

STATE OF KUWAIT

**MINISTRY OF FINANCE
&
MINISTRY OF PUBLIC WORKS**

SANITARY ENGINEERING SECTOR

AGREEMENT NO. EF/S/78

FOR

**REHABILITATION AND IMPROVEMENT OF
SEWERAGE AND INFRASTRUCTURE IN
YARMOUK, SURRA AND QURTUBA AREAS
AND
STUDY AND DESIGN MAIN LINE FROM SURRA
TO RIGAI TO NEW P.ST.A7**

PHASE - XI

TERMS OF REFERENCE

SECTION 1 - INTRODUCTION:

1.1 General:

Ministry of Public Works through Ministry of Finance wishes to undertake Engineering Consultancy services for the Study, Design and Preparation of Tender Documents for the following :

- Rehabilitation and Improvement of Infrastructure of Sewerage, Roads & Stormwater, Street lighting, Telephone, TSE Network etc.
- Study and Design Main Line from Surra to Riggai to new P. St. A7 at Riggai site..
- The Consultant shall arrange engineering training program for Kuwaiti Staff directly involved in daily work process.
- The Consultant shall also provide Senior Engineering Staff to reinforce Administration capabilities to carry out duties.
- A preliminary meeting will be held two weeks after the invitation of the consultant in main meeting room in Sanitary Engineering Administration.

The area included in this agreement are Yarmouk, Surra and Qurtuba.

The consultancy should be of a Local Consultant in association with an International Consultant, both from the approved list of participants in the invitation sent out by the Ministry of Finance.

After completion of Design, the construction works will be taken up and the Ministry may select the same Consultant for the Supervision of construction contract/s.

All costs incurred in preparing the proposal shall be entirely at the Consultants expenses.

The Consultant offices are to obtain Document-I “General Conditions” of the Agreement against a charge determined by the Financial Affairs Department of the Ministry.

1.2. Stages of the Work:

The works under this “Terms of Reference” are divided into two parts:-

- (i) Stage - I : Study, Design and Preparation of Tender Documents.
- (ii) Stage - II: Supervision of construction (Optional)

1.3. Period of Agreement:

Commencing from the date of enterprise, the period for completion of Stage-I works for all Four (4) contracts shall be 24 months (730 calendar days).

The Project will be divided into four (4) contracts as follows :

- Contract -1 Rehabilitation and Improvement of Sewerage and Infrastructure for Surra area (Contract period 24 months) .
- Contract -2 Rehabilitation and Improvement of Sewerage and Infrastructure for Qurtuba area (Contract period 24 months)
- Contract-3 : Rehabilitation and Improvement of Sewerage and Infrastructure for Yarmouk area (Contract period 24 months) .
- Contract -4 Construction of Main Line from Surra to Riggai to new P.St.A7 at Riggai site (Contract period 24 months).

The Period for Completion of Construction under Stage-II “Supervision of Construction” will be 26 months for each contract.

1.4. **Design Validity.**

The Design must take into account, all data and information available and foreseen for present and future development for a design horizon of not less than 35 years.

1.5. **Area of the Project:**

The areas where Rehabilitation and Improvement of Sewerage and Infrastructure works to be performed are SURRA ,QURTUBA& YARMOUK areas and Construction of Main Line from Surra to Rigai to nw P.St. A7 at Riggai site, all as specified above.

The approximate quantities of the existing infrastructurre are given hereunder :

Surra

Sewerage network	size	length	No. of MHs
:	200– 500mm dia	51.352KM	1528
Roads	:	-	67.957KM
Stormwater	:	300-1800mm dia.	39.262 KM
			772

Qurtuba

Sewerage network	size	length	No. of MHs
:	200– 600mm dia	48.4KM	1414
Roads	:	-	50.059KM
Stormwater	:	300-1800mm dia.	37.576 KM
			692

Yarmouk

Sewerage network:	size	length	No. of MHs
:	200 – 600mm dia	39KM	1100
Roads	:	-	50 .244 KM
Stormwater	:	300-1800mm dia.	23.210 KM
			373

Street lighting: the net of the street lighting will be for the roads of project area.

Telephone : the net of the telephone will be for the roads of the project area.

Main line from Surra to Riggai to new P.St. A7

Sewerage network	:	size	length	No. of MHs
		300– 600mm dia	8.8KM	176

The associated house connections of all areas.

For area mentioned above, given quantities are from old records, Consultant shall investigate and ascertain the actual quantities.

The Consultant shall co-ordinate with other Consultant/s who are responsible for the Design and Improvement of Sewerage System and Improvement of Infrastructure works of surrounding areas.

Street lighting works

The Consultant shall also be to perform the following design works for street lighting :

1. Survey of the area and preparation of existing street lighting services drawings.
2. Preparation of street lighting design drawings in two stages, Preliminary and Final.
3. Preparation of Typical Details Drawings.
4. Preparation of Particular Specifications.
5. Preparation of Bill of Quantities

All the above works shall be performed in close co-ordination with MEW and must be approved by MEW.

1.6. **Clarification**

Any clarification or any further information necessary for the Consultant in preparation of his offer must be forwarded in writing and addressed : Attention to the Director, Consultant Department, Ministry of Finance, Fax.2454270.

SECTION 2 - SCOPE OF WORK:

2.1. Stage I : Study, Design and Preparation of Tender Documents.

The Consultant shall perform the following :-

- The study and re-design of the existing sewerage conveyance systems, Rehabilitation and Improvement of Infrastructure i.e. Roads, Stormwater, Street Lighting, Telephone and TSE Network etc.. in YARMOUK, SURRA & QURTUBA areas.
- Study and Design Main Line from Surra to Rigai to new P.St. A7 at Rigai site.

In new sewers layout, every effort must be made to eliminate the maximum number of lifting/pumping stations and all existing sewers retained in the new layout must be completely replaced with new approved material pipes.

The Consultant shall also study and design Sewerage and Infrastructure improvement such as Roads and Stormwater, Street lighting, Telephone etc. for the included areas which has no existing sewers.

The sewerage networks and Infrastructure improvement of this area including the inflow lines coming to this area from other areas and the disposal of sewage from these areas to the existing main lines are included in the Scope of work of this Agreement.

Detailed work program by using the Critical Path Method (CPM)

- The Consultant to submit detailed work program which is referred to in Article No.(4) of the Special conditions, for approval by the Engineer within two weeks from the date of signing the Contract and before issuing the starting order, provided that the program includes and is not restricted to a list of the outputs of each (stage/phase) including the information, reports, examinations, studies, drawings, approvals, etc.... in conformity with the technical, professional rules, terms of reference and the instructions of the Engineer.
- This program is to be prepared by using the Critical Path Method (CPM) in a way that includes the expected outputs as well as the starting and completion dates.
- The Engineer has the right to prevent the Consultant from proceeding from a stage/phase to the following stage/phase in case that he fails to complete the works in conformity with the tender conditions, technical & professional rules and obtaining the approval in the light of work interest requirements.

- In case of failure of the Consultant, the period spent by him to complete the works for the purpose of obtaining the approval of the Engineer, is not considered a renewal period, however it will be considered a part of the contract period and the engineer may impose a delay fine for this period according to the contents of the Statement No.6 of Document (II) without the need to give notice, warning or take legal procedures and without the need to prove the damage suffered by the Ministry.
- The Engineer (MPW) has the right to request updating the detailed program of works by deleting or adding to any of its components according to the progress and requirements of the agreement, works and work interest within the extents of what is stated in the terms of reference and this won't entitle the Consultants for any rights.
- The Consultant offices are to obtain Document -I "General Conditions" of the Agreement against a charge determined by the Financial Affairs Department of the Ministry.

Preparation of Tender/s Documents :-

- The project will have Four (4) contracts, the Consultant shall prepare Tender Documents and perform Tender Evaluation. The Tender/s Documents shall not be inferior in detail and quality to the Tender documents previously issued by MPW. Copies of MPW Tender/s Documents are available at MPW Sanitary Engineering Department, for overlooking.

The work under this part shall be performed in four Phases as outlined in Performance of Work Phases Section-3, however, the following general remarks are included for the guidance of the Consultant.

- (i) The Consultant shall make all necessary Studies for the Rehabilitation and Improvement of Sewerage and Infrastructure i.e. Sewerage, Roads & Stormwater, Street Lighting, Telephone, TSE Network etc., and prepare the Tender Documents suitable for tendering the Construction Contract.
- (ii) The Consultant shall study the existing Sanitary Sewerage Network and Infrastructure by investigation and obtain data with the help of any means including but not limited to the following :
 - Existing Sewerage Network and Infrastructure Drawings.
 - Visual inspection of the project areas.
 - Topographic Survey.
 - Survey of House connections.
 - Survey of Manholes and Pipes Inverts

- (iii) The Consultant shall propose a complete overall sewerage conveyance system and Infrastructure Improvement for each of YARMPOUK, SURRA & QURTUBA areas including the study and design of the main line to be constructed from Surra to Riggai to new P.St.A7 which may include but not limited to the following:
- Re-designing of sewers to different diameters and depths.
 - Re-routing of sewers.
 - Rehabilitation and Improvement of Infrastructure i.e. Sewerage, Roads & Stormwater, Street Lighting, Telephone etc. for new, future development area, non served areas and buildings.
- (iv) The Consultant shall make all necessary studies of the existing sewer networks and Infrastructure drawings which are available at the Ministry of Public Works and other concerned Ministries. The Consultant may obtain the mother-prints from MPW and other Ministries or any other Government Agencies and reproduce as many sets as he needs.
- (v) The Consultant shall engage a survey team which shall be available throughout the Study and Design period to provide levels and other topographical data as well as data about infrastructure, any manholes, sewer and house connections, to supplement information in the Study and Design of the Project. This team shall also establish, a system of bench marks for use throughout the execution of the project.
- It shall be noted that some manholes may exist under structures, landscape, hardscape, parking areas and tiles and some manhole covers may have been covered with sand or asphalt. Also some manholes may have been filled with sand and/or all sorts of debris. Therefore a cleaning team shall assist the survey team for obtaining the required information.
- (vi) The Consultant shall carry out the soil investigations to determine the physical and chemical properties of the soils underlying the site. The number of borings for soil exploration to be not less than five (5) in each area. The depth of each bore-hole to be about 8-15 meters and not less than 5 meters below foundation level.
- (vii) The cost of all surveying, soil investigation, testing and trial holes must be estimated and included in the financial proposal as a direct cost.
- (viii) The Consultant shall prepare a comprehensive study report showing different options for re-construction and of overall sewerage network and Rehabilitation and Improvement of Infrastructure.

- (ix) Detailed Design work for all required relocation of utility services for the Sewer Replacement work shall be a part of the design effort. The Consultant shall also be responsible for the co-ordination of design work with the Construction of other service relocations work undertaken by MPW, other Ministries and any other Government Agencies.
Preparation of plans and maps showing final services reservations and final land-take plans shall be the first order of work.
- (x) The Consultant to implement the ad valorem engineering methodology in the desiging studies due to its importance in studying the major projects in order to secure rising the quality of the project, enlarge their benefits and reduce the execution cost to the lowest extent in order to achieve the best economic return (cost effectiveness). All efforts for the value engineering workhop(s) as detailed in item 2.1.1.
- (xi) The Project (Phase XI) will have four(4) contracts of which contracts Nos.1, 2 & 3 for Rehabilitation and Improvement of Sewerage and Infrastructure, i.e. Sewerage, Roads & Stormwater, Street Lighting, Telephone etc. and Contract-4 for construction of a main line from Surra to Riggai .Accordingly, the Consultant shall provide complete tender documents for both contracts and mention the cost of printing Tender Documents in his financial proposal.
- (xii) The Consultant shall conduct all pre-bid conferences/meetings and answer all inquiries and provide tender evaluation services for the contract bids. The consultant will analyze and evaluate all bids to determine their responsiveness and compliance with the tendering requirements and submit the bid tabulations, analysis and evaluation together with a recommendation for contract award to MPW.
- (xiii) Upon approval of award of the contract, the Consultant shall conduct any required clarifying discussions with the successful Contractor and prepare the FINAL CONTRACT DOCUMENTS for signature by MPW and the Contractor.
- (xiv) The consultant shall prepare details of current and future projects undertaken by them to use for conferences and training.
- (xv) The consultant to prepare different programs for raw and treated sewage at different stages in waste water treatment to include in the contract/s and to train Engineers and technicians and also for conferences.
- (xvi) The consultant shall prepare posters with literature of current and future projects for general public information.
- (xvii) The consultant shall update the design if needed before tendering the contract /s of the projects.

2.1.1. Value Engineering Workshop(s) (Optional) :

- The Consultant may be required to contract with an independent firm with specialist experience in Value Management to conduct a Value engineering Studies Workshop(s).

- Value Engineering workshops shall be conducted after the completion of Preliminary Concept Design which should be followed by a workshop session attended by all parties involved in order to finalize the Preliminary Design.
- Upon completion of the Final Design, a second workshop to be conducted in order to finalize the Final Design.
- The Consultant shall submit all relevant data about the Value Management Firm and the personnel to be involved with the workshops as part of his Technical Proposal.

Participants :

- The Value Management Firm will provide a minimum of three Interdisciplinary Value Engineer Specialists headed by a Certified Value Specialist of a recognized Society of Value Engineers or equivalent to conduct a five day intensive Value Engineering Workshop at the Consultant's Kuwait Office. A value Engineer Specialist is defined as a professional Architect or Engineer who have attended a formal 40 hour Value Engineering Workshop and participated in at least two value engineer studies. The Certified Value Specialist shall have a minimum of two years continuous value engineering experience.
- Included as part of the V.E. Team will be members from the MPW Staff. In addition to the value management firm's three participants, the Consultant will have available for reference only (not as participating V.E. team members) a minimum of nine Consultant Representatives from the project's design team, ideally including the following : an architect, structural engineer, mechanical engineer, electrical engineer, quantity surveyor, sub-consultant representatives.

Workshop Activities :

- A minimum of two weeks prior to the workshop start, the consultant will send to the value management firm all pertinent design documents and estimates. The value management firm will submit the workshop agenda for MPW approval at least one week prior to the start of the workshop.
- The Consultant shall prepare an outline for a design status presentation. The outline will be reviewed by MPW for approval prior to workshop commencement. The outline shall include names of the persons responsible for the presentation. The presentation will normally occur on the first morning of the workshop and shall be limited to 1.5 hours.
- During the 5-day workshop the value engineering team shall :
 1. Follow the problem solving technique of the value engineer job plan.
 2. Confirm and evaluate cost estimates
 3. Isolate significant high cost areas.
 4. Develop alternate methods to reduce cost and/or increase efficiency.
 5. Validate the findings to the maximum extent.
 6. Present results on the fifth day at an oral presentation.

VE Report :

- Within two weeks after the conclusion of each Value Engineering Workshops, the value management firm will issue a report presenting the results of the value engineering study.
- The report will contain the most promising value engineering proposals for MPW and its consultants review and implementation. The V.E proposal accepted by the use agency shall be incorporated into the design by the Consultant without any added fees. The value management firm will submit the required number of copies of the Value Engineering Report directly to MPW.

Deliverables :

The Consultant shall refer to the “Schedule of Submittals” for the specifics and requirements of deliverables.

Terms of Payments :

One single payment for each workshop, and shall be paid upon approval of the Report and submitting the required copies to MPW.

2.1.2. Monthly Report.

The Consultant shall submit to the Engineer 8 copies + 5 CDs of the monthly report of the works carried out under Stage 1. The report shall be prepared so that a quantitative estimate of the work done can be assessed and it shall be in a form approved by the Engineer. The Consultant shall also submit documents to support the report if required by the Engineer.

2.1.3. Periodic Progress Review Meetings:

The Consultant will establish the requirement for regular meetings with MPW and other Ministries Representatives. These meetings will be scheduled at a time convenient to the Engineer to review the work progress and discuss the relevant issues as per a prepared agenda.

The agenda and the summary of sequence of discussions in every meeting will be prepared by the Consultant and approved by the Engineer.

2.1.4. Services to Design Office :

The Consultant shall provide all office stationary needed for the Engineer’s office in-charge of the Design works. This office shall specify the monthly needs the cost of which is limited to KD.200/- per month. This shall be provided for the whole duration of Stage-I. The Financial proposal for Stage I shall be inclusive of the above cost.

2.2. Stage - II : Supervision of Construction of Sewerage and Infrastructure Improvement Works (Provisional)

The period of completion for Stage-II will be 26 months for each contract (Rehabilitation and Improvement of Sewerage and Infrastructure i.e. Roads & Stormwater, Street Lighting, Telephone, etc.

The Consultant shall provide necessary staff for site supervision as shown in Table F3, financial proposal. The supervisory team shall be headed by the Resident Engineer. The Consultant shall be responsible through the Resident Engineer, for the Supervision of the project and for the staff assigned to the project. He will be held responsible to report to the Engineer.

Two Type “B” site offices for the Resident Engineer to be shared with MPW Project Engineer and other Ministries Engineers and “mobile” site offices for the Site Engineers shall be provided, furnished and maintained by the Contractor for the whole duration of the project. The Contractor shall also supply all services to these site offices. The Consultant will use these facilities free of cost. But the Consultants shall equip their Resident Engineer’s office and all mobile site offices with all necessary equipment like Computers, Typewriters, Photocopiers, Word Processors etc. and all the stationary required for their use. These equipment shall be provided at the cost of the Consultant.

The Consultant shall provide and maintain the necessary vehicles for his site supervisory staff for the whole period of Agreement.

After construction, the Contractor shall provide to the MPW and other Ministries, three complete sets + 3 CDs of final “As-Built” Drawings for each Ministry for each contract approved by the Consultant responsible for supervision of Construction Works. These drawings must show all details of work executed, variations and amendments introduced into the work. Such drawings shall be submitted to the MPW before the issue of the final certificate of completion of the works to the Contractor.

2.2.1. Office Apparatus and Stationery

Supply within 15 days of the date of start of work and maintain following apparatus and stationary for offices of the supervisory staff working under the project for use throughout the complete period of functioning of supervision agreement for execution of project.

In case any office apparatus is not supplied or maintained or if an alternative apparatus during the maintenance period of an out of order apparatus is not provided, then the fines appearing hereunder will be imposed and the Consultant will supply all such apparatus so as to meet with the full needs of its supervisory staff.

The Consultant must also arrange for working and maintenance of this apparatus for complete period of the functioning of the agreement and the rates of agreement should include only expenses for running, repairs and consumables in Table 2 (Direct Cost). After full completion of all the works mentioned in the items of agreement this office apparatus will be returned to the Consultant. The number of apparatus depends of the value of agreement and the size of works involved.

S.No.	Kind and Specification of Apparatus	No	Fine per Day for an Apparatus (Kuwaiti Dinars)	The highest Limit of Fine (Kuwait Dinars)
1	Computers with Printers complete	8	10/-	300/-
2	Photocopying Machine complete	2	25/-	750/-
3	Digital Fax Machine complete	2	10/-	100/-
4	Mobile without International Line	10	10/-	150/-
5	Measuring Tapes (Different sizes - 7.5mtr to 100 mtr)	6	5/-	50/-

SECTION - 3 - INSTRUCTION FOR THE PERFORMANCE OF WORK STAGES.

3.1. STAGE - I : Study, Design and Preparation of Tender Documents :

The Consultant shall perform all the works under Stage(I) – Study, Design and Preparation of Tender Documents in Four Different Phases as outlined below :-

- | | | |
|-----------|---|-------------------------------------------------------------------|
| Phase I | : | The Report – Preliminary & The Report – Final. |
| Phase II | : | The Preliminary Design and Preparation of Draft Tender Documents. |
| Phase III | : | The Final Design and Preparation of Final Tender Documents. |
| Phase IV | : | Tender Evaluation Services & Contract/s Documents. |

Phase-I :

3.1.1. The Report – Preliminary.

This shall include all necessary studies which shall comprise but not limited to the following:-

- (i) Identify density of buildings and population at present time and growth projection till full occupation of each area (approx. 35 years)
- (ii) Identify the percentage of the current sewage amount to the design flow.
- (iii) Review the As Built Drawings of all existing activities & utilities to identify locations of gravity lines, lifting stations, pumping stations, pressure mains. etc.
- (iv) Study and Design Main Line from Surra to Riggai to new Pst.A7 at Riggai site.
- (v) Prepare an approximate cost estimate for all activities of works.
- (vi) Submit 10 copies of Preliminary Report to the MPW and other Ministries for review and comments alongwith five(5) CDs.

3.1.1.1 The Report – Final.

- (i) Submit 10 copies of Final Report to MPW after all the MPW comments have been incorporated alongwith five(5) CDs.

Phase -II :

3.1.2. The Preliminary Design and the Preparation of Draft Tender

Documents:

Upon approval of the report and cost estimate described in Phases I, the Consultant shall proceed with Phase II works, which include:

Preliminary Design :

The preliminary Design shall take into account all the available data and information. The Preliminary Design shall include, but not limited to the following:-

- Topographic plans with particular references to ground levels. Existing utilities shall be shown in the plans of sewers layout.
- Establishment of sufficient number of Bench Marks to be used as reference points during execution of the project. The exact location and elevation of such Bench Marks shall be marked on the plans.
- The Consultant shall study and review the existing status of complete sewerage and infrastructure network of all the areas and propose necessary steps to improve overall functioning of the system. These steps may include replacement/re-routing of some existing sewers, changing of direction of flow or collection points, construction of deep trunk sewers by tunneling/micro-tunneling, increasing sewers slopes for achieving self-cleansing velocities etc...
- The drawings shall be prepared to suitable scales to the approval of the Engineer. That shall include plans and profiles of sewer and infrastructure network. Working drawings shall also include manholes and other appurtenances relevant to Sewer and Infrastructure Replacement.
- The preliminary design shall cover not less than 70% of the overall design efforts and must include design calculations based on proposed design criteria.
- The Consultant shall submit 2 sets of the preliminary design for each service to the ministry for review alongwith Two(2) CDs.
- The Consultant shall submit 2 sets of the Value Engineering Report (Optional)

Phase -III :

3.1.3. Final Design and Final Preparation of Final Tender Documents:

1. Final Design

Upon approval of the preliminary design by the MPW, the Consultant shall proceed to make final design which shall comprise of, but not limited to:

General plans, key plans and schematic design plans.

Design and Contract Drawings:

- 1.1. The drawings for New Sewer (Replacement Works) shall include plan and profiles to a scale of 1/1000 Horizontal and 1/100 vertical. All details such as natural ground level, invert level and manholes, diameter of sewers, slope, partial and cumulative distances etc. Working drawings shall also include the details of Manholes and other appurtenances related to Sewer Replacement work including bar bending schedules.
- 1.2. All final drawings shall be of highest standard, complete and fully detailed and dimensioned in the Metric system and lettered in English language.
- 1.3. While preparing the design, drawings and contract documents, the Consultant shall keep constant co-ordination with the Employer, discuss pertinent issues including design criteria etc. in order that the views of the Ministry of Public Works can be incorporated as the work proceeds.
- 1.4. All approvals needed from all other authorities are to be obtained by the Consultant. Approval for sewer lines, roads & stormwater, street lighting, telephone, etc., are also to be obtained from concerned authorities by the Consultant.
- 1.5. Combined Utilities Reservation Plans:
The Consultant shall prepare combined utilities reservations plans for each road and street right of way included within the design scope of New Sewer and Infrastructure Improvement. Plans shall be prepared to a scale of 1:500 and shall clearly indicate dimensioned reservation widths including all primary electrical and telephone utility reservation requirements.
- 1.6. The Consultant shall supply 10 copies of final design drawings with design calculations for the approval of the MPW and other Ministries alongwith Five(5) CDs. Upon approval or completion of all amendments required, the Consultant shall supply one complete set of original and a mother print and Two (2) CDs for each service of the final design drawings to the Ministry.
- 1.7. All corrections, modifications, additions, alterations etc. suggested by the ministries shall be done by the Consultant within the time schedule and at no extra cost to the employer.

2. **Preparation of Tender Documents and Work Estimates :**

- 2.1. The Consultant shall prepare tender documents for the approved detailed design to cover the complete Sewerage and Infrastructure Improvement Construction works and testing and commissioning of the proposed works. The tender shall include all required documents as mentioned in Section 4.1.4. and Form of Maintenance Contract (if required), in addition to that, submit detailed estimate for the proposed works on CD.(read only) along with sealed copy of BOQ. The Estimate is to be based on the average and current market rates. The construction cost estimate shall be considered confidential.

The Consultant shall supply 5 sets for each Contract of all Tender Documents to the MPW alongwith 5 copies of CD for all Tender Documents showing the difference & location of changes comparing with the previous submittals for approval. Upon approval on completion of all amendments required, the Consultant shall supply one complete set of the documents and 3 sets of computer diskets of documents which must be operable on the latest version computers.

- 2.2. As the project will be divided into Four (4) contracts as shown below. The Consultant shall provide separate and complete Tender Documents for each contract. The Consultant shall also prepare different Tender Documents in such a manner to co-ordinate the works between different contractors with defined detailed Scope of Work for each Contract.

Contract-1:

Rehabilitation and Improvement of Sewerage and Infrastructure such as Roads & Stormwater, Street Lighting, Telephone, for Surra area

Contract-2:

Rehabilitation and Improvement of Sewerage and Infrastructure such as Roads & Stormwater, Street Lighting, Telephone etc. for Qurtuba area

Contract-3:

Rehabilitation and Improvement of Sewerage and Infrastructure such as Roads & Stormwater, Street Lighting, Telephone etc. for Yarmouk area

Contract-4:

Construction of Main Line from Surra to Riggai to New P.St. A7 at Riggai site.

3. After approval of the final design and Tender Documents, the Consultant shall print and submit 5 sets of the documents alongwith 20 documents loaded computer discs (CDs) for each contract when ordered by the MPW.
4. The Consultant shall be present for pre-tender requirements which may include attending meetings related to the project and preparation of addenda,....., etc. if needed.

Phase -IV:

3.1.4. Tender Evaluation Services & prepare Contract Documents:

The Consultant shall analyze and evaluate all bids to determine their responsiveness and compliance with the tendering requirements. Submit the bid tabulations analysis and technical and financial evaluation together-with a recommendation for contract award to MPW along-with the relevant diskets.

Upon approval of award to each contract, the Consultant shall conduct any required clarifying discussions with the successful contractor and shall prepare ten (10) copies of final contract documents for signature by MPW and Contractor.

In case the lowest Tender amount differ than Consultantant Estimation more than $\pm 10\%$, MPW has the right to ask the Consultant to modify the Design and prepare New Tender Documents without extra cost.

It was noticed lately that some of the reports submitted by the Consultants offices lack some important elements of the bids evaluation report.

In the light of the Administrative Decision (which organizes the authorities of the Documents and Contracts Department) No. 958 -year 1999. We like to focus some elements that the Consultant can include in his report, "according to the opinion of Documents and Contracts Department" for the reports of study related to the bids submitted from the bidders within the period determiend in the terms of reference, if any, otherwise the Ministry may impose the determined fines against the Consultant.

The minimum requirements which can guide the Consultants when they prepare the bids evaluation reports :-

1. Introduction

- 1-1 Summary of the works of the Tender, their objective and an explanatory plan of the location
 - 1-2 Announcement of the tender and bids receipt
 - 1-3 The priliminary meeting (The attendance of the Consultant with the Engineering Departments and his participation in preparing the Appendixes, if any, are necessary).
 - 1-4 Statements of the poarticipating bidders, arranged to begin with the bidder who submitted th lowest price and according to the enclosed table of the Central Tenders Committee.
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- 2- Study and Evaluation : The study should be divided into :-
 - 2-1 Technical Evaluation
 - 2-2 Financial Evaluation

2-1 Techniucal Evaluation :

2-1-1 Tables of the bids documents completion

2-1-2 The technical capability of the bidders for the work performance and the extent of his conformity with the contents of his bid with regard to the tender requirements (similar works, submitted executive proram, required materials, devices, equipment , experience of cadre and the proposed time program) in case that such data are requested either in the tender documents or in the technical study stage.

2-1-3 Evaluating the subcontractors and commenting on their technical and financial level capability in case that such data are requested either in the tender documents or in the technical study stage.

2-1-4 Evaluating the proposed alternativces according to the required specifications.

2-2 Financial Evaluation

2-2-1 Mathematical checking and showing the location of the mathematical mistakes, if any, the reasons which caused such mistakes in the shade of the existence of self account equation, the percentage of these misakes to the grand total and how they are to be corrected in the light of the Central Tenders Committee Law.

2-2-2 The prices comparison tables include :

- Tables of the total cost distribution percentage on the main works sections for the first four bidders which the estimated price after applying the discount percentage and the mathematical correction and they are to be enclsoed with an explanatory graph.
- Comparison table fo the grand totals of the sections before the discount operation and the mathematical correction.
- Comparison table for the grand totals of the sections after the discount operation and the mathematical correction.
- Comparison table between the grand totals of the tables sections prices of each bidder after the mathematical correction and the application of the discount percentage with the mathematical average* and the updated estimated price*.
- Detailed table of the items prices of the bidders after applying the discount percentage and performing the mathematical correction, if any, and classifying each items of the first bidder after comparing them with (the mathematical average) according to the following distribution (which is proposed, however the engineer(MPW) may amend it according to his opinion.

Prices categories which are more than or equal to 200% (of the prices categories average)	Very High
Prices categories which are less than 200% but more than or equal to 150% (of the prices categories average)	High
Prices categories which are less than 150% but more than or equal to 75% (of the prices categories average)	Acceptable
Prices categories which are less than 75% but more than or equal to 50% (of the prices categories average)	Low
Prices categories which are less than 50% (of the prices categories average)	Very Low

2-2-3 Commenting on the prices analysis table and the extent of their suitability for the prevailing prices.

2-2-4 General commenting on the prices submitted by the first bidder after comparing them with the mathematical average, updated estimated price and stating the reasons for the difference, if any, and the extent of need of the prices to make an evaluation budget (and explaining the basis for selecting the mathematical average).

2-2-5 Table of the budget which is proposed by the consultant, if any.

2-2-6 Commenting on the daily work tables, if any.

3- General comparison

4- The recommendations and declarations if any.

* The mathematical average is average of other bidders with updating estimated price after exclusion of any price out of comparison level.

* Estimated Price is Price calculated on updated market prices submitted by the Consultant of the project.

SECTION-4:SCHEDULE OF REQUIREMENTS

The services to be provided by the Consultant are divided into:-

- (A) **STAGE- I:**
Study, Design, Preparation of Tender Documents and Evaluation of Tenders for Rehabilitation and Improvement of Sewerage & Infrastructure works in Surra, Qurtuba & Yarmouk areas and construction of Main line from Surra to Riggai to P.St.A7 at Riggai site.
- (B) **STAGE- II:**
Supervision Services (if requested) for Construction Contract.

4.1. **STAGE-I : Study, Design and Preparation of Tender Documents**

The Study and Design shall comprise:

- | | |
|------------|---------------------------------------------------------|
| Phase-I: | The Preliminary Report ,
The Final Report. |
| Phase-II: | Preliminary Design and Draft Tender Documents. |
| Phase-III: | Final Design and Final Contract/s Documents. |
| Phase-IV: | Tenders Evaluation & Preparation of Contract Documents. |

Phase-I

4.1.1. **The Preliminary Report.**

The Consultant shall submit to the MPW 10 copies of a detailed Preliminary Report alongwith five (5) CDs.which shall deal with and include the following as a minimum :-

- (1) The requirements of the Project as mentioned in this Terms of Reference.
- (2) A general layout and one or more Schematic design showing the lines for replacement.
- (3) An approximate estimate of cost.
Everything necessary for the preparation of the Report (such as Staff, instruments, transport, investigation, surveying works, computer programming etc.) shall be provided and done by the Consultant at his own expense and responsibility.

Presentation

The Consultant shall be required to present the findings and recommendations at a conference with the attendance of appropriate officials of the Government of Kuwait.

Presentation No.1 to be held at the time of submission of the Preliminary Report.

4.1.2. The Final Report.

Upon approval of the Preliminary Report by the MPW and other Ministries , the Consultant shall prepare the Final Report incorporating all the corrections and modifications suggested by the First Party and submit 10 copies + 5 CDs.

Soil Investigation Report (2 copies alongwith 2CDs) to be submitted separately.

Phase-II

4.1.3. Preliminary Design and Draft Tender Documents.

Upon approval of the Final Report and estimate of cost by the MPW and other ministries, the Consultant shall prepare the following:

- (1) Preliminary Design & Drawings of the Project (2 sets & two(2) CDs) for each ministry.
- (2) Design Calculations (2 sets & two(2) CDs) for each ministry.
- (3) Schedule of finishes (if any) (2 sets & two(2) CDs). for each ministry.
- (4) Sufficiently detailed preliminary estimate of cost (2 sets & two(2) CDs) for each ministry.
- (5) Draft Specifications (2sets) & two(2) CDs) for each ministry.
- (6) Draft Bill of Quantities (2 sets) & two (2) CDs) for each ministry.

The Preliminary estimate of cost shall be based on the current and expected market rates.

Presentation No.2 to be held as explained in 4.1.1. at the time of submission of Preliminary Design and approved VE Report.

Phase-III:

4.1.4. Final Design and Final Tender Documents.

Upon approval of the Preliminary Design and Estimate of Cost, the Consultant shall proceed to make the final design and final drawings to suitable scales as approved by the Engineer and large scale details required for the entire construction and completion of the replacement works and necessary structural details.

The final drawings shall include all necessary details and complete information for replacement works for the whole of the project.

The Consultant shall supply 5 copies of final drawings and details for the approval of the MPW and other Ministries alongwith Two(2) CDs for each services. Upon approval or completion of all amendments required, the Consultant shall supply to the MPW and other ministries, two complete sets of negatives (mother prints) of the final approved drawings.

All final drawings shall be of the highest standard, complete and fully detailed and dimensioned in the Metric System and lettered in English language.

The Consultant shall present with the final drawings a schedule of the final estimate of costs. Rates are to be submitted by the Consultant and agreed by the MPW and other ministries.

If the final estimate of cost exceeds by 5% differ than the Preliminary Estimate of Cost, the MPW and other ministries shall have the right to request the Consultant to amend without extra fees the final design in such a manner that the final estimate of cost be within the limit of the agreed Preliminary Estimate of Cost.

However, if such is due to reasons not related to the design and beyond the control of the Consultant, and if the MPW and other ministries are still desirous to change the design and specifications to reduce the cost, then the Consultant shall be entitled to additional fee for such re-design work.

After approval of the final design and drawings, the Consultant shall submit 3 copies of the priced Bill of Quantities of the Contract to be submitted in accordance to the final approved estimated cost.

Tender Documents of the Contract.

The Consultant, when instructed by the MPW, shall prepare 5 sets of all the Documents and 30 CDs for the Contract with complete detailed Schedule of Rates, Bill of Quantities, Specifications and Reports as detailed below:

- DOCUMENT I : TENDERING PROCEDURE (Winword)
(Arabic)

- DOCUMENT II : GENERAL CONDITIONS(Winword)
 - II-2 : Particular Conditions (Winword)
(Arabic)

- DOCUMENT III : TECHNICAL CONDITIONS
 - III-2 : Particular Specifications
(English)

 - III-3 : Drawings (English)
The drawings shall also be prepared by latest CAD method with computerized data files in DWG format on compact disk (CD-ROM).

 - III-4 : Bill of Quantities (English) (Excel XP)

 - III-5 : Price Analysis (English) (Excel XP)

 - III-6 : Appendices (if any).

All works in this project are to be measured and included in the Bills of Quantities. The use of Prime Cost and Provisional Sums will only be allowed where it is impracticable to measure the particular item (which, then must be completely described and specified). The Bills of Quantities and Specifications shall contain sufficient details and special descriptions to enable tenderers to be called for the construction and completion of the whole of this project. Upon completion of the Documents of the Contract, the Consultant shall supply five sets for the approval of the MPW. Upon approval or completion of all amendments required by the MPW, the Consultant when ordered, shall supply to the Ministry, 5 complete sets of paper prints and 30 CD copies of the Final Approved Documents and Final Drawings of the contract.

The cost of the Project after approval of Final Design, shall be calculated by the Consultant on the basis of the quantities established by the Consultant.

Phase -IV:

4.1.5. Tender Evaluation

After bids are received, the Consultant shall render assistance in evaluating these bids and its compliance with the requirement and conduct any meeting clarification for the selection of Contractor for the construction contract as specified in section 3.1.4 and prepare 10 sets of documents for the contract for signature by the MPW and Contractor.

The Ministry shall have the right to request the Consultant to amend without extra fees, the final design or specifications, in case the total amount of the project by the lowest bidder differ by $\pm 10\%$ of the final cost estimate submitted before tendering by the Consultant.

4.2. Stage-II : Supervision Services (if requested) for Construction Contract:

The Consultant should clearly understand that there is no commitment on the part of the MPW to assign supervision of construction of Sewerage and Infrastructure Improvement works to him.

If and when requested by the MPW, the Consultant shall undertake the supervision of execution of Improvement works as indicated in this Agreement.

SECTION - 5 - SCHEDULE OF TIME:

The period for completion of all works under the terms of this agreement shall be as outlined below:-

5.1. Stage I : Study, Design, Preparations of Tender Documents and Advice on Tender Award : 730 calendar days as scheduled below:

(1)	Data Collection and Preliminary Report	:	180	cal. days.
	Presentation No.1	:	(date to be confirmed in due time)	
(2)	MPW & other Ministries Review	:	50	cal. days.
(3)	Final Report	:	60	cal. days.
(4)	MPW & other Ministries Review	:	50	cal. days.
(5)	Preliminary Design & and Draft Tender Documents	:	150	cal. days.
	Presentation No.2	:	(date to be confirmed in due time)	
(6)	MPW & other Ministries Review	:	50	cal. days.
(7)	Final Design and Final Tender Documents	:	90	cal. days.
(8)	MPW & other Ministries Review and Comments:	:	50	cal. days.
(9)	Finalize & Submit Tender Documents	:	50	cal. days.
	T o t a l	:	730	cal. days.

Note : **One month period after date of enterprise will be considered as mobilization period and will be inclusive in 730 days.**

(10) Evaluation of Tender and Advice on Tender Award (As necessary)

5.2. Stage II : Construction Supervision of Sewerage and Infrastructure Improvement for Surra, Qurtuba & Yarmouk areas and construction of main line from Surra to Riggai to P.St.A7 (Provisional)

The period of Agreement for Stage II (Construction) will be 24 months for each of the Construction contract and 26 months for Supervision of each Contract.

SECTION - 6 - FEES AND TERMS OF PAYMENT:

In the final agreement with the successful Consultant, the overall maximum amount payable under the terms of the executed agreements will be the total sum of each individual part shown in the Consultant's Financial Proposal. The Consultant will be expected to complete the proposed work within this maximum amount unless scope changes have been approved by the MPW and other Ministries in advance which may increase or decrease this maximum payable amount.

The amount payable under the terms of the final signed Agreement will be as follows :-

6.1. Stage-I

The fees for Study, Design, Preparation of Tenders Documents and evaluation of the Tenders based on proposed programme scheduled in Section - 4 shall be as per Financial Proposal Table (F1) and (F2). The mode of payment shall be as follows :-

- 6.1.1. Payment for the direct Cost Items such as Survey and Soil Investigations will be paid as per actual expenses based on the accepted official & original documents and not more than the individual sum of the same activity shown in the agreed Financial Proposal of the Agreement. The break down of the payment will be as follows:-
 4. 25% of each item's total cost after confirmation of starting the activity.
 5. 65% of each item's total cost at the substantial completion of the activity.
 6. 10% of each items total cost at the final completion of activity.

The maximum percentage of the direct cost not exceed 15% of the total amount of the project.

- 6.1.2. Payment for Specialist Staff visits shall be made for each visit after receiving the original receipts of expenses within the maximum amount of each.(refer to Article No.10 of the General Conditions – Document – I).
- 6.1.3. Payment of the total remaining value of Stage-I after above shall be made as follows :-

- | | | |
|---|----------------------------------------------------------------------|-----|
| - | After approval of the Preliminary Report | 15% |
| - | After approval of the Final Report | 10% |
| - | After approval of the Preliminary Design and Draft Tenders Documents | 30% |

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 7. After completion and approval of the Final Design and Final Tenders Documents and Drawings including the Computer CDs | 25% |
| 8. After approval and receipt of all sets of Tender/s Documents, one set of complete original mother print and two (2) sets of paper print and One(1) set on CD for each services of the final approved Design drawings. | 10% |
| 9. For assisting in the Study of the Tenders received and presenting the evaluation report and Contract/s Docuemnts | 10% * |
- All payments will be made in Kuwaiti Dinars.

* This % age will be valid for two years after the date of submitting the Final Tender/s Documents of Tender/s and then will be reduced to 5% only.

6.2. Stage-II :

A monthly remuneration calculated on the basis of actual supervisory staff and direct cost as per Financial Proposal Table (F2) and Tables (F3-1 to F3-4).

All payments will be made in Kuwaiti Dinars. With reference to Construction Supervision, the rates shall be fixed for the total mentined construction period. Thereafter inflation may be allowed at the same rate as the CPI (Consumer Price Index) published by the Ministry of Planning for the year immediately preceeding, only in case the extension or delay refer to reasons not related to the Consultant or beyond his control (it is to be verified within MOP).

Direct cost will be paid as per actual expenses along the services is valid, based on original accepted official documents and not more than the relevant individual rate/sum shown in the agreed financial proposal.

A- Performance Bond

A.1: Stage –I: Study, design and Preparation of Tender/s & Contract/s Documents and advise on Tender/s Award.

The Performance Bond will be 10% from the Stage-I total value for Ministry of Public Works as per Article 19 in Document I (General Conditons) in an amount of (KD.) only as a certified cheque or Bank Guarantee. The Performance Bond shall be valid originally or after extension upto the date/dates of contract(s) execution . It will be released after issuing the substantial completion certificate by the Ministry to the Contractor(s) or after (18) months from submitting the Tender Documents in case of non construcion of the project.

A.2: Stage-II: Construction Supervision : (Optional)

The percentage of the Performance Bond will be 10% max. of the total value of Stage- II for Ministry of Public Works as per Article (19) of Document-I (General Condition) in an amount of (KD.) only as a certified cheque or Bank Guarantee. The Performance Bond shall be valid originally or after extension upto the date/dates of contract(s) execution . It will be released after issuing the substantial completion certificate from the Ministry to the Contractor(s)

- B - Advance Payment and Bank Guarantee and Method of Recovery :**
According to Article (20) of Document –I (General Conditions) the Advance Payment shall be 10% of the value of each stage and recovery method will be 10% from each payment due to the Consultant.
The Ministry has the right to adjust this percentage in order to guarantee the full recovery of the advance payment at least one month before the completion date of each stage.
- C- Insurance :**
Insurance will be according to Article (21) of Document I (General Conditions) and as follows :-
- C-1: Insurance Certificate on Stage-I: Study, Design & Preparatin of Tender/s & Contract Documents and Advise on Tender Award :**
If the Ministry assign the works of this stage to the Consultant, then this certificate value will be (KD.500,000/-) and is to be submitted with the Final Tender/s Document/s.
The Certificate shall be valid for 5 years from the date of submitting the tender documents, taking into consideration that the insurance policy must, in all cases, cover all the Consultant’s Design Responsibilities as per the Agreement Conditions.
- C-2: Insurance Certificate on Stage-II: Construction Supervision :**
If the Consultant is assigned the supervision works then he shall, before the date of enterprise, submit the Insurance Certificate for a value equal to 10% of the Project cost.
It shall remain valid till the date of issuing final completion certificate from Ministry to the Contractor(s) work, taking into consideration that the insurance policy must, in all cases, cover all the Consulant’s responsibilities as per the Agreement Conditions.
- D: Penalty for Delay :**
According to Article (24) of Document ((General Conditions) the penalty for delay will be as follows :
The Consultant shall pay a penalty to the Ministry for delays of Contract/s in proportionate with his responsibilities of delay on completion of the construction contract/s.The maximum of the delay penalty is 10% of the Agreement Price.
Stage –I: Study, Design and Preparation of Tender/s & Contract/s Documents and advise on Tender/s Award.
The Penalty value is (KD.500/-) for each day of delay.
Stage-II: Construction Supervision :
If the Consultant failed to provide the Supervision Staff as per the Ministry request or any of the staff member was absent from work without an accepted excuse by the Ministry, then the Ministry has the right to charge the following penalties.
KD.150/- for each day of absence for first week and then after KD.200/- of absence for the Resident Engineer.
KD.100/- for each day of absence for any Engineer or Quantity Suerveyor.
KD.80/- for each day of absence for any Technical Inspector.
KD.50/- for each day of absence for any of the Administrative Staff.

SECTION 7 -STAFFING:

The specialized nature of this project requires that the Consultant staff the project with a core group of Professionals and Technicians that are experienced in both Project Management techniques and the engineering design, construction, operations and maintenance. The project Manager and Landscape Architect shall be resident in Kuwait. The Consultant shall have a Senior Mechanical or Sanitary Engineer in residence in Kuwait assigned to the project to oversee the design of all pump stations and transfer mains.

7.1 Organizational Chart:

The Consultant shall submit with their Technical Proposal an organizational chart of the team(s) proposed. The chart shall provide the name of the person proposed and his or her assignment on the team. The chart shall indicate the team member to be resident in Kuwait and those located internationally. A detailed CV of each nominated team member shall be included in the Technical Proposal presented in the form and with the content as illustrated in Table T2.

7.2 Staff Qualifications:

The Consultant shall determine the number of staff necessary to complete the scope of work as stated herein. The Consultant shall submit in the Technical Proposal full details of the staffing proposed. The Financial Proposal shall reflect the cost of the staffing proposed in the Technical Proposal. Prior to assignment to the project or performing services for the project, the Consultant shall submit the proposed staff name and qualifications to MPW for approval. The majority of the engineers and other staff assigned to the project must have been employed by the Consultant at least one year prior to being assigned to this project.

The following positions are the core staff needed for execution of this contract:

7.2.1 Resident Engineer:

- Twenty years experience in water and sanitary engineering design and construction
- Ten years Project Management Experience;
- Experience with major multi-contract, multi-facility Water or Waste Water Projects or Programs with values in excess of KD.30 million;
- Graduate Civil/Sanitary Engineer Chartered or Registered Engineer from an internationally recognized institute;
- Resident Middle East Experience.

7.2.2 Civil Engineers (Sanitary, Roads & Stormwater)

10 years experience in civil design of major engineered facilities.

Graduate structural/civil engineer chartered or registered engineer from an internationally recognized institute.

* Resident Middle East Experience.

7.2.3 Senior Mechanical Engineer.

- 10 years experience in design and construction of major sanitary or water supply pumping stations distribution systems.
- Graduate Mechanical/Sanitary Engineer Chartered or Registered Engineer from an internationally recognized institute.
- Resident Middle East Experience.

7.2.4 Electrical Engineer.

- 10 years experience in design and construction of major Electrical facilities.
- Graduate from an internationally recognized institute with multi-national experience.
- Resident Middle East Experience.

7.2.5 Telecommunication Engineer.

- 10 years experience in design and construction of major Electrical facilities.
- Graduate from an internationally recognized institute with multi-national experience.
- Resident Middle East Experience.

7.2.6 Penalties.

Ministry has the right to control minimum staffing and penalize the consultant with the ability to deduct the salary of staff missing. The Consultant shall provide a certified time sheet to be monitored by MPW.

7.3. Advise Support Service

The Consultant shall provide to Ministry's Sanitary Administration Departments Senior Professional Staff who will be assigned to work under Director's order.

Anticipation of these services are participation of Senior Professional Staff in duties carried out by Department

The minimum staff required is listed below:

- Senior Sanitary Engineer – Design
- Senior Hydraulic Engineer –Design
- Senior Mechanical Engineer for Sanitary works
- Senior Electrical Engineer for Sanitary Works
- Senior Instrumentation and Telemetry Engineer – Sanitary works
- Senior Quantity Surveyor

The Senior Engineers particular responsibilities will be discussed prior to commencement of the Agreement with regard to relevant department requirements.

All senior staff qualification shall be at least B.Sc. with minimum 15 years of relative professional experience.

- All Administration affairs of the trainees, such as annual leave, sick leave, salary costs, etc. will be processed directly by the Ministry and the costs will not be charged to the Consultant. The manpower assessment by the Consultant to perform the work under this Agreement will not be adjusted to reflect the trainees assigned to the Project. The Consultant's rate for the same to be shown in detail through the direct cost schedule.

SECTION 8 - GENERAL MATTERS :

8.1. Office Staffing:

The selected Consultant is expected to maintain an office in Kuwait that is adequately equipped and staffed with engineering personnel and support staff throughout the Agreement Period.

The Consultant's staff shall have word processing, computer aided drafting and data entry capabilities and all tools and equipment to fulfil his obligations. The Consultant shall make his own assessment as to the number of staff and man-months required for this project. Full details of his staffing shall be included in his Technical Proposal. The Financial Proposal shall reflect the cost of the staffing proposed in the Technical Proposal.

8.2. TRAINING AND PERFORMANCE EVALUATION

8.2.1. General

In accordance with the provision of Article (29) of Document (I) of the Agreement the Consultant shall accept and train three of the MPW Kuwaiti Engineers on this project.

The Consultant is expected to provide a proper and comprehensive training program. This training program is very important to the Ministry. The Consultant ability in conveying practical engineering skills to the trainees for future use will be well considered by the Ministry. The scope of training shall cover all works required for Conceptual upto Final Design and preparation of Tender Documents.

The positions required for the training are as follows:

- One Engineer for Mechanical Design
- One Engineer for Sanitary Networks
- One Engineer for Quantity Surveying

The Consultant shall provide the Training Team to perform this task.

It is the objective of the Consultant to encourage open, communication between employees and their immediate supervisors/managers regarding performance issues and to formally document employees' performance at least annually. The process is a continuous cycle that helps management and employees work together to establish critical goals and focus on continuous improvement and personal development through coaching and feedback. The Performance Management Process provides an employee the opportunity to maximize his/her contributions to the organization and to develop his/her knowledge and skills. The Consultant has to establish and maintain a performance appraisal process, which is designed to:

- Communicate performance objectives and job expectations to employees at the beginning of the appraisal period to be used as a means of measuring their achievements.
- Identify new, but attainable, “stretch” targets.
- Identify specific areas of performance which need improvement and develop a plan of action to achieve recommended changes.
- Create an environment which encourages employees and supervisors/managers to openly discuss performance issues, action plans, and developmental needs throughout the year.
- Provide input for decisions pertaining to salary administration, training, promotion, transfers reduction in force, and disciplinary actions.

8.2.2 Establishing Performance Objectives and Expectations.

Performance objectives and expectations should be established at the beginning of the appraisal period by the immediate supervisor/manager in conjunction with the employee. They should be clearly defined, measurable, challenging, and achievable.

Performance objectives and expectations should relate to the employee’s role on the project or within the work group, as well as those pertaining to personal development.

The employee should receive a written copy of his/her objectives and expectations, and dates should be established to review interim progress.

8.2.3. Performance Coaching:

The employee’s immediate supervisor/manager should provide the employee with a regular assessment of progress to ensure that communications between the manager and the employee are ongoing and to revise performance objective as appropriate.

The employee’s immediate supervisor/manager should also endeavour to facilitate performance by ensuring that he/she provides the employee with adequate resources and opportunities to be able to meet these objectives and expectations.

8.2.4 Performance Assessment and Communication

The employee’s immediate supervisor/manager prepares a written Performance Communication document at the completion of the project assignment (or at the end of one year), whichever is less. The manager solicits feedback from primary clients (internal and external). The summary should include an assessment of strengths and weaknesses, a plan of action for improved performance in areas identified as needing improvement.

The employee and his/her immediate supervisor/manager should meet to discuss this written summary of performance and to explore areas of possible improvement and growth.

New performance objectives and expectations should be established for the next appraisal period, including corrective actions and developmental goals.

8.2.5. **Responsibility**

All supervisors/managers are accountable for preparing Performance Communication documents and meeting with their subordinates in a timely manner as part of their own performance appraisal.

The Consultant is responsible for providing advice and counsel on the process and for the training staff qualifications.

8.2.6. **Training Types**

There are two general types of training an employee should be expected and received. Educational Training, which consists of seminars, courses, and lectures offered by the Consultant or a professional institute selected by the Consultant and on job training.

The following is a summary of both types.

8.2.6.1. **Educational Training**

The Consultant must arrange and provide all staff with seminars, lectures, and training courses related to their work and practice. Such educational courses are intended to increase employee's technical knowledge. Additionally, they can educate them on the most current applications, regulations, policies, standards, and changes with respect to a particular discipline. Courses, seminars and lectures typically range in duration from a few days to a few weeks and can be done locally or abroad.

Educational Training is essential since it offers trainees valuable information that may not otherwise be gained through regular work applications.

8.2.6.2. **On Job Training**

On job practical job training are essential for the development of employees' skill and abilities. Hands on training should involve the trainees on all aspects of project development and completion and should include all phases from planning to operation and maintenance of the project.

8.3. **Quality System Procedure for Training**

8.3.1 **Scope**

The purpose of this procedure is to define the procedures, responsibilities and controls for the training of Ministry Staff, and to ensure that training needs are identified.

8.3.2 **Identification of Training Needs**

I. Project related training needs.

At the time no later than the commencement of planning and designing phase work, and preferably during Contract Review, the Consultant's Training Manager shall verify the personnel assigned to his project have the needed training, education, and experience to meet the client's specified requirements.

1. Chart
2. The Engineer shall inform the Training Manager of the names of staff assigned to his project requiring training based on the scope of the project, whether the assigned personnel have done previous similar projects and any special quality needs of the project.
3. Project related training needs shall be documented and kept as a Quality Record in the project files for ten years.

II. Quality Related Training needs.

1. The Training Manager shall obtain from Administration on a monthly basis, a list of all new employees, regardless of employee's position. This list is required in order to allow the Training Manager to schedule Quality training for all new employees. Results of training shall be forwarded to the Engineer for filing as quality documents and for updating personnel files.
2. The Training Manager shall also monitor the Internal Quality Audits and where trends or results indicate the need for quality procedure training for either individuals or groups, the Training Manager shall arrange for specific training to cover the requirements.
3. Quality related training needs shall be documented and kept as a Quality Record. The Quality Record will be kept by the Sanitary Administration for ten years.

8.3.3 Provision of Training

I. Responsibility for Providing Training:

When specific training needs are identified, the Engineer will select alternate suitable employee who has the needed qualifications. The Sanitary Administration Department shall maintain the records of training and record any certification.

II. Type of class training:

The type of training (i.e. formal or on the job) and the class (i.e. certificate, diploma, or degree) needed must be decided on a case by case basis, by the Training Manager in consultation with the Engineer.

III. Training Effectiveness

Training shall be monitored and reported by the Training Manager to the department receiving the training. The responsible MPW manager shall obtain delegate feedback for review and analysis. The training receiving departments are:

Design Department - Sanitary

1. Benefits and Evaluation:

The benefit of training shall be measured against return over expenditure. Benefits shall be included in the evaluation of effectiveness and reported to management for review by the responsible manager of the department receiving the training.

8.3.4 Qualification of Personnel

I. Job Description

All personnel whose job function will impact the quality of Sanitary Administration product will have a job specification written that details the following:

- Academic qualifications
- Training, and/or experience
- Special skills
- Personal characteristics needed for that position

II. Usage of Job Description

1. When evaluating a candidate for employment, the job description shall be used and consulted by the interviewer.

2. The performance evaluation of employees by supervisor shall be conducted on the basis of the Job Description. The evaluator shall note on the evaluation form his remarks about the employer's qualifications and make recommendations for training when it is required.

III. Training Records:

1. The Sanitary Administration Department shall make available to the Training Manager individual Training and education records as required.
2. The Sanitary Administration will maintain training and educational files of all staff. The employee's educational and training records shall be clearly updated to reflect new training and educational attainments.
3. Training records are considered to be Quality Documents and shall be maintained by the Sanitary Administration Department for a minimum of ten years, or as required by any other specified requirements.

8.4. Co-Ordination :

It is necessary and obligatory that a close cooperation concerning various planning, design and construction works must be done during the period of this Agreement with, but not limited to, the following:

- Municipality.
- Ministry of Public Works.
- Ministry of Defense.
- Ministry of Communication.
- Ministry of Electricity and Water
- Ministry of Interior.
- Environmental Public Authority
- Public Authority for Housing Authority.
- Traffic Department.
- Public Authority for Agriculture and Fish Resources
- All concerned Consultant's Offices and/or other offices.

- The Consultant should bear in mind that all existing and proposed planning is an on-going process and that Consultant should keep the situation under review and shall incorporate the latest data and information in the design.

- The Consultant should cooperate closely with the Sub-Service Committee and other concerned ministries to define the service reservations such as sanitary, stormwater, brackish water, sweet water, telephone, electrical cables...etc. along the sidewalk of roads.

- The Consultant should keep all correspondence with all other concerned offices directly or indirectly in the study, design and construction of the Project. All of these correspondence or part of it should be presented at any time to MPW, when requested.

8.5. **Insurance** :

8.5.1. **Design Insurance** :

According to Article (21) Doc.(I), the Consultant shall submit an Insurance Policy/Policies in his name and in favor of Ministry/any other nominee of the Ministry to indemnify all damages, losses, expenses and claims/liability due to faults in the design prepared by Consultant, his employees, his agents or sub-consultants and specialists or their employees or agents.

8.5.2. **Supervision Insurance** :

According to Article (21) Doc.(I), in the case, the Consultant is assigned the supervision work, then he shall submit an insurance policy or policies in his name and in favour of the Ministry and/or any other nominee of the Ministry, to indemnify all damages, losses, costs, claims and liability due to fault in the supervision works performed by the Consultant, his employees or agents. All costs for this policy/policies shall be included in the Supervision fees.

8.5.3. **Third party Insurance** :
(During the Study & Design Period)

The Consultant, before commencing the execution of the works on the site, shall insure against any damage, loss or injury which may occur to any property, or to any person by or arising out of the execution of works or temporary works by the Consultant, his employees, his agents or sub-consultants and specialists.

All the expenses for the policies shall be included in the direct cost of study and design fees.

SECTION 9 : CONSULTANTS PROPOSALS

9.1. Technical Proposal :

The Consultant is required to submit 10 copies of his technical proposal based on the Scope of Work presented herein. The proposal should be in two parts describing the approach to :

Stage I : Study, Design, Preparation of Tender Documents and Evaluation of Tenders.

Stage II Supervision of Construction of Sewerage and Infrastructure Improvement for Surra, Qurtuba, Yarmouk areas and Study & Design Main Line from Surra to Riggai. (Optional)

The Consultant is required to submit 10 hard copies and 10 soft copies on (CDs) of his technical proposal based on the Scope of Work presented herein. The Consultant is encouraged to use the Scope of Work presented herein as a general guide and is required to present his selected technical approach describing plans for accomplishing the works. For the Design part, the proposal shall include comments on Preliminary and Final Design with particular comments on works to be performed outside Kuwait.

The Consultant is further encouraged to review all reports and documents available at the Ministry of Public Works and other ministries concerning the past and on-going works for related projects and evaluate the existing facilities and local conditions carefully before submitting his proposal.

Field trips and visits to assist the Consultant in preparing his proposal and supervision of the project as mentioned in the tables of the direct cost and will be paid as actual expenses and the payment as mentioned in section (6) of Document III-1 and in statement (6) in Document II of Agreement and must be supported by approved document.

As a minimum the Technical Proposal should include :-

- Key issue
- Technical approach
- Scope of work in detail including breakdown of different tasks
- Experience of Consultant's Firm, especially with work done in the Middle East should be highlighted as per Table T1.
- Experience particulars of the professional members of staff should be submitted in Table T2.
- Submit a bar-chart showing the work programme in Table T3.
- Submit a man-month schedule in the Format Table T4.
- List of three references for whom similar projects have been completed by the Consultant.
- Value Engineering Workhop(s) Firm with specialised experience and staff.

In describing the supervision programmes, the Consultant shall provide a description of the qualifications and experience for each key position as per Format Table T2 and shall indicate the plans of any, for recruitment of international and local manpower outside his own organization. A substantial number of the engineers and other staff assigned to the project supervisory staff must have been employed by the Consultant at least one year prior to being assigned to Kuwait projects and shall have past experience on Sewerage and Infrastructure Improvement works. A statement as to when the Consultant should be mobilized to begin work should be included.

9.2. **Submittals :**

The Technical Proposal shall be submitted in ten (10) hard copies and ten (10) electronic copies (CDs). The Financial Proposal shall be submitted in ten (10) hard copies. Both the proposals shall be submitted in an envelope sealed with wax and identified as Technical or Financial Proposal. The Technical and Financial proposals shall be submitted in separate volumes.

The following conditions apply to the soft copies :

- Soft copies containing the Financial Proposal or any Financial Data will result in disqualifying the Consulting Firm.
 - In case of any discrepancy whatsoever between the hard copies and the soft copies, the hard copies shall prevail.
- * All submittals by the Consultant to MPW will be totally owned by MPW.
 - * MPW will have all printing rights effective the date of the relevant contract signing.

9.3. **Financial Proposal :**

The Consultant shall submit 10 copies of Financial Proposal for each Part of the Work as described below :-

Stage I	Study, Design, Preparation of Tender Documents for Rehabilitation and Improvement of Sewerage and Infrastructure works for Surra, Qurtuba and Yarmouk areas and Construction of Main Line from Surra to Riggai to P.St.A7.
Stage II	Supervision of Construction of Sewerage & Infrastructure Improvement for Surra, Qurtuba and Yarmouk areas and construction of Main Line from from Surra to Riggai to P.Stn.A7 (Optional)

- The Financial Proposals shall be prepared to show the Consultant's Staff and a detailed breakdown of man-months with indication of salary, overheads and profit. Copies of Forms included in this document shall be used in preparing the Financial Proposal. Separate cost estimate summaries shall be provided for each part.
 - The period for completion of Stage -I shall be 730 calendar days. For Stage II, Supervision of Construction shall be 26 months for each contract (total 4 contracts).
 - For Stage -I Staff Cost, Table F1 and Stage-II Staff Cost, Table F3 shall be filled in and submitted.
10. Direct costs in the proposals shall be itemized in sufficient details for each part of work so that the individual costs can be clearly understood and evaluated. Cost items shall include but not limited to vehicle and transport expenses, air fares for assigned visitors from home office of International Consultant to/from Kuwait, soil and sub-surface investigations and other items as necessary. Calculations for the direct cost shall be made for Stages I and II separately in the Format given as Table F2.
- For Supervision, the Consultant shall be responsible (as part of his overhead) for providing all necessary site office consumable equipment (typewriters, word processors, surveying equipment etc.), codes and standard manuals and other reference materials and equipment required by the Consultant in the performance of his work. The Ministry will provide and maintain for the Consultant only a site office and office furniture.

Financial Proposal

Description	Staff Costs	Direct Costs	Total - KD
Part – I Study, Design, Preparation and Evaluaton of Documents			
Study, Design, Preparation and Evaluation of Documents Total KD.			
Part – II Supervision of Contract 1 Supervision of Contract 2 Supervision of Contract 3 Supervision of Contract 4			
Supervision costs Total KD			
Total cost for Part I and II			

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FOR

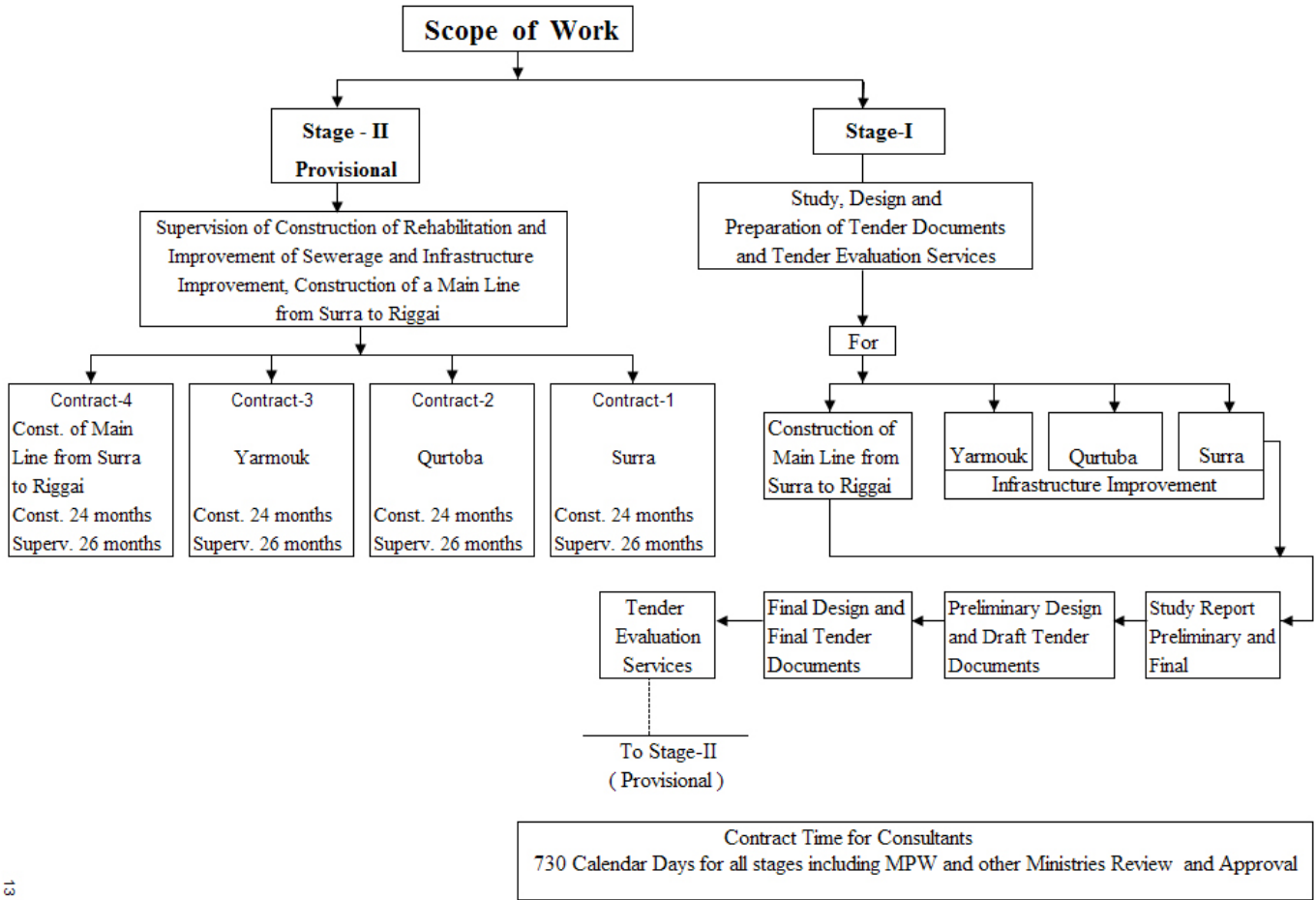
**REHABILITATION AND IMPROVEMENT OF
SEWERAGE AND INFRASTRUCTURE IN
YARMOUK, SURRA AND QURTUBA AREAS
A N D
STUDY AND DESIGN MAIN LINE FROM SURRA
TO RIGAI TO NEW P.ST.A7**

PHASE – XI

DOCUMENT – I

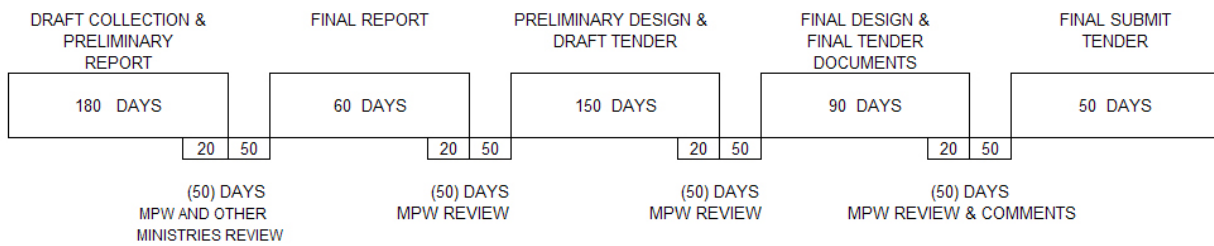
DOCUMENT – II-1 & II-2

DOCUMENT – III-1



SECTION (5) - SCHEDULE OF TIME

DOCUMENT III-1



730 DAYS

The Consultant has to submit almost complete stage of work to MPW and other Ministries for review at the start of overlap period as shown above.