

Date: 20 February 2020

**Pre-bid Meeting Minutes/ Addendum No. 2**

**PAL 10-00047395: Construction of Khan Younis Waste Water Treatment Plant (KY WWTP)**

**ITB-PAL-0000089780: Rehabilitation of Pumping Stations No. 08, 03 and 02 in Khan Younis for KY WWTP**

ITB PAL-0000089780: Rehabilitation of Pumping Stations No. 08, 03 and 02 in Khan Younis for KY WWTP

Issue Date: 3 February 2020

Initial Bids Submission Date: 24 February 2020 @ 5:00 AM EST – (12:00 hr - Jerusalem Time)

Extended Bids Submission Date: 2 March 2020 @ 5:00AM EST – (12:00 hr - Jerusalem Time)

Dear Bidders,

A pre-bid meeting was organized at UNDP/PAPP Gaza Office on 10 February 2020 @ 10:00hr (Jerusalem Time).

A site visit was conducted to the pumping stations no. 08, 03 and 02 and the infiltration basins' sites in Khan Younis area on 10 February 2020 at 12:30hr (Jerusalem Time)

Below are clarifications and answers to the bidders' enquiries raised before, during and after the pre-bid meeting and the site visit.

This "Pre-bid Meeting Minutes" is considered as addendum No. 2 to the ITB-PAL-0000089780, which shall be deemed to form, be read as part of the tender.

1. All bidders shall submit within their bids all documents and evidences required to establishing bidder's eligibility and qualifications as mentioned in the Invitation to Bid (ITB).
2. All bidders shall submit their bids comprising all the documents and related forms as mentioned detailed in the pertinent sections of the ITB.
3. All bidders shall furnish and submit within their bids actual price analysis/ cost breakdown for all items of the Bill of Quantities with details as given in the last clause of section 4 of the ITB and as requested by UNDP.
4. The contractor shall take into account in his costing importing all construction materials, equipment and goods according to CLA, GRM and any applicable procedures. The contractor shall be fully responsible for coordinating the access of the construction materials, equipment and goods to the Gaza Strip with the Israeli concerned authorities. The Contractor shall be responsible for obtaining the required permits, licenses and approvals from the competent authorities and for accessing the construction materials, Yakubi St., Jerusalem, 91191, P.O. Box: 51359 Tel: (972 2) 626 8200 Fax: (972 2) 626 8222www.undp.ps

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- equipment and goods into the Gaza Strip and no claim whatsoever will be accepted by UNDP for costs that may be incurred in obtaining the permits, licenses and approvals and in accessing the construction materials, equipment and goods into the Gaza Strip. The contractor shall inform UNDP in-advance about the dates of receiving the construction materials, equipment and goods at Gaza/Rafah crossings to be inspected by the UNDP's access team.
5. The contractor shall submit a signed and stamped commitment to preserve the material within the site or factories. In case of any violations or misuse of accessed dual use materials, UNDP without prejudice will terminate the contract and the contractor will be excluded from involvement in UNDP projects in the future.
  6. The contractor shall be fully responsible and bear all costs for storing, preserving and protecting the supplied materials inside Israel and Gaza including harbors, factories and on-site. The contractor shall be responsible for any damages that may occur to the material in the stores or on-site.
  7. If the contractor fails to secure and access the construction materials, equipment and goods into Gaza, UNDP has the right to terminate the contract without bearing any financial implications.
  8. The contractor shall take into account in his costing paying for one fresh engineer, with three years' experience, an amount of USD 750 per month, for the time for completion of the works. The engineer will be appointed by the Employer and reporting directly to the Employer to support managing the materials accessed through the UNDP mechanism. The contractor shall also take into account in his costing paying for one engineer from CMWU an amount of USD 750 per month, for the time for completion of the works. The CMWU engineer will be appointed by CMWU for UNDP approval and reporting directly to UNDP Engineer to support the on-site construction supervision of the rehabilitation of pumping stations no. 08, 03 and 02 project through the UNDP mechanism.
  9. The contractor shall make available at the commencement date of the works, maintain, repair, and keep in sound, safe running condition one vehicle for the sole use of the Employer (engine capacities not less than 1600CC-model 2016 or higher). The vehicles shall be complete with spare parts, tools and the like. The contractor shall provide all necessary materials including fuel (1,400 NIS /month) and lubrication. The contractor shall keep the vehicle insured during the contract period under a fully comprehensive motor insurance policy issued by a reputable insurance company. Both the policy and the insurer will be subject to the approval of Employer. The vehicles shall be kept permanently at the disposal of the Engineer and the Employer. During periods of maintenance or repair, the contractor shall make an equivalent replacement vehicle available. Upon completion or termination of the contract, the vehicle will remain the property of the contractor.
  10. The Works are tax exempted. VAT shall not appear in the invoices. Referring to section 5 in the ITB, Local Context, the bid price under this contract shall include all charges and any other expenses, may be paid by the contractor or their local subcontractors to all official authorities. The contractor may register his company for this project in the State of Palestine either in Gaza or West Bank or both. Local subcontractors will not have a direct

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- contract with UNDP. UNDP will provide the contractor with the VAT exemption certificates for the project issued by the Ministry of Finance in Ramallah for KY WWTP project, and with the VAT exemption certificate for the project issued by the Ministry of Finance in Gaza for KY WWTP project. It is the responsibility of the contractor to obtain the donation numbers and to reimburse the VAT and any taxes from the Ministry of Finance and any concerned authorities and no claim whatsoever shall be entertained in respect thereof.
11. The unit rates/prices of the Bill of Quantities shall include any bank charges incurred due to payments transfer.
  12. The contractor shall put in place a safety and security plan and take all reasonable precautions to maintain the safety and security of its personnel and property, taking into account the security situations in the Gaza Strip and the working area of the sites, and as required by the pertinent sections of the contract.
  13. The contractor shall consider gender equality when recruiting its technical staff.
  14. The contractors shall carry out at his expenses all investigations required to figure out the existing buildings, infrastructures, mechanical, electromechanical and electrical equipment and installations, public and private facilities at and along the underground and overhead sites and paths of the pumping stations 08, 03 and 02 and the infiltration basins. The contractor shall take all his precautions during the implementation of all works, including excavation for foundations, pipes, manholes and thrust blocks, so that these existing buildings, infrastructures, equipment, installations and facilities are not affected. The contractor shall remedy any damages occurred to these existing buildings, infrastructures, equipment, installations and facilities at his own expenses.
  15. Before starting any work, the contractor shall prepare and provide for the Engineer's approval detailed shop drawings for all civil, mechanical and electrical works to be implemented and installed in pumping stations no. 08, 03 and 02 and the infiltration basins.
  16. The contractor shall take into account in his costing the backfilling of any excavated trenches, around foundations, manholes and storm water collection manholes by using clean sand.
  17. The contractor shall carry out different concrete job mixes for each type of concrete required to be casted for the project to achieve the requirements of the technical specifications. The costs for the tests are deemed to have been included in the unit rates/prices of the Bill of Quantities. If the cube results at 28 days is less than the nominated strength, the relevant casted items shall be removed and re-casted at the expenses of the contractor.
  18. The contractor shall carefully collect from the sites any dismantled materials including equipment, machines, mechanical and electrical parts, manifolds, pipes, valves, fittings, thrust blocks, tiles, base coarse and interlock and transfer them to the municipality warehouses, or as instructed by the Engineer, at the contractor's expenses.
  19. Surplus excavated materials, debris, sand, sludge and any other materials arising from the works or cleaning the wet wells and alike shall be evacuated and dumped on agreed

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disposal sites at any distance far from the construction site within the Gaza Strip and as directed by the Engineer at the expenses of the contractor. The contractor shall coordinate with the concerned authorities to define designated sites for dumping these materials. The contractor is responsible for making any special arrangements and agreeing upon any required fees for the dumping sites with the concerned authorities. The contractor is responsible for transporting all these materials, debris sand, sludge, etc. to the agreed disposal sites using his own machinery.

20. The contractor shall submit as built drawings as required in the pertinent sections of the contract. In addition, the contractor shall provide certified GIS survey for all project elements taking into consideration the following:

- Surveying should be accomplished using accurate GPS receivers or total station.
- All project elements should have x,y,z coordinates along with attribute information.
- The attribute information will be identified in coordination with project owner and the Employer.
- The coordinates should be referenced to the coordinate system adopted by the relevant local authorities.
- All surveying works should conform to the accuracy standards adopted by the relevant local authorities and UNDP.
- Two formats of measurements should be submitted: one in AutoCAD format (\*.dwg) and another in GIS format (ArcGIS Geodatabase \*.gdb).

21. The contractor shall coordinate and make all necessary arrangements with all concerned parties such as municipalities, authorities, ministries, Pal Tel, GEDCO, etc. for the proper and on-time implementation of the works in the pumping stations no. 08, 03 and 02 and the infiltration basins. The contractor shall be fully responsible for performing the works as per the contract and shall abide to local rules and norms at his expenses. UNDP will not bear any responsibility for such arrangements.

22. The contractor shall keep and maintain full and close liaison and cooperation with the contractors who are implementing the different packages of KY WWTP, especially the international and local contractors who are implementing the treatment plant package, through the construction, operation and maintenance stages.

23. The contractor shall take the written approval from the UNDP Engineer before starting the works for each stage in the project. The Engineer has the right to reject all works implemented by the contractor without the Engineer's approval.

24. **In section 4. Evaluation Criteria, Financial Standing**, all bidders shall submit within their bids proof of access to lines of credit via **an official unconditional bank credit letter** (An Official letter from bidder's bank certifying the actual approved credit facilities ceiling and balances of all active accounts within the bank) for **Liquid assets and/or credit facilities**, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, **of no less than USD400,000**.

**Any bidder who fails to submit such proof, via an official unconditional bank credit letter within his bid, will be considered ineligible and disqualified.**

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25. **In section 4. Evaluation Criteria, Previous Experience**, the bidder, as a Prime Contractor, has implemented at least (2) projects of similar value, nature and complexity implemented over the last (7) years (to comply with this requirement, works cited should be at least 80 percent complete) ;
- At least one of the implemented similar projects, over the past five (7) years, should be of a contract value not less than **USD 250,000**
26. All bidders shall submit within their bids, written power of attorney, authorizing the signatory of the bid to commit the Bidder.
27. The bidders shall submit within their bids, catalogues for the pumps, pipes, surge tanks, valves and fittings to be used for the project.
28. The contractor shall be fully responsible for coordinating the access of the construction materials, equipment and goods to the Gaza Strip with the Israeli concerned authorities as mentioned in item 4 above.
29. As mentioned in the ITB, section 5 A, Local Context, the Contractor represents that it is aware of and has considered in its bid price, the security and local circumstances of the Gaza Strip, including without limitation closures of border crossings between the Gaza Strip and Israel, delays in custom procedures, delays in access for people, supplies and construction materials and equipment into the Gaza Strip, which could affect the progress of Works. The Contractor further represents that it has familiarized itself with these circumstances through the construction and maintenance stages of the works and has taken into account all the consequences that may arise due to these circumstances.
30. In items for pumps, equipment, machines, surge tank and valves in the BOQ, the unit prices shall include supplying, manufacturing, shipping, transporting, storing, handling and delivering to the work site and installing all required elbows and bends (vertical and horizontal), bolts, gaskets, fittings and accessories required for proper installation all according to the specifications, drawings, approved shop drawings and the Engineer's instructions.
31. **The contractor shall arrange for and pay the cost of visas, transport, flights tickets and accommodation of the UNDP's Personnel (or any representatives duly nominated by UNDP) for 4 persons for both sides, for 2 times to inspect at all places (outside the State of Palestine and Israel) the materials, pumps, surge tank, valves and fittings' manufacturing, storing, testing, packing and delivering facilities. All costs relevant to these inspections are deemed to have been included in the unit rates/prices of the Bill of Quantities. If the Contractor failed to arrange and allow for accomplishing these inspections on time, the due cost for doing such inspections will be deducted from the contractor's final payment.**
32. The contractor shall be aware that the pumping stations no. 08, 02 and 03 are currently under operation and the pumping out of the raw sewage shall not be stopped by the contractor by any means or for any reason for more than 4 hours; only during the lowest flow rate, in the 24/7. Therefore, the contractor shall take all necessary measures, make all necessary arrangements and consider in his pricing all associated costs required during

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- the implementation of the works to maintain the continuing of pumping out the raw sewage from these pumping stations and avoid any probability of flooding on them.
33. For the manifold installation in pumping station no. 08, the maximum hours allowed for installing, welding and erecting all pipes, valves, fittings and accessories and commissioning the new pumps and manifold are 48 hours and the contractor shall bear all financial implications resulted from the delay of pumping out the raw sewage from the pumping station no. 8 to KY WWTP.
  34. It is the contractor's responsibility to make the needed inspection for the type and size of the existing bases of the pumps in the wet wells in the pumping stations no. 08, 02 and 03 and to assure that the new pumps will be installed appropriately on these bases before delivering the new pumps.
  35. It is the sole responsibility of the contractor to evacuate and dump all sewage, sludge, water, sand and any unwanted materials from the working places during all stages of the inspection and implementation of the works in the pumping stations no. 08, 02 and 03. The contractor shall consider in his pricing all associated costs required for that, and shall coordinate with Khan Younis Municipality and concerned authorities for agreed disposal sites.
  36. For item 1.3.1 page 10 in the bill of quantities (BOQ), the contractor shall consider in his pricing supplying and installing a complete stainless steel 316L supporting holder made of profile 100\*100\*8 mm for carrying and fixing the pump guide holder with all needed bolts, nuts, anchors, fixing plate 10mm with all required fabrication works for the opening gates. The same is required for items 5.1 and 5.2 in page 26 and as per the attached detailed drawing included within this addendum No. 2.
  37. For item 5.7 in page 28 in the BOQ, the size of 3 concrete beams in the short direction of the wet well shall be increased to 70\*30 cm with increased steel reinforcement as per the detailed drawings for pumping station No 3 and the Engineer's approval. The unit price for this item shall include supplying and fixing steel anchoring for the new column with the existing walls.
  38. For item 5.7 in page 28 in the BOQ, the I beam I.P.E 220 type shall be modified to I.P.N 220 type, and required bolts shall be made of steel.
  39. For item 1.1.2 in page 4 in the BOQ, the conveyor is excluded from the maintenance works of the item.
  40. For item 1.3.4 in page 11 in the BOQ, the description for this item is replaced to the following: "Supply and install mobile container made from S.S 316L 4mm thick, 1.6 m3 free volume, 2 wheels trailer mounted, double cabinet with removable dewatering false floor (cabinet), heavy duty skid, screen free area around 20%, movable false floor, sealed container, movable hinged cover, side drain 4", gate valve 4", drainage hose 4", hooking systems, greaseable wheels, and all other necessary parts, fittings and grout needed for proper installation and operation of the container in the bar screen place, all as per engineer instructions and approval"



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41. For item 4.5.2 in page 25 in the BOQ, the details and specifications for the new shed are as described in this item of the BOQ.
42. For item 1.3.1 in page 10, items 5.1 and 5.2 in page 26 in the BOQ, the unit price shall include supplying the extra set of spare parts; as clarified in these items, **for each new supplied pump**. I.e. the number of the extra set of spare parts equals the number of the new supplied pumps. The contractor shall provide certificates of origin for all pumps and related spare parts.
43. The unit price shall also include supplying one additional impeller (just extra one impeller) within the supplied sets for each item. I.e. the total impellers to be supplied as spare parts for all the above-mentioned items are **10 impellers**.

Below are clarifications and answers to the bidders' enquiries:

No	Enquiries	Answers
1	Reference to item 5.3 in page 27 in the BOQ, kindly provide us with the following to be able to design and price the surge tank: 1- Complete force main pipe profile. 2- Pipe diameter and material. 3- Flow rate (1 pump, 2 pumps in operation, etc.) 4- Working pressure.	The length of the pressure pipe is 3,400 metres (the first portion of the discharge pipe is from Al Wafia pumping station no. 3 to Jamal Abed Al Naser street with around 300 metres and the pipe material is cement lined steel with 24" diameter and steel wall thickness 3/16 inch. The second portion is 3,100 metres and the pipe material is cement lined steel with 16 inch diameter and steel wall thickness 3/16 inch). The flow rate will be 600 m <sup>3</sup> /hr at 79 metres' head. Schematic diagram with profile for the discharge pipe of PS 3, along with some details for pumps connections & installations are given in annex 1. The contractor shall be responsible for the check and verification for these information and any other required information and data with Khan Younis Municipality and on site and shall be responsible for appropriate and proper design, installation and commissioning of the surge tank.
2	Reference to BOQ page No. 10 Item No. 1.3.1, and page No. 26 Item No. 5.1 & 5.2, please confirm that all pumps impellers mentioned in the items must be Nori-hard impellers and all the pumps must be supplied with original pump bases.	For item 1.3.1 in page 10, items 5.1 and 5.2 in page 26 in the BOQ, <b>all impellers of all new pumps and the impellers of the extra spare parts shall be of grey cast iron</b> . All new pumps shall be supplied complete with their original bases. As the type of the existing pumps is KSB, the type of the required new pumps shall be the same. The contractor shall

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		provide certificates of origin for all pumps and related spare parts.
3	Reference to BOQ page No. 9 Item No. 1.2.16, and page No. 30 Item No. 5.19, please advise the pressure rating of the flow meters, and for the electrical power and output signal is it must be (0-10 volt) and (4-20mA)? or not.	The pressure rating of the electromagnetic flowmeters shall be PN 16 bars.  The flowmeters shall be connected to the analogue input module in PLC panel.
4	Reference to BOQ page No. 26 Item No. 5.2 Is the price including spare parts?	Please refer to the clarification given in the above-mentioned point no. 42.
5	Reference to BOQ page No. 27 Item No. 5.3 Could you please provide us the required data for design the tank? the required data as the following * Profile pipeline * Flow rate (m3/h) * diameter and the type of the pipes (UPVC, steel, ductile) * Length of the pipeline for each diameter	Please refer to above mentioned answer given to enquiry no. 1.
6	Reference to BOQ page No. 29 Item No. 5.10 & 5.11 Is the spare parts required for the new supplied valves or for the existing valves?	The spare parts sets shall be supplied for existing valves.
7	Reference to BOQ page No. 31 Item No. 5.24 & 5.25 The items description "Supply and install D.I Socket Flanged" What did you mean D.I? is it ductile iron socket flanged? please confirm	The abbreviation of D.I stands for ductile iron.
8	Reference to BOQ page No. 7 Item No. 1.2.8, the item including connection the existing steel pipes 24" with proposed SS pipe, but in the tender drawings the existing pipe concrete, could you please check and advise?	The connection shall be between the new S.S 316L pipe manifold and the existing steel pressure pipe 24" dia. as mentioned in the BOQ.



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9	Reference to BOQ page No. 21 Item No. 4.3.10, please specify the required length of cable tray.	The required cable tray type is perforated cable tray with cover and different sizes including all accessories, which are required for the new cables installation inside electrical room for panels and outside in the field for (local isolated switch panels, electromagnetic flow meters, pressure switches, level sensors, electric valves, etc.).
10	Reference to BOQ Page 38, preamble item "supplying and installing PLC panel board", please clarify this item and specify dimensions of the panel and if it includes trenches or not	Refer to the new description of item No. 6.1 as mentioned in below table.
11	Reference to BOQ pages No. 20, 35 & 38 Items No. 6.1, 5.55 & 4.2.1 Please, specify exact number of digital inputs, digital outputs, analog inputs and analog outputs.	Refer to the new description of items 6.1, 5.55 and 4.2.1 mentioned in below table.
12	kindly we ask you if possible to postponed the deadline of submission of the offer another 7 days	Please refer to addendum No.1.
13	ITB data sheet point# 11 states that The Performance Security shall be valid until end of defects liability period (i.e. 12 months after the intended completion date) while the maintenance guarantee shall be valid until the end of the Warranty Period (one year after issuance of completion certificate). This means that both guarantees will be valid and running at the same time. Please clarify and kindly specify the exact duration for each guarantee.	Referring to BDS No 11, the Performance Security shall be valid until end of defects liability period (i.e. 12 months after the intended completion date). As per BDS No 12 UNDP will return to the Contractor the Performance Security after the Contractor furnishes to the UNDP a Maintenance Guarantee in an amount equal to (5%) of the Contract Price to be valid until the end of the Warranty Period.
14	ITB data sheet point # 22 states that the contract duration is 6 months while in section 5C, "Various Additional & Important Special Conditions", point# 3 states that the contract duration is 3 months. kindly confirm the exact contract duration.	The maximum expected duration of the contract is six (6) calendar months from the date of the commencement of work till handing over the project.

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15	Section 5C states that liability insurance to be by 15% of the contract price and shall be valid up to end of defects liability period (12months after intended completion date). Please confirm.	Confirmed
16	Item 1.2.11 for the 4" air release valve, please advise if it is acceptable to supply stainless steel air valve body with internal parts made out of materials suitable for sewage use.	For item 1.2.11 in the BOQ, the air release valve shall be complete stainless steel (316L) PN16 model: D-020 ARI type or equivalent for sewage as per specifications of ARI or equivalent.
17	Item 1.2. 11: Please advise if the tilting check valves with hydraulic damper is accepted or not.	For item No. 1.2.12 in the BOQ, the check valve shall be a counterweight type as specified in item in BOQ.
18	Item 1.2.19: What do you mean by TBS and kindly advise if it is acceptable to supply Stainless Steel Gate instead of HDPE.	For item No. 1.2.19 in the BOQ, the TBS stands for manufacturer brand name. The sluice gate seat shall be made from HDPE while all other parts shall be made from S.S 316L, and the shaft is solid.
19	Item 1.3.1: Please advise whether the spare parts, mentioned in the item description to be supplied, are required as one set for all 3 pumps or one set for each pump.	For item No. 1.3.1 in the BOQ, please refer to the clarification given in the above-mentioned point no. 42.
20	Item 1.3.2: the capacity of chain hoist 3200 KG is not standard. Please advise.	For item No. 1.3.2 in the BOQ, for STAR lift kit the lifting load of 3,200 kg is available, and for any other approved equivalent type, it shall be for a minimum load of 3,200 kg.
21	For item 5.3: -Please confirm the type of ARAA surge tank whether it is (Dip Tube) or (Air Pad). -kindly specify the volume of the surge tank. -Please advise if the design can be prepared locally and the manufacturing would be from abroad.	For item 5.3 in the BOQ, the dipping tube type for surge tank is confirmed. Please refer to above mentioned answer given to enquiry no. 1. The contractor shall be responsible for making appropriate and proper design, manufacturing, installation and commissioning of a complete and functional surge tank with proper volume required to control and safely protect the pumping system from water hammer phenomena during the operation.

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22	Please confirm that the Pump's impeller is gray cast iron as indicated in specifications Page 146.	Please refer to above mentioned answer given to enquiry no. 2.
23	Kindly extend the deadline of submission for another 2 weeks to allow for sufficient time to prepare the required documents.	Please refer to addendum No.1.

The following are clarifications and modifications for the electrical works items mentioned in the BOQ:

1. Item 5.29 in bill 5 of the BOQ: The price shall include dismantling and removing the existing panels, inverter, cable trays, cables and all other components from the existing wall inside the electrical room to prepare the place for the installation of the new MCC with all needed civil works and additional materials for proper fixing. In addition, the price shall include re-installing all previous components in other locations with all needed new materials and workmanship to complete the works and for proper operation and as per the instructions of the engineer.
2. Item 5.43 in bill 5 of the BOQ: The rating size of the By-Pass Contactor is DIL M400 or equivalent.
3. Item 5.44 in bill 5 of the BOQ: The rating size of 3-phase solid state starter is SOLCON RVS-DN 390A or equivalent.
4. Item 4.4.2 in bill 4 and item 5.56 in bill 5 of the BOQ: The items and the prices shall include supply, install and operate the electrical float switches and all associated components, parts, fittings, cables, etc. In addition, the works and the price shall include dismantling the existing float switches and all other old related materials and installations, if required, and transferring them to CMWU or stores.
5. Item 6.3 in bill 6 of the BOQ: The item and the price shall include supplying and installing 2-inch flexible pipe with all needed excavation and backfilling and reinstating the pavement as per the existing status.
6. Item 6.4 in bill 6 of the BOQ: The item and the price shall include supplying and installing UPVC pipe 4 inch to install the float inside it with all needed vertical and horizontal hot dip galvanized profiles and clamps with complete painting and concrete to fix the base of these profiles structure inside the basins. Each float shall include supplying and installing a connection box IP65 with terminals inside inlet room for control cable connections.
7. Item 1.2.16 in bill 4 and item 5.19 in bill 5 of the BOQ: The Electro Magnetic flow meter will be connected to the analogue input module in PLC panel.
8. Details drawing for Bill 6 for the infiltration basins is attached as annex 2.

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Bill No	Item	Previous Description	Modified Description
Bill 4	4.1.1	<p>(MCC Panel): Supply, install and commission the following and all required components related with new pump number No.4 (P4) inside the existing blank panel, factory assembled wired and tested, including bus bars, neutral bus bar and earthing terminal, internal wires and cables to cover the loads of the new pump and all necessary civil works, ducts, all internal components. The panel shall drive pump power rate 110KW with all required power control circuits for auto / manual operation including all monitoring and protections. The contractor has to modify the components ratings to comply with the pumping system ratings were necessary. The works includes but not limited to the following supply and installations.</p> <p>1- Main Circuit breaker type NZM 250 A (Isc=50KA) with shunt trip for the pump. 2- SOLCON Soft starter of RVS-DN- 310A type with all integrated protections. 3- By-pass contactor of DILM - 225 A (110KW) for the pumps. 4- sets of Enters type Digital voltmeter No.4, Digital Ammeter (0-800A) No.4. 5- Digital hour meter (counter 3.4 digits, 24V dc and/or 230V) No.4, current transformers No12, emergency stops No.2 (one connected to shunt trip in main NZM in MDB and the second connected with pump control panel. Push buttons and signal lamps ...etc. 6- Connecting to Grounding pit Flexible copper cable size (1x70) mm2 from pump control panel and pump room. 7- Panel ventilation system including one extract fan, thermistor relay, temperature sensors (30-70 OC), 16A contactor, mcb 1X10A. 8- All required power and control circuit with all required Relays, temperature relay, PKZM, signal lamps single pole switched needed for manual and automatic operation, emergency PB</p>	<p>(MCC Panel): Supply install and commission all the required components and materials to operate new pump (P4) which will be installed inside the Existing Panel, that includes only the main busbars. The new works shall include supply and install all required internal power, control, wires and cables, ducts, terminals, angles to fix the cables, all needed modifications on the panel door for new lamps, instruments, Soft starter, and others and all needed materials to complete the job for effective operation. The works shall include but not limited to supply, install the following required components:</p> <p>1- Main Circuit breaker type NZM 250 A (Isc=50KA) with shunt trip for the pump. (QTY =1). 2- SOLCON Soft starter Type is RVS-DN- 310A or equivalent with all integrated protections. (QTY =1). 3- By-pass contactor type is Eton / DILM - 225 A or equivalent for (110KW) pump. (QTY =1). 4-Sets of ENTES type Digital voltmeters (QTY =4), Digital Ammeters (0-800A) (QTY =4). Note "three of each type will be install for the existing pumps and the contractor has to remove the old one". 5- Digital hour meter (counter 3.4 digits, 24V dc and/or 230V) (QTY =4), current transformers (QTY =12), to be installed for 4 pumps. Emergency stop switch (QTY =2), (one connected to shunt trip in main NZM in MDB and the second connected with pump control panel. Push buttons and signal lamps with selector switch for pump 4 ...etc. 6- Flexible copper cable size (1x70) mm2 from pump control panel and pump room to be connect to earth system. 7- Panel ventilation system including one extract fan, thermistor relay, temperature sensors (30-70 OC), 16A contactor, mcb 1X10A. 8- All required power and control circuit with all required Relays, temperature relay, PKZM,</p>

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		...etc.) all as per attached drawing and engineer instructions.	signal lamps single pole switched needed for manual and automatic operation, emergency PB ...etc.) all as per attached drawing and engineer instructions.
Bill 4	4.2.1	<p>(PLC Panel): Supply, install and commission complete PLC system with all required components inside the existing PLC Panel in the site, as specified and as shown on drawings, tested and in operating conditions. (Type is DELTA or equivalent). The Programmable logic controller system includes also PLC, 128 I/O points (Digital &amp; analog), computer software and interface, with sufficient updated RAM, and two memory packs, logic memory of 16 kilo byte size (and PLC connection with laptops). The unit shall be as per drawings, specifications, and engineer's instructions and the new version manufactured at the time of tendering. The work includes programming the PLC to operate the pumping station with 4 pumps(3- duty/1-standby), as specified by the engineer and according to the sequence to operate the pumps equal times, including original pump protection controllers, humidity, thermistor, bearing, temperature, leakage sensitive electronic relay from same manufacturer of pumps, 10" HMI touch screen and all other necessary power and control circuits with all extra relays and/or switches, timers, PKZM, push buttons, manual changeovers, signal lamps, MCB's of FAZ type , isolating control transformers, wires, cables, terminals, and Panel ventilation system including one extract fan, thermistor relay, temperature sensors (30-70 OC), 16A contactor, mcb 1X10A. , all as according to attached drawings, specifications and engineer's instructions. Old control and PLC components should be removed and handed over to CMWU store.</p>	<p>(PLC Panel): Supply, install and commission and operate complete PLC system with all required components inside the Existing PLC Panel in the site. (Type is DELTA or equivalent). The price includes the followings: Programmable logic controller system (PLC) includes at least:</p> <ul style="list-style-type: none"> <li>• 96 I/O points (Digital (In/out) cards, type is DVP-16SP, QTY =6)).</li> <li>• 4 input points (Analogue Input module, type is DVP04AD, QTY =1)).</li> <li>• Power supply unit (type is DVP-PS01, QTY =1).</li> <li>• CPU unit with memory backup, slim size (type is DVP-14SS2, QTY =1).</li> <li>• Touch Panel HMI 10", (type is DOP-B10S411, QTY =1) with all needed data &amp; power interface connections and fabrication for the panel door.</li> <li>• PLC Software copy with flash disk driver 16GB, and PLC connection cables with laptop.</li> </ul> <p>The work includes programming the PLC to operate the pumping station with 4 pumps(3- duty/1-standby), as specified by the engineer, operator and according to the sequence to operate the pumps equal times and also including original pump protection controllers, humidity, thermistor, bearing, temperature, leakage sensitive electronic relay from same manufacturer of pumps, complete door lighting unit, all other necessary power and control circuits with all extra relays and/or switches, timers, PKZM, push buttons, manual changeovers, signal lamps, MCB's of FAZ type , isolating control transformers, wires, cables, terminals, horn with lamp, and Panel ventilation system including one extract fan, thermistor relay, temperature sensors (30-70 OC), 16A contactor, mcb 1X10A.</p>

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			All works shall be according to specifications and engineer's instructions. Old control and PLC components should be removed with wires and handed over to owner store.
Bill 4	4.4.8	Supply, install, connect and test Pole Mounted 120 watt LED lighting Fixture High-pressure die cast aluminum housing with powder coated finish for corrosion resistance, with high lumen efficiency, with all needed XLPE cables 3X1.5mm <sup>2</sup> and other connections as per the following: LED luminous efficiency =85-90 Lumen/W or more. Power Factor >0.92 Color Temperature 3000-4000K, Working Temperature -30.C-+50.C Housing Material Aluminum Alloy, Input Voltage AC (185-240V) LED Chip PHILIPS, Total lumen not less than 10200 L. lamp's Efficiency >90%, Guard Level IP65, Type is (Gaash, Matix or equivalent). Old components should be removed and handed over to CMWU store if found.	Supply, install, connect and test Pole Mounted LED lighting fixture, 120 Watt LED, die cast aluminum Alloy housing, UV resistance, with high lumen efficiency Type is (Gaash, Philips, or equivalent). as per the following specifications: <ul style="list-style-type: none"> <li>LED luminous efficiency =85-90 Lumen/W at least.</li> <li>Power Factor &gt;0.92.</li> <li>Color Temperature 4000K – 6000K.</li> <li>Working Temperature -30.C-+50.C</li> <li>Input Voltage AC range (185-230V).</li> <li>PHILIPS LED Chip and driver, and the total lighting unit lumen not less than 10200 L.</li> <li>LED Efficiency &gt;90%, protective Level IP65.</li> </ul> The works include supply and install hot dip galvanizes Arm to fix the fixture, and new XLPE cables 3X1.5mm <sup>2</sup> with all needed connections and terminals, mcb, others. The contractor has to dismantle and remove old lighting fixture, arm, cables, and other components and handed over to the KH. Store.
Bill 5	5.55	(PLC Panel): Supply install and commission Programmable logic controller PLC. (Type is DELTA or equivalent). The price includes PLC, CPU, Card modules (32 input, 32 output points) - (Digital & analog), computer software and interface, with sufficient updated RAM, and two memory packs, logic memory of 16 kilo byte size (and PLC connection with laptops). The unit shall be as per drawings, specifications, and engineer's instructions and the new version manufactured at the time of tendering. The work includes programming the PLC to operate the pumps as (duty/standby) as per the engineer instruction for the operation purpose, as specified according to the sequence to operate the pumps equal times, including 10" HMI touch screen and	(PLC Panel): Supply, install and commission and operate New PLC Panel from hot dip galvanized steel, thickness 2mm frame with antistatic paint one door, the size will be approved after the submittal of shop drawings. The price includes supply, install including programing of a Complete PLC system with all required components inside new Panel in the site. (Type is DELTA or equivalent). The price includes Programmable logic controller system (PLC) includes at least the following: <ul style="list-style-type: none"> <li>32 I/O points. (Digital (In/out) cards, type is DVP-16SP, QTY =2)).</li> <li>4 input points (Analogue Input module, type is DVP04AD, QTY =1).</li> <li>Power supply unit (type is DVP-PS01, QTY =1).</li> </ul>



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		<p>all other necessary power and control circuits with all extra relays and/or switches, timers, PKZM, push buttons, manual changeovers, signal lamps, MCB's of FAZ type , and UPS of 1000VA, 50-60min batteries @ full load, sine wave output, wires, cables, terminals, all as according to attached drawings, specifications and engineer's instructions.</p>	<ul style="list-style-type: none"> <li>• CPU unit with memory backup, slim size (type is DVP-14SS2, QTY =1).</li> <li>• Touch Panel HMI 10", (type is DOP-B10S411, QTY =1) with all needed data &amp; power interface connections and fabrication for the panel door.</li> <li>• PLC Software copy with flash disk driver 16GB, and PLC connection cables with laptop.</li> <li>• UPS of 1000VA, 50-60min batteries @ full load of PLC.</li> </ul> <p>The work includes programming the PLC to operate the pump with on (duty / standby), as specified by the engineer, operator and according to the sequence to operate the pump equal times according to the control of the floats and Ultrasonic level Transmitter, and also including pump protection controllers, humidity, thermistor, temperature, leakage sensitive electronic relay, complete door lighting unit, all other necessary power and control circuits with all extra relays and/or switches, timers, PKZM, push buttons, manual changeovers, signal lamps, MCB's of FAZ type , isolating control transformers, wires, cables, terminals, horn with lamp, and Panel ventilation system including one extract fan, thermistor relay, temperature sensors (30-70 OC), 16A contactor, mcb 1X10A and all needed civil works (e.g. foundations, cable trenches and dismantling, removing and re installing tiles, handing over clean and as same existing), and cable trays to fix cables and other needed materials and workman ship to complete works according to specifications and engineer's instructions.</p>
Bill 6	6.1	<p>(PLC Panel):          Supply, install and commission PLC panel board factory assembled wired and tested in accordance with international standards, including 2mm Galvanized steel frame with anti-static paint including bus bars, terminal blocks and all necessary civil works (e.g. foundations, cable trenches and handing over clean), tested and in operating conditions. The price including supply and install Programmable logic controller (</p>	<p>(PLC Panel):          Supply, install and commission and operate New PLC Panel Board from hot dip galvanized steel, thickness 2mm frame with antistatic paint one door, the size will be approved after the submittal of shop drawings.          The price includes supply, install including programing of a Complete PLC system with all required components inside new Panel in the site. (Type is DELTA or equivalent).</p>

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	<p>PLC) Type is Delta or equivalent, the item include cards 128 I/O points, computer software and interface, with sufficient updated RAM, two memory Flash 16 giga bite per each with complete program and software and logic memory of 16 kilo byte size, also the item include the last version HMI 10" touchable. The item includes programming the PLC to operate the basins valves with 6 Actuators (3- duty/3-standby to be changed per 48 hours), according to the sequence which require to operate the basins at equal times, also the item include all necessary extra relays for each inputs and outputs required and the required switches, timers, PKZM, H- 0-1 switch, push buttons, manual changeovers, signal lamps, MCB's of FAZ type , isolating control transformers and on line UPS of 1500VA, 50-60min, sine wave output, the item include all internal cables and wires and conductors, all according , specifications and engineer's instructions.</p>	<p>The price includes Programmable logic controller system (PLC) includes at least the following:</p> <ul style="list-style-type: none"> <li>• 48 I/O points (Digital (In/out) cards, type is DVP-16SP, QTY =3)).</li> <li>• Power supply unit (type is DVP-PS01, QTY =1).</li> <li>• CPU unit with memory backup, slim size (type is DVP-14SS2, QTY =1).</li> <li>• Touch Panel HMI 10", (type is DOP-B10S411, QTY =1) with all needed data &amp; power interface connections and fabrication for the panel door.</li> <li>• PLC Software copy with flash disk driver 16GB, and PLC connection cables with laptop.</li> <li>• UPS of 1000VA, 50-60min batteries @ full load of PLC.</li> </ul> <p>The work includes programming the PLC to operate basins Valves (Multi Turned Electrical Actuator) 6 No. with status (Duty / Standby), as specified by the engineer, operator and according to the sequence to operate the Electrical Valves equal times according to the control of the floats ( 2 No. in each basin), and also including complete door lighting unit, bus bars, terminal blocks, all other necessary power and control circuits with all extra relays and/or switches, timers, PKZM, push buttons, manual changeovers, signal lamps, MCB's of FAZ type , isolating control transformers, wires, cables, terminals, horn with lamp, and Panel ventilation system including one extract fan, thermistor relay, temperature sensors (30-70 OC), 16A contactor, mcb 1X10A. and all needed civil works (e.g. foundations, cable trenches and dismantling, removing and re installing tiles, handing over clean and as same existing), and cable trays to fix cables and other needed materials and workman ship to complete works according to specifications and engineer's instructions.</p>
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**The bidders shall acknowledge receipt of this pre-bid meeting minutes/ Addendum No.2 by including it, signed and stamped, with their bids.**

For your kind attention and reference,

Yours sincerely,

Shehadeh A. Habash

Head of Procurement Unit

UNDP/PAPP

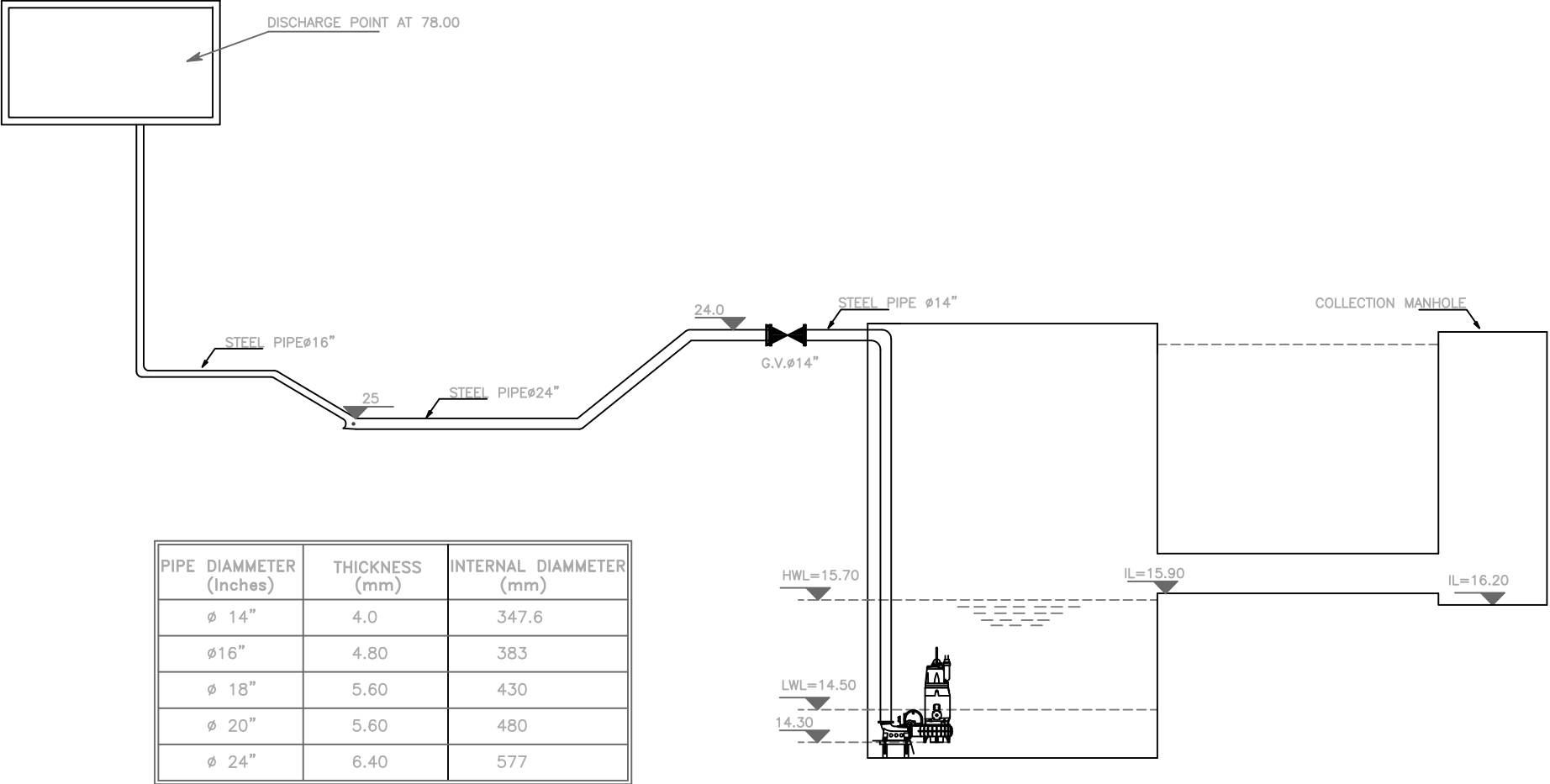
Attachment:

Annex 1: schematic diagram, profile for discharge pipe of PS3 and details for pumps connections & installations

Annex 2: details drawing for the infiltration basins

**Annex 1: schematic diagram, profile for discharge pipe of PS3 and details for pumps connections & installations**

FOR TENDER ONLY

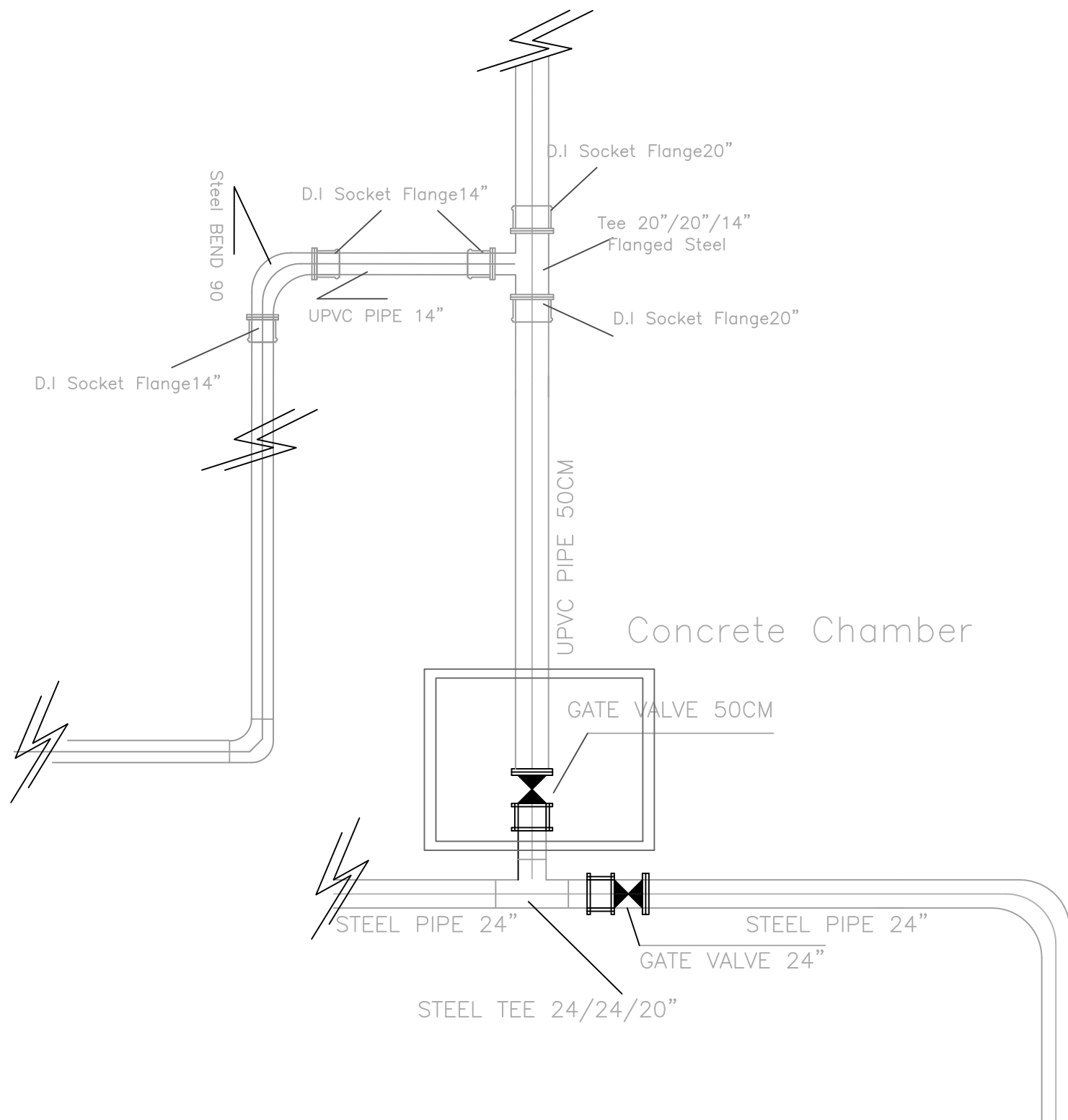


PS3 SYSTEM CHEMATIC DIAGRAM

NOTES

Construction of Khan Younis Waste Water Treatment Plant In Gaza Strip  
Rehabilitation of P.S No.08 , 03 and 02 In Khan Younis  
Executing Entity : UNDP/PAPP  
Employer : UNDP/PAPP  
DRAWING NAME:  
PS3 SYSTEM CHEMATIC DIAGRAM  
SCALE : DATE: REPORT NO.: DRAWING NO.:  
NTS Dec - 2019 000

Conection the 500 mm new line to Ps



FOR TENDER ONLY

## NOTES



<p><b>Construction of Khan Younis Waste Water Treatment Plant In Gaza Strip</b></p> <p><b>Rehabilitation of P.S No.08 , 03 and 02 In Khan Younis</b></p>
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Executing Entity : UNDP/PAPP

Employer : UNDP/PAPP

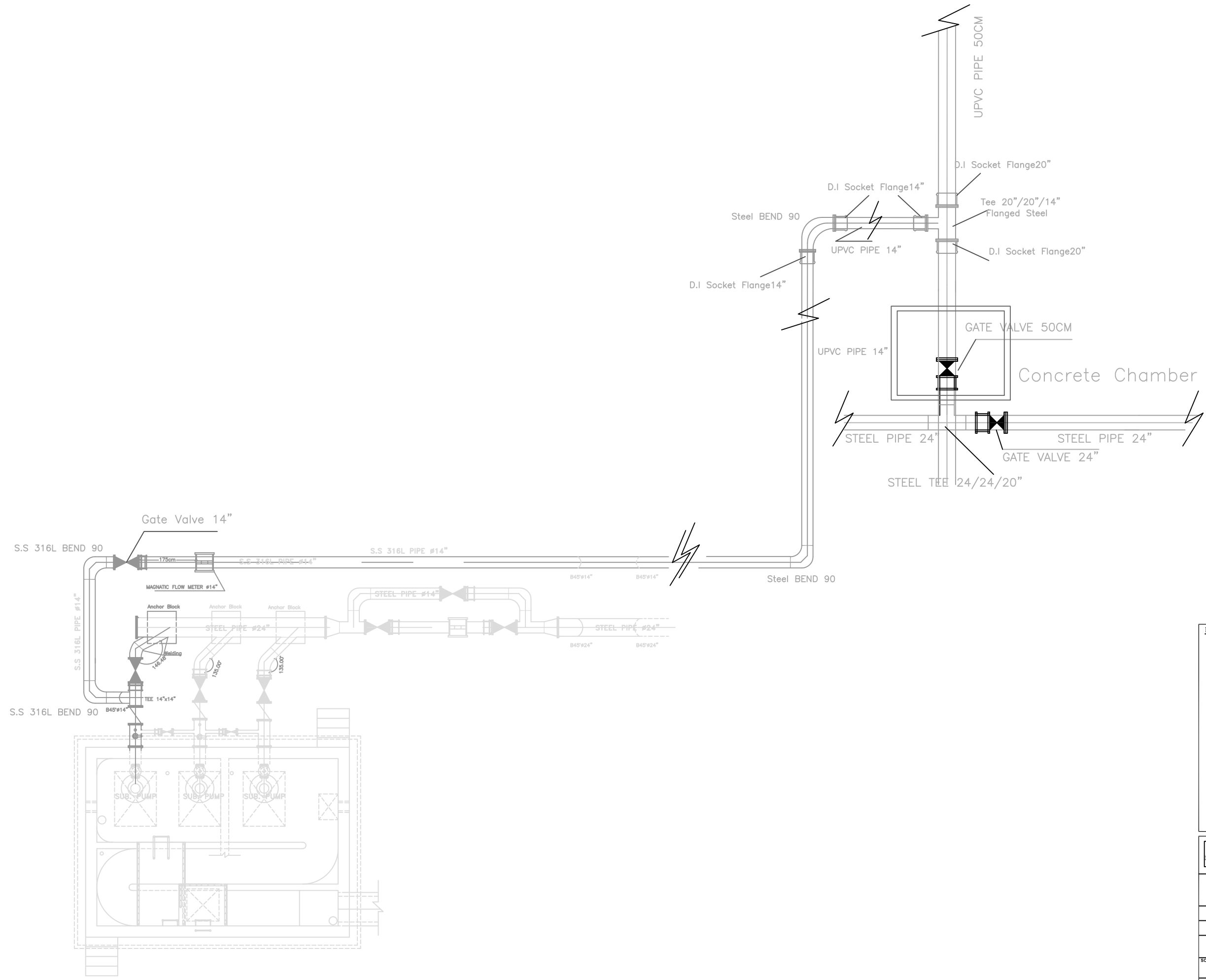
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Conection the 500 mm new line to Ps

SCALE:	DATE:	REPORT NO.:	DRAWING NO.:
NTS	Dec - 2019		000



FOR TENDER ONLY

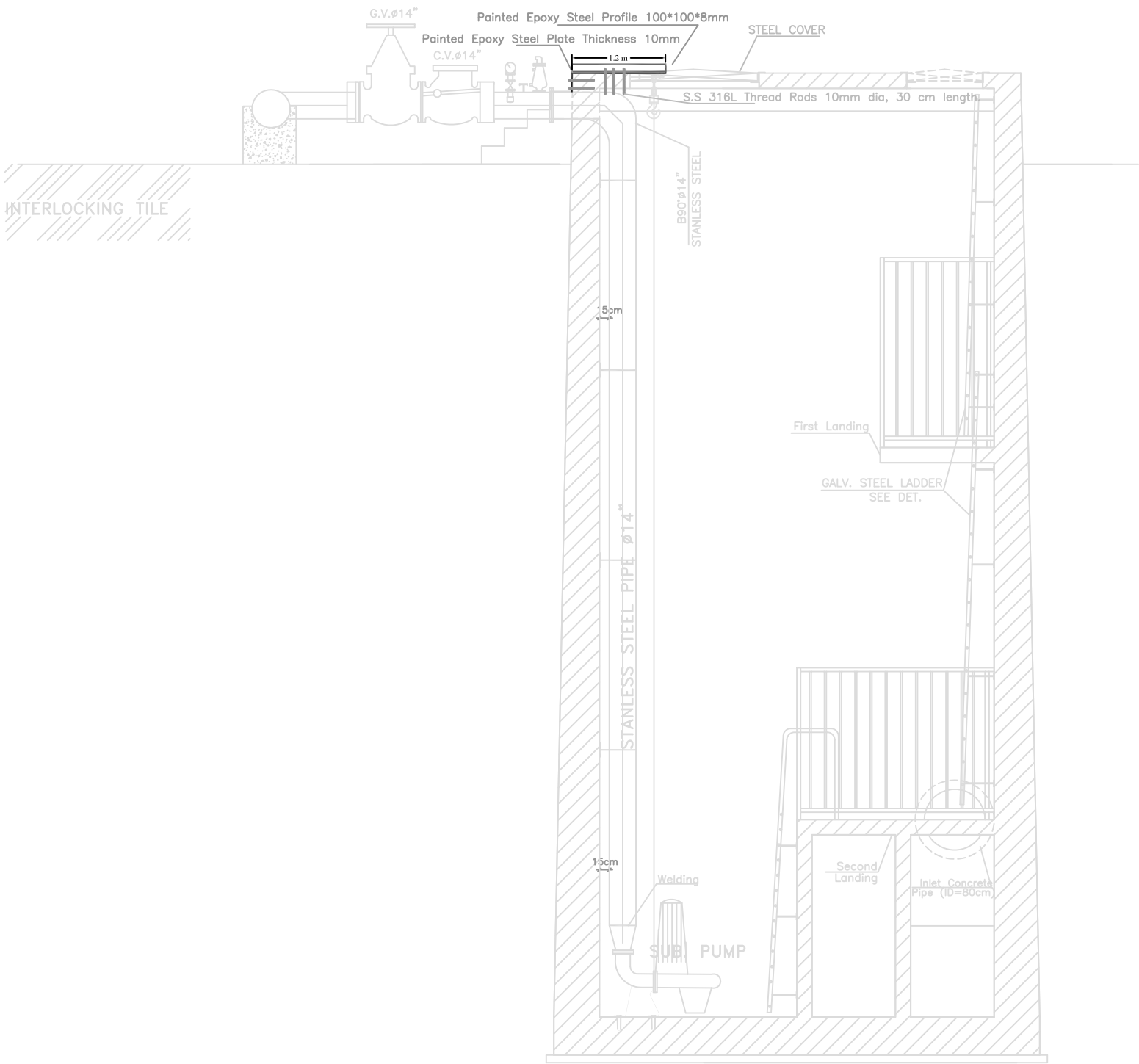


**NOTES**


Construction of Khan Younis Waste Water Treatment Plant In Gaza Strip  
Rehabilitation of P.S No.08 , 03 and 02 In Khan Younis  
Executing Entity : UNDP/PAPP  
Employer : UNDP/PAPP  
**DRAWING NAME:**  
MECHANICAL WORKS FOR WIT PIT PLAN  
SCALE : DATE: REPORT NO.: DRAWING NO.:  
NTS Dec - 2019 000

FOR TENDER ONLY

Pump guiding holder for new pumps installation



**NOTES**



**Construction of Khan Younis Waste Water Treatment Plant In Gaza Strip**

**Rehabilitation of P.S No.08 , 03 and 02 In Khan Younis**

**Executing Entity : UNDP/PAPP**

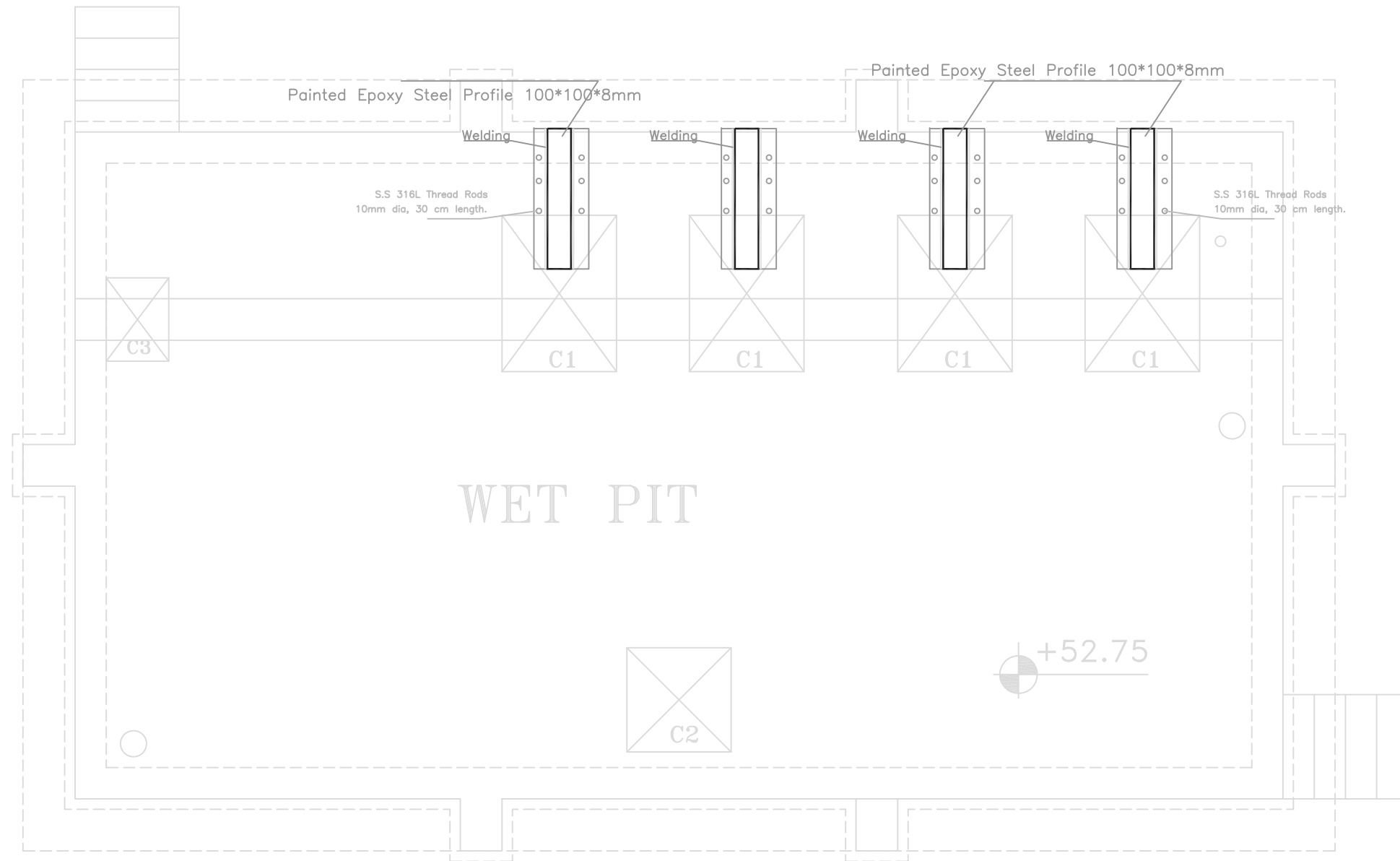
**Employer : UNDP/PAPP**

**DRAWING NAME:**

**Pump guiding holder for new pumps installation**

SCALE :	DATE:	REPORT NO.:	DRAWING NO.:
NTS	Dec - 2019		000

FOR TENDER ONLY



Pump Guide Holder For New Pumps Installation In PS8

NOTES

Construction of Khan Younis Waste Water Treatment Plant In Gaza Strip

Rehabilitation of P.S No.08 , 03 and 02 In Khan Younis

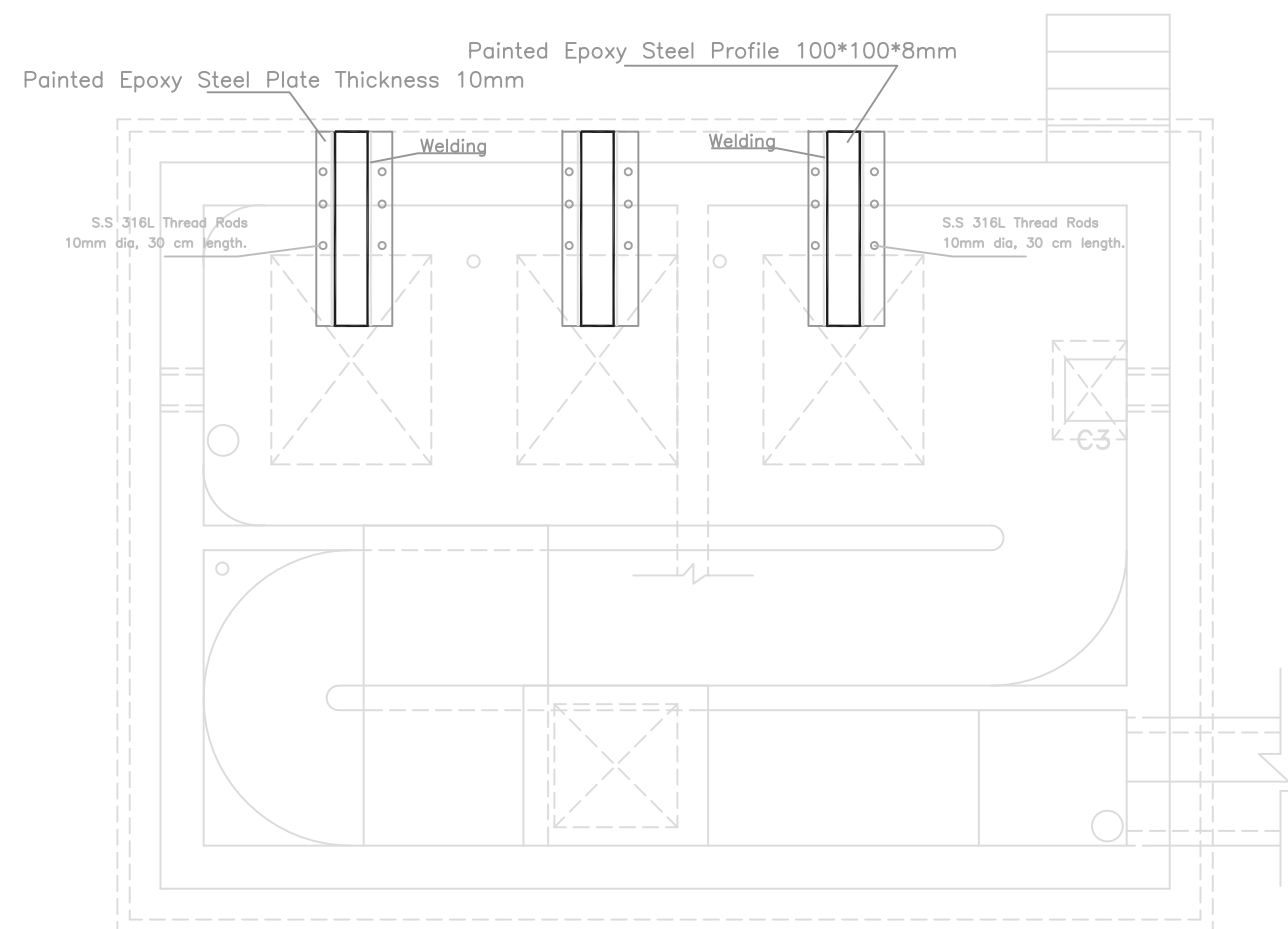
Executing Entity : UNDP/PAPP

Employer : UNDP/PAPP

DRAWING NAME(00)








Pump Guide Holder For New Pumps Installation In PS8

SCALE :	DATE:	REPORT NO.:	DRAWING NO.:
NTS	Dec - 2019		



Pump Guide Holder For New Pumps Installation In PS2 & PS3

NOTES



Construction of Khan Younis Waste Water Treatment Plant In Gaza Strip  
Rehabilitation of P.S No.08 , 03 and 02 In Khan Younis

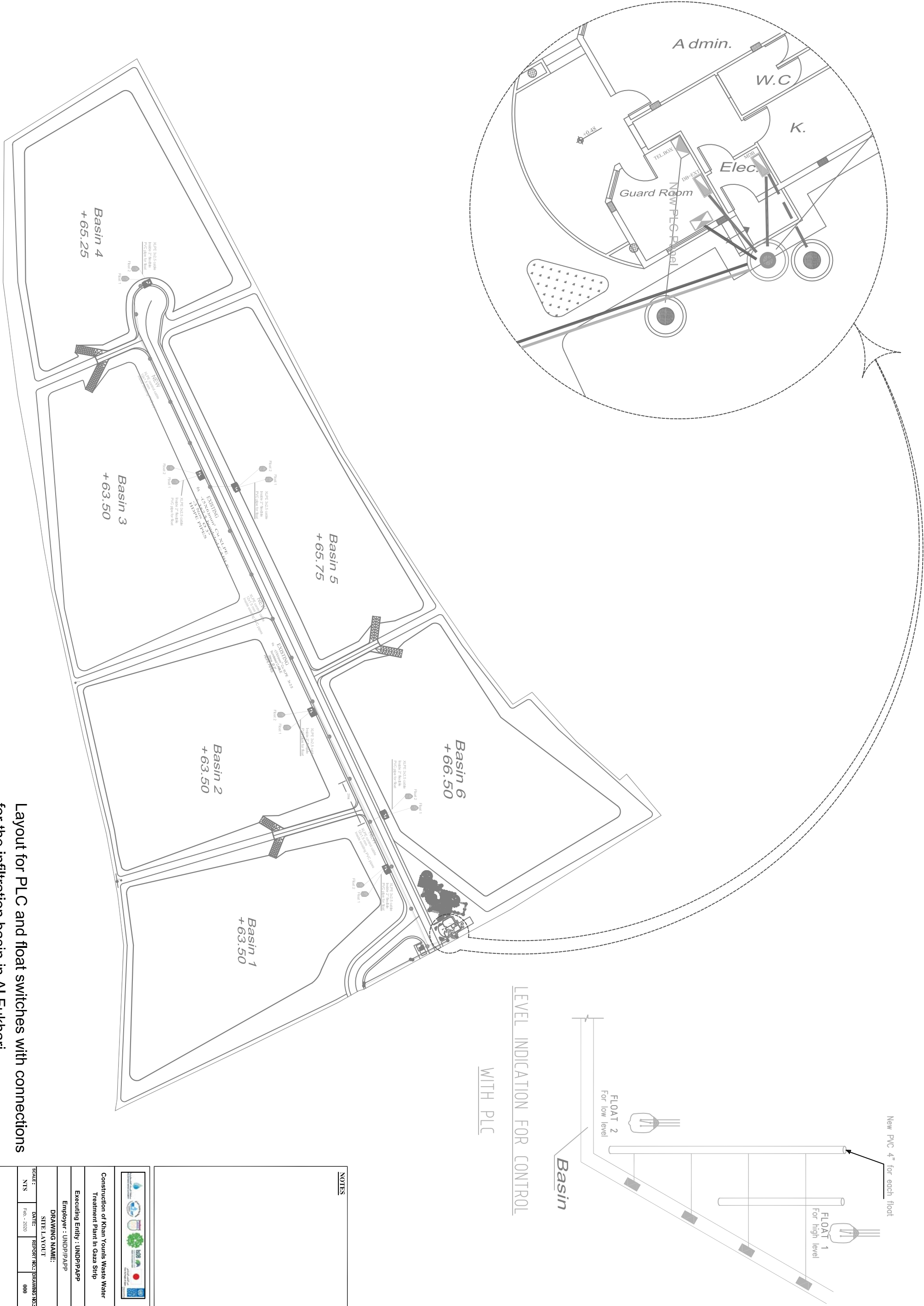
Executing Entity : UNDP/PAPP

Employer : UNDP/PAPP

DRAWING NAME**000**  
Pump Guide Holder For New Pumps Installation In PS2 & PS3

SCALE :	DATE:	REPORT NO.:	DRAWING NO.:
NTS	Dec - 2019		

## **Annex 2: details drawing for the infiltration basins**



Construction of Khan Younis Waste Water Treatment Plant in Gaza Strip

Executing Entity : UNDP/PAPP

Employer : UNDP/PAPP

DRAWING NAME : SITE LAYOUT

DATE : Feb. - 2020

REPORT NO.: DRAWING NO.: 000

Layout for PLC and float switches with connections

for the infiltration basin in Al Fukhari