2 tracks | 1 | Job | 9,600 | 9,600 | This work was executed as per the requirement and instructions from higher officials |
| 7 | Dress Hangers | 5.00 | Nos | 510 | 2,550 | This work was executed as per the requirement and instructions from higher officials |
| 8 | Sun Control film | 48.00 | Sqm | 381 | 18,288 | This work was taken up at Record room, P Change room, Pre/Post Operative wards, Embryologist room, Store room and Semen Collection room as per the instructions issued by the End user |
| 9 | Rectangular Mirror Frameless of size 457 .2 mm x 609.6 mm (For Change room) | 5.00 | Nos | 1,775 | 8,875 | This work was executed as per the requirement and instructions from higher officials |
|  |  |  |  |  | **5,09,944** |  |

* The Air Handling Units (AHUs) were installed on the terrace above 7th floor as originally contemplated. A shed was built to protect the AHUs from Rainfall, sunlight, rodents and Pests. This shed will also enhance the life and performance of the equipment reducing breakdowns and ensuring the required Up-Time of the AHU equipment.
* In The estimate only 1 No condensing Unit is provided for the Operation of HVAC in Embryology Lab & IVF-OT. However it is required to run the air-conditioning in this area (24/7) and it will not be possible to run one condensing unit round the clock. Therefore a second condensing unit was installed additionally with an automatic change over timer so that a single condensing unit will not be required to run continuously.

| **S. No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | AHU shed | 1.00 | Job | 3,00,000 | 3,00,000 | This work is proposed as safety measure for AHU's keeping in view of temperature of outdoor and weather conditions. Technically 5° to 6° C temperature will be reduced which will decrease the power bill also. |
| 2 | Condensing units - VRF/VRV System - 22 HP | 1 | Nos | 4,02,500 | 4,02,500 | As per the site condition & floor plans approved, the increase of indoor units as the new rooms added requires higher capacity of VRV system. Hence proposed as Supplemental item |
| 3 | Air Handling Unit 4400CFM / 11.0 TR | 1 | Nos | 7,18,500 | 7,18,500 | As per the site condition & floor plans approved, the increased area requires higher capacity of AHU. Hence proposed as Supplemental item. |
| 4 | Condensing units of11.0 TR capacity | 2 | Nos | 2,40,750 | 4,81,500 | As per the site condition & floor plans approved, the increased area requires higher capacity of condensing unit to maintain required temperature and increase in AHU capacity too. Hence proposed as Supplemental item |
|  |  |  |  |  | **16,02,500** |  |

* Automatic GAS Alarm Panels for MGPS lines carrying the required Medical Gas from Gas Manifold Room was installed to ensure un-interrupted gas flow as any interruption in Gas Supply even for a short time will have very serious consequences on the incubation process in the labs.

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| **S.No** | **Description** | **Qty** | **Unit** | **Rate** | **Amount** | **Remarks** |
| 1 | 12 mm Valve for 12 mm OD Pipe | 3 | Nos | 930 | 2790 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 2 | Fully Automatic Control Panel f=or CO2  System: | 1 | Set | 175180 | 175180 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 3 | Fully Automatic Control Panel for Oxygen  System | 1 | Set | 175180 | 175180 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 4 | Fully Automatic Control Panel for  Trigas  System | 1 | Set | 175180 | 175180 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 5 | C02 Manifold for 2 Cylinders | 1 | Set | 20750 | 20750 | Additional Manifold is provided to supply CO2 at 2-3 bar pressure to IVF OT and proposed as AE |
| 6 | Medical Air-4 Outlet with matching probe | 6 | Nos | 12470 | 74820 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 7 | 15mm COPPER PIPE | 87.23 | Rmt | 824 | 71878 | Qty. increased as per the site requirement hence proposed as AE |
| 8 | 22mm COPPER PIPE | 42.65 | Rmt | 1191 | 50796 | Qty. increased as per the site requirement hence proposed as AE |
| 9 | 46.7 litre CO2 cylinders | 2 | Nos | 20850 | 41700 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 10 | 46.7 litre N2O cylinders | 2 | Nos | 33000 | 66000 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 11 | 46.7 litre size O2 cylinders | 2 | Nos | 17850 | 35700 | This work is executed as per the necessity of medical gases in IVF Centre under the instructions of End user |
| 12 | 46.7 litre size Trigas cylinders | 2 | Nos | 29250 | 58500 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
| 13 | Trigas Emergency  Manifold D-Type | 1 | Set | 9620 | 9620 | This work is executed as per the necessity of medical gases in IVF Center under the instructions of End user |
|  |  |  |  |  | **9,58,094** |  |

**SUMMARY - PETLABURZ**

* The original layout lacked an emergency exit, necessitating a revision. This revision extends the corridor reducing the floor area of the Embryology Lab, which was then expanded by merging it with an adjacent room beyond the original layout area.
* The layout was revised to accommodate extra consulting rooms, a redesigned reception area, and a waiting area for patients.
* To maintain sterility, the Manifold Room was moved outside the sterile and semi-sterile areas as advised by the expert doctors, leading to an additional room.
* The hospital’s existing electrical panel could not handle the additional load from the IVF Centre. A dedicated power cable was run from the main transformer, and a new electrical panel was installed, requiring an additional electrical panel room which could not be accommodated in UPS room.
* The above revisions resulted in a 27% increase in floor area (126.68 m²), leading to increased quantities of Civil, Electrical, and Finishing works, including more Air Conditioners, Fans, and Lighting.
* Due to the increased area and scope, several "authorized extras" were added, covering civil items, electrical items, and air conditioning components. These include additional demolition, construction, electrical installations, and HVAC systems, among others.
* Civil Extras – **14,40,341**

Electrical Extras – **25,63,358**

Air Conditioning Extras – **7,20,354**

* Dedicated 50 LPH RO system was installed to supply clean water to the Autoclave, following ICMR guidelines. – **75,000**
* The reception area was redesigned to meet ICMR approval standards, including moving the record room inside the centre. – **5,09,944**
* Shed For AHU Protection From Direct Sunlight, Birds & Rodents – **3,00,000**
* Increase in AHU & Condensing units capacity – **13,02,500**
* Mandatory MGPS Control Panels & Other Provisions – **9,58,094**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **Description** | **As per Agreement** | **Supplemental** | **Total** |
| 1 | Equipment | 2,60,20,475.00 | 2,21,000.00 | 2,46,54,375.00 |
| 2 | Civil Works | 70,12,631.00 | 11,56,237.00 | 81,68,868.00 |
| 3 | Plumbing works | 1,36,973.00 | 8,985.00 | 1,45,958.00 |
| 4 | Electrical works | 56,41,335.00 | 4,96,686.00 | 61,38,021.00 |
| 5 | ELV works | 6,89,000.00 | - | 6,89,000.00 |
| 6 | Fire Fighting works | 8,73,880.00 | - | 8,73,880.00 |
| 7 | Air Conditioning works | 27,25,391.00 | 17,49,744.00 | 44,75,135.00 |
| 8 | MGPS works | 11,41,255.00 | 8,14,670.00 | 19,55,925.00 |
| **9** | **Sub Total (Agreement Part-A)** | **4,42,40,940.00** | **44,47,322.00** | **4,86,88,262.00** |
| 10 | Provision towards Engineering Supervision Charges @ 4% on RE Value | 17,69,637.00 | 1,77,893.00 | 19,47,530.00 |
| 11 | GST @ 18% | 79,63,369.00 | 8,00,518.00 | 87,63,887.00 |
| 12 | **Sub Total** | **5,39,73,946.00** | **54,25,733** | **5,74,52,149.16** |
| 13 | Labour Cess @ 1% on Basic Price of Revised Estimate |  |  | 4,86,883.00 |
| 14 | NAC @ 0.1% on Basic Price of Revised estimate |  |  | 48,688.00 |
| 15 | Provision towards Seniorage Charges on Civil Component |  |  | 448.00 |
| 16 | Provision towards DMF Charges 30% on Seniorage Charges |  |  | 134.00 |
| 17 | Provision towards SMFT Charges 2% on Seniorage Charges |  |  | 9.00 |
| 18 | Provision towards Haritha Nidhi |  |  | 4,869.00 |
| 19 | Subtotal of S.No 12 to 17 |  |  | **5,41,031.00** |
| 20 | Provision towards GST 18% on Seniorage Charges |  |  | 97,386.00 |
| 21 | Provision towards Unforeseen items and rounding off (LS) - Inauguration Expenses | 10,26,054.00 | 5,22,643.00 | 9,10,280.00 |
|  | Subtotal of S.No 18 to 21 | **10,26,054.00** | **5,22,643.00** | **15,48,697.00** |
|  | **Grand Total** | **5,50,00,000** | **59,48,376** | **6,09,48,376.00** |