# Preamble of Bill of Quantities (Additional)

1) INTRODUCTION

The Bill of Quantities includes this preamble, the parts of the bill of Quantities and the schedules .

The bill of Quantities shall be read in conjunction with the Conditions of Contract, the Specifications, and the Drawings. The work or Materials covered by items in the Bill of Quantities are as detailed in the Specifications and Drawings.

The quantities given in the bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding therefore they are not to be taken as accurate Quantities of the works to be executed by the Contractor in fulfillment of this obligations under the Contract. The basis of Payment will be the actual Quantities of work ordered and Carried out, as measured and verified by the Engineer and valued at the rates and prices bid in the priced bill of Quantities, wherever applicable, and otherwise at such rates and prices as the aforesaid and foregoing. Errors during bidding process will be corrected by the Employer for any arithmetic errors pursuant to Clause 33 of the instructions to Bidders.

2) RATES & PRICES

The unit rate of the each items shall be exclusive of Value Added Taxes (VAT). The VAT shall be added separately as prescribed in Summary of Bills of Quantities.

The rates and prices in the Bill of Quantities shall, except where otherwise provided in the Contract, cover all the contractor's obligations under the Contract and all matters and items necessary as survey using survey instruments to verify the alignment, preparation of preconstruction investigation, contractor's working drawings, shop drawings, as built drawings, mobilization of Constructional Plant and equipment and management and technical personal for execution and supervision labour , material supervision, erection, maintenance, protection, insurance, profit taxes and duties for the proper construction and completion of the works including testing and remedy of detects works as specified in or reasonably to be inferred from the contract. Unless the method of measurement makes a specific promise of measurement no further payment shall be made in respect of anything described in the contract for which apparently no corresponding item is given in the bill of Quantities. The cost of any items that is necessary for successful completion of the works but not mentioned in the bill of Quantities and against which no contract rate has been entered , shall be deemed to be covered by other Quoted items rates. If any item required for successful completion of works inadvertently missed out in the bill of Quantities, the bidder shall include the cost of its supply in the relevant laying or install item ( including all the relevant, small ancillary items required for social , safety and environmental concerns), therefore, the prices and rates entered by the Contractor in the bill of Quantities shall cover the complete and finished work in final position as required by the Contract document including, inter alia, all cost and expenses which may be required in and for the constructions and maintenance of the works, together with all risks, liabilities, contingencies, insurance and obligations imposed or implied by the contract .

Price quoted against each items, must be reasonable reflecting the actual cost of the work plus expenses and must correspond to the relative value of each item in relation to the total amount of the bid, they must in particular not be of such nature as to distort the comparison of bids or to result in interim payments which are clearly disproportionate to the normal value of the services to be rendered.

Without affecting the generality of the foregoing provisions, the prices and rates entered by the contractor in the bill of Quantities shall include, enter alia, all cost and expenses involved with or arising from the following:-

- The provision, storage, transport, handling, use distribution and maintenance of all materials, plant, equipment, machinery and tools including all costs charges, dues, demurrage or other outlays involved in carriage and importation:,
- The provision and maintenance of all staff and labor and their payment, accommodation, transport fares and other requirements.
- Setting out, including the location and preservation of survey markers, measurement and supervision.,
- The provision, operation, maintenance and removal upon completion of the contract of all contractor's side installations.
- The provision, storage, transport, use, handling, distributions and maintenance of all consumable stores, fuel, water and electricity for the contractor's side installation.
- The opening, operations and reinstatement upon completion of all sources for concrete, aggregates, earthworks etc.
- The provision and maintenance of all temporary detours, of traffic control measures and of reinstatement upon complication of the existing roads.
- Protections against failure of property adjoining the excavations for pipelines to be laid.
- All contractual submission by the contractor except spare parts and photographs.
- All quality control measure including inspections and tests.
- Damage caused to the works under construction, plant, materials and consumable stores by the weather.
- Repairs to the works either prior to during the defects liability period.
- Maintenance of total work from commencement day to end the defect liability period.
- Coordination with other contractor's and authorities carrying outwork either in connection with or adjacent to the works.
- Overheads , on –costs and profits.

A price or rate shall be entered against each items in the bill of quantities weather quantities are stated or not. Items against which the bidder dos not enter a price or rate shall be deemed include in other prices and rates quoted in the bill of quantities.

The unit price or rate entered against any item shall take precedence over any miscalculation in the total sum against that item. where separate items have not been provided in the bill of quantities for work required under the contract, then the cost of such works shall be deemed to have been include in the unit prices and rates for other items.

3) BILL OF QUANTITIES

The total quantity include in the final measurement of each item shall be measured to the nearest integer relative to that item, or to one decimal place if so indicated in the bill of quantities.

The following abbreviations are used in the bill of quantities :

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| Sq | Square | Mm | millimeter |
| Cu | Cubic | M | meter |

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|---|---|---|---|
| Nr | Number | km | kilometer |
| Hr | Hour | % | percent |
| Kg | Kilogram | d or dia | diameter |
| Ha | Hectare | t or Mt | Metric ton |
| Prov.Sum | Provisional Sum | Nrs | Nepali |
| US$ | United states Dollars | NRs | Nepali |
| Md | Mandays | | |

Where in the bill of quantities there is a schedule or subsidiary bill setting out the quantities Of component materials and work which comprise a unit of work measured under a single item in a part of the bill of quantities , the said quantities , shall be subject to ad measurement and valued at the rates and prices entered therein and the total thereof shall be the rate for the item in the part.

4. ITEM

The item descriptions in the bill of quantities are only in sufficient detailed to insure identification of the work covered with that shown on the drawings and described in the specification, description of the work given on the drawings or in the specification is not necessarily repeated in the identifying descriptions of the items in the bill of quantities, A reference clause number set against any item in bill of quantities indicates a clause in the specification in which work or material covered by the item is described. While every care is taken provide reference to specification in the item description, the contractor Shall have no claim in cases where such reference is absent. The bidder is advised to bring such discrepancies to the notice of the
Employer before submitting the tender. The items described as " Procurement supply and Installation of Fittings and Valves" of any kind and for any diameter of fitting and valves include all associated works such as transportation of delivered fittings and valves to the concerned sit, handling, storage, protection of flanges and other connection ends, installation of fittings and valves with necessary bolts, collars, gaskets etc as required to make a complete watertight joint to the corresponding pipe, testing, backfilling compaction and disposal of excess materials as per specification and drawings.
Further requirements for the work or material in question may be stated in other clauses in the specification or on the Drawings and the Contract Rates shall be deemed to cover also the cost of complying with any such further requirements.

## 5. METHOD OF MEASUREMENT

The method of measurement of completed work (supply, delivery and installation including testing) for payment shall be in accordance with provisions made and specified in the Technical Specifications and any other related document forming part of the Contract Documents.

Other cost not mentioned in BOQ for pipeline works as an item shall be arranged by Contractor at his own cost.

**6. PROVISIONAL WORK, SUM AND QUANTITLES**

Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with the Conditions of Contract against provisional work mentioned under part of BOQ , it will be Used by the Engineer for nominated sub-contractors, line agencies, third party inspecting agencies, charges levied by statutory electrical, telephone, or other authorities, or for other miscellaneous works, The uses of provisional sum will also be for relocation of utilities above or under the ground that conflict with the existing or permanent line or level or the works, independent sampling and laboratory testing as directed by the Engineer, Replacement or Compensation for Plants and Tress removed due to the works etc. As directed by the Engineer.

The rates set out for such items shall be used for the valuation of works so ordered by the Engineer in writing whether the quantities are shown or not. lf the amount of work ordered by the Engineer to be executed under or provisional quantity item exceeds the quantity shown in the Bill of Quantities, the rate for that item set out in the Contract shall not necessarily be deemed applicable to the excess.

Each Provisional Sum shall only be used, in whole or in part, in accordance with the engineers instructions. The total sum paid to the contractor shall include only such amounts, for the work, supplies or services to which the provisional sum relates, as the Engineers shall have instructed. The provisional sum shall include only the actual amounts paid (or due to be paid) by the contractor and no overhead charges and profit is given. The Contractor shall, when required by the Engineer produce quotations, invoices, vouchers and accounts or receipts in substantiation.

**7. OTHER COST**

Cost of temporary works like construction and maintenance of road diversions including traffic control: construction and maintenance of dewatering and drainage arrangements, establishment and maintenance of contractor's site office, store, establishment and maintenance of workshops, plant and equipment, including project sing boards etc unless and otherwise mentioned in BOQ , will be deemed part of priced work and shall not be paid extra .

**8 DAYWORKS SCHEDULE**

General

The Contractor will be paid for daywork which may be required by the Engineer in writing during the course of the Contract at the rates set down by him in the Schedule. All profit and overhead must be included in these rates which shall also include all other costs of whatever nature necessary for and incidental to the performance of extra expenditures, such as royalties, payment to third party transportation, tools, housing for personnel, laboratory equipment and personnel for testing. Time

actually engaged in the works will be the only time allowed. No allowance will be made for travelling time even if it is necessary to import labor to the site for the execution of the Daywork item. Rates quoted for Daywork will be taken into consideration when the bids are examined. Rates for Daywork shall show a reasonable relationship with unit rates entered elsewhere in the documents.

These rates will be subject to review by the Engineer and if unreasonably high (as determined by the Engineer) will not be used; in lieu of their Use, the Engineer may accomplish any required extra work in the manner as set out in Clause 13 of the conditions of contract .

All quantities in the Dayworks Schedule are provisional but the amounts shall be extended and totals carried to the Summaries of each of the all Schedules .

The Contract Rates in the Daywork Schedule shall apply up to the data of expiry of the Defects Liability Period.

Labour Rates

For the purpose of payment for Daywork, labour shall be grouped into the classes contained in the Daywork Schedule and the classes shall have the meaning assigned to them therein. Provided that if the Contractor employs a man on daywork for lower classification than that fof which the man is qualified, then in respect of such a man the contractor will be pain only at the rate for the lower classification.

Rate for the various classes of labour in the daywork Schedule shall cover all the Contractor's obligations whatsoever in providing and maintaining such labour at the place the work including wages, payment for conditions and for skill, bonus travelling and subsistence all allowance and expenses, watching and insurances of all kinds, site supervision, administrative clothing, the use and maintenance of staging scaffolding, portable electric tools, non- mechanical plant and hand tools of every kind, overheads, profit and all incidental expense .
The rates for labour are for units of man-days and a day shall be deemed to be a normal working day of 8 hours. Any less time shall be pain for proportionatiely.

Material Rates
Materials used on day work shall be as specified for the works. The rates shall include delivery to the concerned pipe laying stretches and reservoir construction area (hereinafter referred as project sites.) Should any materials be required for use on day work which are not included in the Schedule, the lowest current net market price shall apply, plus the cost of loading, transporting and unloading to the Project Sites including 15% allowance for overhead and profit. Should the Engineer instruct that the materials be ordered from abroad, then the lowest current net manufacture's C.I.F. (Cost, insurance, Freight) price shall apply, plus the cost of customs and handling charges, transporting and unloading to the Project Sites and 15% allowance for overhead and profit. All rates shall include storing and protecting the materials as necessary, plus any and all additional handling cost and taxes.

Plant and Equipment Rates

The Contract Rates for plants in the Daywork Schedule shall apply to all plant whether belonging to the contractor or hired by him and shall cover all the contractor's obligations whatsoever in providing and maintaining such plant at the place of work including all fuel, lubricants, all auxiliary equipment consumable stores, overhauls, repairs, replacement and all other change necessary for efficient operation and use of the plant, overheads and profits but excluding operators and attendants for whom labour changes shall apply. The amounts changed shall be the actual hours worked at the direction of the Engineer, no allowance being made for standing time, at the rate laid down for Contractors' own plant in the Daywork Schedule.

Payment for plant of daywork will be limited to items listed in the Daywork Schedule or added thereto by the Contractor when tendering , unless otherwise agreed by the Engineer.
The contract Rates for plant shall be apply both to plant which is already available at site and to plant brought to site especially for daywork but in the later case the Contractor shall be reimbursed his additional net costs in transporting such plant to and from the site.

9 Insurance

The cost of providing insurance of works and contractor's Equipment shall be paid to the contractor as provisional sum amount against submission of required insurance policies with the appropriate payment receipts, in the form acceptable to the Employer. The cost of providing third party insurance (including Employer's property) shall be paid to the contractor as provisional sum amount against submission of required insurance policies with the appropriate payment receipts, in the from acceptable to the Employer. The cost of providing insurance against accident to workmen shall be paid to the Contractor as provisional sum amount against submission of required insurance policies with the appropriate payment receipts, in the from acceptable to the Employer.

The Contractor shall extend the validity period of all kinds of insurances until the completion of the project including extension of time given, if any, plus defect liability period. No extra/additional cost will be paid for the extension of validity period after original time of completion until the revised time of completion, if any, plus defect liability period.

10. Quality Control

This covers the provision of quality control plan and procedures, sampling, material/plant certificates, maintaining of site records and daily log books and testing facilities and laboratories including materials, manpower and equipment needed for all testing required to ensure quality of work, and all other requirements shall be as per relevant clauses of Technical Specifications. Unless otherwise mentioned in

BOQ, no separate measurements and/or payment shall be made for the works required under this Clause. All the cost associated with this Clause is deemed to be included in the item rates of the Bill of Quantities.

The personal requirement submitted is deemed to be part of BOQ item and shall present for Quality control.

To test the RCC Reservoir's water tightness, water shall be filled 1/3 rd of the total capacity and retained for three days.

11. Preparation of As-built Drawings

Unless otherwise mentioned in BOQ, no separate measurements and/or payment shall be made for the works required under this Clause. All the cost associated with this Clause is deemed to be included in the item rates of the Bill of Quantities. Final payment shall be made after the submission of as built drawing of project along with other documents as specified. For each IPC contractor shall submit as built drawing of works mentioned in IPC.

12. Pipe Trenches

All pipe line trench excavation for pipe line trench excavated by manual cum machine method only until as instructed by the Engineer.

Excavation shall be paid in cum. For the pipe laying works, the width of trench will not be more than the width given in the pipe trench drawing/table.

The Contractor shall backfill the trench up to the existing level. The additional earth work at reinstatement will be the temporary works and will not be paid additional. The backfilling works will be paid only after the compaction.

13. Disinfection of Treatment Plant, Reservoir Tanks and Pipe Line

Unless otherwise mentioned in BOQ, no separate measurements and/or payment shall be made for works as per instruction of Engineer using disinfectants required under this Clause. All the cost associated with this Clause is deemed to be included in the item rates of the Bill of Quantities.

**14. PAYMENT**

With respect to the items regarding the supply of pipes and fittings given in the Bill of Quantities, brought by the Contractor to the Site for incorporation in the Permanent Works, partial payment shall be made to the contractor provided the following conditions are met:

i. The materials have been delivered to the Site and properly stored and protected against loss, damage, or deterioration:

ii. The Contractor's records of the requirements, orders, receipts, and use of material are kept in a from approved by the Project Manager, and such records are available for inspection by the Project Manager iii. The Contractor has submitted a statement for the supply pipes and fittings delivered to the site as per approved schedule together will test certificate that the materials supplied are as per specification:

iv. The materials are to be used as per construction schedule.

v. Water required for structural Construction for preparation of cement/sand motar, Concrete, curing of concrete structures, testing, Commissioning and other are deemed to be in item rate itself and no separate payment will be for water.

vi. As built drawing with GPS coordinates of each and every control points and Operation and Maintenance manual shall be provided before starting of DLP. If the contractor fails to do so, certain amount shall be withheld and released only after the submission of these documents. vii. If there is any provisioned rebate by Nepal Electricity Authority (NEA) in the power consumption bills during testing and Commissioning Period, 50% amount of such rebate shall be in favour of Employer and remaining 50% shall be provided to contractor. In case of any penalty for delayed payment of power consumption bill, the contractor shall be fully liable and the penalty shall not be paid by Employer. Four percent of Billing cost shall be added as overhead cost of contractor in monthly billing of NEA.

Payment against pipes and valves, specials etc. Intended to form part of permanent works shall be made to the contractor as per following provision:-

(1)Payment modality on supply and delivery of pipe (all types), fittings and appurtenances shall be provided in three installments.

In first Install, Seventy (70%) of the cost of each items shall be provided after the delivery, acceptance and final inspection at the stockpiling site. Second Install, 25% of remaining payments of such items shall be after the completion of pipe laying and jointing and remaining last Install, 5% payments shall be done only after the completion of testing and commissioning of the project as a whole.

The acceptance shall be considered only after the approval of employer to deliver pipes & fittings on site and certified pass certificate issued by National Bureau of Standard and Metrology for HDPE (PE-100) and Galvanized Iron. Similarly, acceptance of the Seamless and Ductile Iron (DI) pipe shall

be considered after the submission of required test/pass certificates approved by manufacturer and other certificates as needed by the client if any.

(2) Payment deduction on surplus pipe & Fittings

**i)** Any Surplus pipe quantities after the completion of works and deemed necessary for future use by the Water Supply Users committee (WSUC) and the Engineer, contractor shall be paid for at a rate lower by 10% for

HDPE, GI, DI, Seamless and other Pipes of the supply, laying and jointing rates of those respective pipe types quoted in the BOQ

**ii)** Similarly, any surplus pipe fitting/valves and meter quantities after the completion of works and deemed necessary for future use by the Water Supply Users committee (WSUC) and the Engineer, contractor shall be paid for at a rate lower by 5% for pump and its accessories, PE fittings, GI fittings, DI fittings and other fittings type supply, laying and installation rates of those respective fitting/valves and meter types quoted in the BOQ Pipes of the supply, laying and jointing rates of those respective pipe types quoted in the BOQ.

The interim payment made to the contractor under Clause 14.2 and 14.7 of the condition of contract and any other amounts are advanced payments. Only the payment made under final payment certificate is considered as payment for the permanent Works completed. If at any time, prior to the issue Defects Liability certificate, the quality or quantity of the works found to be unsatisfactory or do not confirm to the requirement of the Contract, the Engineer is entitled to deduct or withhold the amount sufficient to remedy such unsatisfactory works, from the successive interim or other payments to the Contractor.