Stop Corona

(i) Wash Your Hands, (ii) Wear Mask, (iii) Maintain Social Distance

DELHI JAL BOARD: GOVT. OF NCT OF DELHI
OFFICE OF THE EXECUTIVE ENGINEER(EAP)-I
ROOM NO. 501, VARUNALAYA PHASE-I, KAROL BAGH,
NEW DELHI-110005
Email :- eeeap1.djb@gmail.com

Name of Work : "Improvement of Water Supply System including Operation and Maintenance of Transmission & Distribution Pipes, Pumping Stations, Service Connections and Consumer Meters with DMA formation and NRW Reduction in Chandrawal WTP Command Area, Package -3 (Central)".
-JICA Assisted DWSIP in Chandrawal WTP Command Area (Loan ID-P 225)

Corrigendum and Addendum No. 3
NIT No. 02(2021-22)/EE(EAP)-I(Re-invited)

This is in continuation to the earlier Corrigendum and Addendum No. 1&2. The replies of pre- bid queries and inclusion of the Jhandewalan BPS works are enclosed herewith. Further, the schedule of receipt of tenders for the above said work has been revised and is as under:

- Last date & time for purchasing Tender Documents: **14.07.2021** upto 15:00 Hours
- Last Date/Time for submission of Bids: **16.07.2021** upto 15:00 Hours
- Date/Time for opening of Technical Bid: **16.07.2021** at 15:10 Hours

Encl.: As Above

(B S Rawat)
EE (EAP)-I

No. DJB/EE (EAP)-I/2021/ 2134-2182

Dated: 02.07.2021

Copy to:-

1. P.S. to Vice Chairman, DJB
2. Secy. to CEO/Member (A)/Fin/Dr./WS
3. All CE's
4. Under Secretary(JICA), DEA, Ministry of Finance, North Block, New Delhi
5. Dir. (F&A)/ Addl.CEO/ DOV, DJB
6. JICA INDIA
7. SE(Project) Water-I,II,III, IV, V./ (Planning)W/ SE(E&M)WC
8. ALL EE(Project) Water
9. AO(Project) Water-III/ AAO(EAP)-I
10. All AEs(EAP)-I
11. PMSC
12. Contractors Welfare Association registered, 20 FF, LSC, BQ Block, DDA Mkt., Shalimar Bagh, Delhi-88.
13. EE(EDP): with softcopy to upload on DJB Website

EE (EAP)-I

JICA Assisted Delhi Water Supply Improvement Project in Chandrawal WTP Command Area (ID-P225)

Name of the Work : Improvement of Water Supply System including operation and maintenance of Transmission &distribution pipes, pumping stations, Service connections and consumer meters with DMA formation and NRW reduction in Chandrawal WTP Command Area (Package 3: Central Zone).

NIT Number and Date : NIT No. 01 (2021-22)/EE (EAP)-I dated 20.04.2021

Corrigendum and Addendum No. 3

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td>1.</td><td>II</td><td>192</td><td>Part 2, Section VI, A Scope of Work-Sub-section 1. Project Description, Clause no.1.4.2</td><td>In the Table giving Package-wise scope of works;
Item No. 3. BPS (a) Construction of New Pumping Station:
For Package 3, the number “3” is replaced by “4”.</td></tr>
<tr><td>2.</td><td>II</td><td>194</td><td>Part 2, Section VI, A Scope of Work-Sub-section 2. General, Clause no. 2.2</td><td>Main Components of Physical Works, refer to the Table.
Item No. 3. BPS (a) Construction of New Pumping Station,
Under Column Quantity, the word “3 Nos.” is replaced by “4 Nos.”.</td></tr>
<tr><td>3.</td><td>II</td><td>197</td><td>Part 2, Section VI, A Scope of Work-Sub-section 2. General, Clause no. 2.3.3, Sub - clause 2 (d)</td><td>Pump duty Parameter, Refer to the Table
The following data has been added to the Table.
<table>
<tr><td>Year →</td><td colspan="2">2051</td><td colspan="2">2036</td><td colspan="2">2026</td><td rowspan="2">Daily Variation</td></tr>
<tr><td>Duty Point →</td><td>Q (LPS)</td><td>H (m)</td><td>Q (LPS)</td><td>H (m)</td><td>Q (LPS)</td><td>H (m)</td></tr>
<tr><td rowspan="3">Jhandewalan Distribution-1</td><td>949</td><td>22</td><td>905.50</td><td>22.66</td><td>869</td><td>23.18</td><td>Peak</td></tr>
<tr><td>380</td><td>28.16</td><td>362.2</td><td>28.27</td><td>347.60</td><td>28.34</td><td>Average</td></tr>
<tr><td>113.80</td><td>34.23</td><td>108.66</td><td>34.24</td><td>104.30</td><td>34.24</td><td>Lean</td></tr>
<tr><td>Jhandewalan</td><td>562</td><td>12.00</td><td>546.61</td><td>12.22</td><td>533.67</td><td>12.39</td><td>Peak</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>Distribution-2</td><td>225</td><td>15.36</td><td>218.64</td><td>15.39</td><td>213.50</td><td>15.42</td><td>Average</td></tr>
<tr><td></td><td>67.4</td><td>20.94</td><td>65.59</td><td>20.95</td><td>64.04</td><td>20.95</td><td>Lean</td></tr>
</table>
</td></tr>
<tr><td>4.</td><td>II</td><td>199</td><td>Part 2, Section VI, A Scope of Work-Sub-section 2. General, Clause no. 2.3.3, Sub - clause 3 (c)</td><td>Proposed System, Refer to the Table
The row for Jhandewalan: Under Column BPS, the word “No” is replaced by “Yes”.</td></tr>
<tr><td>5.</td><td>II</td><td>231</td><td>Part 2, Section VI, A Scope of Work-Sub-section 5. Scope of UGRS and BPSS Civil Works, Clause no. 5.1</td><td>General, Refer to the Table.
In item no. 5, Jhandewalan, Under Column Pumping Station (PS), New, the cell should be tick marked.</td></tr>
<tr><td>6.</td><td>II</td><td>242</td><td>Part 2, Section VI, A Scope of Work-Sub-section 6. Scope of Electrical Works</td><td>At the end of the chapter, Add clause 6.2.7 with the text as follows.
6.2.7 Jhandewalan Pumping Station
The DJB will provide 33KV / 11 KV / 415 V supply upto pumping station premises. Its Contractor responsibility to provide DP structure and metering unit in premises as per norms of electricity department. However, metering unit will be supplied by department. Incoming Supply Voltage shall be considered as per load and Norms of Electricity Department. No variation shall be considered in respect of incoming supply voltage. The supply will be received through two incomers through two different sources, however Contractor has to do the liasioning for the same with electricity department. Bidder has to feed 11 KV supply from metering unit to 11 KV indoor switch board (2 I/C, 1 B/C and 2 O/G) through HT, XLPE cable. From 11 KV HT panel, 11 KV supply will be fed to 11 / 0.433 KV, indoor cast resin dry type transformer for step down the voltage. From transformer to Main LT panel, 415 V supply will be fed through Bus duct. Main LT Panel will also be connected with Solar System and DG set through bus coupler and required interlocking between all incomers. From Main LT panel supply will be fed to Motors, lighting system, battery charger, dewatering pump, actuators, and auxiliary load of pumping station. Following are the items</td></tr>
</table>

S.N.	Vol	Page	Clause	Corrigendum and Addendum
				which Bidder has to supply install, testing and commissioning. **Refer SLD: P-225-324-E-SLD-002.** (a) 11 KV indoor HT, VCB switchgear panel having 2 incomers, 1 bus-coupler and 2 outgoing feeders as per specification and SLD. (b) 11 / 0.433 KV, Cast Resin Dry Type transformer with OLTC tap changer and all required accessories as per specification. (Transformer shall be supplied with 100 % redundancy). (c) 415 V LT switchgear panel for feeding supply to motors, valve DB, lighting DB, exhaust fan DB, battery and battery charger, dewatering Pump, PLC / SCADA System, Chlorination System, Welding Socket, other auxiliary load of pumping stations. (d) DG Set with AMF Panel. (e) Solar system complete for feeding supply to system load and for supply to Grid as per specification. (f) Variable Frequency Drive Panel as per motors rating and specification. (g) HT and LT XLPE cable, control cable, NPSBD, cable tray, angle support, lugs, gland, termination, cable marking as per specification. (h) Indoor and Outdoor, energy efficient lighting (LED fittings), lighting poles, cable, wiring, conduit, lighting DB, switchboard, switches and sockets, fans, exhaust fans, AC, as per specification. (i) Earthing and Lightning Protection System as per specification. (j) Battery and Battery Charger (Float cum Boost Charger) (k) Safety Kit and tools, Spare Items, Safety Chart, Sand Bucket, Rubber Mat and Gloves, Spares etc. (l) Dismantling and deposit to DJB existing Transformer, HT panels, Starters, LT Panels, Changeover switches, APFC panels, cables, earthing etc. (m) Miscellaneous items which are not mentioned above but required for commissioning of complete plant.

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td>7.</td><td>II</td><td>251</td><td>Part 2, Section VI, A Scope of Work-Sub-section 7. Scope of Mechanical Works, Clause no. 7.5</td><td>Jhandewalan UGR, At the bottom of 1st Table, add the data as follows.
<table>
<tr><th colspan="2">Data on Existing Components</th></tr>
<tr><td>Details of existing Pumping Units</td><td></td></tr>
<tr><td>Pump – 1</td><td>7.02 MGD@ 18.3 mwc</td></tr>
<tr><td>Pump – 2</td><td>7.02 MGD@ 18.3 mwc</td></tr>
<tr><td>Pump – 3</td><td>2.59 MGD@ 19.8 mwc</td></tr>
<tr><td>Pump – 4</td><td>9.38 MGD@ 25.9 mwc</td></tr>
<tr><td>Pump – 5</td><td>2.88 MGD@ 29.8 mwc</td></tr>
<tr><td>Pump – 6</td><td>2.88 MGD@ 29.8 mwc</td></tr>
<tr><td>Pump – 7</td><td>7.79 MGD@ 29.6 mwc</td></tr>
<tr><td>Pump – 8</td><td>NA MGD@ NA mwc</td></tr>
<tr><td>Pump – 9</td><td>5.0 MGD@ 30 mwc</td></tr>
<tr><td>Pump – 10</td><td>2.89 MGD@ 30 mwc</td></tr>
<tr><td>Pump – 11</td><td>2.89 MGD@ 30 mwc</td></tr>
<tr><td>Pump – 12</td><td>2.89 MGD@ 30 mwc</td></tr>
<tr><td>Pump – 13</td><td>1.0 MGD@ 38 mwc</td></tr>
<tr><td>Pump – 14</td><td>1.0 MGD@ 35 mwc</td></tr>
<tr><td>Pump – 15</td><td>1.0 MGD@ 40 mwc</td></tr>
</table></td></tr>
<tr><td>8.</td><td>II</td><td>253</td><td>Part 2, Section VI, A Scope of Work-Sub-section 7. Scope of Mechanical Works, Clause no. 7.5</td><td>Under head “Proposed Project Bid Purpose drawings” add the texts as follows:
• Process and Instrumentation Diagram no. P-225-312-P-UGR-JHW-001</td></tr>
<tr><td>9.</td><td>II</td><td>253</td><td>Part 2, Section VI, A Scope of Work-Sub-section 7.</td><td>The contents under head “Proposed Recommendations:” is deleted and replaced by followings.
• As per the UGR command area wise water demand (Table 7.5) from Jhandewalan UGR, 52.25 MLD is planned as water demand</td></tr>
</table>

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td></td><td></td><td></td><td>Scope of Mechanical Works, Clause no. 7.5</td><td>

A flow control valve is proposed at the inlet of the UGR.
Based on the hydraulic analysis, Jhandewalan pumping station will pump to 2 separate zones only, the following shall be the capacity:
<ol type="a">
Zone -1 as 949 LPS
Zone -2 as 562 LPS

Hydraulic modelling recommends that Jhandewalan will be planned for direct pumping to local distribution areas within above dedicated zones. The other areas currently being fed by the intermittent BPS stations should be abandoned once the new transmission system is in place and working for the UGRs currently being fed by Jhandewalan
Based on the above new requirements the following recommendations are being made:
<ol type="i">
Since the current system cannot be dispensed till alternate new system is in place, it may not be viable to replace the existing system. Hence it is suggested to propose a new pumping station for these new revised requirements having facility for smooth transfer.
A new pumping station is proposed towards the upstream side of the existing Pump house where complete green belt is available. This Pump house shall have five pump sets for each Zone totalling to ten numbers. Since the proposed system will be 24x7 scenarios, it shall be required to install trimmer pumps to take care of lean flows in addition to proposal for installation of VFD system for the pumping operation.

It is proposed to install new incoming and outgoing pipelines with valves, and the existing arrangement will be dispensed with.
This new BPS will house 10 nos. of pumps with all associated pipe fittings and valves including all electrical items.
Electro Chlorination systems is proposed at this Pumping station considering the requirement of maintaining residual Chlorine at furthest ends of the distribution network.
The pumping station shall be fully equipped with all necessary and required mechanical items as following:

Electrically operated handling system
Firefighting equipment
Dewatering and Drain Pumps
Ventilation system

Table 7.5 : Proposed Components for Jhandewalan BPS
<table>
<tr><td colspan="2">Projected Demand (MLD)</td></tr>
<tr><td>2021</td><td>47.63</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>2036</td><td colspan="2">50.27</td></tr>
<tr><td>2051</td><td colspan="2">52.25</td></tr>
<tr><td>Details of proposed pump sets (tentative)</td><td>Duty point condition</td><td>Qty- nos</td></tr>
<tr><td>Set – 1 Z- 1(Distribution - Peak)</td><td>1710m^3/hr @35mwc</td><td>2W + 1S</td></tr>
<tr><td>Set – 2 Z- 1(Distribution –Non-Peak)</td><td>420m^3/hr @35mwc</td><td>1W + 1S</td></tr>
<tr><td>Set – 3 Z- 2(Distribution - Peak)</td><td>1010m^3/hr @21mwc</td><td>2W + 1S</td></tr>
<tr><td>Set – 4 Z- 2(Distribution –Non-Peak)</td><td>250m^3/hr @21mwc</td><td>1W + 1S</td></tr>
<tr><td>Details of proposed incoming pipes</td><td colspan="2">900 mm dia main from Chandrawal. (1 No.) MS</td></tr>
<tr><td>Details of proposed outgoing pipes</td><td colspan="2">900 mm dia (1 No.) MS
700 mm dia (1 No.) DI</td></tr>
</table>

Refer attached proposed GA drawing for more details
Refer tentative Bill of Quantities as per the preliminary design features

</td></tr>
<tr><td>10.</td><td>II</td><td>270</td><td>Part 2, Section VI, A Scope of Work-Sub-section 8. SCADA and instrumentation Works, Clause no. 8.1</td><td>
Equipment to be installed at UGR’s under SCADA and Automation works,
The following data is added in the Table at the end and Total quantity modified as per given in the Table below.
<table>
<tr><th>S. N</th><th>Unit Name</th><th>Main Eqp. Description</th><th>Main Eqp. Quantity</th><th>Mag. Flow Meter</th><th>Level Transmitter</th><th>Level Switch</th><th>Level Gauge</th><th>Drain pit Level Controller</th><th>Pr. Transmitter</th><th>Dual Bar Graph Indicators</th><th>Pr. Switch</th><th>Pr Gauge</th><th>Wireless Fire Alarm System</th><th>CCTV & Intruder Monitoring system</th><th>Residual Chlorine analyzers</th><th>Turbidity Analyzer</th><th>Power & Instrument Cables</th><th>LCP</th><th>RTU</th><th>UPS</th></tr>
<tr><td>4</td><td>Jhandewalan</td><td>UGR</td><td>2</td><td></td><td>2</td><td>2</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2000 mtrs</td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Sump</td><td>2</td><td></td><td></td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Pump</td><td>10</td><td></td><td></td><td></td><td></td><td></td><td>10</td><td>5</td><td></td><td>20</td><td>1</td><td>1</td><td></td><td></td><td></td><td>1</td><td>1</td><td>1</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
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<table>
<tr><td></td><td></td><td>Set</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Inlets to UGR(900mm)</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td>1</td><td>1</td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Outlets (900 & 700 mm)</td><td>2</td><td>2</td><td></td><td></td><td></td><td></td><td>2</td><td>2</td><td>2</td><td>2</td><td></td><td></td><td>1</td><td>1</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Drain Pit</td><td>1</td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Total Qty.</td><td></td><td>22</td><td>25</td><td>31</td><td>20</td><td>7</td><td>60</td><td>63</td><td>9</td><td>90</td><td>6</td><td>5</td><td>8</td><td>8</td><td rowspan="2">14000 mtrs</td><td>10</td><td>11</td><td>10</td></tr>
<tr><td></td><td></td><td>Unit</td><td></td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>Set</td><td>Set</td><td>Set</td><td>Set</td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>11.</td><td>III</td><td>848</td><td>Part-1, Section IV, Price Bid, Section B, Price Proposal data, Table A, Part-c)</td><td>
Add at the end of the Table c) Operation and Maintenance, the weighting (f) with respect to index description (b) for Price Schedule OM-M1 and OM-M2 will be as under:
<table>
<tr><th>(a)</th><th>(b)</th><th>(f)</th></tr>
<tr><th>Index Code</th><th>Index Description</th><th>Weighting</th></tr>
<tr><td>1</td><td>Nonadjustable</td><td>0.15</td></tr>
<tr><td>2</td><td>Labour</td><td>0.65</td></tr>
<tr><td>3</td><td>Material</td><td>0.15</td></tr>
<tr><td>4</td><td>Petrol, Oil and Lubricant</td><td>0.05</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td>12.</td><td>III</td><td>863</td><td>Part 1, Section-IV, Price Bid,Section B-Price Schedule CW-G, Item no. 2</td><td>(i) In second column of item no. 2, the word “Site Office” is replaced by “Customer Service Office”.
(ii) In second column of item no. 2.1, the text “Engineer’s office with” may be read as “Establishment, operation and maintenance of Customer Service Office with minimum 1500 sq. ft floor area including rent, furnishing, office equipment with”.
(iii) The word“32” in fourth column of item no. 2.1may be read as “152”.</td></tr>
<tr><td>13.</td><td>III</td><td>918</td><td>Part 1, Section-IV, Price Bid, Section B-Price Schedules, Item no. 1.6, 1.7 and 1.8 (CW-DB-C)</td><td>In C&A no. 2 “S. No. 39 to 41” stands deleted.</td></tr>
<tr><td>14.</td><td>III</td><td>923</td><td>Part 1, Section-IV, Price Bid,Section B-Price Schedules, Item no. 2 (CW-DB-C), Design-Build: UGR and BPS- Civil Works</td><td>Under Item No. 2, add a sub-item 2.6 and the text as follows.
<table>
<tr><th rowspan="2">Item No.</th><th rowspan="2">Description</th><th rowspan="2">Unit</th><th rowspan="2">Quantity</th><th colspan="2">Rate</th><th colspan="2">Amount</th></tr>
<tr><th>Local</th><th>Foreign</th><th>Local</th><th>Foreign</th></tr>
<tr><td>2.6</td><td>Construction of new Pump House with associated Structures at Jhandewalan</td><td>LS</td><td>1</td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>15.</td><td>III</td><td>925, 938</td><td>Part 1, Section-IV, Price Bid, Section B-Price Schedules, Item no. A (CW-DB-M), Design-Build: UGR and BPS-Mechanical Works</td><td>Under Item No. A, UGR’s and BPS’s, under description, add item no. 6 with the word as “Jhandewalan”.
At the end of Item A, in Page 938, add sub-item 6.0 with the work items as in the Table below.
<table>
<tr><th rowspan="2">Item No.</th><th rowspan="2">Description</th><th rowspan="2">Unit</th><th rowspan="2">Quantity</th><th colspan="2">Rate</th><th colspan="2">Amount</th></tr>
<tr><th>Local</th><th>Foreign</th><th>Local</th><th>Foreign</th></tr>
<tr><td>A</td><td><u>UGR’s and BPS’s</u>
6. Jhandewalan
(Note: Sizes, capacities and quantities given herein, if any, are indicative and provided for Bidder’s</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
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S.N.	Vol	Page	Clause	Corrigendum and Addendum							
					reference only)						
				6	**Jhandewalan BPS & UGR**						
				6.1	Pipes and Fittings: (i) Inlet side & outlet side of UGR Suction, Discharge & Header of Pumps						
				a	DI Pipes	Lot	1				
				b	DI fittings	Lot	1				
				c	MS Pipes	Lot	1				
				d	MS fittings	Lot	1				
				6.2	Electrically actuated double flanged Sluice Valves along with dismantling joints : (i) Inlet side & outlet side of UGR (ii) Suction, Discharge & Header of Pumps						
				a	250 dia	Nos	2				
				b	300 dia	Nos	4				
				c	350 dia	Nos	2				
				d	450 dia	Nos	3				
				e	600 dia	Nos	6				
				f	700 dia	Nos	3				
				6.3	Double flanged Sluice Valves along with dismantling joints: (i) Inlet side & outlet side of UGR Suction, Discharge & Header of Pumps						
				a	300 dia	Nos	2				
				6.4	Electrically actuated double flanged Butterfly Valves along with dismantling joints: (i) Inlet side & outlet side of UGR						

S.N.	Vol	Page	Clause	Corrigendum and Addendum							
					(ii) Suction, Discharge & Header of Pumps						
				a	700 dia	Nos	3				
				b	800 dia	Nos	2				
				c	900 dia	Nos	5				
				d	1400 dia	Nos	2				
				6.5	Double flanged Non Return Valve						
				a	250 dia	Nos	2				
				b	300 dia	Nos	2				
				c	450 dia	Nos	3				
				d	600 dia	Nos	3				
				6.6	Double flanged Duel plate Check Valve along with dismantling joint						
				a	700 dia	Nos	1`				
				b	900 dia	Nos	1				
				6.7	Electrically Actuated Flow Control Valve along with dismantling joint						
				a	900 dia	Nos	1				
				6.8	Electrically actuated sluice gate, size 1200 x 1200	Nos	1				
				6.9	Double suction horizontal split casing centrifugal volute Pump set along with induction motor and all associated accessories as per technical specification						
				a	1710 m3/hr x 35 m, (2W + 1S)	Nos	3				
				b	1010 m3/hr x 21 m, (2W + 1S)	Nos	3				
				c	420 m3/hr x 35 m, (1W + 1S)	Nos	2				
				d	250 m3/hr x 21 m, (1W + 1S)	Nos	2				
				6.10	Portable submersible dewatering pump set of Capacity 50 m3/hr at 15 mwc head with electric	Nos	1				

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td></td><td>motor and accessories, including flexible hose of 10 mt & cable of 10 mt</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.11</td><td>Submersible drain pump set including electric motor, piping , valve, etc. of Capacity 10 m3/hr at 15 mwc head (1W + 1S)</td><td>Nos</td><td>2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.12</td><td>Ventilation System with exhaust fan complete</td><td>Nos</td><td>8</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.13</td><td>Double Girder EOT Crane of capacity 5.0 MT</td><td>Nos</td><td>1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.14</td><td>Portable extinguishers with glow signs indicating location of extinguishers- ABC type @ 6 kg as per TAC IS:2190</td><td>Nos</td><td>10</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.15</td><td>Any other items required for commissioning of pumping system</td><td>LS</td><td>1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.16</td><td>Suitable capacity Electro chlorinator (1W + 1S) complete with piping, valves, accessories, etc.</td><td>Nos</td><td>2</td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>16.</td><td>III</td><td>946, 953</td><td>Part 1, Section-IV, Price Bid, Section B-Price Schedules, Item no. A (CW-DB-E), Design-Build: UGR and BPS- Electrical Works</td><td>
Under Item A, UGR’s and BPS’s, under description add item no. 6 with the word as “Jhandewalan”.
At the end of Price Schedule, Page 953, add sub-item 7.0 with the work items as in the Table below.
<table>
<tr><th rowspan="2">Item No.</th><th rowspan="2">Description</th><th rowspan="2">Unit</th><th rowspan="2">Quantity</th><th colspan="2">Rate</th><th colspan="2">Amount</th></tr>
<tr><th>Local</th><th>Foreign</th><th>Local</th><th>Foreign</th></tr>
<tr><td>A</td><td><u>UGR’s and BPS’s:</u>
6.Jhandewalan
(Note: Sizes, capacities and quantities given herein, if any, are indicative and provided for Bidder’s reference only)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>7</td><td>Jhandewalan BPS & UGR</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>7.1</td><td>HT Panel: 11 KV,630 Amp, Indoor VCB Type HT Panel, 5 panel board (2 I/C, 1 B/C, 2 O/G) compatible with PLC / SCADA System.</td><td>No.</td><td>1</td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
</table>

S.N.	Vol	Page	Clause	Corrigendum and Addendum							
				7.2	**Transformers**: 11/0.433 KV, (1000 KVA, minimum) KVA, Indoor Cast resin Dry type Transformer Dyn11 with On Load Tap Changer Arrangement	Nos.	2				
				7.3	**Solar System**: Solar system (400 KWp, minimum) along with all accessories	Set	1				
				7.4	**DG Set**: 415 V, 3 Phase, (750 KVA, minimum) DG set with AMF Panel	No.	1				
				7.5	**415 Volts L T Panels**: 415 Volts Main Panel, Aux Panels and APFC panel along with starter feeders – Metal enclosed, free standing, floor mounting, extensible on either side, compatible with PLC/SCADA Systems.	LS	1				
				7.6	**Variable Frequency Drive**: VFD as per SLD and tender specification	LS	1				
				7.7	**Battery and Battery Charger**: 24 V, 150 AH (minimum) Ni-Cd maintenance free battery and Float Cum Boost Charger	No.	1				
				7.8	**Lighting System**: Indoor and Outdoor lighting System with LED fittings, lighting DB, JB, wiring, cabling, receptacles, poles, fans, AC etc	LS	1				
				7.9	**Earthing**: Complete Earthing System and Lightning Protection System	LS	1				
				7.10	**Cabling System**: XLPE HT and LT power cables, control cables, NPSBD, telephone cables, etc.	LS	1				
				7.11	**Safety kit and tools & tackle: S**afety chart, sand bucket, rubber mat, gloves, tools, spares, etc.	LS	1				

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>7.12</td><td>Dismantling Items: Dismantling of existing electrical equipment.</td><td>LS</td><td>1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>7.13</td><td>Miscellaneous items: Items which are not covered above and in other schedules but required for commissioning of UGR and BPS from Electrical perspectives</td><td>LS</td><td>1</td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>17.</td><td>III</td><td>954</td><td>Part 1, Section-IV, Price Bid, Section B-Price Schedules, (CW-DB-S&I), Design-Build: All SCADA & Instrumentation Works</td><td>
Under various items, the quantities are modified / revised as in the Table below.
<table>
<tr><th>Item No.</th><th>Description</th><th>Unit</th><th>Original Quantity</th><th>Revised Quantity</th></tr>
<tr><td>1.27</td><td>230V AC Redundant UPS of required capacity with 1 hour backup (For 6 Nos. UGR withBPS).</td><td>Nos.</td><td>5</td><td>6</td></tr>
<tr><td>3.7</td><td>Electromagnetic Flowmeter DN700</td><td>Nos</td><td>2</td><td>3</td></tr>
<tr><td>3.9</td><td>Electromagnetic Flowmeter DN900</td><td>Nos</td><td>2</td><td>7</td></tr>
<tr><td>3.10</td><td>Ultrasonic Level Transmitter</td><td>Nos.</td><td>23</td><td>25</td></tr>
<tr><td>3.11</td><td>Water Level Switch</td><td>Nos.</td><td>27</td><td>31</td></tr>
<tr><td>3.12</td><td>Local Level Gauge for UGRs</td><td>Nos.</td><td>18</td><td>20</td></tr>
<tr><td>3.13</td><td>Pressure Transmitter</td><td>Nos.</td><td>47</td><td>60</td></tr>
<tr><td>3.14</td><td>Pressure Switch</td><td>Nos.</td><td>7</td><td>9</td></tr>
<tr><td>3.15</td><td>Pressure Gauge</td><td>Nos.</td><td>67</td><td>90</td></tr>
<tr><td>3.16</td><td>Drain Pit Level Controller</td><td>Nos.</td><td>6</td><td>7</td></tr>
<tr><td>3.19</td><td>Local Control Panels</td><td>Nos.</td><td>9</td><td>10</td></tr>
<tr><td>3.20</td><td>On Line Residual Chlorine Analyser</td><td>Nos.</td><td>7</td><td>8</td></tr>
<tr><td>3.21</td><td>On Line Turbidity Analyser</td><td>Nos.</td><td>7</td><td>8</td></tr>
<tr><td>3.22</td><td>Bar Graph Indicator</td><td>Nos.</td><td>55</td><td>63</td></tr>
<tr><td>5.13</td><td>Fire Alarm System for BPSs (Cold Wire/Wireless Technology).</td><td>Nos.</td><td>05</td><td>06</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S.N.</th><th>Vol</th><th>Page</th><th>Clause</th><th>Corrigendum and Addendum</th></tr>
<tr><td>18.</td><td>III</td><td>993</td><td>Part-1, Section IV, Price Bid, Section B, Price Schedule OM-MISC</td><td>
The following items of work have been added at the end of the Price Schedule OM-MISC.
<table>
<tr><th rowspan="2">Item No.</th><th rowspan="2">Description</th><th rowspan="2">Unit</th><th rowspan="2">Quantity</th><th colspan="2">Rate</th><th colspan="2">Amount</th></tr>
<tr><th>Local</th><th>Foreign</th><th>Local</th><th>Foreign</th></tr>
<tr><td>6.0</td><td>O&M of Additional House Connections beyond 5% limit for Customer Services (meter reading and others as specified in the contract) during post-construction O&M period.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.1</td><td>1st Year</td><td>No.</td><td>1100</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.2</td><td>2nd Year</td><td>No.</td><td>2200</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.3</td><td>3rd Year</td><td>No.</td><td>3300</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.4</td><td>4th Year</td><td>No.</td><td>4400</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.5</td><td>5th Year</td><td>No.</td><td>5500</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.6</td><td>6th Year</td><td>No.</td><td>6600</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.7</td><td>7th Year</td><td>No.</td><td>7700</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.8</td><td>8th Year</td><td>No.</td><td>8800</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.9</td><td>9th Year</td><td>No.</td><td>9900</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6.10</td><td>10th Year</td><td>No.</td><td>11000</td><td></td><td></td><td></td><td></td></tr>
</table>
The payment for this item will be made for actual number of house connections on prorata basis for the respective year.
</td></tr>
<tr><td>19.</td><td>IV</td><td></td><td></td><td>
The following additions of drawings are made in the Volume IV of Bid Document. Provided as Annexure 1.
1. Jhandewalan Pumping Station- SLD for 11 KV/ 415V Main Electrical panel. Drawing No. P-225-324-E-SLD-002
However, in the drawing, pumps head value 30m, 30m, 16m & 16m may be read as 35m, 35m, 21m & 21m respectively.
2. Proposed Layout and Section of UGR & Pump House at Jhandewalan. Drawing No. P-225-323-M-UGR-JHW-001 (Revision R1)- Sheet 1 of 2
3. Proposed Layout and Section of UGR & Pump House at Jhandewalan. Drawing No. P-225-323-M-UGR-JHW-001 (Revision R1)- Sheet 2 of 2
</td></tr>
</table>

JICA Assisted Delhi Water Supply Improvement Project in Chandrawal WTP Command Area (ID-P225)

REPLIES TOPRE-BID QUERIES

PACKAGE 3 (CENTRAL)

Name of the Work : Improvement of Water Supply System including operation and maintenance of Transmission &Distribution pipes, Pumping stations, Service connections and consumer meters with DMA formation and NRW reduction in Chandrawal WTP Command Area (Package 3: Central Zone).

NIT Number and Date : NIT No. 02 (2021-22)/EE (EAP)-Idated20.04.2021

S.N.	VOLUME /SECTION	CLAUSE	PAGE	SUBJECT	CLARIFICATION REQUIRED	DJB'S REPLY
1.	Volume-I	ITB 19.3	19	Bid Security	As per Section 1, Instruction to Bidders Cl. 19.2 (c) Bid Security can be in the form of "a cashier's or certified check". We presume that FDR (Fixed Deposit Receipt) will be accepted against bid security. Kindly confirm.	No, Fixed Deposit Receipt (FDR) is not acceptable against Bid Security.
2.	Volume-II	Section VI, A. Scope of Work, Sub Section-2, Clause no. 3	198	UGR	As per Clause no. 3, At UGRs locations, rehabilitation of UGRs and associated works of roads, drainage, landscaping, fencing and lighting at the site area is in the scope of the bidder. But, as per our site visit, it is observed that drains are not available in most of the locations. We presume that it is not required to construct new drains wherever it is not exist.	Rehabilitation also includes for new construction of these works as required as per site condition.
3.	Volume-II	Section VI, A. Scope of Work, Sub Section-5, Clause no. 5.2.2	232	Hindu Rao UGR	Rehabilitation work shall be done, while maintaining the continuous water supply at Hindu Rao UGR. To meet these criteria, additional chamber is to be constructed. As per the site condition, additional space is not available. Kindly review and suggest.	Additional space for construction of temporary sump may be explored near OHT, otherwise put up online booster for by-passing the UGR
4.	Volume- 2	Part 2, Section VI, A Scope of work, Sub-section 5, Scope of UGRs and	235-236	Proposed UGR details	BOQ UGRs capacities of Cantt Palam, Talkatora, Hasanpur and Hindu Rao are not matching with the capacities indicated in drawings.	The capacities mentioned in the drawing are indicative only. The capacities mentioned in

S.N.	VOLUME /SECTION	CLAUSE	PAGE	SUBJECT	CLARIFICATION REQUIRED	DJB'S REPLY
	Volume-3	BPSS Civil Works, Part-1, Section-IV, Price Bid, Section B, Price Schedules S. No. iv, (CW-DB-C), Item No. 1.6 to 1.10	922			the BOQ (Price Schedule) shall be considered.
5.	Volume II	Section VI Part D, O&M works, Sub-Section-1, Clause no. 1.4	797	Modality of O&M Contract and Payment	We understand that electricity charges will be paid by the Employer for Operator's establishments such as offices for doing O&M on behalf of client and call centers etc. Please confirm. We understand that electricity charges Operator's O&M Office will be paid by DJB. Since in the STP/WTP plants this practice is already established. Please suggest.	Refer to C&A No. 3, Sr. No. 12.
6.	Volume-II	Section-VI, D. O&M Works, Subsection-1, Clause no. 1.12 & 1.13	812-814	Minimum Staff to be deployed for O&M for Civil and E & M Works Division	Further, as per the clause 1.12 & 1.13 (Page 812 to 814) of volume II, the minimum O&M manpower during construction phase is 436 numbers & post construction phase is 355 numbers. In our considered opinion and based on our assessment, the project can be operated efficiently with relatively less manpower. Hence, we request you to make this minimum number of staffs mentioned above as indicative and kindly allow the contractor to deploy the required number of staffs based on their assessment for smooth & proper functioning of O&M.	As per Bid documents.
7.	Volume II	Section VI Part D, O&M works, Sub-Section-1, Clause no. 1.12	812	Minimum Staff to be deployed for O&M	The Manpower mentioned in the tender is not sufficient for O&M., we request you to please add following MANDPOWER as mandatory Project Manager Hydraulic Engineer GIS Engineer NRW Manager Customer Service Asst Manager	As per Bid documents.

S.N.	VOLUME /SECTION	CLAUSE	PAGE	SUBJECT	CLARIFICATION REQUIRED	DJB'S REPLY
					Store In-charge Store Assistants – 1 no. Admin Staff – 2 no. Office Assistants – 2 no. Water Tanker Supervisor – 1 per 4 command areas Billing Data Compiler New Connection Engineers – 2 no. Legal Compliance Staff – 2 nos. Zonal Supervisors (1 per 8 DMAs) H&S Engineers – 2 nos. Meter Testing Engineer – 1 per 50000 meters	
					Apart from the Manpower mentioned in the tender, we request you to please add following positions which are necessary for the implementation of the project on a long term. 1. Project Manager 2. NRW Manager 3. Hydraulic Engineer 4. GIS Engineer 5. Customer Service Asst Manager 6. Store In-charge 7. Store Assistants – 2 no. 8. Billing Data Coordinator 9. New Connection Engineers – 2 no. 10. Legal Compliance Staff – 2 nos. 11. Zonal Supervisors (1 per 7-8 DMAs) 12. H&S Engineers – 3 nos. 13. Meter Testing Engineer – 1 per 30000 meters 14. Water Tanker Supervisor – 1 per 3-4 command areas 15. Admin Staff – 1 no. 16. Office Assistants – 1 no. Please add the same in mandatory manpower requirements.	
8.	Volume-II	Section-VI, D.	827-	Key	As per sub section II of volume II (Page 827-838), there is	As per Bid documents.

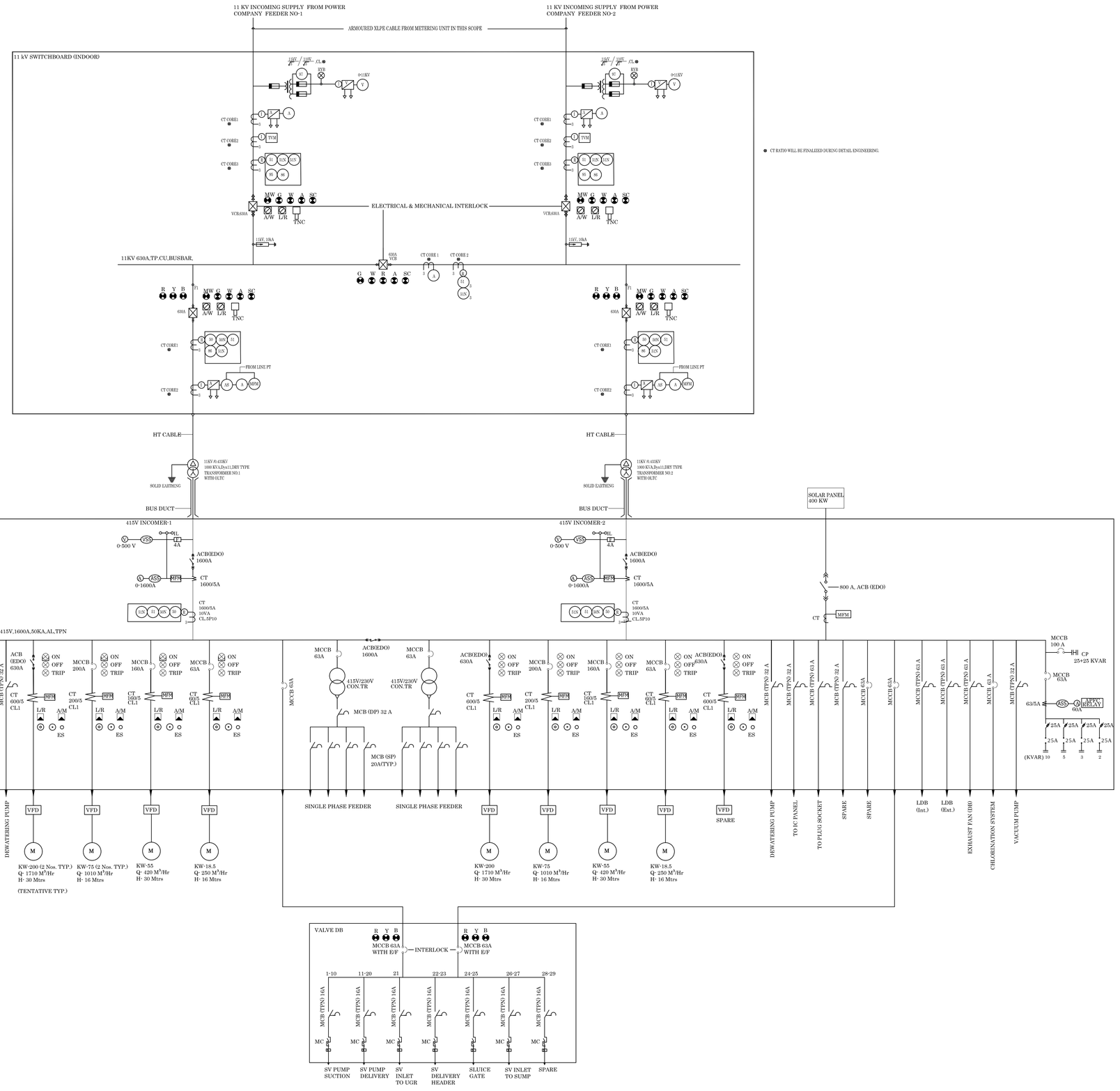
S.N.	VOLUME /SECTION	CLAUSE	PAGE	SUBJECT	CLARIFICATION REQUIRED	DJB'S REPLY
		O&M Works, Subsection-2, Clause no. 1.12 & 1.13	828	Performance indicator for Distribution system O&M	no mention about maximum compensation payable by contractor during O&M towards non-achievement of KPIs. Hence, we request you to limit the maximum compensation to 10% of accepted O&M price as being followed in tenders across India. The above request was accepted during the first call of this project (Reference: Sl. No. 1 Corrigendum No. 9 dated 02.07.2019)	
9.	Volume III	Part 1, Section-IV, Schedule of Price Adjustment Data, Table A, Part C	848	Operation and Maintenance	As per the schedule of price adjustment data, the weightage for labour component is given as 40%. Generally, projects of this nature are labour intensive and it contributes to almost more than 75% of the total O&M cost. Hence, we request you to increase the weightage accordingly which will help us to submit a better techno-commercial proposal & will ease the process of finalization.	Refer C&A no. 3, S. No. 11
10.	Volume III	Part 1, Section-IV, BOQ, A. Preamble , S.No.19	854	BOQ-O&M Works	The O&M cost is to be quoted as Lump Sum. However, in practice, any increase in the number of connections actually found will considerably increase the variable part of O&M cost. Therefore, we request you to clarify how this additional cost will be compensated to the Contractor if the number of connections actually found is more than the number of connections indicated in the BoQ.	Refer to C&A no. 3, S. No. 18
11.	Volume-III	Section-IV, Part 1, Price Bid, Section B- Price Schedules, CW-DP, BOQ item no. 4.3	894	BOQ	As per the Distribution BOQ item no. 4.3, precast reinforced cement concrete in vertical & horizontal fins are provided. Kindly provide the drawing and specify where it will be used?	This item is generally used in hanging portion of chajjahs or parapet walls and will be paid as per requirement at site.
12.	Volume-III	Section-IV, Part 1, Price Bid, Section B- Price Schedules, CW-DP, BOQ item no. 4.8	896	BOQ	As per the Distribution BOQ item no. 4.8, precast reinforced cement concrete waffle units are provided. Kindly provide the drawing and specify where it will be used?	This item will use for construction of precast units for laying of 100mm dia DI pipes in narrow lanes and will be paid as per requirement at site.

S.N.	VOLUME /SECTION	CLAUSE	PAGE	SUBJECT	CLARIFICATION REQUIRED	DJB'S REPLY
13.	Corrigendum & Addendum No 2	Part 2, Section-VI, D O&M Services Sub—section 2, Clause 2.3	Sr. No. 31		The corrigendum issued for shortfall in demand is not clear. It is mentioned that KPIs will be only deemed to be achieved proportionately with reference to the volume of water actually supplied. Our understanding is that, for example, if water supplied is only 50% of the guaranteed quantity, then the KPIs would also be deemed to be proportionately met i.e. 50% even though it is not Contractor's default. Kindly clarify / modify the response accordingly.	The contractor shall establish the net quantity and pressure heads that can be available in each DMA under various supply conditions (quantity of water released) from WTP by running the hydraulic model. Such data will be taken as target value for KPI purpose. The meaning of pro-rata is to consider the reduced value of water quantity and pressure head as the target value.
14.	Corrigendum and Addendum no. 2	Section-IV, Price Bid, Section B- Price Schedules, Item no. 1.6 (CW-DB-C)	SI. No. 39-41		In the addendum it is mentioned as "add" regarding capacities. For example Package-3, SI. No. 39, it is mentioned as 'add 21.79 ML' capacity. In original BOQ it is mentioned as 11.80 ML. Hence we presume that 11.80 ML has to be replaced to 21.79 ML. Kindly confirm.	Refer to C&A no. 3, S. No. 13
15.	General				Please confirm that the building to be used for O&M office and Customer Service activities will be provided by DJB free of cost to the Contractor.	This is provided as BOQ item under Price Schedule CW-G. (Refer to C&A no. 3, S. No. 12)
16.	General				3% PG for O&M has to be submitted. We once again request you to allow us to submit PG O&M for annual O&M value or Net present Value of total O&M value.	As per Bid Documents.
17.	General				We presume that existing pipeline will not be disturbed till the completion of new pipeline. If it is disturbed, supply of water to affected areas will be in the scope of DJB. Kindly confirm.	As per bid documents

S.N.	VOLUME /SECTION	CLAUSE	PAGE	SUBJECT	CLARIFICATION REQUIRED	DJB'S REPLY
18.	General				At UGRS & BPS locations, demolition and disposal, transportation and stacking at places designated by DJB is given as LS. Kindly specify the lead for the disposal of the material.	As per Bid document and C&A No. 2.
19.	General				We request you to allow us to submit the printed price bids in the excel file provided by you instead of writing in the Hard copy for bid submission.	Price Bids printed separately but duly signed and sealed can be submitted along with the original price bid (blank) put in the same envelope.
20.	General			Extension of Bid Submission Date	We request you to provide minimum 2 weeks of time for bid submission.	Refer letter of issue for C&A No. 3

Package 3 **NIT No. 02(2021-22)/EE(EAP)-I**

ANNEXURE-1



LEGEND:

S. NO.	SYMBOL	NAME
1.		TRANSFORMER
2		VCB
3.		CT
4.		ACB
5.	M	MOTOR
6.	F	FUSE
7.		MCB
8.		MCCB
9.	VSS	VOLT SELECTOR SWITCH
10.	ASS	AMP SELECTOR SWITCH
11.	A	DIGITAL AMP METER
12.	V	DIGITAL VOLT METER
13.	MFM	MULTI FUNCTION METER WITH RS 485 PORT
14.	CP	CAPACITOR
15.	IL	INDICATING LAMP
16.	SFU	SWITCH FUSE UNIT
17.		CONTACTOR
18.		PUSH BUTTON
19.	M	METER
20.	VFD	VARIABLE FREQUENCY DRIVE
21.	51	AC INVERSE DEFINITE MINIMUM TIME OVERCORRECT RELAY
22.	51N	INVERSE DEFINITE MINIMUM TIME EARTH FAULT RELAY
23.	27	PT FUSE FAILURE RELAY
24.	50N	INSTANTANEOUS EARTH FAULT RELAY
25.	50	INSTANTANEOUS OVERCORRECT RELAY
26.	94	MASTER TRIP RELAY
27.	WTI	WINDING TEMPERATURE INDICATOR ALARM & TRIP ALARM & TRIP
28.	AW	MILKY WHITE - TRIP CIRCUIT HEALTHY
29.		GREEN - OPEN POSITION
30.	MT	MASTER TRIP RELAY
31.		AMBER-AUTO TRIP
32.	SC	SPRING CHARGING
33.	OLTC	ON LOAD TAP CHANGER

NOTE:-

1. CAPACITY OF EACH EQUIPMENT IS TENTATIVE.
2. CABLE SIZING SHALL BE AS PER LOAD REQUIREMENT.
3. THE DRAWING IS ONLY FOR TENDER PURPOSES.
4. FEEDER FROM THE MAIN PANEL SHALL TERMINATE ON EITHER SIDE OF THE BUS COUPLER IN EACH PROCESS UNIT.
5. THE IMPROVEMENT POWER FACTOR IS BASED ON 0.8 LAGGING TO 0.98 LAGGING.
6. CAPACITOR BANK ARE TO BE DEPLOYED WITH THE MAIN BUS BAR ON PANEL .
7. ALL RELAYS PROVIDED ARE NUMERICAL MICRO-PROCESSOR BASED ONLY.
8. ALL METERS PROVIDED ARE DIGITAL TYPE ONLY.
9. APFC PANEL TO HAVE CAPACITOR DUTY COMPONENTS ONLY.
10. MCCB FOR MAIN PUMP SET SHALL BE WITH MICRO -PROCESSOR BASED RELEASE WHILE OTHERS ARE WITH THERMAL MAGNETIC RELEASE .
11. ALL VCB's PROVIDED ARE WITH MICRO PROCESSOR BASED CONTROL RELEASED FOR OVER CURRENT, SHORT CIRCUIT & EARTH FAULT WITH TIME DELAY.
12. ALL EQUIPMENT ARE SUITABLE FOR AUTOMATION SCADA .
13. FOR REASONS OF CLARITY ONLY MAJOR COMPONENTS SHOWN IN THE DRAWING.
14. HV PANEL SHALL BE PROVIDED WITH POWER PACK.

REV	REVISION DESCRIPTION	DRAWN	DATE	CHECK'D	APPD.
RO	DRAFT DPR	RKS	14.08.15	BS/NAOI	CK

PROJECT

JICA ASSISTED DELHI WATER SUPPLY IMPROVEMENT PROJECT IN CHANDRAWAL WTP COMMAND AREA (ID-P225)

CLIENT

DELHI JAL BOARD

CONSULTANTS

- TOKYO ENGINEERING CONSULTANTS CO. LTD. - JAPAN
LEAD CONSULTANT IN ASSOCIATION WITH
- EGIS EAU - FRANCE
- STUP CONSULTANTS PVT. LTD.-INDIA
- TATA CONSULTING ENGINEERS LTD. - INDIA
- EGIS INDIA CONSULTING ENGINEERS PVT. LTD. - INDIA

PACKAGE-3

Improvement of Water Supply System including Transmission and Distribution Pipes, Pumping Stations & Service Connections with DMA formation and NRW Reduction in Chandrawal WTP Command Area (Package 3 - Central)

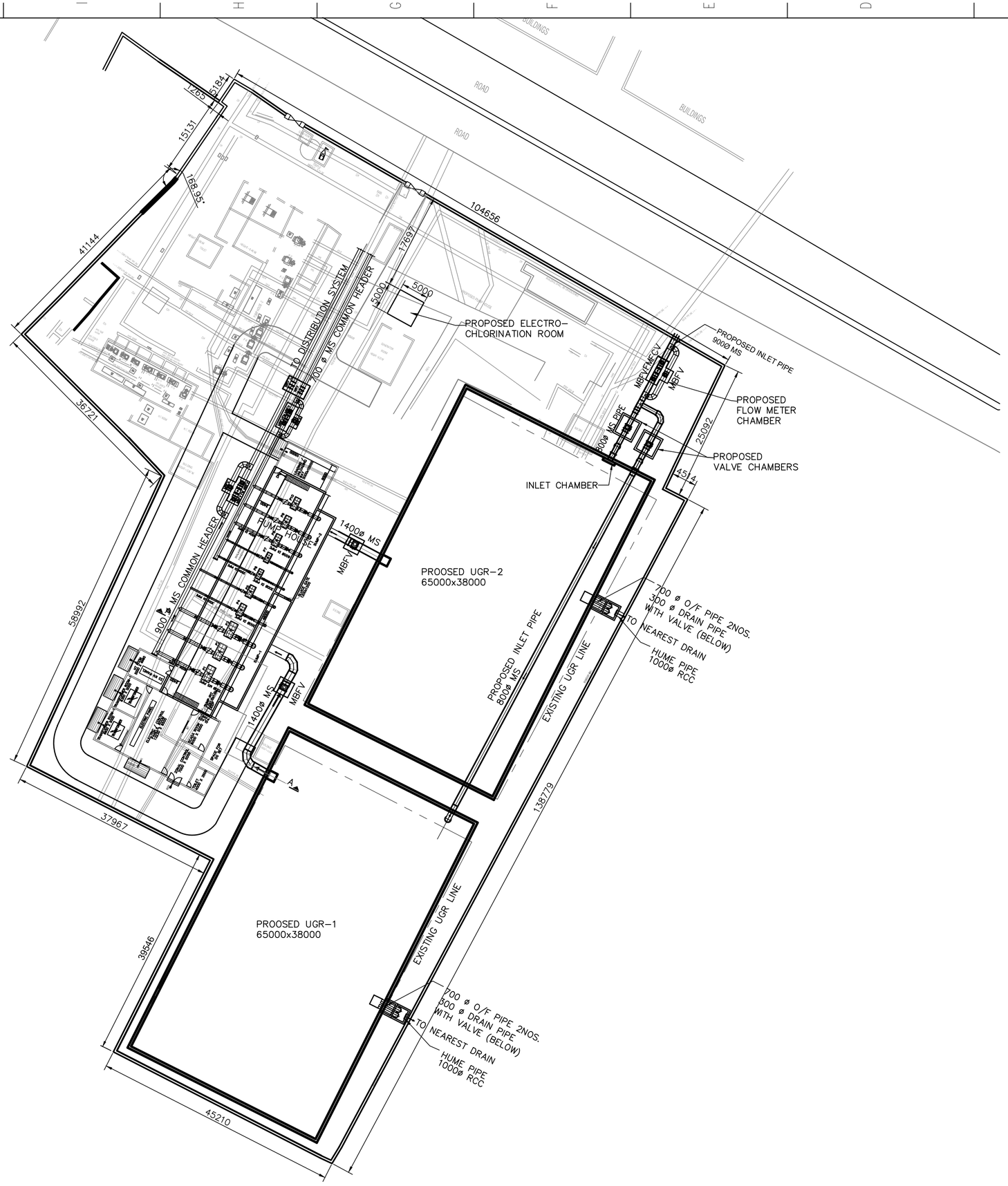
TITLE

JHANDAWALAN PUMPING STATION SLD FOR 11KV / 415V MAIN ELECTRICAL PANEL

SCALE	DRAWN	CHECKED	APPROVED	S.SIZE
1:1100	BBD	MG/NAOI	CK	A1
	DATE 09.09.16	DATE 09.09.16	DATE 09.09.16	

DRAWING NUMBER: P-225-324-E-SLD-002

REV: R1



NOTES:-

1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS.
2. PIPE SIZES ARE IN MM.
3. DIMENSIONS ARE TENTATIVE & FOR TENDER PURPOSE ONLY, IF NOT SPECIFIED OTHERWISE.
4. VALVES, PIPES SHALL BE SUITABLY SUPPORTED.
5. EFFECTIVE DESIGN CAPACITY SHALL BE VOLUME OF WATER FROM MWL TO TWL EXCLUDING VOLUME OF COLUMN INSIDE UGR
6. SUITABLE APPROACH TO UGR ROOF & INSIDE UGR SHALL BE PROVIDED.
7. DISMANTLING JOINT TO BE PROVIDED WITH VALVES.

LEGENDS:-

1. EXISTING STRUCTURE ——·——·——
2. MWL---------- MINIMUM WATER LEVEL
3. TWL---------- TOP WATER LEVEL

MINIMUM CARPET AREA OF FACILITY

HT. ROOM	34m²
TRANSFORMER ROOM	65m²
ELECTRIC/ CONTROL PANEL ROOM	113m²
ZONAL CONTROL ROOM	35m²
SCADA ROOM	30m²
TOILET	14m²
CHLORINATION ROOM	25m²

FOR TENDER PURPOSE ONLY

REV	REVISION DESCRIPTION	DRAWN	DATE	CHECK'D	APPD.
R1	FOR TENDER PURPOSE ONLY	RC	16.6.17	KH	SKM
R0	FOR DPR PURPOSE ONLY	BBS	9.9.16	MPS	SKV/VKS

PROJECT
JICA ASSISTED DELHI WATER SUPPLY IMPROVEMENT PROJECT IN CHANDRAWAL WTP COMMAND AREA (ID-P225)

CLIENT
DELHI JAL BOARD

CONSULTANTS
- TOKYO ENGINEERING CONSULTANTS CO. LTD., - JAPAN (LEAD CONSULTANT) IN ASSOCIATION WITH
- EGIS EAU - FRANCE
- STUP CONSULTANTS PVT. LTD. - INDIA
- TATA CONSULTING ENGINEERS LTD. - INDIA
- EGIS INDIA CONSULTING ENGINEERS PVT. LTD. - INDIA

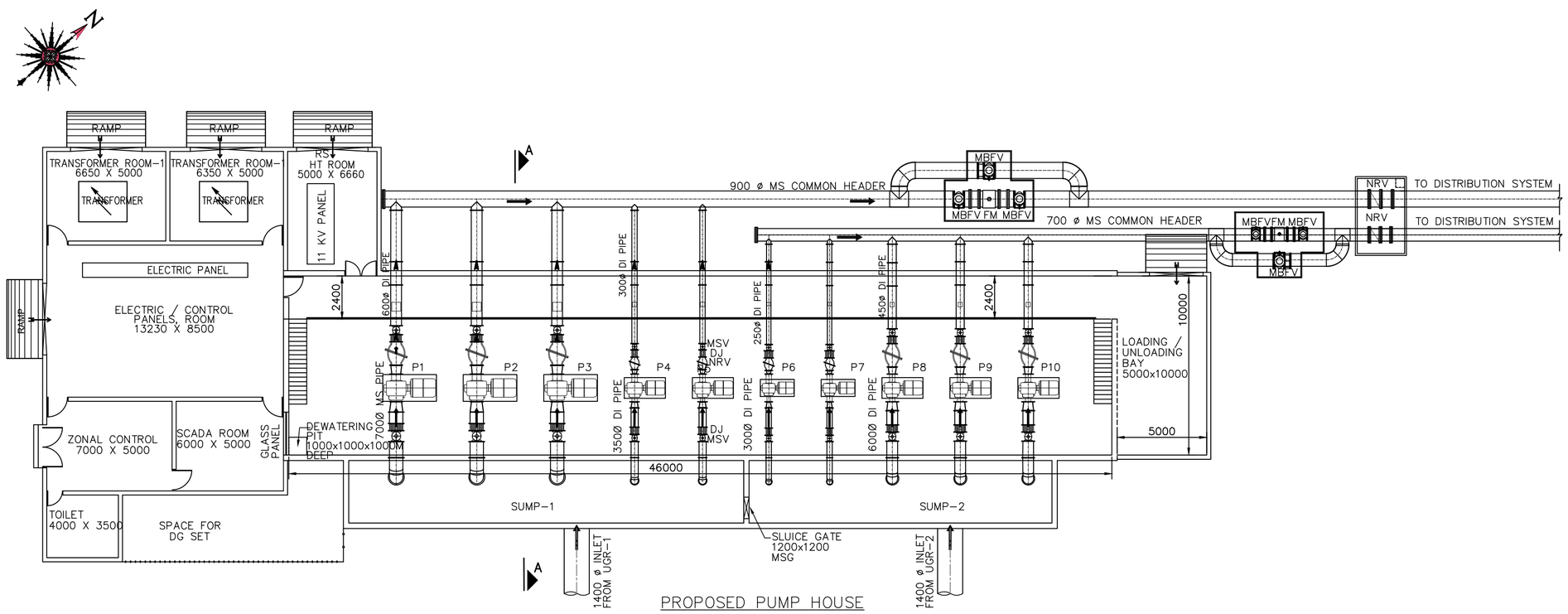
PACKAGE-3
Improvement of Water Supply System including Transmission and Distribution Pipes, Pumping Stations & Service Connections with DMA formation and NRW Reduction in Chandrawal WTP Command Area (Package - 3 Central)

TITLE
PROPOSED LAYOUT & SECTION OF UGR & PUMP HOUSE AT JHANDEWALAN

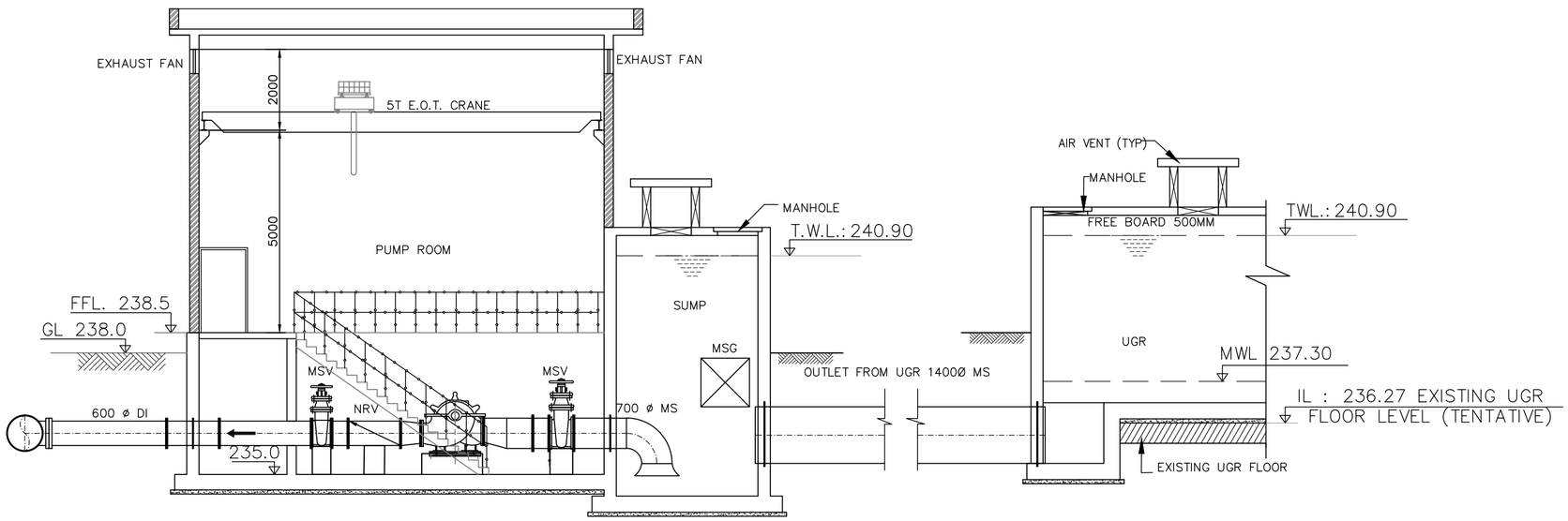
SCALE	DRAWN	CHECKED	APPROVED	S.SIZE
	BBS	MPS	SKV/VKS	A2
	DATE. 9.9.16	DATE 9.9.16	DATE 9.9.16	

DRAWING NUMBER P-225-323-M-UGR-JHW-001 SHT. 1 OF 2 — REV R1

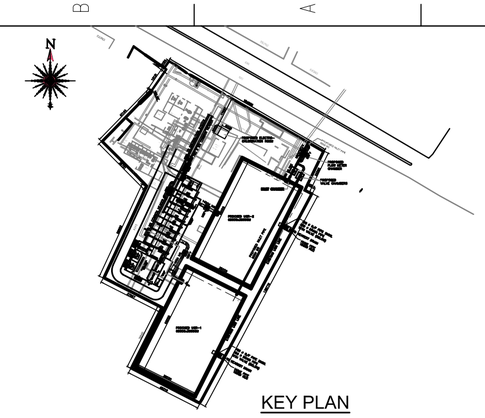
A2



PROPOSED PUMP HOUSE



TYP. CROSS SECTION A–A



KEY PLAN

NOTES:-

1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS.
2. PIPE SIZES ARE IN MM.
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LEGENDS:-

1. EXISTING STRUCTURE ——--——--——
2. MWL---------- MINIMUM WATER LEVEL
3. TWL---------- TOP WATER LEVEL

PROPOSED UGR DETAILS

MIN. EFFECTIVE DESIGN CAPACITY	17.4ML
MWL–RL (MANDATORY)	237.30
TWL–RL	240.90
FREE BOARD	500MM
INLET PIPE & VALVE DIA	900ø
OUTLET PIPE & VALVE DIA	1400ø
DRAIN PIPE	300ø
OVERFLOW PIPE	700ø 2NOS.

FOR TENDER PURPOSE ONLY

REV	REVISION DESCRIPTION	DRAWN	DATE	CHECK'D	APPD.
R1	FOR TENDER PURPOSE ONLY	RC	16.6.17	KH	SKM
R0	FOR DPR PURPOSE ONLY	BBS	9.9.16	MPS	SKV/VKS

PROJECT

JICA ASSISTED DELHI WATER SUPPLY IMPROVEMENT PROJECT IN CHANDRAWAL WTP COMMAND AREA (ID-P225)

CLIENT

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PACKAGE-3

Improvement of Water Supply System including Transmission and Distribution Pipes, Pumping Stations & Service Connections with DMA formation and NRW Reduction in Chandrawal WTP Command Area (Package - 3 Central)

TITLE

PROPOSED LAYOUT & SECTION OF UGR & PUMP HOUSE AT JHANDEWALAN

SCALE	DRAWN	CHECKED	APPROVED	S.SIZE
	BBS	MPS	SKV/VKS	A2
	DATE 9.9.16	DATE 9.9.16	DATE 9.9.16	

DRAWING NUMBER P–225–323–M–PS–JHW–001 SHT. 2 OF 2 — REV R1

A2