

**JAPAN INTERNATIONAL COOPERATION AGENCY
MINISTRY OF ECONOMY AND BUDGET PLANNING
ASTANA CITY GOVERNMENT
CAPITAL DEVELOPMENT CORPORATION**

**THE DETAILED DESIGN STUDY
OF
THE WATER SUPPLY AND SEWERAGE SYSTEM
FOR
ASTANA CITY
IN
THE REPUBLIC OF KAZAKHSTAN**

**ASTANA WATER SUPPLY AND SEWERAGE PROJECT
(DRAFT) TENDER DOCUMENTS
VOLUME 3
BILL OF QUANTITY**

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THE ASTANA WATER SUPPLY AND SEWERAGE PROJECT

BIDDING DOCUMENTS FOR CONTRACT CP-1:

CONSTRUCTION OF WATER SUPPLY AND SEWERAGE FACILITIES

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PREAMBLE TO BILL OF QUANTITIES

Section 6.1 Preamble to Bill of Quantities

6.1.1 General

(1) Application

- A. The relevant clause of this Preamble shall be deemed to apply equally to work subsequently ordered for execution by the Contractor, either under provisional sums or variation orders, except where specifically varied therein.
- B. In the Bill of Quantities, the sub-headings and item descriptions identify construction work of permanent components including necessary temporary works and do not state the tasks either basic or incidental required to be carried out by the Contractor nor do they comprehensively register all the materials required. The exact nature and extent of the work to be performed shall be ascertained by reference to the Drawings, Specifications, Bidding Conditions and Conditions of Contract as the case may be, read in conjunction with the matters listed against the relevant heading and item description as described in the Bill of Quantities.
- C. Differences in the method of billing and in the phraseology used in various parts of the Bill of Quantities will not be recognized as a basis of any claim for an increase in the Contract Price.
- D. No additional items shall be inserted into, nor any alterations made to, any Bill of Quantities.

(2) Method of Measurement

- A. All items of work specified and/or shown on the drawings shall be valued by the measurement of such items only as are included in the Bills of Quantities, which items shall cover all costs incurred by the Contractor in fulfillment of his obligations under the Contract.
- B. The net measurement or weight of the finished work in place will always be taken, and, except where otherwise stated, or where separate items are provided, no allowance will be made for cutting, wastage, working space, overlaps, circular work, etc., and no deductions will be made for grout nicks, rounded arises, bulking or shrinkage and the like.
- C. Payment will be made for only those materials, which are installed in the permanent works and taken over to the stocks as specified in the Specifications to the approval of the Engineer. Construction materials supplied and delivered to the site by the Contractor which become surplus to the above requirements shall become the property of the Contractor who shall reimburse the Employer any money that was paid to the Contractor for the supply and delivery to the site of the surplus materials.

(3) Units and Extension of Bill of Quantities

- A. All sizes and quantities have been entered in the Bill of Quantities in metric units. Figures with decimals, including sums of money are written with a full stop in the integer position.
- B. The format of the Bill of Quantities is such that it allows the Bidder to insert rates both local currency (Kazakhstan Tenge [Tg]) and foreign currency (Japanese Yen [¥]) components for each item. For specific items of imported goods, further columns are provided for the Contractor to insert the rate (in Kazakhstan Tenge) payable on each item for customs duty, cess, levy, excise duty etc. The total of local currency together with the foreign currency components for each item (including the rate for customs duty etc., where relevant) will be the contract rate for the item.

(4) Rates and Sums to be for Work Complete

A. Notwithstanding any limits which may be implied by the wording of the individual items and/or explanation in this preamble, it is to be clearly understood by the Contractor that the rates and sums which are entered in the Bill of Quantities shall be the full inclusive value for the work, finished complete in every respect, whether separately or specifically described in the Contract Documents or not. The Contractor shall be deemed to have taken full account of all requirements and obligations, whether expressed or implied, covered by all parts of this Contract, and to have priced the items herein accordingly. The rates and sum must include for all incidental and contingent expenses and risks of every kind necessary to construct, complete and maintain the whole of works in accordance with the Contract. Full allowance shall be made in the rates and/or sums, inter alliance, which are referred to and/or specified herein:

- paying fees and giving notice to authorities;
- payment of all patent rights and royalties;
- all site investigations which may be necessary;
- all setting out and survey work;
- safety precautions and all measures to prevent and suppress fire and other hazards;
- interference to the works by persons, vehicles, vessels and the like using the existing land and water facilities;
- full maintenance of access to the existing roads in motorable condition and waterways during the period of construction;
- works in connection with the protection and safety of adjacent structures;
- maintaining public roads and footpaths and maintaining access upon existing roads or recognized routes;
- temporary fencing, watching, and lighting;
- supporting faces of excavation, temporary or permanent shoring, shuttering & scaffolding etc.
- dewatering, if required, and working in the dry except where otherwise permitted by the specification;
- supply, inspection, sampling and testing of materials and of the Works under construction, including the provision and use of equipment;
- except where separate items are provided for bringing plant to the site and removing on completion, for providing, transporting to site, setting to work, operating (including all fuel and consumable stores), maintaining and removing from the site upon completion all construction plant and equipment necessary for the execution of the work, including the cost of all tests and other requirements in respect to such plant and equipment;
- the recruitment, bringing to and from the site, accommodating and feeding and all incidental costs and expenses involved in the provision of all necessary skilled and unskilled labour and supervision;
- supplying, maintaining and removing on completion the Contractor's own accommodation, offices, stores, workshops, transport, welfare services and all charges in connection therewith;
- reinstatement of the site to the satisfaction of the Engineer;
- all costs of design, drawings, and related data for materials, pipework and equipment;
- all costs arising out of inspection and testing at manufacturers' works before dispatch of materials, pipework and equipment;
- all ancillary parts, minor fittings, bolts, nuts, gaskets, washers, fixings, etc. joining materials, protective coatings and sleeveings and other items not specifically listed, but necessary for the proper installation of the materials, pipework and equipment;

- all costs of packaging and protection for export and storage for materials, pipework and equipment;
 - all costs of freight, insurance and related documentation for shipment to Kazakhstan for materials, pipework and equipment;
 - all costs of custom duty, cess, levy, surcharges and excise duty etc for materials, pipework and equipment;
 - all costs of unloading at the port, road transport, offloading, stacking and storage in temporary sheds or weather proof sheds etc. and double handling as required at site for materials, pipework and equipment;
 - drawings and reports required during the execution of the works;
 - as built drawings, operation and maintenance manuals and close out reports.
- B. No claim will be considered for further payment in respect of any work or method of execution, which may be described in the Contract or is inherent in the construction of the work and detailed on the drawings on account of:
- items omitted from the Bill of Quantities, but depicted on the drawings.
 - any omission from the wording of the items or from a clause in the Preamble or
 - no mention of such work or method of execution having been in the Preamble.
- C. Each item in the Bill of Quantities is to be priced. Items against which no rates or sums are entered by the Contractor, whether quantities are stated or not, will not be paid for when executed, but will be regarded as covered by rates and sums set against other items in the Bill of Quantities.
- D. The quantities set out in the Bill of Quantities are the estimated quantities of the work and they shall not be taken as the actual and correct quantities of the works to be executed by the Contractor in fulfillment of his obligations under the Contract.
- E. The Contractor shall be deemed to have taken into account all of the following in his Bid prices and his construction programmes:
- all recognized holidays, festivals, religious and other customs;
 - any stoppage of work or delays due to adverse weather conditions.
- (5) Rates and Sums to bear Proper Relation to Work Described
- The rates and sums entered by the Contractor against all items in the Bill of Quantities shall bear a proper relationship to the cost of carrying out the work described in the Contract. All on-costs and similar charges which are applicable to the Contract as a whole are to be spread over all the rates in the Bill of Quantities, whilst those which are applicable only to particular sections of the Contract are only to be spread over items to which those sections refer.
- (6) Provisional Sum Items
- A. Provisional Sums are represented by the words ‘Provisional Sum’ entered under the description and shall be dealt with as provided for in the Conditions of Contract.
- B. Provisional Sum items are followed by an item where the Contractor shall indicate, as a percentage, all his financial and administrative costs including costs of liaison with external agencies, profits, overheads and any other costs for the “Provisional Sum” item. This percentage will be the basis of assessing the actual amount payable to the Contractor.
- (7) Provisional Quantity Items

Items in the Bill of Quantities designated as “Provisional Quantity” in the description column indicate that the quantities for the work covered by such items are the best possible estimates that can be made in advance of the execution of the work, or that the provision of such facilities as are described in the items, may not, in the event, be required under the Contract. All items so designated will be used only at the direction and discretion of the Engineer, and if not used either wholly, or in part shall, as to the amount not used, be deducted from the Contract Sum. Where such items consist of a sum, the Contractor shall enter a *lump sum* which shall be the price for the work if executed, as distinct from a ‘Provisional Sum’ as defined herein. No claim will be entertained in respect of overhead charges or any other costs which may allegedly result from the omission of all or part of the work covered by such “Provisional Quantity” items.

(8) Payment of Items on a Monthly Basis

Payment for items which are measured on a monthly basis will not be made until the full facilities described in the items and the specification have been provided to the satisfaction of the Engineer. Payment will continue until such time as the Engineer shall signify that measurement is no longer required.

(9) Payment of Lump Sums

A. Lump Sum items, and where the Bid includes additional items for complying with the General Conditions etc., will be paid on the basis of a proportion of the respective lump sum in the same ratio as the value of the work complete bears to the total value of the Contract.

B. Lump sum items which are related to specific work will be paid on the basis of the proportion of actual work done to the total work of that specific item as assessed by the Engineer.

C. Items with quantities and units will be paid against number of units used and/ or incorporated in the works.

(10) Facilities for Engineer

A. The sums entered to cover the cost of the Engineer’s site offices are to include erection, and subsequent removal on completion, for provision of all the items specified and also for the supply of electricity, water supply, telephone connection, electrical and electronic appliances and other facilities.

B. The sums entered to cover the maintenance of above facilities are to include the payment for provision of electricity, gas, water, telephone, cleaning and security services etc. The sums shall also include for the maintenance and routine servicing of all electrical and electronic appliances, and making good of all defects of all equipment and furnishings immediately prior to the handing over to the Employer.

C. The sum entered to cover the cost of assistance to the Engineer shall include for labour, materials and equipment specified.

(11) Protection of Completed Work and Clearing upon Completion

The Contractor shall allow in his rates for protecting completed work from subsequent operations, making good all damage to complete work, for clearing away all rubbish as it accumulates, and leaving the site in a tidy condition to the satisfaction of the Engineer.

(12) Rates

In addition to the breakdown of the Bid rates and lump sums in the Schedule of Rates attached to the Bill of Quantities, the Contractor may be required to provide the Engineer with a full and detailed Rate Breakdown within 48 hours of being so requested. The breakdown is to show the actual calculations of the Labour, Plant/Equipment and Materials costs for the works, the build-up of measured rates with profit and overheads and any other allowances used to arrive at the Bid Prices.

(13) General

Unless specific items have been provided for in the Bill of Quantities no separate measurement shall be made in respect of items, whether specified or not, requiring mortar/sealant; assembling, building-in or fixing to blockwork, concrete, metalwork or timber; painting and protective treatment; welding; drilling; bolting inclusive of bolts, nuts and washers; screws, nails and plugs; jointing and joint materials; boxing out and filling thereof; grouting; packing; bedding; insulation between different metals, making good; conduits and fittings; cutting; waste; labour; materials; and all incidental work to the items concerned and their surroundings.

6.1.2 Site Work

(1) Site Clearance

Rates for site clearance shall include for, but not be limited to, the removal and grubbing out of all trees, shrubs, boulders or other debris from the area of the site and legal disposal of same to tip provided by the Contractor. The measurement shall be the plan area of the area as expressly required to be cleared by the Engineer.

(2) Excavation - General

A. The rates and prices for excavations shall be for, but not be limited to, all types of ground encountered, including those above, or below, water level. The Contractor must make allowance for the possibility of permission not being granted for the use of explosives.

B. In no case shall any of the following be included in the measurement for payment:

- quantity of any excavations performed prior to the taking of measurements of the undisturbed, original, natural ground;
- quantity of excavation required due to the swelling of the foundation when driving piles;
- removal of slides, cave-ins, silting or filling due to the action of the elements or weather and/ or carelessness of the Contractor.

C. For unsuitable material, the excavated material shall be measured as the volume of material directed to be removed by the Engineer.

D. No allowance shall be made for any bulking or for any extra transport required due to bulking.

E. Excavation in rock which shall, in all cases, be measured extra over, shall be by volume from the level at which rock is encountered. For trench excavation the volume measured shall be to the maximum bottom width of trench permitted under the Specification or actual width, whichever is less, and the depth as indicated in the Drawings. An isolated volume rock or concrete occurring within other material to be excavated shall not be measured separately unless its volume exceeds 1m³.

F. The rates shall include, but not by way of limitation, for:

- for clearing any scrub or other vegetable growth including all trees and for legal disposing of the whole of the cleared material to tip provided by the Contractor;
- excavation to the correct depth to the net dimensions as indicated on the Drawings and preserving the bottoms of excavations in a state suitable for the reception of concrete, pipes or pipe bedding, and no payment will be made for any concrete or pipe bedding required for filling over-excavated volumes or disturbed areas;
- any additional excavation required for working space, temporary or permanent shoring, and subsequent refilling, compacting and disposal of surplus excavated material;
- taking all precautions by supporting faces of excavation to ensure the safety of the workmen and to prevent damage to adjacent walls, buildings and all other structures and services and to prevent damage to road and other surfaces by slip or breaking away of trench sides or other cause, including permanent and/ or temporary shoring of trenches;
- keeping the site and trenches and all other excavations in a dry condition and free from water from whatever cause arising;
- all obligations with respect to trial holes
- all temporary and permanent measures required to protect and support all existing pipes, cables and services, including all chambers, gullies and foundations thereto, or repair or replace them should they become damaged due to the Contractor's activities;
- trimming the bottoms of excavations including bottoming to falls, and trimming to sloping surfaces, where required or specified, including foundation preparation as specified;
- provision of storage areas for the temporary storage of any material required for backfilling which cannot be stored alongside the excavation for any reason, together with the cost of loading, transporting, including disposal of surplus, and unloading such material; disposal of rock to a site approved by the Engineer: and all other charges incurred in this respect;
- backfilling to structures and pipelines including all multiple handling, spreading, levelling, watering, compaction, trimming each layer and testing of backfill all as specified ;
- all barriers, watching, lighting, warning signs, traffic control and any other measures necessary to ensure complete safety around the area of the works;
- temporary and permanent reinstatement of all affected surfaces and structures except where separate items are included for permanent road reinstatement.

(3) Structure Excavation

For structures, the volume of material excavated shall be the product of the horizontal plan area of the base of permanent work constructed, and the mean depth in each section below ground level. The each mean depth shall be measured in a section at same elevation to the underside of the specified blinding concrete.

(4) Pipework

A. Pipe Laying

- 1) Pipe laying shall cover all things necessary to provide, install, lay and test the complete pipeline without limitation including storing, transporting, handling, site clearance, excavation, dewatering, granular bedding, concrete barriers, selected fill material, laying, cutting and forming short lengths of pipe, jointing, welding when approved, installation of polyethylene sleeve for DI pipelines, incorporation of all required pipe specials, couplings and fittings, special pipe and fitting protection (including flexible couplings, flange adapters, flanged joints, ferrules, saddle straps, nuts, bolts and washers), provision and installation of detectable marker tape, painting where specified,

connections to existing mains, backfilling, compacting and testing thereof, removal and proper disposal of surplus excavated material, temporary and permanent support blocks to pipes, temporary and permanent reinstatement (permanent reinstatement in roads is paid for separately as specified) and all other things necessary for pipeline installation and commissioning not measured separately under other items provided in the Bill of Quantities.

- 2) Payment will be by depth band from ground level to the bottom level of pipe bedding. The depth of pipelines shall be the average depth to invert calculated as the arithmetic mean of measurement of depth from original ground level to the bottom level of pipe bedding taken at every 10m and at change of direction. For lengths of pipelines less than 10m long the measurement of depth shall be the average depth from original ground level to the bottom level of pipe bedding measured at each end of the pipeline.
- 3) The quantities for laying of pipes shall be measured by length of pipe, for each material, class and size, along its centre line measured from the first joint outside of a structure by using steel tape or laser measuring equipment to the joint nearest to the outside of the next structure unless indicated in the Drawings. No deduction will be made for pipes or fittings in thrust blocks and for valves and fittings buried directly in the ground. Such fittings and valves will be measured extra over the pipeline cost. The cost shall include (where required) extended spindles, key heads, surface box assembly with protection pipes and all fixings and painting as required and as depicted on the Drawings or specified in the Specification.
- 4) Concrete for thrust blocks shall be measured in cubic metres and shall include for all work necessary to complete the block, including extra excavation and extra backfilling, blinding, formwork, reinforcement, reinstatement, etc those for pipe installation.
- 5) Pipework, valves and fittings inside structures, from the outside joint nearest to the structure will be included in the cost of the internal pipework for the structure, or as otherwise specified.
- 6) Pipeline structures including pipe bridges, valve chambers, air valve chambers, washout chambers, sumps, manholes and the like shall be measured by number and shall include for all work necessary to complete the structure, excluding piling, but including excavation and backfilling, blinding, formwork, concrete, blockwork, reinforcement, rendering, waterproofing, structural steelwork, metalwork including ladders or step irons, protective coatings, etc. and all connecting pipes, valves, fittings, surface boxes, covers, including all necessary supports, hangers, clamps and for all building in of the pipes.
- 7) Crossings of watercourses and culverts, except where detailed as a pipe bridge or pipe jacking work, shall not be measured separately and the specified requirements including trench cut-off walls, riprap and concrete surround, shall be included in the appropriate rate for the pipeline section.
- 8) Concrete surround of the pipework and fittings shall be measured extra over by linear metre along the length of the pipeline.
- 9) Geotextile surround to granular bedding, if necessary, shall be measured extra over by linear metre along the length of the pipeline.
- 10) No separate valuation shall be made in respect of concrete barriers; interconnecting pipework; detectable marker tape; polyethylene sleeving; survey of all underground utilities and trial holes. The Contractor's costs for meeting his obligations under the

Contract with respect to these items shall be deemed to be included in the rates for pipe laying.

B. Connection to Existing Pipelines

In addition to other requirements of this preamble, rates for connecting to, or capping off, existing pipework shall include but not by way of limitation for:

- co-ordinating the work with the ASA and other authorities of Public Utilities;
- any work necessary outside normal working hours or days;
- ascertaining the precise outside diameters of existing pipes prior to placing orders for couplings etc;
- arranging for the location, isolating and drainage of the existing main;
- re-commissioning.

C. Pressure Testing, Disinfection and Cleaning

Lump sum items for pressure testing and disinfection and cleaning shall cover costs of, but not be limited to, all materials including water, labour, tools and equipment and incidentals necessary to complete the required work for the pipelines and all associated fittings and chambers, disconnecting and reconnecting any pipes and specials, any excavation and backfilling involved. The amount for these items will only become payable when the Engineer approves the successful test results.

(5) Fill

Fill shall be measured as the net volume, above ground level, of the permanent earthwork to the dimensions shown on the Drawings or directed by the Engineer, irrespective of source of material. The rate shall include for, but not be limited to, selection, handling, placing, and compaction of excavated or imported material.

(6) Piling

A. The Contractor shall allow in his rates for all costs of ascertaining the subsoil conditions at the various sites and for all detailed calculations; method statements to the Engineer for approval; submittals and records including presentation of test results.

B. The rates shall include all costs for providing all piling equipment to site; setting up; dismantling and removal on completion; moving, setting up and dismantling at different pile locations; idle time for labour and plant during tests or while soil samples are taken and analysed; removal of artificial or natural obstructions; preliminary test piles; and preparation of the exposed pile head and reinforcement to receive capping.

C. Driven piles shall be measured net as length of pile driven, measured from pile toe to pile cap soffit. Rates for piles shall include but not be limited to the costs of provision of all materials, labour, plant and tools needed to manufacture, transport, store, pitch, drive, pile extensions, cut off surplus, strip pile head, and provide and effect all other incidentals necessary for the complete installation of piles. Reinforcement will be paid for separately.

D. Cast in situ piles shall be measured net as length of pile measured from pile toe to pile cap soffit. The rate for piles shall include, but not limited to the cost of casings, linings, dewatering, excavation and boring, forming enlarged base by reaming, disposal of excavated material, concrete placement underwater, use of any drilling fluids, provision of equipment and labour to safely descend shafts for inspection, backfilling of open shafts and filling of annulus of pre-bore, provision of all material, labour, plant and tools needed for the whole work, all other incidental costs necessary for the complete installation of piles. Reinforcement will be paid separately.

- E. The rate for testing of piles as specified shall include the cost of all plant, equipment, tools and labour to carry out the load tests to the approval of the Engineer.

(7) Marker and Boundary Posts

Rates for erection of marker and boundary posts shall include, but not be limited to, for all excavation, refilling, ramming, disposing of surplus, concrete, shuttering, reinforcement, making good ground surface, information plates and fixing and painting. In addition boundary posts shall be engraved with the ASA logo and the letters “ASA” and marker posts engraved as specified.

6.1.3 Concrete Work

(1) Concrete

- A. The rate for structural concrete shall include, but not be limited to:
- all costs incurred in determining the mixes and testing of materials to satisfy the Specification (including any admixtures);
 - supplying all materials, storing, mixing, transporting, placing and compaction;
 - provision of all blinding concrete;
 - preparing the surface of previously executed work to provide the necessary bond with new concrete.
 - achieving specified tolerance;
 - forming slopes, falls and the like;
 - forming holes or boxing out for pipes, bolts, frames for covers and other steel work;
 - building-in pipes, ducts, conduit, junction boxes, bolts, frames, steelwork, etc;
 - forming chamfers on all external arises to exposed concrete;
 - forming all construction joints, stop ends, temporary stops and shuttering;
 - providing and removing all shuttering/formwork and all scaffolding, centering, fabricating, assembly, cutting, fittings and fixing in position and taking all measures necessary to produce the required shapes of concrete;
 - curing the concrete and all measures to protect freshly poured concrete;
 - rubbing down etc. and making good the concrete surfaces to provide the specified finishes;
 - making and testing of all test specimens and all testing and remedial work ordered by the Engineer consequent to the results of tests falling below the minimum specified;
 - all overtime working to maintain continuity of casting;
 - leakage testing of water retaining structures including provision and legal disposal of water;
 - cleaning & disinfection of structures including provision of water & chemicals required for the operation and legal disposal.
- B. Except where included in specific items, the measurement of concrete shall be by cubic metre. No deductions will be made for channels, recesses, or rebates less than 600 mm girth, for 25 mm chamfers nor for holes or ducts formed in the concrete less than 1000 mm girth.
- C. No separate measurement will be made for shuttering/formwork. The cost thereof shall be deemed to be included in the rates for concrete work.

(2) Steel Reinforcement

- A. The rates for bars and fabric reinforcement shall include, but not be limited to, for providing drawings and bar bending schedules, samples, testing, supplying, transporting, storing,

cleaning, cutting, bending, distributing throughout the works, fixing and supporting in position, for all binding wire (and for welding, where indicated) and all labour necessary.

- B. The unit of measurement for steel reinforcement, where measured separately, is the tonne (t) and the weight of steel shall be calculated net, with no allowance made for wastage or laps and the cost of these will be deemed to be covered in the rates.
- C. The weight of steel supports, spacer bars and ties used to locate and hold the reinforcement in place is not included in the quantity and the cost of these will be deemed to be covered in the rates.

6.1.4 Masonry

Provisions covered under this section shall be included in the item(s) provided in the Bills of Quantities and shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. Rates for items shall include, but not be limited to:

- shop drawings;
- samples for the Engineer's approval;
- supply, installation and fixing of all materials;
- all cutting and finishing at openings;
- wastage;
- temporary works;
- protection of other works;
- all testing;
- leaving the whole of the work in perfect condition on completion.

6.1.5 Metals

Provisions covered under this section shall be included in the item(s) provided in the Bills of Quantities and shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. Rates for items shall include, but not be limited to:

- shop drawings
- samples for the Engineer's approval;
- supply, installation, fixing and building in of all materials including supports;
- all cutting and finishing at openings;
- wastage;
- temporary works;
- protection of other works;
- all testing;
- leaving the whole of the work in perfect condition on completion.

6.1.6 Wood & Plastic

Provisions covered under this section shall be included in the item(s) provided in the Bills of Quantities and shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. Rates for items shall include, but not be limited to:

- shop drawings
- samples for the Engineer's approval;

- supply, installation, fixing and building in of all materials including supports;
- all cutting and finishing at openings;
- wastage;
- temporary works;
- protection of other works;
- all testing;
- leaving the whole of the work in perfect condition on completion.

6.1.7 Thermal and Moisture Protection

Provisions covered under this section shall be included in the item(s) provided in the Bills of Quantities and shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. Rates for items shall include, but not be limited to:

- shop drawings
- samples for the Engineer's approval;
- supply, installation, fixing and building in of all materials including supports;
- all cutting and finishing at openings;
- wastage;
- temporary works;
- protection of other works;
- all testing;
- leaving the whole of the work in perfect condition on completion.

6.1.8 Doors and Windows

Provisions covered under this section shall be included in the item(s) provided in the Bills of Quantities and shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. Rates for items shall include, but not be limited to:

- shop drawings
- samples for the Engineer's approval;
- supply, installation, fixing and building in of all materials including ironmongery and glazing;
- all cutting and finishing at openings;
- wastage;
- temporary works;
- protection of other works;
- all testing;
- leaving the whole of the work in perfect condition on completion.

6.1.9 Finishes

Provisions covered under this section shall be included in the item(s) provided in the Bills of Quantities and shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. Rates for items shall include, but not be limited to:

- shop drawings
- samples for the Engineer's approval;
- supply, installation, fixing and building in of all materials including beddings, screeds,

- skirtings and joints;
- all cutting and finishing at openings;
- wastage;
- temporary works;
- protection of other works;
- all testing;
- leaving the whole of the work in perfect condition on completion.

6.1.10 Specialities

Provisions covered under this section shall be included in the item(s) provided in the Bills of Quantities and shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. Rates for items shall include, but not be limited to:

- shop drawings
- samples for the Engineer's approval;
- supply, installation, fixing and building in of all materials including supports;
- all cutting and finishing at openings;
- wastage;
- temporary works;
- protection of other works;
- all testing;
- leaving the whole of the work in perfect condition on completion.

6.1.11 Equipment, Furnishings, Special Constructions, Conveying Systems, Mechanical Work and Electrical Work

- A. The supply of equipment, piping and materials shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. The work shall include product design, manufacturing, inspection and testing, provision of the specified accessories and spare parts, packing, shipment, expenses for custom clearance and other taxes, in-land transportation, delivery to the place at site designated by the Engineer, safeguarding and protection from inclement conditions during storage prior to, and after, installation. Payment shall be full compensation to cover all the Contractor's obligations under the Contract for furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the said works.
- B. The installation works of the supplied equipment, piping and materials specified above shall be valued by the measurement of such items only as are included in the Bills of Quantities. If no specific item is provided then the work is deemed to be included in the Contractor's other rates. The work shall include all multiple handling necessary prior to installation, including during storage and carrying in to the site, installation including all necessary permanent and temporary supports, building in, painting, calibration, performance testing, and any other works necessary to meet the requirements shown on the drawings and/or specified. Payment shall be full compensation to cover all the Contractor's obligations under the Contract for providing all materials, labour, tools, equipment, and incidentals necessary to complete the said works.
- C. Rates for cables laid in trenches shall include, but not be limited to, excavation, backfilling and reinstatement, laying the cables and supply and laying indicator tapes and/or protection tiles, testing.

- D. Rates for the installation of buried valves shall include, but not be limited to, the supply and construction of protection tubes, surface box and concrete surround.

- E. Where approved amendments are required to the civil designs due to electrical or mechanical equipment offered not being in accordance with the general dimensions indicated on the Drawings, then payment shall be made at Bid rates against the net quantities of civil work valued by the measurement of such items only as are included in the original Bills of Quantities and executed in accordance with the amended designs produced by the Contractor and approved by the Engineer.

Section 6.2 Bill of Quantities

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. GT: Grand Total of the Project

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
GT	Grand Total of the Project							
	Water Supply System							
	Civil and Architectural Work							
IN	Construction of Intake Pump Station	Lot	1					
WT	Construction of Water Treatment Plant	Lot	1					
DN	Installation of Distribution Network	Lot	1					
IM	Water Meter Installtion Work	Lot	1					
WM	Mechanical Work	Lot	1					
WE	Electrical Work	Lot	1					
	Sewerage System							
	Civil and Architectural Work							
ST	Construction of Sewerage System	Lot	1					
SN	Installation of Sewer Network	Lot	1					
MC	Replacement of Manhole Cover	Lot	1					
SM	Mechanical Work	Lot	1					
SE	Electrical Work	Lot	1					
	O&M Equipment							
OM	Procurement of O&M Equipment	Lot	1					
	Contingencies	Lot	1					
	V.A.T	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W11: Construction of Intake Pump Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W11	Intake Pump Station							
	Civil Works							
CC-100	Temporary Works	lot	1					
CC-101	Earth Works	m ³	9,676					
CC-23-2	Formwork	m ²	6,468.2					
CC-22	Re-bar	ton	545.244					
CC-26-1	R.concrete	m ³	3,894.6					
CC-21	L.concrete	m ³	1,389					
CC-27-1	Plain Concrete	m ³	78.5					
CC-28	Mortar Coating	m ²	31.3					
CC-24	Scaffolding	m ³	8,626					
CC-50	Handrail, GSP Dia. 50 mm, H = 1.1 m	m	207.1					
CC-103	Raw water Channel	lot	1					
CC-104	Connection Bridge Construction Work	lot	1					
CC-105	Water pipe bridge	lot	1					
CC-106	Mechanical transportation	lot	1					
	Architectural Work							
	(Building Work)							
	(Structure Works)							
AA-22	Reinforcing Bar	ton	276.79					
AA-23	Formwork	m ²	406.9					
AA-24	Scaffolding	m ³	499.8					
AA-25	Supporting	m ²	2,142.5					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W11: Construction of Intake Pump Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-26	Reinforced concrete	m ³	2,636.1					
AA-32-2	Brick wall t=200	m ²	221.8					
AA-32-4	Brick wall w/ insulator t=470	m ²	123.9					
AA-34	Toilet Partation Wall	m ²	7.22					
AA-40-3	Floor Finishing (F-3)	m ²	371.7					
AA-41-2	Base (B-2)	m ²	90.8					
AA-42-1	Wall Finishing (W-1)	m ²	782.6					
AA-43-3	Ceiling (C-3)	m ²	371.7					
AA-44-1	Alminum Window (Single Glass)	m ²	7					
AA-44-3	Alminum Window (Triple Glass)	m ²	92.82					
AA-44-6	SD (w/ insulation)	m ²	7.17					
AA-44-7	SD (w/o insulation)	m ²	12.2					
AA-44-8	Wooden Door	m ²	1.89					
AA-44-9	Rolling Door	m ²	10.1					
AA-60-1	Roofing 1	m ²	668.0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W11: Construction of Intake Pump Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	(Utility Work)							
AU-1	Utility Work	Lot						
AU-1-1	Lighting facilities in buildings	Lot	1					
AU-1-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-1-3	Power distribution system in buildings including power outlets	Lot	1					
AU-1-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-1-5	Paging system in the premises of the plants	Lot	1					
AU-1-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-1-7	Lightning protection system in the premises of the plants	Lot	1					
AU-1-8	Air conditioning system of buildings (heating/cooling)	Lot	1					
AU-1-9	Ventilation system for mechanical rooms, electrical rooms, and others.	Lot	1					
	Total							

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. W12:Construction of Surge Control House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W12	Surge Control House							
	Architectural Work							
	(Building Work)							
AA-01-1	Pile installation work 300x300x10m	pcs	225					
AA-10-1	Excavation	m ³	0					
AA-11	Back Filling	m ³	0					
AA-12-1	Embankment	m ³	3,451					
AA-13	Disposal of surplus soil	m ³	0					
AA-14-1	Well-point work	m	0					
AA-15	Pit drainage work	set	0					
AA-16	Slope protection work	m ²	786.3					
	(Structure Works)							
AA-20	Gravel Stone	m ³	23.6					
AA-21	Lean Concrete	m ³	5.9					
AA-22	Reinforcing Bar	ton	35					
AA-23	Formwork	m ²	1,188					
AA-24	Scaffolding	m ³	1,114					
AA-25	Supporting	m ²	2,776					
AA-26	Reinforced concrete	m ³	305.4					
AA-35	Scarsement	m ²	62.5					
AA-32-4	Brick wall w/ insulator t=470	m ²	684.2					
AA-40-2	Floor Finishing (F-2)	m ²	302.8					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. W12:Construction of Surge Control House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-41-2	Base (B-2)	m ²	71.0					
AA-42-1	Wall Finishing (W-1)	m ²	625.2					
AA-43-3	Ceiling (C-3)	m ²	315					
AA-44-3	Alminum Window (Triple Glass)	m ²	58.1					
AA-44-6	SD (w/ insulation)	m ²	5.8					
AA-60-1	Roofing 2	m ²	324					
AA-61	Roof Drain	pc	4.0					
AA-62	Downspout	m	36.8					
AA-73-1	Concrete Coping W=400mm	m	74.8					
AA-70	Handhole cover DIP Dia. 600	pc	1					
CC-54	Checkerplate	m ²	15.9					
AA-74	Building Base	m	73					
	(Utility Work)							
AU-2	Utility Work							
AU-2-1	Lighting facilities in buildings	Lot	1					
AU-2-2	Outdoor lighting facilities covering premises of the plants including	Lot	1					
AU-2-3	Power distribution system in buildings including power outlets	Lot	1					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. W12:Construction of Surge Control House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AU-2-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-2-5	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-2-6	Lightning protection system in the premises of the plants	Lot	1					
AU-2-7	Air conditioning system of buildings (heating/cooling)	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W15:Construction of Yard Pipe

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W15	Yard Pipe							
	Civil Works							
CC-211-1	Pipe Installation Work SP Dia. 1400mm	m	540					
CC-211-2	30 Bend Dia. 1400mm	pc	12					
CC-211-3	Butterfly Valve SP Dia. 1400mm	pc	2					
CC-211-4	45 Bend Dia. 1400mm	pc	2					
CC-211-5	SP Tee 1400 x 1200	pc	1					
CC-211-6	Taper 1400 x 1200	pc	1					
CC-211-7	Taper 1200 x 1100	pc	1					
CC-211-8	Blank Flanged Tee 1,400 x 600	pc	4					
CC-211-9	SP Thrust Block 1400mm	pc	2					
CC-211-10	Sleeve Coupling 1400mm	pc	3					
CC-211-11	Pipe Installation Work SP Dia. 1100mm	m	14.7					
CC-211-12	45 Bend Dia. 1100mm	pc	2					
CC-211-13	SP Thrust Block 1100	pc	1					
CC-211-14	SP Tee 1400 x 1000	pc	1					
CC-211-15	Air Valve Dia. 150mm	pc	1					
CC-211-16	Repare valve	pc						
CC-211-17	Pipe Installation Work SP Dia. 1000mm	m	11.8					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W17: Construction of Sub-Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W17	Sub-Station							
	Architectural Work							
	(Building Work)							
AA-01-1	Pile installation work 300x300x7m	pcs	126					
AA-10-1	Excavation	m ³	49.5					
AA-11	Back Filling	m ³	29.6					
AA-12-1	Embankment	m ³	118.8					
AA-14	Well-point	lot	1					
AA-16	Slope protection work	m ²	46.6					
	(Structure Works)							
AA-20	Gravel Stone	m ³	4.2					
AA-21	Lean Concrete	m ³	1.4					
AA-22	Reinforcing Bar	ton	8.19					
AA-23	Formwork	m ²	119.3					
AA-24	Scaffolding	m ³	238.8					
AA-25	Supporting	m ²	556.0					
AA-26	Reinforced concrete	m ³	81.9					
AA-35	Scarsement	m ²	60.03					
AA-32-2	Brick wall w/ insulator t=250	m ²	72.9					
AA-32-4	Brick wall w/ insulator t=470	m ²	256.4					
AA-40-2	ditto (F-2)	m ²	19.35					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W17: Construction of Sub-Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-40-3	ditto (F-3)	m ²	4.14					
AA-40-7	ditto (F-7)	m ²	11.73					
AA-41-2	ditto (B-2)	m ²	33.6					
AA-41-3	ditto (B-3)	m ²	41.0					
AA-42-1	Wall Finishing (W-1)	m ²	298.3					
AA-43-1	Ceiling (C-1)	m ²	11.73					
AA-43-6	ditto (C-6)	m ²	108.7					
AA-44-2	Aluminum Window (Double Glass)	m ²	14.4					
AA-44-7	SD (w/o insulation)	m ²	15.7					
AA-44-8	Wooden Door	m ²	3.6					
AA-30	PC Panel (1.041.1-2 series) 1.5 x 9.0	m ²	135					
AA-60-2	Roofing 2	m ²	135.0					
AA-61	Roof Drain	pc	4					
AA-62	Downspout	m	18.0					
AA-73	Concrete Coping W=400mm	m	38.0					
AA-70	Handhole cover DIP Dia. 600	pc	1					
AA-74	Building Base	m	45.4					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W17: Construction of Sub-Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	(Utility Work)							
AU-3	Utility Work	Lot						
AU-3-1	Lighting facilities in buildings	Lot	1					
AU-3-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-3-3	Power distribution system in buildings including power outlets	Lot	1					
AU-3-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-3-5	Paging system in the premises of the plants	Lot	1					
AU-3-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-3-7	Lightning protection system in the premises of the plants	Lot	1					
AU-3-8	Plumbing (hot/cold water) in buildings	Lot	1					
AU-3-9	Air conditioning system of buildings (heating/cooling)	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W18: Construction of Guard House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W18	Guard House							
	Architectural Work							
	(Building Work)							
AA-01-1	Pile installation work 300x300x12m	pcs	10					
AA-10-1	Excavation	m ³	102.7					
AA-11	Back Filling	m ³	87.02					
AA-12-1	Embankment	m ³	0					
AA-13	Disposal of surplus soil	m ³	15.7					
AA-14-1	Well-point work	lot	1					
AA-15	Pit drainage work	set	1					
AA-16	Slope protection work	m ²	0					
	(Structure Works)							
AA-20	Gravel	m ³	1.6					
AA-21	Lean Concrete	m ³	0.4					
AA-22	Reinforcing Bar	ton	1.998					
AA-23	Formwork	m ²	75.7					
AA-24	Scaffolding	m ³	135.2					
AA-25	Supporting	m ²	75.8					
AA-26	Reinforced concrete	m ³	19.98					
AA-35	Scarsement	m ²	23.3					
AA-32-1	Brick wall w/ insulator t=120	m ²	23.4					
AA-32-4	Brick wall w/ insulator t=470	m ²	98.1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W18: Construction of Guard House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-40-3	Floor Finishing (F-3)	m ²	22.4					
AA-41-4	Base (B-4)	m ²	29.9					
AA-42-1	Wall Finishing (W-1)	m ²	38.0					
AA-42-2	Wall Finishing (W-2)	m ²	38.0					
AA-43-1	Ceiling (C-1)	m ²	20.0					
AA-43-2	Ceiling (C-2)	m ²	7.2					
AA-44-3	Aluminum Window (Triple Glass)	m ²	7.2					
AA-44-6	SD (w/ insulation)	m ²	1.9					
AA-44-8	Wooden Door	m ²	5.5					
AA-30	PC Panel (1.041.1-2 series) 1.5 x 4	m ²	24					
AA-73-1	Concrete Coping W=400mm	m	21.4					
AA-60-1	Roofing 2	m ²	24.0					
AA-61	Roof Drain	pc	1					
AA-62	Downspout	m	4.2					
AA-74	Building Base	m	22.8					
AA-70	Manhole Cover DIP Dia. 600	pc	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W18:Construction of Guard House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	(Utility Work)							
AU-9	Utility Work	Lot	1					
AU-9-1	Lighting facilities in buildings	Lot	1					
AU-9-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-9-3	Power distribution system in buildings including power outlets	Lot	1					
AU-9-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-9-5	Paging system in the premises of the plants	Lot	1					
AU-9-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-9-7	Lightning protection system in the premises of the plants	Lot	1					
AU-9-8	Plumbing (hot/cold water) in buildings	Lot	1					
AU-9-9	Air conditioning system of buildings (heating/cooling)	Lot	1					
AU-9-10	Ventilation system for mechanical rooms, electrical rooms, and others.	Lot	1					
	Sub-total							
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W31: Construction of Distribution Chamber

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W31	Distribution Chamber							
	Civil Works							
CC-01	Pile Installation Work 300 x 300 x 7m	pc	12					
CC-02	Pile Installation Work 500 x 500 x 11.5m	pc	90					
CC-10	Excavation	m ³	2,415					
CC-11	Back Filling	m ³	1,243					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	1,172					
CC-20	Gravel	m ³	58.9					
CC-21	Lean Concrete	m ³	29.4					
CC-22	Re-bar	ton	100.658					
CC-23	Formwork	m ²	1,879.4					
CC-24	Scaffolding	m ²	1,723.0					
CC-25	Support	m ³	474.0					
CC-26	R.Concrete	m ³	875.2					
CC-27	Plain Concrete	m ³	77.2					
CC-28	Mortar Coating	m ²	25.6					
CC-30	Asphalt Sheet	m ²	201.2					
CC-31-1	Acid Proof Coating	m ²	318.7					
CC-33	Sand Compaction	m ³	218.6					
CC-35-1	Brick wall w=250mm	m ²	439.0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W31: Construction of Distribution Chamber

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
C-50	Handrail SGP H=1.1m	m	138.9					
CC-56	Grating	m ²	9.72					
CC-70	Handhole	pcs	1					
CC-58	Footstep	pcs	235					
	Architectural Works							
	(Building Work)							
AA-22	Reinforcing Bar	ton	37.081					
AA-23	Formwork	m ²	337.1					
AA-24	Scaffolding	m ³	241.8					
AA-25	Supporting	m ²	560.9					
AA-26	Reinforced concrete	m ³	148.5					
AA-32-4	Brick wall w/ insulator t=470	m ²	218.8					
AA-40-2	Floor Finishing (F-2)	m ²	145.6					
AA-41-2	Base (B-2)	m	24.4					
AA-42-1	Wall Finishing (W-1)	m ²	92.7					
AA-43-6	Ceiling (C-6)	m ²	146.0					
AA-44-2	Aluminum Window (Double Glass)	m ²	19.2					
AA-44-7	SD (w/o insulation)	m ²	3.8					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W31:Construction of Distribution Chamber

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-73	Concrete Coping W=400mm	m	52.6					
AA-60-1	Roofing 1	m ²	160.2					
AA-61	Roof Drain	pc	2					
AA-62	Downspout	m	7.6					
	(Utility Work)							
AU-12	Utility Work	Lot						
AU-12-1	Lighting facilities in buildings	Lot	1					
AU-12-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-12-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-12-5	Paging system in the premises of the plants	Lot	1					
AU-12-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-12-7	Lightning protection system in the premises of the plants	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W32: Construction of Receiving Well

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W32	Receiving Well							
	Civil Works							
CC-01	Pile Installation Work 300x300x8m	pc	14					
CC-02	Pile Installation Work 500x500x11.5m	pc	56					
CC-10	Excavation	m ³	348.7					
CC-11	Back Filling	m ³	54.4					
CC-13	Surplus Soil	m ³	294.3					
CC-20	Gravel	m ³	55.0					
CC-21	Lean Concrete	m ³	13.7					
CC-22	Re-bar	ton	70.106					
CC-23	Formwork	m ²	2,464.0					
CC-24	Scaffolding	m ²	119.9					
CC-25	Support	m ³	778.9					
CC-26	R.Concrete	m ³	922.1					
CC-27	Plain Concrete	m ³	59.1					
CC-28	Mortar Coating	m ²	0.0					
CC-30	Asphalt Sheet	m ²	163.2					
CC-31-1	Acid Proof Coating	m ²	219.8					
CC-33	Sand Compaction	m ³	236.0					
CC-35-1	Brick wall w=250mm	m ²	67					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W33: Construction of Flocculation Basin and Sedimentation Basin

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W33	Flocculation Basin and Sedimentation Basin							
	Civil Works							
CC-01-1	Pile Installation Work 300x300x10m	pc	12					
	Pile Installation Work 400x400x8m	pc	481					
	Pile Installation Work 400x400x10m	pc	1,073					
CC-10	Excavation	m ³	2,689					
CC-11	Back Filling	m ³	424					
CC-12	Embankment	m ³	19,703					
CC-13	Surplus Soil	m ³	1,262					
CC-20	Gravel	m ³	802.6					
CC-21	Lean Concrete	m ³	201					
CC-22	Re-bar	ton	8.928					
CC-23	Formwork	m ²	14,052					
CC-24	Scaffolding	m ²	940					
CC-25	Support	m ³	25,363					
CC-26	R.Concrete	m ³	8,589.2					
CC-27	Plain Concrete	m ³	268.1					
CC-28	Mortar Coating	m ²	106.7					
CC-30	Asphalt Sheet	m ²	4,335					
CC-31-1	Acid Proof Coating	m ²	634.8					
CC-33	Sand Compaction	m ³	289.5					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W33: Construction of Flocculation Basin and Sedimentation Basin

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-35-1	Brick wall w=250mm	m ²	1,000.9					
CC-36	Expansion Joint, w=250 mm	m	166.9					
CC-37-1	Trough 350 x 350 x 4.8m	pcs	36					
CC-39	Elastite t=20mm	m ²	137.4					
CC-50	Handrail SGP H=1.5m	m	976.8					
CC-54	Checker Plate Dia. 600	m ²	0.57					
CC-56	Grating 600 x 2,000	m ²	43					
CC-58	Footstep	pcs	918					
CC-68	Stainless Door	m ²	14					
CC-69	PVC Pipe ϕ 150	m	677					
CC-70	Handhole	pcs	2					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W34: Construction of Rapid Sand Filter

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W34	Rapid Sand Filter							
	Civil Works							
CC-01	Pile Installation Work 400x400x11.5m	pc	1026					
CC-10	Excavation	m ³	0					
CC-11	Back Filling	m ³	0					
CC-12	Embankment	m ³	9,383					
CC-13	Surplus Soil	m ³	0					
CC-20	Gravel	m ³	439.9					
CC-21	Lean Concrete	m ³	109.1					
CC-22	Re-bar	ton	910.747					
CC-23	Formwork	m ²	14,292.3					
CC-24	Scaffolding	m ²	866.2					
CC-25	Support	m ³	17,558					
CC-26	R.Concrete	m ³	6,151.6					
CC-27	Plain Concrete	m ³	70.4					
CC-28	Mortar Coating	m ²	106.7					
CC-30	Asphalt Sheet	m ²	2,655					
CC-31-1	Acid Proof Coating	m ²	634.8					
CC-35-1	Brick wall w=250mm	m ²	753					
CC-36	Expansion Joint, w=250 mm	m	199					
CC-39	Elastite T=20mm	m ²	93.4					

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. WT36:Construction of Washing Drain Basin

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Washing Drain Basin							
	Civil Works							
CC-10	Excavation	m ³	8,585					
CC-11	Back Filling	m ³	2,956					
CC-12	Embankment	m ³	23.6					
CC-13	Surplus Soil	m ³	5,629					
CC-14	Well-point work H=5m	lot	1					
CC-20	Gravel	m ³	226.5					
CC-21	Lean Concrete	m ³	184.3					
CC-22	Re-bar	ton	151.043					
CC-23-1	Formwork	m ²	3,447					
CC-24	Scaffolding	m ²	884.1					
CC-25	Support	m ³	7,354					
CC-26	R.Concrete	m ³	1,598					
CC-27	Plain Concrete	m ³	28					
CC-28	Mortar Coating	m ²	14.4					
CC-30	Asphalt Sheet	m ²	1,064					
CC-31-1	Acid Proof Coating	m ²	866.3					
CC-51-2	PC Panel W=1.2m	pc	80					
CC-51-3	PC Panel W=1.5m	pc	20					
CC-50	Handrail SGP H=1.1m	m	72.6					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WT36:Construction of Washing Drain Basin

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-56	Grating	m ²	12.2					
CC-58	Footstep	pcs	120					
CC-70	Handhole	pcs	1					
	Architectural Works							
	(Building Work)							
AA-24	Scaffolding	m ³	220					
AA-25	Supporting	m ²	351.5					
AA-32-4	Brick wall w/ insulator t=470	m ²	192.9					
AA-73-1	Concrete Coping W=400mm	m	50					
AA-35	Scarsement	m ²	30.7					
AA-40-2	Floor Finishing (F-2)	m ²	97.6					
AA-41-2	Base (B-2)	m ²	50.0					
AA-42-1	Wall Finishing (W-1)	m ²	180					
AA-43-6	Ceiling (C-6)	m ²	120.3					
AA-44-2	Aluminum Window (Double Glass)	m ²	21.84					
AA-44-7	SD (w/o insulation)		5.3					
AA-30	PC Panel (1.041.1-2 series) 1.5 x 6.0	m ²	50					
AA-60-2	Roofing 2	m ²	12					
AA-61	Roof Drain	pc	108.0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WT36:Construction of Washing Drain Basin

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-62	Downspout	m	2.0					
	(Utility Work)							
AU-6	Utility Work	Lot						
AU-6-1	Lighting facilities in buildings	Lot	1					
AU-6-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-6-3	Power distribution system in buildings including power outlets	Lot	1					
AU-6-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-6-5	Paging system in the premises of the plants	Lot	1					
AU-6-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-6-7	Lightning protection system in the premises of the plants	Lot	1					
AU-6-8	Air conditioning system of buildings (heating/cooling)	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W37:Construction of Sludge Thickener

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W37	Sludge Thickener							
	Civil Works							
CC-10	Excavation	m ³	6,925					
CC-11	Back Filling	m ³	3,723					
CC-12	Embankment	m ³	1,362					
CC-13	Surplus Soil	m ³	3,202					
CC-14	Well-point work H=8m	m	1					
CC-20	Gravel	m ³	129.2					
CC-21	Lean Concrete	m ³	32.3					
CC-22	Re-bar	ton	94.565					
CC-23-2	Formwork	m ²	1,629.6					
CC-24	Scaffolding	m ²	903.0					
CC-25	Support	m ³	4,963.3					
CC-26	R.Concrete	m ³	866.0					
CC-27	Plain Concrete	m ³	18.9					
CC-28	Mortar Coating	m ²	30.0					
CC-30	Asphalt Sheet	m ²	607.7					
CC-31-1	Acid Proof Coating	m ²	571					
CC-33	Sand compaction	m ³	47.5					
CC-50	Handrail SGP φ 50 H=1.1m	m	97					
CC-56	Grating 600 x 600	m ²	5.48					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W37: Construction of Sludge Thickener

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-58	Footstep	pcs	37					
CC-59-2	Weir Plate (V-notch Type)	m	105					
CC-70	Handhole	pcs	1					
	Architectural Works							
	(Building Work)							
AA-22	Reinforcing Bar	ton	16.695					
AA-23-2	Formwork	m ²	626.6					
AA-24	Scaffolding	m ³	537.1					
AA-25	Supporting	m ²	2,580.0					
AA-26	Reinforced concrete	m ³	85					
AA-35	Scarsement	m ²	1.4					
AA-32-4	Brick wall w/ insulator t=470	m ²	409.9					
AA-31	Iron Frame	ton	16.668					
AA-40-2	Floor Finishing (F-2)	m ²	30					
AA-41-2	Base (B-2)	m ²	148.2					
AA-42-1	Wall Finishing (W-1)	m ²	1,079.9					
AA-43-3	Ceiling (C-3)	m ²	240.6					
AA-43-6	Ceiling (C-4)	m ²	537.3					
AA-44-2	Alminum Window (Double Glass)	m ²	184.8					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W37:Construction of Sludge Thickener

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-44-6	SD (w/ insulation)	m ²	7.8					
AA-44-9	Rolling Door	m ²	18.0					
AA-73-1	Concrete Coping W=400mm	m	37.4					
AA-60-1	Roofing 1	m ²	100.0					
AA-61	Roof Drain	pc	2					
AA-62	Downspout	m	9.0					
AA-50-1	Corrugated Meral Roofing	m ²	738.9					
AA-74	Building Base	m	149.2					
	(Utility Work)							
AU-11	Utility Work	Lot						
AU-11-1	Lighting facilities in buildings	Lot	1					
AU-11-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-11-3	Power distribution system in buildings including power outlets	Lot	1					
AU-11-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-11-5	Paging system in the premises of the plants	Lot	1					
AU-11-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W38: Construction of Sludge Drying Bed

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W38	Sludge Drying Bed							
	Civil Works							
CC-10	Excavation	m ³	15,502					
CC-11	Back Filling	m ³	2,440					
CC-13	Surplus Soil	m ³	13,062					
CC-20	Gravel	m ³	29.0					
CC-21	Lean Concrete	m ³	9.7					
CC-22	Re-bar	ton	130.200					
CC-23-1	Formwork	m ²	3,720.5					
CC-26	R.Concrete	m ³	1,597.3					
CC-27	Plain Concrete	m ³	0.5					
CC-33	Sand	m ³	926.9					
CC-20	Gravel	m ³	2,240.2					
CC-30	Asphalt Sheet	m ²	1,858.0					
CC-31-1	Acid Proof Coating	m ²	359.8					
CC-70	Handhole	pc	1					
CC-56	Grating	m ²	8.64					
CC-58	Footstep	pcs	96					
CC-60-1	Stop Log and Cover frame (SUS 304 Stainless Steel)	pcs	12					
CC-61-1	PVC Pipe Dia.200	m	182					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W40: Construction of Discharge Pool

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W40	Discharge Pool							
	Civil Works							
CC-10	Excavation	m ³	11,258					
CC-11	Back Filling	m ³	4,534					
CC-12	Embankment	m ³	87.6					
CC-13	Surplus Soil	m ³	6,724					
CC-14	Well-point work H=7m	lot	1					
CC-20	Gravel	m ³	240.7					
CC-21	Lean Concrete	m ³	120.3					
CC-22	Re-bar	ton	186.2					
CC-23	Formwork	m ²	3,709.6					
CC-24	Scaffolding	m ²	677.1					
CC-25	Support	m ³	4,508.8					
CC-26	R.Concrete	m ³	1,977					
CC-27	Plain Concrete	m ³	188.0					
CC-28	Mortar Coating	m ²	18.0					
CC-30	Asphalt Sheet	m ²	978.8					
CC-31-1	Acid Proof Coating	m ²	928.6					
CC-51-3	PC Cover H=1.5m	pc	80					
CC-50	Handrail SGP φ 50 H=1.1m	m	23.9					
CC-56	Grating	m ²	11.88					
CC-58	Footstep	pcs	148					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W40: Construction of Discharge Pool

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-70	Handhole	pcs	1					
	Architectural Works							
	(Building Work)							
AA-24	Scaffolding	m ³	131.8					
AA-25	Supporting	m ²	221.0					
AA-35	Scarsement	m ²	24.5					
AA-32-4	Brick wall w/ insulator t=470	m ²	143.6					
AA-40-2	Floor Finishing (F-2)	m ²	61.4					
AA-41-2	Base (B-2)	m ²	32.8					
AA-42-1	Wall Finishing (W-1)	m ²	118.2					
AA-43-6	Ceiling (C-6)	m ²	61.4					
AA-44-2	Alminum Window (Double Glass)	m ²	12					
AA-44-7	SD (w/o insulation)	m ²	5.4					
AA-30	PC Panel (1.041.1-2 series)	m ²	63					
AA-60-2	Roofing 2	m ²	66.0					
AA-61	Roof Drain	pc	2.0					
AA-62	Downspout	m	8.0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W40: Construction of Discharge Pool

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-73	Concrete Coping W=400mm	m	36.6					
AA-74	Building Base	m	36.6					
	(Utility Work)							
AU-7	Utility Work	Lot						
AU-7-1	Lighting facilities in buildings	Lot	1					
AU-7-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-7-3	Power distribution system in buildings including power outlets	Lot	1					
AU-7-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-7-5	Paging system in the premises of the plants	Lot	1					
AU-7-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-7-7	Lightning protection system in the premises of the plants	Lot	1					
AU-7-8	Air conditioning system of buildings (heating/cooling)	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W41: Construction of Yard Work

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W41	Yard Work							
	Civil Works							
	Yard Piping							
CC-200-1	Yard piping work, DIP 75mm	m	373					
CC-201	Yard piping work, DIP 100mm	m	383					
CC-202-1	Yard piping work, DIP 200mm	m	582					
CC-202-2	Yard piping work, DIP 250mm	m	419					
CC-203	Yard piping work, DIP 350mm	m	12					
CC-204-1	Yard piping work, DIP 400mm	m	118					
CC-204-2	Yard piping work, DIP 450mm	m	27					
CC-205	Yard piping work, DIP 600mm	m	615					
CC-206	Yard piping work, DIP 700mm	m	122					
CC-208	Yard piping work, SP 1000mm	m	1,101					
CC-209-1	Yard piping work, SP 1100mm	m	392					
CC-210-1	Yard piping work, SP 1200mm	m	513					
CC-211-1	Yard piping work, SP 1400mm	m	72					
CC-212-1	Yard piping work, SP 1600mm	m	33					
CC-213	Yard piping work, SP 300mm	m	12					
CC-214	Yard piping work, SP 600mm	m	139					
CC-215	Yard piping work, SP 800mm	m	368					
CC-216	Yard piping work, SP 900mm	m	19					
CC-554-1	Valve Dia.75mm	pcs	6					
CC-554-2	Valve Dia.100mm	pcs	7					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W41:Construction of Yard Work

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-554-3	Valve Dia.250mm	pcs	3					
CC-554-4	Valve Dia.300mm	pcs	1					
CC-554-5	Valve Dia.400mm	pcs	1					
CC-554-6	Valve Dia.450mm	pcs	1					
CC-554-7	Valve Dia.600mm	pcs	6					
CC-554-8	Valve Dia.700mm	pcs	1					
CC-554-9	Valve Dia.800mm	pcs	5					
CC-554-10	Valve Dia.900mm	pcs	1					
CC-554-11	Valve Dia.1000mm	pcs	5					
CC-554-12	Valve Dia.1100mm	pcs	2					
CC-554-13	Valve Dia.1200mm	pcs	4					
CC-555-1	Air Valve Dia. 50mm	pcs	1					
CC-555-2	Air Valve Dia. 100mm	pcs	2					
CC-555-3	Air Valve Dia. 150mm	pcs	15					
CC-556-1	Ball Valve Dia. 50mm	pcs	1					
CC-556-2	Ball Valve Dia. 100mm	pcs	2					
CC-556-3	Ball Valve Dia. 150mm	pcs	15					
CC-257	Fire Hydrant, Above ground type Dia. 75mm	pcs	9					
CC-253-1	Valve Box Dia. 75 - 1,200mm	pcs	44					
CC-253-2	Air Valve Box	pcs	9					
CC-253-3	Flow meter Box	pcs	4					
CC-254-1	Blank Flange Dia.1,200mm	pcs	3					
CC-254-2	Blank Flange Dia.1,000mm	pcs	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W43: Construction of Water Treatment Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Water Treatment Building							
	Architectural Work (Building Work)							
AA-01-1	Pile installation work 400 x 400 x 11m	pcs	108					
	(Structure Works)							
AA-22	Reinforcing Bar	ton	228					
AA-23	Formwork	m ²	15,290					
AA-24	Scaffolding	m ³	2,835					
AA-25	Supporting	m ²	4,033					
AA-26	Reinforced concrete	m ³	2,209.3					
AA-31	Iron Frame	ton	69.0					
AA-32	Brick wall w/ insulator t=470	m ²	2,905					
AA-35	Scarsement	m ²	366					
AA-40-1	Floor Finishing (F-1)	m ²	267.4					
AA-40-2	Floor Finishing (F-2)	m ²	804.6					
AA-40-3	ditto (F-3)	m ²	759.8					
AA-40-4	ditto (F-4)	m ²	264.5					
AA-40-5	ditto (F-6)	m ²	173.0					
AA-40-6	ditto (F-8)	m ²	685.0					
AA-41-1	Base (B-1)	m	250.5					
AA-41-2	Base (B-2)	m	50.8					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W43: Construction of Water Treatment Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-41-3	ditto (B-3)	m	113.2					
AA-41-4	ditto (B-4)	m	585.5					
AA-41-5	ditto (B-5)	m	520.9					
AA-42-1	Wall Finishing (W-1)	m ²	5,240.4					
AA-42-2	Wall Finishing (W-2)	m ²	194.7					
AA-43-1	Ceiling (C-1)	m ²	1,704.0					
AA-43-2	Ceiling (C-2)	m ²	188.5					
AA-43-3	Ceiling (C-3)	m ²	432.8					
AA-44-2	Aluminum Window (Double Glass)	m ²	397.5					
AA-44-4	Aluminum Door (w/o insulation)	m ²	35.1					
AA-44-6	SD (w/ insulation)	m ²	18.9					
AA-44-9	Rolling Door	m ²	26.0					
AA-51-1	Roofing Metal Sheet w/ insulation	m ²	940.2					
AA-51-2	Roofing Polycarbonate Sheet	m ²	907.1					
AA-61	Roof Drain	pc	10					
AA-62	Downspout	m	73.5					
AA-74	Building Base	m	360					
	(Utility Work)							
AU-5	Utility Work	Lot						

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W43: Construction of Water Treatment Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AU-5-1	Lighting facilities in buildings	Lot	1					
AU-5-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-5-3	Power distribution system in buildings including power outlets	Lot	1					
AU-5-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-5-5	Paging system in the premises of the plants	Lot	1					
AU-5-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-5-7	Lightning protection system in the premises of the plants	Lot	1					
AU-5-8	Plumbing (hot/cold water) in buildings	Lot	1					
AU-5-9	Air conditioning system of buildings (heating/cooling)	Lot	1					
AU-5-10	Ventilation system for mechanical rooms, electrical rooms, and others.	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W44: Construction of Administration Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W44	Administration Building							
	Architectural Work							
	(Building Work)							
AA-01-1	Pile installation work 300x300x11	pcs	480					
AA-10-1	Excavation	m ³	1539					
AA-11	Back Filling	m ³	339					
AA-12-1	Surplus Soil	m ³	1200					
AA-14-1	Well-point work	lot	1					
	Structure Works							
AA-20	Gravel	m ³	44.5					
AA-21	Lean Concrete	m ³	177.8					
AA-22	Reinforcing Bar	ton	49.245					
AA-23	Formwork	m ²	2341.0					
AA-24	Scaffolding	m ³	1,904.0					
AA-25	Supporting	m ²	2,070.0					
AA-26	Reinforced concrete	m ³	469.4					
AA-31	Iron Frame	ton	13.986					
AA-32-1	Brick wall w/ insulator t=120mm	m ²	124.5					
AA-32-2	Brick wall w/ insulator t=250mm	m ²	1257.0					
AA-32-3	Brick wall w/ insulator t=380mm	m ²	289.0					
AA-32-4	Brick wall w/ insulator t=610mm	m ²	1,668.0					
AA-34	Toilet Partation Wall	m ²	26					
AA-35	Scarsment	m ²	142					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W44: Construction of Administration Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-40-2	Floor Finishing (F-2)	m ²	2179.1					
AA-40-3	Floor Finishing (F-3)	m ²	1161.3					
AA-41-1	Base (B-2)	m	288.0					
AA-41-3	ditto (B-3)	m	72.0					
AA-41-4	ditto (B-4)	m	515.6					
AA-42-1	Wall Finishing (W-1)	m ²	3195.1					
AA-43-3	Ceiling (C-3)	m ²	2848.3					
AA-44-1	Alminum Window (Single Glass)	m ²	8.3					
AA-44-2	Alminum Window (Double Glass)	m ²	19.2					
AA-44-3	Alminum Window (Triple Glass)	m ²	383.8					
AA-44-6	SD (w/ insulation)	m ²	15.7					
AA-44-7	SD (w/o insulation)	m ²	25.3					
AA-44-8	Wooden Door	m ²	96.2					
AA-30-1	PC Panel (1.041.1-2 series) 6.0 x 1.5 x 12	m ²	117.0					
AA-30-2	PC Panel (1.041.1-2 series) 6.0 x 1.2 x 12	m ²	21.6					
AA-30-3	PC Panel (1.041.1-2 series) 5.6 x 1.5 x 12	m ²	495.6					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W44: Construction of Administration Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-30-4	PC Panel (1.041.1-2 series) 5.6 x 1.2 x 12	m ²	544.3					
AA-30-5	PC Panel (1.041.1-2 series) 3.0 x 1.5 x 8	m ²	9.0					
AA-30-6	PC Panel (1.141.1-B series) 6.0 x 1.5 x 6	m ²	45.0					
AA-30-7	PC Panel (1.141.1-B series) 6.0 x 1.2 x 6	m ²	7.2					
AA-30-8	PC Panel (1.141.1-B series) 5.8 x 1.5 x 6	m ²	121.8					
AA-30-9	PC Panel (1.141.1-B series) 5.6 x 1.2 x 8	m ²	168.0					
AA-30-10	PC Panel (1.141.1-B series) 5.8 x 1.5 x 8	m ²	626.4					
AA-30-11	PC Panel (1.141.1-B series) 5.8 x 1.2 x 8	m ²	76.6					
AA-36	Wooden support	m ³	26.3					
AA-50	Corrugated Meral Roofing	m ²	807					
AA-51-1	Roofing Metal Sheet w/ insulation	m ²	108.6					
AA-51-2	Roofing Polycarbonate Sheet	m ²	106.3					
AA-62	Downspout	m	123.0					
AA-63	Gutter	m	129					
AA-72-1	Staircase 1	lot	1					
AA-74	Building Base	m	138.0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W44: Construction of Administration Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	(Utility Work)							
AU-8	Utility Work	Lot						
AU-8-1	Lighting facilities in buildings	Lot	1					
AU-8-2	Outdoor lighting facilities covering premises of the plants including	Lot	1					
AU-8-3	Power distribution system in buildings including power outlets	Lot	1					
AU-8-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-8-5	Paging system in the premises of the plants	Lot	1					
AU-8-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-8-7	Lightning protection system in the premises of the plants	Lot	1					
AU-8-8	Plumbing (hot/cold water) in buildings	Lot	1					
AU-8-9	Air conditioning system of buildings (heating/cooling)	Lot	1					
AU-8-10	Ventilation system for mechanical rooms, electrical rooms, and others.	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W46: Construction of Guard House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W46	Guard House							
	Architectural Work							
	(Building Work)							
AA-01-1	Pile installation work 300x300x10m	pcs	12					
AA-10-1	Excavation	m ³	102.7					
AA-11	Back Filling	m ³	87.0					
AA-12-1	Embankment	m ³	0					
AA-13	Disposal of surplus soil	m ³	15.7					
AA-14-1	Well-point work	lot	1					
AA-16	Slope protection work	m ²	0					
	(Structure Works)							
AA-20	Gravel	m ³	1.6					
AA-21	Lean Concrete	m ³	0.4					
AA-22	Reinforcing Bar	ton	2.140					
AA-23	Formwork	m ²	75.7					
AA-24	Scaffolding	m ³	135.2					
AA-25	Supporting	m ²	75.8					
AA-26	Reinforced concrete	m ³	20.38					
AA-35	Scarsement	m ²	23.25					
AA-32-1	Brick wall w/ insulator t=120	m ²	23.4					
AA-32-4	Brick wall w/ insulator t=470	m ²	98.1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W46: Construction of Guard House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-40-3	Floor Finishing (F-3)	m ²	22.4					
AA-41-4	Base (B-4)	m ²	29.9					
AA-42-1	Wall Finishing (W-1)	m ²	38.0					
AA-42-2	Wall Finishing (W-2)	m ²	38.0					
AA-43-1	Ceiling (C-1)	m ²	20.0					
AA-43-2	Ceiling (C-2)	m ²	7.2					
AA-44-3	Aluminum Window (Triple Glass)	m ²	7.2					
AA-44-6	SD (w/ insulation)	m ²	1.9					
AA-44-8	Wooden Door	m ²	5.5					
AA-30	PC Panel (1.041.1-2 series) 1.5 x 4.0	m ²	24					
AA-73	Concrete Coping W=400mm	m	21.4					
AA-60-2	Roofing 2	m ²	24.0					
AA-61	Roof Drain	pc	1					
AA-62	Downspout	m	4.2					
AA-74	Building Base	m	22.8					
AA-75	Manhole Cover DIP Dia. 600	pc	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W46:Construction of Guard House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	(Utility Work)							
AU-9	Utility Work	Lot						
AU-9-1	Lighting facilities in buildings	Lot	1					
AU-9-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-9-3	Power distribution system in buildings including power outlets	Lot	1					
AU-9-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-9-5	Paging system in the premises of the plants	Lot	1					
AU-9-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-9-7	Lightning protection system in the premises of the plants	Lot	1					
AU-9-8	Plumbing (hot/cold water) in buildings	Lot	1					
AU-9-9	Air conditioning system of buildings (heating/cooling)	Lot	1					
AU-9-10	Ventilation system for mechanical rooms, electrical rooms, and others.	Lot	1					
	Total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. W47: Construction of Sub-Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W47	Sub-Station							
CC-01-1	Pile installation work 300x300x11	pcs	120					
CC-20	Gravel	m ³	100.0					
CC-21	Lean Concrete	m ³	25.0					
CC-22	Re-bar	ton	10					
CC-23	Formwork	m ²	100.0					
CC-26	R.Concrete	m ³	246					
	Architectural Work (Building Work)							
AA-01-1	Pile installation work 300x300x11m	pcs	109					
AA-10-1	Excavation	m ³	963.2					
AA-11	Back Filling	m ³	878					
AA-12-1	Embankment	m ³	0					
AA-13	Disposal of surplus soil	m ³	85.2					
AA-14-1	Well-point work H=2m	lot	1					
AA-16	Slope protection work	m ²	0					
	(Structure Works)							
AA-20	Gravel Stone	m ³	8.9					
AA-21	Lean Concrete	m ³	2.2					
AA-22	Reinforcing Bar	ton	19.364					
AA-23	Formwork	m ²	871.6					
AA-24	Scaffolding	m ³	647.6					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W47: Construction of Sub-Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-25	Supporting	m ²	2,019.0					
AA-26	Reinforced concrete	m ³	184.4					
AA-35	Scarsement	m ²	97.7					
AA-32-1	Brick wall w/ insulator t=120	m ²	44.3					
AA-32-4	Brick wall w/ insulator t=470	m ²	582.3					
AA-40-3	Floor Finishing (F-3)	m ²	30.1					
AA-41-2	Base (B-2)	m ²	95.0					
AA-41-4	Base (B-4)	m ²	21.0					
AA-42-1	Wall Finishing (W-1)	m ²	579.3					
AA-43-1	Ceiling (C-1)	m ²	30.1					
AA-43-6	Ceiling (C-6)	m ²	390.5					
AA-44-2	Alminum Window (Double Glass)	m ²	17					
AA-44-3	Alminum Window (Triple Glass)	m ²	8					
AA-44-6	SD (w/ insulation)	m ²	7.3					
AA-44-8	Wooden Door	m ²	1.9					
AA-30	PC Panel (1.041.1-2 series) 1.5 x 9.0	pc	432					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W47: Construction of Sub-Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-73	Concrete Coping W=400mm	m	98					
AA-60-2	Roofing 2	m ²	432.0					
AA-61	Roof Drain	pc	4					
AA-62	Downspout	m	22.0					
AA-74	Building Base	m	94					
	(Utility Work)							
AU-10	Utility Work	Lot						
AU-10-1	Lighting facilities in buildings	Lot	1					
AU-10-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-10-3	Power distribution system in buildings including power outlets	Lot	1					
AU-10-4	Communication (telephone network) system in the premises of the plants	Lot	1					
AU-10-5	Paging system in the premises of the plants	Lot	1					
AU-10-6	Fire fighting system in the premises of the plants including alarm system	Lot	1					
AU-10-7	Lightning protection system in the premises of the plants	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W100	Distribution Pipeline Facility							
	Civil Works							
	Route No.1	Lot						
	Route No.2	Lot						
	Route No.3	Lot						
	Route No.4	Lot						
	Route No.5	Lot						
	Route No.6	Lot						
	Route No.7	Lot						
	Route No.8	Lot						
	Route No.9	Lot						
	Route No.10	Lot						
	Route No.11	Lot						
	Route No.12	Lot						
	Route No.13	Lot						
	Route No.14	Lot						
	Route No.15	Lot						
	Route No.16	Lot						
	Route No.17	Lot						
	Route No.18	Lot						
	Route No.19	Lot						
	Route No.20	Lot						
	Route No.21	Lot						

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.22	Lot						
	Route No.23	Lot						
	Route No.24	Lot						
	Route No.25	Lot						
	Route No.26	Lot						
	Route No.27	Lot						
	Route No.28	Lot						
	Route No.29	Lot						
	Route No.30	Lot						
	Route No.31	Lot						
	Route No.32	Lot						
	Route No.33	Lot						
	Route No.34	Lot						
	Route No.35	Lot						
	Route No.36	Lot						
	Route No.37	Lot						
	Route No.38	Lot						
	Route No.39	Lot						
	Route No.40	Lot						
	Route No.41	Lot						
	Governmental Area Distribution Main	Lot						
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W100	Distribution Pipeline Facility							
	Civil Works							
	Route No.1							
CC-412-1	Pipe work, DIP Dia 800 mm	m	1,176					W205 (1)
CC-412-2	Butterfly Valve, DIP Dia 800 mm	pcs	4					ditto
CC-412-3	Air Valve Dia 100mm, DIP Dia 800 mm	pcs	2					ditto
CC-412-4	Drain Valve Dia 150mm, DIP Dia 800 mm	pcs	2					ditto
CC-412-5	Collar, DIP Dia 800 mm	pcs	27					ditto
CC-412-6	45 Bend, DIP Dia 800 mm	pcs	0					ditto
CC-412-7	22.5 Bend, DIP Dia 800 mm	pcs	0					ditto
CC-412-8	Tee, DIP Dia 800 mm	pcs	23					ditto
	FH	pcs	7					ditto
	MH	pcs	29					ditto
	BV 700	pcs	1					ditto
	BV 400	pcs	2					ditto
	GV 150	pcs	20					ditto
	Collar 150	pcs	40					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	218					W205 (2)
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	1					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	7					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	2					W205 (2)
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	1					ditto
	FH	pcs	2					ditto
	MH	pcs	3					ditto
	GV 150	pcs	3					ditto
	Collar 150	pcs	6					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,157					W269
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	19					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.2							
CC-411-1	Pipe work, DIP Dia 700 mm	m	1,002					W221 (1)
CC-411-2	Butterfly Valve, DIP Dia 700 mm	pcs	2					ditto
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	1					ditto
CC-411-4	Drain Valve Dia 150mm, DIP Dia 700 mm	pcs	1					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	22					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	6					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	12					ditto
	FH		7					ditto
	MH		20					ditto
	BV 300		2					ditto
	GV 150		10					ditto
	Col 150		20					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	278					W221 (2)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	11					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	4					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	3					ditto
	FH		2					ditto
	MH		10					ditto
	GV 150		7					ditto
	Col 150		14					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	353					W205 (3)
CC-408-2	Buttefly Valve, DIP Dia 400 mm	pcs	1					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					W205 (3)
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	10					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	3					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	3					ditto
	FH		2					ditto
	MH		5					ditto
	GV 150		6					ditto
	Col 150		12					ditto
CC-409-1	Pipe work, DIP Dia 500 mm	m	339					W205 (4)

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-409-2	Buttefly Valve, DIP Dia 500 mm	pcs	1					ditto
CC-409-3	Air Valve Dia 100mm, DIP Dia 500 mm	pcs	1					ditto
CC-409-4	Drain Valve Dia 150mm, DIP Dia 500 mm	pcs	1					ditto
CC-409-5	Collar, DIP Dia 500 mm	pcs	6					ditto
CC-409-6	45 Bend, DIP Dia 500 mm	pcs	0					ditto
CC-409-7	22.5 Bend, DIP Dia 500 mm	pcs	0					ditto
CC-409-8	Tee, DIP Dia 500 mm	pcs	1					ditto
CC-409-9	Cross Pipe, DIP Dia 500 mm	pcs	1					ditto
	FH		1					ditto
	MH		5					ditto
	GV 150		2					ditto
	Col 150		4					ditto
CC-409-1	Pipe work, DIP Dia 500 mm	m	341					W205 (5)
CC-409-2	Buttefly Valve, DIP Dia 500 mm	pcs	1					W205 (5)
CC-409-3	Air Valve Dia 100mm, DIP Dia 500 mm	pcs	1					ditto
CC-409-4	Drain Valve Dia 150mm, DIP Dia 500 mm	pcs	1					ditto
CC-409-5	Collar, DIP Dia 500 mm	pcs	7					ditto
CC-409-6	45 Bend, DIP Dia 500 mm	pcs	0					ditto
CC-409-7	22.5 Bend, DIP Dia 500 mm	pcs	0					ditto
CC-409-8	Tee, DIP Dia 500 mm	pcs	2					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-409-9	Cross Pipe, DIP Dia 500 mm	pcs	1					ditto
	FH		2					ditto
	MH		6					ditto
	GV 150		3					ditto
CC-410-1	Pipe work, DIP Dia 600 mm	m	324					W231
CC-410-2	Buttefly Valve, DIP Dia 600 mm	pcs	3					ditto
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	11					ditto
CC-410-6	45 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-7	22.5 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-8	Tee, DIP Dia 600 mm	pcs	7					ditto
	FH		3					ditto
	MH		10					ditto
	BV 300		1					ditto
	BV 250		1					ditto
	GV 150		5					ditto
	Col 150		10					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.3							
CC-407-1	Pipe work, DIP Dia 300 mm	m	571					W244 (4)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	1					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	15					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	2					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	5					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	2					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	2					ditto
	FH		6					ditto
	MH		18					ditto
	GV 150		4					ditto
	Col 150		8					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	714					W244 (3)
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	13					ditto

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	2					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	1					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	3					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	3					ditto
	FH		3					ditto
	MH		9					ditto
	GV 150		6					ditto
	Col 150		12					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,321					W245 (1)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	22					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	7					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	7					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	2					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	2					ditto
	FH		3					ditto
	MH		10					ditto
	GV 150		4					ditto
	Col 150		8					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-452	Pipe Jacking, W245, Railway Crossing, Dia. 300 mm (Double)	m	120					W245
CC-452-1	Tempotrary Work	Lot	1					ditto
CC-452-2	Shaft Constrution Work, Starting Shaft	Lot	1					ditto
CC-452-3	ditto, Arrival Shaft	Lot	1					ditto
CC-452-4	Pipe Jacking Work	Lot	1					ditto
CC-452-5	Other Necessary Works, including manhole construction	Lot	1					ditto
CC-407-1	Open cutting method, W245, River Crossing, Dia. 300 mm (Double)	m	20					W245
CC-407-2	Buttefly Valve, DIP Dia 300 mm	pcs	0					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	0					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	0					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	0					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	5,040					W259 (1)
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	6					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	5					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	5					W259 (1)
CC-408-5	Collar, DIP Dia 400 mm	pcs	45					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	3					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	7					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	16					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	15					ditto
	FH		17					ditto
	MH		58					ditto
	BV 500		1					ditto
	GV 150		30					ditto
	Col 150		60					ditto
	Total							

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.4							
CC-407-1	Pipe work, DIP Dia 300 mm	m	832					W244 (2)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	19					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	6					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	5					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	2					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	2					ditto
	FH		6					ditto
	MH		18					ditto
	GV 150		4					ditto
	Col 150		8					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	419					W244 (1)
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	1					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	13					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	1					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	2					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-8	Tee, DIP Dia 200 mm	pcs	3					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	3					ditto
	FH		3					ditto
	MH		9					ditto
	GV 150		6					ditto
	Col 150		12					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	829					W267
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	2					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	14					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	5					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	5					ditto
	FH		6					ditto
	MH		22					ditto
	GV 150		10					ditto
	Col 150		20					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-1	Open cutting method, W244(1), Railway Crossing, Dia. 200 mm (Double)	m	25					W244(1)
CC-408-1	Open cutting method, W244(1), Railway Crossing, Dia. 300 mm (Double)	m	40					W244(2)
CC-408-1	Open cutting method, W244(1), Railway Crossing, Dia. 300 mm (Double)	m	30					W244(2)
CC-408-1	Open cutting method, W244(1), Railway Crossing, Dia. 300 mm (Double)	m	15					W244(2)
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.5							
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,933					W217
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	18					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	7					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	7					ditto
	FH		12					ditto
	MH		29					ditto
	GV 150		14					ditto
	Col 150		28					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	1,907					W248 (1)
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	2					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	13					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.6							
CC-408-1	Pipe work, DIP Dia 400 mm	m	2,050					W218
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	5					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	2					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	2					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	18					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	7					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	7					ditto
	FH		13					ditto
	MH		31					ditto
	BV 300		2					ditto
	GV 150		12					ditto
	Col 150		24					ditto
CC-410-1	Pipe work, DIP Dia 600 mm	m	881					W203
CC-410-2	Butterfly Valve, DIP Dia 600 mm	pcs	4					ditto
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	10					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.7							
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,334					W211
CC-407-2	Buttefly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	15					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	1					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	5					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	5					ditto
	FH		8					ditto
	MH		11					ditto
	GV 150		10					ditto
	Col 150		20					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	2,672					W247
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	5					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	2					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	2					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	49					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	6					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	3					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	18					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	18					ditto
	FH		22					ditto
	MH		64					ditto
	BV 300		1					ditto
	GV 150		35					ditto
	Col 150		70					ditto
CC-408-1	Open cutting method, W247, Railway Crossing, Dia. 400 mm (Double)	m	12					W247
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-1	Open cutting method, W247, Railway Crossing, Dia. 400 mm (Double)	m	12					W247
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open cutting method, W247, Railway Crossing, Dia. 400 mm (Double)	m	12					W247
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					W247
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open cutting method, W247, Railway Crossing, Dia. 400 mm (Double)	m	12					W247
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open cutting method, W247, Railway Crossing, Dia. 400 mm (Double)	m	12					W247

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open cutting method, W247, Railway Crossing, Dia. 400 mm (Double)	m	12					W247
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.8							
CC-407-1	Pipe work, DIP Dia 300 mm	m	847					W212
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	17					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	7					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	6					ditto
	FH	pcs	5					ditto
	MH	pcs	20					ditto
	GV 150	pcs	13					ditto
	Col 150	pcs	26					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	0					W248 (2)
CC-408-2	Butterfly, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.9							
CC-405-1	Pipe work, DIP Dia 200 mm	m	350					W209
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	10					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	3					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	3					ditto
	FH		2					ditto
	MH		10					ditto
	GV 150		6					ditto
	Col 150		12					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	498					W272 (1)
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	8					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	2					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	2					ditto
	FH		3					ditto
	MH		7					ditto
	GV 150		4					ditto
	Col 150		8					ditto
CC-404-1	Pipe work, DIP Dia 150 mm	m	591					W272 (2)
CC-404-2	Sluice Valve, DIP Dia 150 mm	pcs	2					ditto
CC-404-3	Air Valve Dia 75mm, DIP Dia 150 mm	pcs	1					ditto
CC-404-4	Drain Valve Dia 50mm, DIP Dia 150 mm	pcs	1					ditto
CC-404-5	Collar, DIP Dia 150 mm	pcs	15					ditto
CC-404-6	45 Bend, DIP Dia 150 mm	pcs	6					ditto
CC-404-7	22.5 Bend, DIP Dia 150 mm	pcs	0					ditto
CC-404-8	Tee, DIP Dia 150 mm	pcs	5					ditto
	FH		4					ditto
	MH		12					ditto
	GV 150		5					ditto
	Col 150		10					ditto
CC-403-1	Pipe work, DIP Dia 100 mm	m	50					W272 (3)
CC-403-2	Sluice Valve, DIP Dia 100 mm	pcs	1					ditto

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.10							
CC-407-1	Pipe work, DIP Dia 300 mm	m	924					W219
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	11					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	1					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	3					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	3					ditto
	FH		6					ditto
	MH		15					ditto
	GV 150		6					ditto
	Col 150		12					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	711					W254
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	4					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	23					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	5					ditto

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.11							
CC-408-1	Pipe work, DIP Dia 400 mm	m	608					W207
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	2					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	12					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	1					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	2					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	3					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	2					ditto
	FH		4					ditto
	MH		10					ditto
	GV 150		5					ditto
	Col 150		10					ditto
CC-401-1	Pipe work, SP Dia 1000 mm	m	97					W258
CC-401-2	Butterfly Valve, SP Dia 1000 mm	pcs	0					ditto
CC-401-3	Air Valve Dia 100mm, SP Dia 1000 mm	pcs	0					ditto
CC-401-4	Drain Valve Dia 150mm, SP Dia 1000 mm	pcs	0					ditto
CC-401-5	Collar, SP Dia 1000 mm	pcs	3					ditto
CC-401-6	45 Bend, SP Dia 1000 mm	pcs	2					ditto

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-401-7	22.5 Bend, SP Dia 1000 mm	pcs	2					ditto
CC-401-8	Tee, SP Dia 1000 mm	pcs	1					ditto
CC-401-1	Open cutting method, W258, River Crossing, Dia. 1000 mm	m	100					W258
CC-401-2	Butterfly Valve, SP Dia 1000 mm	pcs	0					ditto
CC-401-3	Air Valve Dia 100mm, SP Dia 1000 mm	pcs	0					ditto
CC-401-4	Drain Valve Dia 150mm, SP Dia 1000 mm	pcs	0					ditto
CC-401-5	Collar, SP Dia 1000 mm	pcs	0					ditto
CC-401-6	45 Bend, SP Dia 1000 mm	pcs	0					ditto
CC-401-7	22.5 Bend, SP Dia 1000 mm	pcs	0					ditto
CC-401-8	Tee, SP Dia 1000 mm	pcs	0					ditto
	Total							

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.12							
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,277					W224
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	5					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	26					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	11					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	11					ditto
	FH		10					ditto
	MH		43					ditto
	GV 150		22					ditto
	Col 150		44					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,229					W228
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	26					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	4					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	2					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	9					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	7					ditto
	FH		9					ditto
	MH		26					ditto
	GV 150		17					ditto
	Col 150		34					ditto
CC-407-1	Open-Cutting Method, W228, River Crossing, Dia. 300 mm (Double)	m	30					W228
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	0					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	0					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	0					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	0					ditto
CC-406-1	Pipe work, DIP Dia 250 mm	m	1,072					W251
CC-406-2	Sluice Valve, DIP Dia 250 mm	pcs	2					ditto
CC-406-3	Air Valve Dia 75mm, DIP Dia 250 mm	pcs	1					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-406-4	Drain Valve Dia 80mm, DIP Dia 250 mm	pcs	1					ditto
CC-406-5	Collar, DIP Dia 250 mm	pcs	17					ditto
CC-406-6	45 Bend, DIP Dia 250 mm	pcs	2					ditto
CC-406-7	22.5 Bend, DIP Dia 250 mm	pcs	2					ditto
CC-406-8	Tee, DIP Dia 250 mm	pcs	5					ditto
CC-406-9	Cross Pipe, DIP Dia 250 mm	pcs	4					ditto
	FH		7					ditto
	MH		28					ditto
	GV 150		9					ditto
	Col 150		18					ditto
	Total							

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.13							
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,010					W220
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	18					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	3					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	6					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	5					ditto
	FH		7					ditto
	MH		18					ditto
	GV 200		1					ditto
	GV 150		10					ditto
	Col 150		20					ditto
CC-406-1	Pipe work, DIP Dia 250 mm	m	361					W252
CC-406-2	Sluice Valve, DIP Dia 250 mm	pcs	4					ditto
CC-406-3	Air Valve Dia 75mm, DIP Dia 250 mm	pcs	0					ditto
CC-406-4	Drain Valve Dia 80mm, DIP Dia 250 mm	pcs	0					ditto
CC-406-5	Collar, DIP Dia 250 mm	pcs	9					ditto
CC-406-6	45 Bend, DIP Dia 250 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-406-7	22.5 Bend, DIP Dia 250 mm	pcs	0					ditto
CC-406-8	Tee, DIP Dia 250 mm	pcs	3					ditto
CC-406-9	Cross Pipe, DIP Dia 250 mm	pcs	2					ditto
	FH		3					ditto
	MH		8					ditto
	GV 150		5					ditto
	Col 150		10					ditto
	Total							

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.14							
CC-405-1	Pipe work, DIP Dia 200 mm	m	1,227					W242
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	22					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	3					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	8					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	7					ditto
	FH		8					ditto
	MH		26					ditto
	GV 150		15					ditto
	Col 150		30					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,066					W204
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	4					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	11					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	4					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	3					ditto
	FH		6					ditto
	MH		15					ditto
	GV 150		7					ditto
	Col 150		14					ditto
	Total							

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.15							
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,575					W206
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	23					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	10					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	9					ditto
	FH		7					ditto
	MH		30					ditto
	GV 150		19					ditto
	Col 150		38					ditto
CC-411-1	Pipe work, DIP Dia 700 mm	m	2,276					W202
CC-411-2	Butterfly Valve, DIP Dia 700 mm	pcs	5					ditto
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	2					ditto
CC-411-4	Drain Valve Dia 150mm, DIP Dia 700 mm	pcs	2					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	41					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	2					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	2					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	33					ditto
	FH		16					ditto
	MH		49					ditto
	BV 500		1					ditto
	BV 300		1					ditto
	GV 150		31					ditto
	Col 150		62					ditto
CC-411-1	Pipe work, DIP Dia 700 mm	m	366					W229
CC-411-2	Butterfly Valve, DIP Dia 700 mm	pcs	1					ditto
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	0					ditto
CC-411-4	Drain Valve Dia 150mm, DIP Dia 700 mm	pcs	0					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	9					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	5					ditto
	FH		3					ditto
	MH		8					ditto
	GV 150		5					ditto
	Col 150		10					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.16							
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,118					W227
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	4					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	26					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	4					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	9					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	9					ditto
	FH		8					ditto
	MH		32					ditto
	GV 200		1					ditto
	GV 150		17					ditto
	Col 150		34					ditto
CC-454	Pipe Jacking, W227, River Crossing, Dia. 300 mm	m	0					W227
CC-454-1	Tempotrary Work	Lot	0					ditto
CC-454-2	Shaft Construsion Work, Starting Shaft	Lot	0					ditto
CC-454-3	ditto, Arrival Shaft	Lot	0					ditto
CC-454-4	Pipe Jacking Work	Lot	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-454-5	Other Necessary Works, including manhole construction	Lot	0					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	981					W261
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					W261
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	11					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	2					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	3					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	2					ditto
	FH		7					ditto
	MH		13					ditto
	GV 150		5					ditto
	Col 150		10					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.17							
CC-407-1	Pipe work, DIP Dia 300 mm	m	245					W227 (2)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	1					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	8					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	4					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	0					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	0					ditto
	FH		1					ditto
	MH		3					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	701					W262
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	2					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	14					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	4					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	3					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	3					ditto
	FH		5					ditto
	MH		17					ditto
	GV 150		6					ditto
	Col 150		12					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.18							
CC-407-1	Pipe work, DIP Dia 300 mm	m	449					W222
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	14					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	4					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	2					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	2					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	2					ditto
	FH		3					ditto
	MH		12					ditto
	GV 150		4					ditto
	Col 150		8					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	627					W263
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	17					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	2					ditto

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	6					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	5					ditto
	FH		4					ditto
	MH		18					ditto
	GV 150		11					ditto
	Col 150		22					ditto
	Total							

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.19							
CC-407-1	Pipe work, DIP Dia 300 mm	m	405					W226
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	11					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	1					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	3					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	3					ditto
	FH		3					ditto
	MH		11					ditto
	GV 150		6					ditto
	Col 150		12					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	633					W265
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	12					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	1					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	7					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	6					ditto
	FH		5					ditto
	MH		20					ditto
	GV 150		13					ditto
	Col 150		26					ditto
	Total							

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.20							
CC-407-1	Pipe work, DIP Dia 300 mm	m	451					W225
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	2					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	18					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	5					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	2					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	4					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	3					ditto
	FH	pcs	3					ditto
	MH	pcs	10					ditto
	GV 150	pcs	7					ditto
	Col 150	pcs	14					ditto
CC-406-1	Pipe work, DIP Dia 250 mm	m	138					W271(1)
CC-406-2	Sluice Valve, DIP Dia 250 mm	pcs	0					ditto

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-406-3	Air Valve Dia 75mm, DIP Dia 250 mm	pcs	0					ditto
CC-406-4	Drain Valve Dia 80mm, DIP Dia 250 mm	pcs	0					ditto
CC-406-5	Collar, DIP Dia 250 mm	pcs	5					ditto
CC-406-6	45 Bend, DIP Dia 250 mm	pcs	0					ditto
CC-406-7	22.5 Bend, DIP Dia 250 mm	pcs	0					ditto
CC-406-8	Tee, DIP Dia 250 mm	pcs	1					ditto
CC-406-9	Cross Pipe, DIP Dia 250 mm	pcs	0					ditto
	FH	pcs	1					ditto
	MH	pcs	4					ditto
	GV 150	pcs	1					ditto
	Col 150	pcs	2					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	1,312					W271 (2)
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-5	Collar, DIP Dia 200 mm	pcs	9					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	3					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	2					ditto
	FH	pcs	8					ditto
	MH	pcs	23					ditto
	GV 150	pcs	5					ditto
	Col 150	pcs	10					ditto
CC-404-1	Pipe work, DIP Dia 150 mm	m	719					W271 (3)
CC-404-2	Sluice Valve, DIP Dia 150 mm	pcs	2					ditto
CC-404-3	Air Valve Dia 75mm, DIP Dia 150 mm	pcs	1					ditto
CC-404-4	Drain Valve Dia 50mm, DIP Dia 150 mm	pcs	1					ditto
CC-404-5	Collar, DIP Dia 150 mm	pcs	20					ditto
CC-404-6	45 Bend, DIP Dia 150 mm	pcs	3					ditto
CC-404-7	22.5 Bend, DIP Dia 150 mm	pcs	4					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-404-8	Tee, DIP Dia 150 mm	pcs	9					ditto
	FH	pcs	4					ditto
	MH	pcs	17					ditto
	GV 150	pcs	9					ditto
	Col 150	pcs	18					ditto
CC-403-1	Pipe work, DIP Dia 100 mm	m	398					W271 (4)
CC-403-2	Sluice Valve, DIP Dia 100 mm	pcs	5					ditto
CC-403-3	Air Valve Dia 75mm, DIP Dia 100 mm	pcs	1					ditto
CC-403-4	Drain Valve Dia 50mm, DIP Dia 100 mm	pcs	1					ditto
CC-403-5	Collar, DIP Dia 100 mm	pcs	1					ditto
CC-403-6	45 Bend, DIP Dia 100 mm	pcs	1					ditto
CC-403-7	22.5 Bend, DIP Dia 100 mm	pcs	0					ditto
CC-403-8	Tee, DIP Dia 100 mm	pcs	0					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.21							
CC-410-1	Pipe work, DIP Dia 600 mm	m	3,015					W233
CC-410-2	Butterfly Valve, DIP Dia 600 mm	pcs	6					ditto
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	3					ditto
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	3					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	42					ditto
CC-410-6	45 Bend, DIP Dia 600 mm	pcs	5					ditto
CC-410-7	22.5 Bend, DIP Dia 600 mm	pcs	9					ditto
CC-410-8	Tee, DIP Dia 600 mm	pcs	24					ditto
	FH	pcs	22					ditto
	MH	pcs	52					ditto
	GV 150	pcs	24					ditto
	Col 150	pcs	48					ditto
CC-410-1	Pipe work, DIP Dia 600 mm	m	773					W234 (1)
CC-410-2	Butterfly Valve, DIP Dia 600 mm	pcs	2					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	11					ditto
CC-410-6	45 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-7	22.5 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-8	Tee, DIP Dia 600 mm	pcs	7					ditto
	FH	pcs	6					ditto
	MH	pcs	15					ditto
	GV 150	pcs	7					ditto
	Col 150	pcs	14					ditto
CC-410-1	Pipe work, DIP Dia 600 mm	m	6,966					W250
CC-410-2	Butterfly Valve, DIP Dia 600 mm	pcs	93					ditto
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	7					W250
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	7					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	60					ditto
CC-410-6	45 Bend, DIP Dia 600 mm	pcs	29					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-410-7	22.5 Bend, DIP Dia 600 mm	pcs	17					ditto
CC-410-8	Tee, DIP Dia 600 mm	pcs	10					ditto
	FH	pcs	45					ditto
	MH	pcs	121					ditto
	BV 400	pcs	1					ditto
	BV 300	pcs	6					ditto
	BV 250	pcs	1					ditto
	BV 200	pcs	3					ditto
	GV 150	pcs	6					ditto
	Col 150	pcs	12					ditto
CC-410-1	Open cutting method, W250, River Crossing, Dia. 600 mm (Double)	m	280					W250
CC-410-2	Butterfly Valve, DIP Dia 600 mm	pcs	4					ditto
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	0					ditto
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	0					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	2					ditto
CC-410-6	45 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-7	22.5 Bend, DIP Dia 600 mm	pcs	2					ditto
CC-410-8	Tee, DIP Dia 600 mm	pcs	4					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.22							
CC-400-1	Pipe work, SP Dia 900 mm	m	2,048					W249
CC-400-2	Butterfly Valve, SP Dia 900 mm	pcs	2					ditto
CC-400-3	Air Valve Dia 100mm, SP Dia 900 mm	pcs	2					ditto
CC-400-4	Drain Valve Dia 150mm, SP Dia 900 mm	pcs	2					ditto
CC-400-5	Collar, SP Dia 900 mm	pcs	31					ditto
CC-400-6	45 Bend, SP Dia 900 mm	pcs	5					ditto
CC-400-7	22.5 Bend, SP Dia 900 mm	pcs	8					ditto
CC-400-8	Tee, SP Dia 900 mm	pcs	14					
	FH	pcs	14					ditto
	MH	pcs	31					ditto
	BV 300	pcs	1					ditto
	GV 150	pcs	14					ditto
	Col 150	pcs	28					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-400-1	Open Cutting method, W249, River Crossing, Dia. 900 mm (Double)	m	140					W249
CC-400-2	Butterfly Valve, SP Dia 900 mm	pcs	1					ditto
CC-400-3	Air Valve Dia 100mm, SP Dia 900 mm	pcs	0					ditto
CC-400-4	Drain Valve Dia 150mm, SP Dia 900 mm	pcs	0					ditto
CC-400-5	Collar, SP Dia 900 mm	pcs	1					ditto
CC-400-6	45 Bend, SP Dia 900 mm	pcs	0					ditto
CC-400-7	22.5 Bend, SP Dia 900 mm	pcs	1					ditto
CC-400-8	Tee, SP Dia 900 mm	pcs	2					ditto
CC-400-1	Open Cutting method, W249, River Crossing, Dia. 900 mm (Double)	m	70					W249
CC-400-2	Butterfly Valve, SP Dia 900 mm	pcs	0					ditto
CC-400-3	Air Valve Dia 100mm, SP Dia 900 mm	pcs	0					W249
CC-400-4	Drain Valve Dia 150mm, SP Dia 900 mm	pcs	0					ditto
CC-400-5	Collar, SP Dia 900 mm	pcs	1					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-400-6	45 Bend, SP Dia 900 mm	pcs	0					ditto
CC-400-7	22.5 Bend, SP Dia 900 mm	pcs	0					ditto
CC-400-8	Tee, SP Dia 900 mm	pcs	1					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	722					W253
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	4					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	23					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	3					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	6					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	5					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	5					ditto
	FH	pcs	5					ditto
	MH	pcs	18					ditto
	BV 250	pcs	1					ditto
	GV 150	pcs	10					ditto
	Col 150	pcs	20					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.23							
CC-408-1	Pipe work, DIP Dia 400 mm	m	2,661					W241 (1)
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	6					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	3					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	3					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	35					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	7					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	5					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	10					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	9					ditto
	FH	pcs	18					ditto
	MH	pcs	55					ditto
	GV 250	pcs	1					ditto
	GV 150	pcs	18					ditto
	Col 150	pcs	36					ditto
CC-411-1	Pipe work, DIP Dia 700 mm	m	918					W232
CC-411-2	Butterfly Valve, DIP Dia 700 mm	pcs	2					ditto
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	1					ditto
CC-411-4	Drain Valve Dia 150mm, DIP Dia 700 mm	pcs	1					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	14					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	1					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	9					ditto
	FH	pcs	6					ditto
	MH	pcs	16					ditto
	BV 600	pcs	1					ditto
	BV 300	pcs	1					ditto
	GV 150	pcs	7					ditto
	Col 150	pcs	14					ditto
CC-412-1	Pipe work, DIP Dia 800 mm	m	1,968					W201 (1)
CC-412-2	Butterfly Valve, DIP Dia 800 mm	pcs	2					W201 (1)
CC-412-3	Air Valve Dia 100mm, DIP Dia 800 mm	pcs	2					ditto
CC-412-4	Drain Valve Dia 150mm, DIP Dia 800 mm	pcs	2					ditto
CC-412-5	Collar, DIP Dia 800 mm	pcs	32					ditto
CC-412-6	45 Bend, DIP Dia 800 mm	pcs	0					ditto
CC-412-7	22.5 Bend, DIP Dia 800 mm	pcs	2					ditto
CC-412-8	Tee, DIP Dia 800 mm	pcs	26					ditto
	FH	pcs	14					ditto
	MH	pcs	44					ditto
	BV 700	pcs	1					ditto
	GV 150	pcs	25					ditto
	Col 150	pcs	50					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-1	Open Cutting method, W241, Railway Crossing, Dia. 400 mm (Double)	m	35					W241
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open Cutting method, W241, Railway Crossing, Dia. 400 mm (Double)	m	25					W241
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.24							
CC-410-1	Pipe work, DIP Dia 600 mm	m	194					W223 (1)
CC-410-2	Butterfly Valve, DIP Dia 600 mm	pcs	2					ditto
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	0					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	6					ditto
CC-410-6	45 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-7	22.5 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-8	Tee, DIP Dia 600 mm	pcs	4					ditto
	FH	pcs	0					ditto
	MH	pcs	5					ditto
	GV 150	pcs	2					ditto
	Col 150	pcs	4					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	244					W223 (2)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	3					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-407-8	Tee, DIP Dia 300 mm	pcs	4					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	4					ditto
	FH	pcs	2					ditto
	MH	pcs	6					ditto
	GV 150	pcs	3					ditto
	Col 150	pcs	6					ditto
CC-409-1	Pipe work, DIP Dia 500 mm	m	1,269					W266
CC-409-2	Butterfly Valve, DIP Dia 500 mm	pcs	8					W266
CC-409-3	Air Valve Dia 100mm, DIP Dia 500 mm	pcs	1					ditto
CC-409-4	Drain Valve Dia 150mm, DIP Dia 500 mm	pcs	1					ditto
CC-409-5	Collar, DIP Dia 500 mm	pcs	25					ditto
CC-409-6	45 Bend, DIP Dia 500 mm	pcs	2					ditto
CC-409-7	22.5 Bend, DIP Dia 500 mm	pcs	0					ditto
CC-409-8	Tee, DIP Dia 500 mm	pcs	10					ditto
CC-409-9	Cross Pipe, DIP Dia 500 mm	pcs	9					ditto
	FH	pcs	8					ditto
	MH	pcs	29					ditto
	BV 300	pcs	1					ditto
	GV 250	pcs	1					ditto
	GV 150	pcs	17					ditto
	Col 150	pcs	34					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-409-1	Pipe work, DIP Dia 500 mm	m	3,309					W260
CC-409-2	Butterfly Valve, DIP Dia 500 mm	pcs	5					ditto
CC-409-3	Air Valve Dia 100mm, DIP Dia 500 mm	pcs	3					ditto
CC-409-4	Drain Valve Dia 150mm, DIP Dia 500 mm	pcs	3					ditto
CC-409-5	Collar, DIP Dia 500 mm	pcs	48					ditto
CC-409-6	45 Bend, DIP Dia 500 mm	pcs	1					ditto
CC-409-7	22.5 Bend, DIP Dia 500 mm	pcs	6					ditto
CC-409-8	Tee, DIP Dia 500 mm	pcs	19					ditto
CC-409-9	Cross Pipe, DIP Dia 500 mm	pcs	18					ditto
	FH		23					ditto
	MH		66					ditto
	GV 150		37					ditto
	Col 150		74					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	0					W259 (2)
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					W259 (2)
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto

**Astana Water Supply and Sewerage Project
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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open cuttint method, W259, Railway Crossing, Dia. 400 mm (Double)	m	50					W259 (2)
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	1					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	1					ditto
CC-408-1	Open cuttint method, W259, Railway Crossing, Dia. 400 mm (Double)	m	15					W259 (2)
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open cuttint method, W259, Railway Crossing, Dia. 400 mm (Double)	m	17					W259 (2)
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-453	Jacking method, W259, Railway Crossing, Dia. 400 mm (Double)	m	100					W259
CC-453-1	Tempotrary Work	lot	1					
CC-453-2	Shaft Construstion Work	lot	1					
CC-453-3	ditto	lot	1					
CC-453-4	Pipe Jacking Work	lot	1					
CC-453-5	Other Necessary Works	lot	1					
	Total							

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.25							
CC-407-1	Pipe work, DIP Dia 300 mm	m	1,382					W236
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	3					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	21					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	3					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	3					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	6					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	5					ditto
	FH	pcs	9					ditto
	MH	pcs	23					ditto
	GV 150	pcs	11					ditto
	Col 150	pcs	22					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	185					W264
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	1					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	0					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	0					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	7					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	0					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	2					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	1					ditto
	FH	pcs	2					ditto
	MH	pcs	6					ditto
	GV 150	pcs	3					ditto
	Col 150	pcs	6					ditto
	Total							

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.26							
CC-407-1	Pipe work, DIP Dia 300 mm	m	3,046					W239
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	6					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	3					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	3					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	39					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	2					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	4					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	15					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	14					ditto
	FH	pcs	21					ditto
	MH	pcs	55					ditto
	GV 150	pcs	29					ditto
	Col 150	pcs	58					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	649					W256
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	3					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	19					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	3					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	3					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	5					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	4					ditto
	FH	pcs	5					ditto
	MH	pcs	15					ditto
	GV 150	pcs	9					ditto
	Col 150	pcs	18					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	246					W255
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	9					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	1					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	2					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	2					ditto
	FH	pcs	2					ditto
	MH	pcs	8					ditto
	GV 150	pcs	4					ditto
	Col 150	pcs	8					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-407-1	Open cuttint method, W239, Railway Crossing, Dia. 300 mm (Double)	m	12					W239
CC-407-2	Sluice Valve, DIP Dia 300 mm	pcs	0					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	0					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	0					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	0					ditto
CC-407-1	Open cuttint method, W239, Railway Crossing, Dia. 300 mm (Double)	m	40					W239
CC-407-2	Sluice Valve, DIP Dia 300 mm	pcs	0					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	0					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	0					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	0					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.27							
CC-407-1	Pipe work, DIP Dia 300 mm	m	0					W238 (2)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	0					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	0					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	0					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	0					ditto
	FH	pcs	0					ditto
	MH	pcs	0					ditto
	GV 150	pcs	0					ditto
	Col 150	pcs	0					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	531					W257
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	1					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	19					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	4					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.28							
CC-407-1	Pipe work, DIP Dia 300 mm	m	763					W243
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	1					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	27					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	12					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	6					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	5					ditto
	FH	pcs	5					ditto
	MH	pcs	22					ditto
	GV 250	pcs	2					ditto
	GV 200	pcs	1					ditto
	GV 150	pcs	8					ditto
	Col 150	pcs	22					ditto
CC-411-1	Pipe work, DIP Dia 700 mm	m	802					W268 (2)
CC-411-2	Butterfly Valve, DIP Dia 700 mm	pcs	3					W268 (2)
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	1					ditto
CC-411-4	Drain Valve Dia 150mm, DIP Dia 700 mm	pcs	1					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-411-5	Collar, DIP Dia 700 mm	pcs	21					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	2					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	15					ditto
	FH	pcs	6					ditto
	MH	pcs	23					ditto
	GV 150	pcs	15					ditto
	Col 150	pcs	30					ditto
CC-410-1	Pipe work, DIP Dia 600 mm	m	464					W268 (3)
CC-410-2	Butterfly Valve, DIP Dia 600 mm	pcs	1					ditto
CC-410-3	Air Valve Dia 100mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-4	Drain Valve Dia 150mm, DIP Dia 600 mm	pcs	1					ditto
CC-410-5	Collar, DIP Dia 600 mm	pcs	15					ditto
CC-410-6	45 Bend, DIP Dia 600 mm	pcs	0					ditto
CC-410-7	22.5 Bend, DIP Dia 600 mm	pcs	3					ditto
CC-410-8	Tee, DIP Dia 600 mm	pcs	8					ditto
	FH	pcs	3					ditto
	MH	pcs	12					ditto
	GV 150	pcs	8					ditto
	Col 150	pcs	16					ditto
CC-408-1	Pipe work, DIP Dia 400 mm	m	320					W268 (4)

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	1					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					W268 (4)
CC-408-5	Collar, DIP Dia 400 mm	pcs	6					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	1					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	1					ditto
	FH	pcs	2					ditto
	MH	pcs	6					ditto
	GV 150	pcs	2					ditto
	Col 150	pcs	4					ditto
	Total							

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.29							
CC-407-1	Pipe work, DIP Dia 300 mm	m	2,220					W238 (1)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	33					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	5					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	1					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	12					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	11					ditto
	FH	pcs	15					ditto
	MH	pcs	39					ditto
	GV 150	pcs	23					ditto
	Col 150	pcs	46					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	905					W270
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	3					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	24					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	0					ditto

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Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.30							
CC-408-1	Pipe work, DIP Dia 400 mm	m	2,540					W246
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	4					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	3					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	3					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	29					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	3					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	16					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	3					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	3					ditto
	FH	pcs	17					ditto
	MH	pcs	49					ditto
	BV 300	pcs	1					ditto
	GV 200	pcs	2					ditto
	GV 150	pcs	4					ditto
	Col 150	pcs	8					ditto
CC-405-1	Pipe work, DIP Dia 200 mm	m	445					W273 (1)
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	2					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	14					ditto

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Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	8					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	1					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	1					ditto
	FH	pcs	2					ditto
	MH	pcs	5					ditto
	GV 150	pcs	2					ditto
	Col 150	pcs	4					ditto
CC-404-1	Pipe work, DIP Dia 150 mm	m	296					W273 (2)
CC-404-2	Sluice Valve, DIP Dia 150 mm	pcs	2					ditto
CC-404-3	Air Valve Dia 75mm, DIP Dia 150 mm	pcs	0					ditto
CC-404-4	Drain Valve Dia 50mm, DIP Dia 150 mm	pcs	0					ditto
CC-404-5	Collar, DIP Dia 150 mm	pcs	17					ditto
CC-404-6	45 Bend, DIP Dia 150 mm	pcs	8					ditto
CC-404-7	22.5 Bend, DIP Dia 150 mm	pcs	0					ditto
CC-404-8	Tee, DIP Dia 150 mm	pcs	5					ditto
	FH	pcs	1					ditto
	MH	pcs	9					ditto
	GV 150	pcs	5					ditto
	Col 150	pcs	10					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-408-1	Open cutting method, W246, Railway Crossing, Dia. 400 mm	m	12					W246(1)
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
CC-408-1	Open cutting method, W246, Railway Crossing, Dia. 400 mm	m	45					W246(1)
CC-408-2	Sluice Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	0					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	0					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	0					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	0					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.31							
CC-407-1	Pipe work, DIP Dia 300 mm	m	585					W214
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	21					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	1					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	2					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	7					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	7					ditto
	FH	pcs	7					ditto
	MH	pcs	22					ditto
	GV 150	pcs	14					ditto
	Col 150	pcs	28					ditto
CC-412-1	Pipe work, DIP Dia 800 mm	m	0					W201 (2)
CC-412-2	Sluice Valve, DIP Dia 800 mm	pcs	0					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-412-3	Air Valve Dia 100mm, DIP Dia 800 mm	pcs	0					ditto
CC-412-4	Drain Valve Dia 150mm, DIP Dia 800 mm	pcs	0					ditto
CC-412-5	Collar, DIP Dia 800 mm	pcs	0					ditto
CC-412-6	45 Bend, DIP Dia 800 mm	pcs	0					ditto
CC-412-7	22.5 Bend, DIP Dia 800 mm	pcs	0					ditto
CC-412-8	Tee, DIP Dia 800 mm	pcs	0					W201 (2)
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.32							
CC-408-1	Pipe work, DIP Dia 400 mm	m	1,796					W237
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	3					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	2					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	2					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	15					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	6					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	5					ditto
	FH	pcs	12					ditto
	MH	pcs	29					ditto
	GV 150	pcs	11					ditto
	Col 150	pcs	22					ditto
CC-411-1	Pipe work, DIP Dia 700 mm	m	0					W202
CC-411-2	Sluice Valve, DIP Dia 700 mm	pcs	0					ditto
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	0					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-411-4	Drain ValveDia 150mm, DIP Dia 700 mm	pcs	0					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	0					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	0					ditto
CC-411-1	Pipe work, DIP Dia 700 mm	m	1,256					W230
CC-411-2	Butterfly Valve, DIP Dia 700 mm	pcs	4					W230
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	1					ditto
CC-411-4	Drain ValveDia 150mm, DIP Dia 700 mm	pcs	1					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	27					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	1					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	22					ditto
	FH	pcs	9					ditto
	MH	pcs	37					ditto
	BV 300	pcs	1					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.33							
CC-407-1	Pipe work, DIP Dia 300 mm	m	342					W215
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	16					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	5					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	4					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	3					ditto
	FH	pcs	2					ditto
	MH	pcs	10					ditto
	GV 150	pcs	7					ditto
	Col 150	pcs	14					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.34							
CC-405-1	Pipe work, DIP Dia 200 mm	m	389					W216
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	1					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	17					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	8					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	3					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	2					ditto
	FH	pcs	3					ditto
	MH	pcs	9					ditto
	GV 150	pcs	5					ditto
	Col 150	pcs	10					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.35							
CC-405-1	Pipe work, DIP Dia 200 mm	m	65					W240
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	1					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	0					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	0					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	6					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	1					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	1					ditto
	FH	pcs	1					ditto
	MH	pcs	5					ditto
	GV 150	pcs	2					ditto
	Col 150	pcs	4					ditto
CC-450-1	Pipe Jacking, W240, Railway Crossing, Dia. 200 mm (Doouble)	m	60					W240
CC-450-2	Tempotrary Work	Lot	1					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-450-3	Shaft Construsion Work, Starting Shaft	Lot	1					ditto
CC-450-4	ditto, Arrival Shaft	Lot	1					ditto
CC-450-5	Pipe Jacking Work	Lot	1					ditto
CC-450-6	Other Necessary Works, including manhole construction	Lot	1					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.36							
CC-405-1	Pipe work, DIP Dia 300 mm	m	1,132					W246
CC-405-2	Sluice Valve, DIP Dia 200 mm	pcs	3					ditto
CC-405-3	Air Valve Dia 75mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-4	Drain Valve Dia 80mm, DIP Dia 200 mm	pcs	1					ditto
CC-405-5	Collar, DIP Dia 200 mm	pcs	10					ditto
CC-405-6	45 Bend, DIP Dia 200 mm	pcs	2					ditto
CC-405-7	22.5 Bend, DIP Dia 200 mm	pcs	0					ditto
CC-405-8	Tee, DIP Dia 200 mm	pcs	2					ditto
CC-405-9	Cross Pipe, DIP Dia 200 mm	pcs	2					ditto
	FH	pcs	8					
	MH	pcs	20					
	GV 150	pcs	4					
	Col 150	pcs	8					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.37							
CC-408-1	Pipe work, DIP Dia 400 mm	m	691					W213
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	2					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	9					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	1					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	2					ditto
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	2					ditto
	FH		4					ditto
	MH		9					ditto
	BV 300		1					ditto
	GV 200		1					ditto
	GV 150		3					ditto
	Col 150		6					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.38							
CC-407-1	Pipe work, DIP Dia 300 mm	m	424					W235
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	2					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	8					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	2					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	2					ditto
	FH	pcs	3					ditto
	MH	pcs	9					ditto
	GV 150	pcs	4					ditto
	Col 150	pcs	8					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.39							
CC-408-1	Pipe work, DIP Dia 400 mm	m	338					W208 (1)
CC-408-2	Butterfly Valve, DIP Dia 400 mm	pcs	0					ditto
CC-408-3	Air Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-4	Drain Valve Dia 100mm, DIP Dia 400 mm	pcs	1					ditto
CC-408-5	Collar, DIP Dia 400 mm	pcs	10					ditto
CC-408-6	45 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-7	22.5 Bend, DIP Dia 400 mm	pcs	0					ditto
CC-408-8	Tee, DIP Dia 400 mm	pcs	3					W208 (1)
CC-408-9	Cross Pipe, DIP Dia 400 mm	pcs	3					ditto
	FH		1					ditto
	MH		7					ditto
	GV 150		6					ditto
	Col 150		12					ditto
CC-407-1	Pipe work, DIP Dia 300 mm	m	678					W208 (2)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	1					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	1					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	10					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	5					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	1					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	1					ditto
	FH	pcs	4					ditto
	MH	pcs	7					ditto
	GV 150	pcs	2					ditto
	Col 150	pcs	4					ditto
CC-412-1	Pipe work, DIP Dia 800 mm	m	738					W210
CC-412-2	Butterfly Valve, DIP Dia 800 mm	pcs	2					ditto
CC-412-3	Air Valve Dia 100mm, DIP Dia 800 mm	pcs	1					ditto
CC-412-4	Drain Valve Dia 150mm, DIP Dia 800 mm	pcs	1					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-412-5	Collar, DIP Dia 800 mm	pcs	8					ditto
CC-412-6	45 Bend, DIP Dia 800 mm	pcs	0					ditto
CC-412-7	22.5 Bend, DIP Dia 800 mm	pcs	0					ditto
CC-412-8	Tee, DIP Dia 800 mm	pcs	4					ditto
	FH	pcs	4					ditto
	MH	pcs	10					ditto
	BV 300	pcs	1					ditto
	GV 150	pcs	4					ditto
	Col 150	pcs	8					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.40							
CC-407-1	Pipe work, DIP Dia 300 mm	m	0					W245 (2)
CC-407-2	Butterfly Valve, DIP Dia 300 mm	pcs	0					ditto
CC-407-3	Air Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-4	Drain Valve Dia 100mm, DIP Dia 300 mm	pcs	0					ditto
CC-407-5	Collar, DIP Dia 300 mm	pcs	0					ditto
CC-407-6	45 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-7	22.5 Bend, DIP Dia 300 mm	pcs	0					ditto
CC-407-8	Tee, DIP Dia 300 mm	pcs	0					ditto
CC-407-9	Cross Pipe, DIP Dia 300 mm	pcs	0					ditto
	FH	pcs	0					ditto
	MH	pcs	0					ditto
	GV 150	pcs	0					ditto
	Col 150	pcs	0					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.41							
CC-411-1	Pipe work, DIP Dia 700 mm	m	1,650					W234 (2)
CC-411-2	Butterfly Valve, DIP Dia 700 mm	pcs	2					ditto
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	2					ditto
CC-411-4	Drain Valve Dia 150mm, DIP Dia 700 mm	pcs	2					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	9					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	2					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	3					ditto
	FH	pcs	11					ditto
	MH	pcs	25					ditto
	BV 400	pcs	1					ditto
	GV 150	pcs	3					ditto
	Col 150	pcs	6					ditto
CC-411-1	Open Cutting Method, W234, River Crossing, Dia. 700 mm (Double)	m	30					W234
CC-411-2	Sluice Valve, DIP Dia 700 mm	pcs	0					ditto

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-411-3	Air Valve Dia 100mm, DIP Dia 700 mm	pcs	0					ditto
CC-411-4	Drain Valve Dia 150mm, DIP Dia 700 mm	pcs	0					ditto
CC-411-5	Collar, DIP Dia 700 mm	pcs	0					ditto
CC-411-6	45 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-7	22.5 Bend, DIP Dia 700 mm	pcs	0					ditto
CC-411-8	Tee, DIP Dia 700 mm	pcs	0					ditto
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. W100: Installation of Distribution Pipeline Facility

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Governmental Area Distribution Main							
CC-401-1	Pipe work, SP Dia 1000 mm	m	5,572					
CC-401-2	Butterfly Valve, SP Dia 1000 mm	pcs	3					
CC-401-3	Air Valve Dia 100mm, SP Dia 1000 mm	pcs	3					
CC-401-4	Drain Valve Dia 150mm, SP Dia 1000 mm	pcs	2					
CC-401-5	Collar, SP Dia 1000 mm	pcs	19					
CC-401-6	45 Bend, SP Dia 1000 mm	pcs	15					
CC-401-7	22.5 Bend, SP Dia 1000 mm	pcs	2					
CC-401-8	Tee, SP Dia 1000 mm	pcs	0					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WM: Mechanical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W11		Intake Pump Station						
	W11-MM-01	Inflow Screen	3					
	W11-MM-02	Inflow Valve	3					
	W11-MM-03	Suction Valve A	6					
	W11-MM-04	Suction Valve B	2					
	W11-MM-05	Raw Water Pump	6					
	W11-MM-06	Discharge Valve A	6					
	W11-MM-07	Discharge Valve B	6					
	W11-MM-08	Isolation Valve	2					
	W11-MM-09	Overhead Hoist A	2					
	W11-MM-10	Overhead Hoist B	1					
	W11-MM-11	Sump Drain Pump	2					
	W11-MM-12	Piping	Lot					
	W11-MM-13	Steel Works	Lot					
	W11-MM-14	Other Necessary Works	Lot					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WM: Mechanical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W34		Rapid Sand Filter (1/2)						
	W34-MM-01	Inflow Syphon	12					
	W34-MM-02	Wash Syphon	12					
	W34-MM-03	Surface Wash Valve	12					
	W34-MM-04	Surface Wash Piping	12					
	W34-MM-05	Effluent Isolation Gate	24					
	W34-MM-06	Drain Valve A	24					
	W34-MM-07	Flat Bottom Valve	12					
	W34-MM-08	Flow Control Valve	2					
	W34-MM-09	Drain Valve B	2					
	W34-MM-10	Drain Valve C	2					
	W34-MM-11	Effluent Weir	10					
	W34-MM-12	Overhead Hoist	2					
	W34-MM-13	Vacuum Pump	2					
	W34-MM-14	Vacuum Tank	1					
	W34-MM-15	Air Compressor	2					
	W34-MM-16	Air Tank	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WM: Mechanical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W45		Chemical Building (1/2)						
		Coagulant Dosing System (Alum)						
	W45-MM-01	Coagulant Transfer Pump	2					
	W45-MM-02	Coagulant Pump	2					
	W45-MM-03	Flow Control Valve	1					
		Flocculation Dosing System (Polymer)						
	W45-MM-04	Flocculation Tank	1					
	W45-MM-05	Flocculant Tank Mixer	1					
	W45-MM-06	Flocclant Pump	2					
		Activated Carbon Dosing System						
	W45-MM-07	Activated Carbon Blower	2					
	W45-MM-08	Activated Carbon Pump	2					
	W45-MM-09	Chemical Hoist	1					
	W45-MM-10	Dust Extraction Fan	1					
	W45-MM-11	Dust Extraction Tank	1					
		Chlorination System						
	W45-MM-12	Weighting Scale	1					
	W45-MM-13	Evaporator	2					
	W45-MM-14	Chlorinator - Pre	2					
	W45-MM-15	Chlorinator - Post	2					
	W45-MM-16	Chlorine Hoist	1					
	W45-MM-17	Exhaust Fan	2					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WE: Electrical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W00		General Items	Lot					
W10-1		Intake Facilities/High Voltage Switchgear	Lot					
W10-2		Intake Facilities/Low Voltage Switchgear	Lot					
W10-3		Intake Facilities/Instrumentation Facilities	Lot					
W10-4		Intake Facilities/Monitoring and Control Facilities	Lot					
W10-5		Intake Facilities/Other Work	Lot					
W30-1		WTP Facilities/High Voltage Switchgear	Lot					
W30-2		WTP Facilities/Low Voltage Switchgear and Motor Control Center	Lot					
W30-3		WTP Facilities/Instrumentation Facilities	Lot					
W30-4		WTP Facilities/Monitoring and Control Facilities	Lot					
W30-5		WTP Facilities/Other Works	Lot					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WE: Electrical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W10-2		Intake Facilities/Low Voltage Switchgear						
	W10-EE-10	400 V Transformer Panel	2					
	W10-EE-11	400 V Feeder Panel	1					
	W10-EE-12	400 V Transformer Panel	2					
	W10-EE-13	400 V Feeder Panel	1					
	W10-EE-14	UPS	3					
	W10-EE-15	Intake MCC & Auxiliary Relay Panel	1					
	W10-EE-16	Flow Control Panel	1					
	W10-EE-17	Intake Pump LOP	6					
	W10-EE-18	Intake Valve LOP	1					
	W10-EE-19	Isolation Valve LOP	1					
	W10-EE-20	Sump Drainage Pump LOP	1					
	W10-EE-21	Intake Substation LOP	1					
W10-3		Intake Facilities/Instrumentation Facilities						
	W10-EE-22	Raw Water Intake Flow	1					
	W10-EE-23	Pump Suction Water Level	1					
	W10-EE-24	Flow Control Valve Opening Degree	1					
	W10-EE-25	Sump Drainage Pit Level Switch	1					
	W10-EE-26	Instrumentation Panel for Intake	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WE: Electrical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W30-1		WTP Facilities/High Voltage Switchgear						
	W30-EE-01	11 kV Incoming Panel	2					
	W30-EE-02	11 kV Tie Breaker Panel	1					
	W30-EE-03	11 kV Primary Transformer Panel	2					
	W30-EE-04	35 kV Incoming Panel	1					
	W30-EE-05	35 kV Primary Transformer Panel	1					
	W30-EE-06	11/6 kV Power Transformer	1					
	W30-EE-07	6 kV Incoming Panel (1)	3					
	W30-EE-08	GPT Panal (1)	2					
	W30-EE-09	6 kV Feeder Panel	6					
	W30-EE-10	100 k Var Power Capacitor Panel	2					
	W30-EE-11	200 k Var Power Capacitor Panel	2					
	W30-EE-12	300 k Var Power Capacitor Panel	2					
	W30-EE-13	6 kV Tie Breaker Panel (1)	2					
	W30-EE-14	6 kV Incoming Panel (2)	2					
	W30-EE-15	GPT Panal (2)	2					
	W30-EE-16	6 kV Tie Breaker Panel (2)	1					
	W30-EE-17	No.4 Distribution Pump Panel	1					
	W30-EE-18	No.7 Distribution Pump Panel	1					
	W30-EE-19	No.8 Distribution Pump Panel	1					
	W30-EE-20	6 kV VVVF Unit	Lot					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. WE: Electrical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W30-2		WTP Facilities/Low Voltage Switchgear and Motor Control Center (1/3)						
	W30-EE-21	400 V Transformer Panel	2					
	W30-EE-22	Secondary Transformer Panel	2					
	W30-EE-23	400 V Feeder Panel	1					
	W30-EE-24	UPS	3					
	W30-EE-25	Receiving Well & Chemical Facilities MCC & Auxiliary Relay	1					
	W30-EE-26	Water Treatment MCC & Auxiliary Relay Panel	1					
	W30-EE-27	Pump Station MCC & Auxiliary Relay Panel	1					
	W30-EE-28	Administration 400 V Feeder Panel	1					
	W30-EE-29	Distribution Chamber LCP	1					
	W30-EE-30	Backwash Recovery Incoming Panel	1					
	W30-EE-31	Backwash Recovery Pump LCP	3					
	W30-EE-32	Sludge Pump LCP	1					
	W30-EE-33	Sludge Thickener LCP	1					
	W30-EE-34	Sludge Pump LCP	1					
	W30-EE-35	Discharge Pool LCP	1					
	W30-EE-36	Coagulant Transfer Pump LCP	1					
	W30-EE-37	Chlorination Distribution Panel	1					
	W30-EE-38	WTP Substation LOP	1					
	W30-EE-39	Inflow Valve LOP	1					
	W30-EE-40	Inflow Gate LOP	1					

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. WE: Electrical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W30-2		WTP Facilities/Low Voltage Switchgear and Motor Control Center (2/3)						
	W30-EE-41	Inflow Gate LOP	6					
	W30-EE-42	Sludge Collector LOP	6					
	W30-EE-43	Sump Drainage Pump LOP	2					
	W30-EE-44	Sampling Pump LOP	1					
	W30-EE-45	Air Compressor LOP	1					
	W30-EE-46	Filter Washing LOP	12					
	W30-EE-47	Vacuum Pump LOP	1					
	W30-EE-48	Air Compressor LOP	1					
	W30-EE-49	Sampling Pump LOP	1					
	W30-EE-50	No.4 Distribution Pump LOP	1					
	W30-EE-51	Backwash Pump LOP	1					
	W30-EE-52	Distribution Pump-1 LOP	1					
	W30-EE-53	Distribution Pump-2 LOP	1					
	W30-EE-54	No.7, 8 Distribution Pump LOP	1					
	W30-EE-55	Technical Water Pump LOP	1					
	W30-EE-56	Backwash Pump LOP	2					
	W30-EE-57	Distribution Pump LOP	8					
	W30-EE-58	Technical Water Pump LOP	3					
	W30-EE-59	Sump Drainage Pump LOP	1					
	W30-EE-60	Backwash Recovery Pump LOP	1					
	W30-EE-61	Sludge Pump LOP	1					

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. WE: Electrical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W30-3		WTP Facilities/Instrumentation Facilities (1/2)						
	W30-EE-73	Raw Water Distrinution Flow	2					
	W30-EE-74	Surface Wash Water Flow	1					
	W30-EE-75	Distribution Flow	1					
	W30-EE-76	No.1 Distribution Flow for TET's	1					
	W30-EE-77	No.2 Distribution Flow for TET's	1					
	W30-EE-78	Distribution Flow (Technical Water)	2					
	W30-EE-79	Recovery Water Flow	1					
	W30-EE-80	Wastewater Discharge Flow	1					
	W30-EE-81	Coagulant Dosing Flow	1					
	W30-EE-82	Reservoir Level	4					
	W30-EE-83	Washing Drain Level	1					
	W30-EE-84	Discharge Pool Level	1					
	W30-EE-85	Inflow Pressure	2					
	W30-EE-86	Distribution Pressure	1					
	W30-EE-87	Distribution Pressure (Technical)	1					
	W30-EE-88	Inflow Control Valve Opening Degree	1					
	W30-EE-89	Coagulant Control Valve Opening Degree	1					
	W30-EE-90	Temperature Meter	1					
	W30-EE-91	Chroline Dosing System	Lot					
	W30-EE-92	Sump Drainage Pit Level Switch	6					

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. WE: Electrical Work (Water Supply System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
W30-4		WTP Facilities/Monitoring and Control Facilities						
	W30-EE-104	Substation PLC	1					
	W30-EE-105	WTP PLC	1					
	W30-EE-106	Pump Station PLC	1					
	W30-EE-107	Sludge Treatment Facilities PLC	1					
	W30-EE-108	Administration PLC-1	1					
	W30-EE-109	Administration PLC-2	1					
	W30-EE-110	Monotoring System	1					
	W30-EE-111	Mimic Panel	1					
	W30-EE-112	ITV Monitoring System for WTP	1					
	W30-EE-113	ITV Monitoring System for Guard House	1					
W30-5		WTP Facilities/Other Works						
	W30-EE-114	Wiring Work for Substation	Lot					
	W30-EE-115	Wiring Work for Water Treatment Facilities	Lot					
	W30-EE-116	Wiring Work for Pump Station	Lot					
	W30-EE-117	Wiring Work for Sludge Treatment Facilities	Lot					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. ST : Construction of Sewerage Treatment Plant

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
ST	Sewerage Treatment Plant							
S01-1	Inflow Tank (Expansion)	Lot	1					
S01-2	Inflow Tank (rehabilitation)	Lot	1					
S01-3	MH-12 Manhole	Lot	1					
S02-1	Influent Pump Station (Rehabilitation)	Lot	1					
S02-2	Temporary Influence Pump Station	Lot	1					
S02-3	Flow Meter House	Lot	1					
S03	Grit Chamber	Lot	1					
S04-1	P/ST Distribution Tank (Rehabilitation)	Lot	1					
S04-2	P/ST Outlet Pit (Rehabilitation)	Lot	1					
S05-1	Primary Sedimentation Tank (Construction)	Lot	1					
S05-2	Primary Sedimentation Tank (Rehabilitation)	Lot	1					
S06-1	Primary Sludge Pump House (Rehabilitation)	Lot	1					
S06-2	Scum Pit	Lot	1					
S08	Blower House (Rehabilitation)	Lot	1					
S09	S/ST Distribution Tank (Rehabilitation)	Lot	1					
S10-1	Secondary Sedimentation Tank (Construction)	Lot	1					
S10-2	Secondary Sedimentation Tank (Rehabilitation)	Lot	1					
S11-1	Return Sludge Pump House	Lot	1					
S11-2	Return Sludge P/H Sludge Pit (Construction)	Lot	1					
S11-3	Return Sludge P/H Sludge Pit (Rehabilitation)	Lot	1					
S11-4	Valve Box	Lot	1					
S12-1	Discharge Pump Station (Rehabilitation)	Lot	1					
S12-2	Temporary Discharge Pump Station	Lot	1					
S12-3	MH-13 Manhole	Lot	1					
S21	Gravity Thickener (Rehabilitation)	Lot	1					
S22	Thickened Sludge Pump House (Rehabilitation)	Lot	1					
S23	Digester & Pump House (Rehabilitation)	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. ST : Construction of Sewerage Treatment Plant

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24	Sludge Treatment Building	Lot	1					
S25	Hopper House	Lot	1					
S26	Gas Holder (Rehabilitation)	Lot	1					
S27	Boiler House (Rehabilitation)	Lot	1					
S28	Electrical House	Lot	1					
S29	Administration Building (Rehabilitation)	Lot	1					
S31	Yard Work	Lot	1					
S51-1	Sewage Intermediate P/S No.1 (Rehabilitation)	Lot	1					
S51-2	Sewage Intermediate P/S No.2 (Rehabilitation)	Lot	1					
S51-3	Sewage Intermediate P/S No.3 (Rehabilitation)	Lot	1					
S51-4	Sewage Intermediate P/S No.4 (Rehabilitation)	Lot	1					
S51-5	Sewage Intermediate P/S No.6 (Rehabilitation)	Lot	1					
S51-6	Sewage Intermediate P/S No.7 (Rehabilitation)	Lot	1					
S51-7	Sewage Intermediate P/S No.10 (Rehabilitation)	Lot	1					
S51-8	Sewage Intermediate P/S No.11 (Rehabilitation)	Lot	1					
S51-9	Sewage Intermediate P/S No.15 (Rehabilitation)	Lot	1					
S51-10	Sewage Intermediate P/S No.16 (Rehabilitation)	Lot	1					
S51-11	Sewage Intermediate P/S No.17 (Rehabilitation)	Lot	1					
S51-12	Sewage Intermediate P/S No.21 (Rehabilitation)	Lot	1					
S51-13	Sewage Intermediate P/S No.24 (Rehabilitation)	Lot	1					
S64-1	Sewage Intermediate P/S No.28 (Construction)	Lot	1					
S64-2	Sewage Intermediate P/S No.34 (Construction)	Lot	1					
S64-3	Sewage Intermediate P/S No.37 (Construction)	Lot	1					
S64-4	Sewage Intermediate P/S No.IH (Construction)	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S01-1: Expansion of Inflow Tank

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S01-1	Inflow Tank (Expansion)							
	Civil Works							
CC-10	Excavation	m ³	859					
CC-11	Back Filling	m ³	762					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	97					
CC-14	Pit Drainage Work	Lot	1					
CC-21	Lean Concrete	m ³	0.8					
CC-22	Re-bar	ton	6.291					
CC-23	Formwork	m ²	141.1					
CC-24	Scaffolding	m ²	72.5					
CC-25	Supporting	m ³	58.5					
CC-26	R.Concrete	m ³	38.2					
CC-27	Plain Concrete	m ³	2.2					
CC-58	Footstep	pc	16					
CC-520-9	Manhole Cover with Frame	pc	1					
CC-30	Acid proof sheet	m ²	13.5					
CC-31-1	Acid proof coating	m ²	68.3					
CC-31-2	Corrosionproofing paint	m ²	66.3					
CC-40-2	Concrete Chipping	m ³	0.04					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S01-3: Construction of MH-12 Manhole

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S01-3	Inflow Tank (MH-12 Manhole)							
	Civil Works							
CC-10	Excavation	m ³	1,141					
CC-11	Back Filling	m ³	949					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	192					
CC-14	Well-point work	Lot	1					
CC-20	Gravel	m ³	5.4					
CC-21	Lean Concrete	m ³	1.4					
CC-22	Re-bar	ton	6.007					
CC-23	Formwork	m ²	275.2					
CC-24	Scaffolding	m ²	139.0					
CC-25	Support	m ³	96.0					
CC-26	R.Concrete	m ³	71.3					
CC-27	Plain Concrete	m ³	17.0					
CC-58	Footstep	pc	16					
CC-520-9	Manhole Cover with Frame	pc	1					
CC-30	Acid proof sheet	m ²	25.0					
CC-31-1	Acid proof coating	m ²	137.8					
CC-31-2	Corrosionproofing paint	m ²	130.6					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S02-1: Rehabilitation of Influent Pump Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S02-1	Influent Pump Station (Rehabilitation)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-1	Ultra-high pressure water blasting	m ²	730					
CC-40-2	Concrete chipping	m ²						
	Re-bar treatment							
CC-41-1	Pre-treatment	m ²						
CC-41-2	Rust-inhibitor coating	m ²						
	Wall repairing work							
CC-42-1	Lining	m ²	730					
CC-42-2	Sprayed coating	m ²						
CC-42-3	Crack repairing	m ²						
	Anti-corrosive coating							
CC-43-1	Lining	m ²	730					
CC-43-2	Sprayed coating	m ²						
	Architectural Works							
	(Repair Works)							
AR-3-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-3-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-3-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-3-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S02-2: Construction of Temporal Influence Pump Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S02-2	Temporal Influence Pump Station							
	Civil Works							
CC-10	Excavation	m ³	2,619					
CC-11	Back Filling	m ³	2,239					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	380					
CC-14	Well-point work	Lot	1					
CC-20	Gravel	m ³	8.4					
CC-21	Lean Concrete	m ³	2.1					
CC-22	Re-bar	ton	5.365					
CC-23	Formwork	m ²	403.0					
CC-24	Scaffolding	m ²	216.6					
CC-25	Support	m ³	248.8					
CC-26	R.Concrete	m ³	123.5					
CC-27	Plain Concrete	m ³	0.0					
CC-30	Acid proof sheet	m ²	38.5					
CC-31-1	Acid proof coating	m ²	211.1					
CC-31-2	Corrosionproofing paint	m ²	222.4					
CC-52	GRP Cover with frame, 1600 x 2000	m ²	9.6					
CC-520-9	Manhole Cover with frame Dia. 900	pc	1					
CC-58	Foot Step	pc	28					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S02-3: Construction of Flow Meter House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S02-3	Flow Meter House							
	Civil Works							
CC-10	Excavation	m ³	109					
CC-11	Back Filling	m ³	94					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	16					
CC-20	Gravel	m ³	3.8					
CC-21	Lean Concrete	m ³	1.0					
CC-22	Re-bar	ton	1.180					
CC-23	Formwork	m ²	30.3					
CC-24	Scaffolding	m ²	55.1					
CC-25	Support	m ³	24.1					
CC-26	R.Concrete	m ³	17.1					
CC-27	Plain Concrete	m ³	0.3					
CC-28	Mortar Coating	m ²	0					
CC-30	Acid proof sheet	m ²	9.6					
CC-31-1	Acid proof coating	m ²	57.3					
	Architectural Works							
	(Building Work)							
AA-32	Brick wall w/ insulation, w=470 mm	m ²	42.7					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S02-3: Construction of Flow Meter House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-40-7	Floor Finishing (F-7)	m ²	9.6					
AA-42-1	Wall Finishing (W-1)	m ²	31.1					
AA-43-6	Ceiling (C-6)	m ²	9.6					
AA-44-2	Aluminum Window (Double Glass)	m ²	1.0					
AA-44-6	SD (w/ insulation)	m ²	1.9					
AA-60-1	Roofing 1	m ²	9.6					
AA-61	Roof Drain	pc	1					
AA-73-1	Concrete Coping, w=400 mm	m	13.4					
AA-35	Scarsement	m ²	12.1					
AA-74	Building Base	m	13.4					
	(Utility Work)							
AU-30-1	Lighting facilities in buildings	Lot	1					
AU-30-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S03: Construction of Grit Chamber

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S03	Grit Chamber							
	Civil Works							
CC-01-01	Pile Installation Work, 300 x 300, L=8.15 m	pc	9					
CC-01-02	ditto, L=9.15 m	pc	6					
CC-01-03	ditto, L=9.45 m	pc	47					
CC-10	Excavation	m ³	990					
CC-11	Back Filling	m ³	687					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	303					
CC-20	Gravel	m ³	47.8					
CC-21	Lean Concrete	m ³	12.0					
CC-22	Re-bar	ton	28.369					
CC-23	Formwork	m ²	1,150.6					
CC-24	Scaffolding	m ²	419.8					
CC-25	Support	m ³	577.5					
CC-26	R.Concrete	m ³	274.6					
CC-27	Plain Concrete	m ³	28.0					
CC-28	Mortar Coating	m ²	9.3					
CC-30	Acid proof sheet	m ²	225.6					
CC-31-1	Acid proof coating	m ²	218.1					
CC-31-2	Corrosionproofing paint	m ²	861.7					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S03: Construction of Grit Chamber

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-50	Handrail	m	64.5					
CC-54	Steel Checker Plate	pcs	32.7					
CC-58	Footstep	pcs	19					
CC-59-1	Weir Plate (Blade Type)	m	6.8					
CC-60-1	Stop Log, w=3.4 m	m ²	30.3					
	Architectural Works							
	(Building Work)							
AA-32	Brick wall w/ insulation, w=470 mm	m ²	185.1					
AA-40-2	Floor Finishing (F-2)	m ²	86.4					
AA-41-2	Base (B-2)	m	38.2					
AA-42-1	Wall Finishing (W-1)	m ²	149.8					
AA-43-6	Ceiling (C-6)	m ²	86.4					
AA-44-2	Aluminum Window (Double Glass)	m ²	5.8					
AA-44-6	SD (w/ insulation)	m ²	8.8					
AA-30	PC Panel (1.041.1-2 series)	m ²	86.4					
AA-60-2	Roofing 2	m ²	86.4					
AA-61	Roof Drain	pc	2					
AA-62	Downspout	m	8.0					
AA-73-1	Concrete Coping, w=400 mm	m ²	38.4					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S05-1: Construction of Primary Sedimentation Tank

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S05-1	Primary Sedimentation Tank	2 Tanks						
	Civil Works							
CC-01	Pile Installation Work, 300 x 300, L=6.55 m	pc	312					
CC-10	Excavation	m ³	2,720					
CC-11	Back Filling	m ³	788					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	1,932					
CC-14	Pit Drainage Work	Lot	1					
CC-20	Gravel	m ³	322.0					
CC-21	Lean Concrete	m ³	80.6					
CC-22	Re-bar	ton	223.103					
CC-23	Formwork	m ²	2,094.6					
CC-24	Scaffolding	m ²	1,567.3					
CC-25	Support	m ³	0.0					
CC-26	R.Concrete	m ³	1,603.2					
CC-27	Plain Concrete	m ³	5.5					
CC-28	Mortar Coating	m ²	1,193.7					
CC-30	Acid proof sheet	m ²	1,432.6					
CC-31-1	Acid proof coating	m ²	894.4					
CC-31-2	Corrosionproofing paint	m ²	712.6					
CC-33	Sand compaction	m ³	150.6					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S05-2: Rehabilitation of Primary Sedimentation Tank

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S05-2	Primary Sedimentation Tank (Rehabilitation)		6 Tanks					
	Civil Works							
	(Deterioration Removal Works)							
CC-40-1	Ultra-high pressure water blasting	m ²	6,666.3					
CC-40-2	Concrete chipping	m ²						
	(Re-bar Treatment)							
CC-41-1	Pre-treatment	m ²						
CC-41-2	Rust-inhibitor coating	m ²						
	(Wall Repairing Works)							
CC-42-1	Lining	m ²	6,666.3					
CC-42-2	Sprayed coating	m ²						
CC-42-3	Crack repairing	m ²						
	(Anti-corrosive Coating)							
CC-43-1	Lining	m ²	6,666.3					
CC-43-2	Sprayed coating	m ²						
CC-62	Steel Plate, t=6 mm, w=100 mm	m	539.1					
CC-59-2	Weir Plate (V-notch Type)	m	499.5					
CC-59-3	Scum Baffle	m	488.2					
CC-60-1	Stop Log	m ²	7.2					
CC-304-1	Embedded Pipe, SP Dia. 500 mm	m	11.4					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S06-2: Construction of Scum Pit

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S06-2	Primary Sludge Pump House	(Scum Pit)						
	Civil Works							
CC-10	Excavation	m ³	89					
CC-11	Back Filling	m ³	77					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	12					
CC-20	Gravel	m ³	1.1					
CC-21	Lean Concrete	m ³	0.3					
CC-22	Re-bar	m ³	0.465					
CC-23	Formwork	m ²	35.8					
CC-24	Scaffolding	m ²	20.7					
CC-25	Support	m ³	7.2					
CC-26	R.Concrete	m ³	4.7					
CC-27	Plain Concrete	m ³	0.7					
CC-30	Acid proof sheet	m ²	4.5					
CC-31-1	Acid proof coating	m ²	18.1					
CC-31-2	Corrosionproofing paint	m ²	18.8					
CC-52-1	GRP Cover, 650 x 650	m ²	0.42					
CC-58	Foot Step	pc	6					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S08: Rehabilitation of Blower House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S08	Blower House (Rehabilitation)							
	Civil Works							
	(Deterioration Removal Works)							
CC-40-3	Concrete Wall Scrubbing	m ²	121.9					
	(Wall Repairing Works)							
CC-28-1	Mortar coating	m ²	121.9					
CC-38	Oil Paint	m ²	121.9					
	(Blower Base Installation Works)							
CC-82	Demolition of existing base	m ³	101.0					
CC-22	Re-bar	m ³	10.100					
CC-23	Formwork	m ²	554.2					
CC-24	Scaffolding	m ²	338.4					
CC-25	Support	m ³	336.6					
CC-26	R.Concrete	m ³	101.0					
	Architectural Works							
AR-5-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-5-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-5-3	Exchange/Repair of Damedged Door and Window	Lot	1					

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. S10-1: Construction of Secondary Sedimentation Tank

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S10-1	Secondary Sedimentation Tank							
	Civil Works							
CC-01	Pile Installation Work, 300 x 300, L=7.25 m	pc	346					
CC-10	Excavation	m ³	7,633					
CC-11	Back Filling	m ³	2,385					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	5,248					
CC-14	Pit Drainage Work	Lot	1					
CC-20	Gravel	m ³	94.2					
CC-21	Lean Concrete	m ³	23.6					
CC-22	Re-bar	ton	214.570					
CC-23	Formwork	m ²	2,094.4					
CC-24	Scaffolding	m ²	1,892.8					
CC-25	Support	m ³	0.0					
CC-26	R.Concrete	m ³	1,660.2					
CC-27	Plain Concrete	m ³	0.0					
CC-28	Mortar Coating	m ²	1,229.2					
CC-30	Acid proof sheet	m ²	1,432.6					
CC-31-1	Acid proof coating	m ²	903.6					
CC-31-2	Corrosionproofing paint	m ²	0					
CC-33	Sand compaction	m ³	95.6					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S10-2: Rehabilitation of Secondary Sedimentation Tank

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S10-2	Secondary Sedimentation Tank (Rehabilitation)		10 Tanks					
	Civil Works							
	(Deterioration Removal Works)							
CC-40-1	Ultra-high pressure water blasting	m ²	11,378.2					
CC-40-2	Concrete chipping	m ²						
	(Re-bar Treatment)							
CC-41-1	Pre-treatment	m ²						
CC-41-2	Rust-inhibitor coating	m ²						
	(Wall Repairing Works)							
CC-42-1	Lining	m ²	11,378.2					
CC-42-2	Sprayed coating	m ²						
CC-42-3	Crack repairing	m ²						
	(Anti-corrosive Coating)							
CC-43-1	Lining	m ²	11,378.2					
CC-43-2	Sprayed coating	m ²						
CC-62	Steel Plate, t=6 mm, w=100 mm	m	898.5					
CC-59-2	Weir Plate (V-notch Type)	m	832.5					
CC-60-1	Stop Log	m ²	6.0					
CC-304-1	Embedded Pipe, SP Dia. 500 mm	m	17.3					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S11-1: Construction of Return Sludge Pump House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S11-1	Return Sludge Pump House							
	Civil Works							
CC-01	Pile Installation Work, 300 x 300, L=8.15 m	pc	155					
CC-10	Excavation	m ³	4,404					
CC-11	Back Filling	m ³	2,006					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	2,398					
CC-14	Pit Drainage Work	Lot	1					
CC-20	Gravel	m ³	93.2					
CC-21	Lean Concrete	m ³	23.3					
CC-22	Re-bar	ton	95.065					
CC-23	Formwork	m ²	1,734.7					
CC-24	Scaffolding	m ²	5,767.2					
CC-25	Support	m ³	1,459.2					
CC-26	R.Concrete	m ³	637.5					
CC-27	Plain Concrete	m ³	79.8					
CC-28	Mortar Coating	m ²	11.7					
CC-30	Acid proof sheet	m ²	432.0					
CC-31-1	Acid proof coating	m ²	480.0					
CC-31-2	Corrosionproofing paint	m ²	0.0					
CC-50	Handrail	m	17.8					
CC-54	Steel Checker Plate	pc	72.9					
	Architectural Works							
	(Building Work)							
AA-22	Reinforcing Bar	ton	14.241					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S11-1: Construction of Return Sludge Pump House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-23	Formwork	m ²	1,095.2					
AA-24	Scaffolding	m ²	1,008.0					
AA-25	Supporting	m ³	3,564.0					
AA-26	Reinforced concrete	m ³	182.2					
AA-27	Plain concrete	m ³	0.0					
AA-28	Mortar coating	m ²	0.0					
AA-32-3	Brick wall w/ insulator, t=470 mm	m ²	907.8					
AA-32-2	Brick wall w/o insulator, t=250 mm	m ²	92.8					
AA-40-5	Floor Finishing (F-5)	m ²	432.0					
AA-40-7	ditto (F-7)	m ²	360.0					
AA-41-3	Base (B-3)	m	36.0					
AA-42-1	Wall Finishing (W-1)	m ²	822.0					
AA-42-3	ditto (W-3)	m ²	393.6					
AA-43-3	Ceiling (C-3)	m ²	432.0					
AA-44-2	Aluminum Window (Double Glass)	m ²	48.0					
AA-44-9	Rolling Door	m ²	9.0					
AA-44-8	Wooden Door	m ²	3.8					
AA-60-1	Roofing 1	m ²	432.0					
AA-61	Roof Drain	pc	6.0					
AA-62	Downspout	m	49.5					
AA-73-1	Concrete Coping, w=400 mm	m	96.0					
AA-35	Scarsement	m ²	91.2					
AA-70	Handhole Cover	pc	1					
AA-74	Building Base	m	96.0					

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. S11-2: Construction of Sludge Pit

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S11-2	Return Sludge Pump House	(New Sludge Pit)						
	Civil Works							
CC-10	Excavation	m ³	260.5					
CC-11	Back Filling	m ³	211.4					
CC-12	Embankment	m ³	0.0					
CC-13	Surplus Soil	m ³	49.0					
CC-14	Pit Drainage Work	Lot	1					
CC-20	Gravel	m ³	3.1					
CC-21	Lean Concrete	m ³	0.8					
CC-22	Re-bar	ton	4.105					
CC-23	Formwork	m ²	108.3					
CC-24	Scaffolding	m ²	80.9					
CC-25	Support	m ³	0.0					
CC-26	R.Concrete	m ³	33.2					
CC-27	Plain Concrete	m ³	6.3					
CC-28	Mortar Coating	m ²	2.5					
CC-33	Sand compaction	m ³	11.9					
CC-30	Acid proof sheet	m ²	14.1					
CC-31-1	Acid proof coating	m ²	77.0					
CC-31-2	Corrosionproofing paint	m ²	29.6					
CC-50	Handrail	m	11.2					
CC-51	PC Cover	m ²	4.8					
	Total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. S11-4: Construction of Valve Box

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S11-4	Return Sludge Pump House	(Valve Box)						
	Civil Works							
CC-10	Excavation	m ³	483					
CC-11	Back Filling	m ³	431					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	52					
CC-14	Pit Drainage Work	Lot	1					
CC-20	Gravel	m ³	2.2					
CC-21	Lean Concrete	m ³	0.6					
CC-22	Re-bar	ton	5.871					
CC-23	Formwork	m ²	108.9					
CC-24	Scaffolding	m ²	63.9					
CC-25	Support	m ³	25.2					
CC-26	R.Concrete	m ³	21.4					
CC-27	Plain Concrete	m ³	0					
CC-30	Acid proof sheet	m ²	9.4					
CC-31-1	Acid proof coating	m ²	63.6					
CC-31-2	Corrosionproofing paint	m ²	54.0					
CC-50	Handrail	m	0					
CC-54	Steel Checker Plate 5,050 x 1,600	m ²	8.1					
CC-520-9	Manhole Cover with frame Dia. 900	pc	1					
CC-58	Foot Step	pc	13					
CC-66	Back Cover	m	2.1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S12-1: Rehabilitation of Discharge Pump Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S12-1	Discharge Pump Station (Rehabilitation)							
	Civil Works							
	(Deterioration Removal Works)							
CC-40-3	Concrete Wall Scrubbing	m ²	1,190					
	(Wall Repairing Works)							
CC-28-1	Mortar coating	m ²	1,190					
CC-38	Oil Paint	m ²	1,190					
	Architectural Works							
AR-6-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-6-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-6-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-6-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-6-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-6-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S12-2: Construction of Temporary Discharge Pump Station

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S12-2	Temporary Discharge Pump Station							
	Civil Works							
CC-10	Excavation	m ³	1,998					
CC-11	Back Filling	m ³	1,673					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	325					
CC-14	Well-point work	Lot	1					
CC-20	Gravel	m ³	7.7					
CC-21	Lean Concrete	m ³	1.9					
CC-22	Re-bar	ton	4.875					
CC-23	Formwork	m ²	353.9					
CC-24	Scaffolding	m ²	249.6					
CC-25	Support	m ³	291.2					
CC-26	R.Concrete	m ³	111.0					
CC-27	Plain Concrete	m ³	0					
CC-28	Mortar Coating	m ²	0					
CC-30	Acid proof sheet	m ²	38.5					
CC-31-1	Acid proof coating	m ²	244.1					
CC-31-2	Corrosionproofing paint	m ²	250.7					
CC-52-1	GRP Cover with frame, 1600 x 2000	m ²	9.6					
CC-520-9	Manhole Cover with frame Dia. 900	pc	1					
CC-58	Foot Step	pc	26					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S21: Rehabilitation of Gravity Thickener

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S21	Gravity Thickener (Rehabilitation)							
	Civil Works							
	Deterioration removal work							
CC-40-1	Ultra-high pressure water blasting	m ²	1,338.8					
CC-40-2	Concrete chipping	m ²						
	Re-bar treatment							
CC-41-1	Pre-treatment	m ²						
CC-41-2	Rust-inhibitor coating	m ²						
	Wall repairing work							
CC-42-1	Lining	m ²	1,338.8					
CC-42-2	Sprayed coating	m ²						
CC-42-3	Crack repairing	m ²						
	Anti-corrosive coating							
CC-43-1	Lining	m ²	1,338.8					
CC-43-2	Sprayed coating	m ²						
CC-52-5	GRP Cover, Fan-shaped	m ²	628.3					
CC-67	Stainless Steel Frame	Lot	1					
CC-54	Steel Checker Plate Cover	m ²	72.0					
CC-52-1	GRP Cover	m ²	56.6					
CC-62	Steel Plate, t=6 mm, w=100 mm	m	129.4					
CC-59-2	Weir Plate (V-notch Type)	m	118.1					
CC-59-3	Scum Baffle	m	114.4					
	Architectural Works							
AR-7-1	Repair of Roof Leakage by bitumen sheet	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S23: Rehabilitation of Digester & Pump House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S23	Digester & Pump House (Rehabilitation)							
	Civil Works							
	(Deterioration Removal Works)							
CC-40-1	Ultra-high pressure water blasting	m ²	1,784					
CC-40-2	Concrete chipping (Re-bar Treatment)	m ²						
CC-41-1	Pre-treatment	m ²						
CC-41-2	Rust-inhibitor coating (Wall Repairing Works)	m ²						
CC-42-1	Lining	m ²	1,784					
CC-42-2	Sprayed coating	m ²						
CC-42-3	Crack repairing (Anti-corrosive Coating)	m ²						
CC-43-1	Lining	m ²	1,784					
CC-43-2	Sprayed coating	m ²						
	Architectural Works							
AR-9-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-9-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-9-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-9-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S24: Construction of Sludge Treatment Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24	Sludge Treatment Building							
	Civil Works							
CC-10	Excavation	m ³	13,448					
CC-11	Back Filling	m ³	4,405					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	9,044					
CC-14	Well-point work	Lot	1					
CC-20	Gravel	m ³	310.2					
CC-21	Lean Concrete	m ³	77.6					
CC-22	Re-bar	ton	404.128					
CC-23	Formwork	m ²	5,290.2					
CC-24	Scaffolding	m ²	1,147.6					
CC-25	Support	m ³	9,067.5					
CC-26	R.Concrete	m ³	3,040.0					
CC-27	Plain Concrete	m ³	227.8					
CC-28	Mortar Coating	m ²	23.5					
CC-30	Acid proof sheet	m ²	1,511.3					
CC-31-1	Acid proof coating	m ²	1,109.6					
CC-31-2	Corrosionproofing paint	m ²	1,308.2					
CC-58	Footstep	pcs	102					
AA-70	Handhole cover	pcs	7					

**Astana Water Supply and Sewerage Project
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Bill No. S24: Construction of Sludge Treatment Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Architectural Works							
	(Building Work)							
AA-22	Reinforcing Bar	ton	0.0					
AA-23	Formwork	m ²	3,227.6					
AA-24	Scaffolding	m ²	1,638.4					
AA-25	Supporting	m ³	12,725.6					
AA-26	Reinforced concrete	m ³	0.0					
AA-27	Plain concrete	m ³	0.0					
AA-28	Mortar coating	m ²	0.0					
AA-32-3	Brick wall w/ insulator, w=470 mm	m ²	1,769.6					
AA-32-2	Brick wall, w=250 mm	m ²	1,132.0					
AA-34	Toilet Partation Wall	m ²	44.0					
AA-40-1	Floor Finishing (F-1)	m ²	137.2					
AA-40-2	ditto (F-2)	m ²	277.9					
AA-40-3	ditto (F-3)	m ²	182.2					
AA-40-4	ditto (F-4)	m ²	83.2					
AA-40-5	ditto (F-5)	m ²	292.6					
AA-40-6	ditto (F-6)	m ²	981.6					
AA-40-7	ditto (F-7)	m ²	715.6					
AA-40-8	ditto (F-8)	m ²	173.2					
AA-40-9	ditto (F-9)	m ²	0.0					
AA-40-10	ditto (F-10)	m ²	0.0					

**Astana Water Supply and Sewerage Project
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Bill No. S24: Construction of Sludge Treatment Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-41-1	Base (B-1)	m	258.6					
AA-41-2	ditto (B-2)	m	71.1					
AA-41-3	ditto (B-3)	m	265.3					
AA-41-4	ditto (B-4)	m	56.5					
AA-41-5	ditto (B-5)	m	190.7					
AA-42-1	Wall Finishing (W-1)	m ²	5,680.2					
AA-42-2	ditto (W-2)	m ²	243.6					
AA-42-3	ditto (W-3)	m ²	372.5					
AA-43-1	Ceiling (C-1)	m ²	1,268.7					
AA-43-2	ditto (C-2)	m ²	564.5					
AA-43-3	ditto (C-3)	m ²	2,306.5					
CC-54-4	Steel Checker Plate Cover 4,000 x 1,330	m ²	16					
AA-44-1	Aluminum Window (Single Glass)	m ²	0.0					
AA-44-2	Aluminum Window (Double Glass)	m ²	191.1					
AA-44-3	Aluminum Window (Triple Glass)	m ²	43.2					
AA-44-4	Aluminum Door (w/ insulation)	m ²	43.7					
AA-44-5	Aluminum Door (w/o insulation)	m ²	0.0					
AA-44-6	SD (w/ insulation)	m ²	47.8					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S24: Construction of Sludge Treatment Building

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-44-7	SD (w/o insulation)	m ²	51.0					
AA-44-8	Wooden Door	m ²	32.9					
AA-44-9	Rotary Door	m ²	23.1					
AA-72	Steel Staircase	Lot	1					
AA-51-1	Roofing Metal Sheet w/ insulation	m ²	128.6					
AA-51-2	Roofing Polycarbonate Sheet	m ²	79.8					
AA-50-1	Corrugated Meral Roofing	m ²	746.0					
AA-61	Roof Drain	pc	10					
AA-62	Downspout	m	78.2					
AA-63	Gutter	m	0.0					
AA-35	Scaresement	m ²	136.8					
AA-73-2	PC Coping, w=500 mm	m	152.0					
AA-74	Building Base	m	152.0					
	(Utility Work)							
AU-15-1	Lighting facilities in buildings	Lot	1					
AU-15-2	Outdoor lighting facilities covering premises of the plants including	Lot	1					
AU-15-3	Power distribution system in buildings including power outlets	Lot	1					
AU-15-4	Communication (telephone network) system in the premises of the plants	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S25: Construction of Hopper House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S25	Hopper House							
	Architectural Works							
	(Building Work)							
CC-01	Pile Installation Work, 300 x 300, L=6.45 m	pc	96					
CC-10	Excavation	m ³	690					
CC-11	Back Filling	m ³	547					
CC-12	Embankment	m ³	0					
CC-13	Surplus Soil	m ³	143					
CC-14	Well-point work	m						
CC-20	Gravel	m ³	86.6					
CC-21	Lean Concrete	m ³	21.6					
CC-22	Re-bar	ton	51.795					
CC-23	Formwork	m ²	2,752.3					
CC-24	Scaffolding	m ³	1,163.3					
CC-25	Support	m ²	4,404.4					
CC-26	R.Concrete	m ³	553.7					
CC-27	Plain Concrete	m ³	0.0					
CC-28	Mortar Coating	m ²	42.1					
CC-30	Acid proof sheet	m ²	388.2					
CC-31-1	Acid proof coating	m ²	191.1					
CC-31-2	Corrosionproofing paint	m ²	0					
CC-50	Handrail	m	39.0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S25: Construction of Hopper House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-32	Brick wall w/ insulation, w=470 mm	m ²	869.9					
AA-40-2	Floor Finishing (F-2)	m ²	46.7					
AA-40-7	Floor Finishing (F-7)	m ²	568.9					
AA-41-2	Base (B-2)	m	35.5					
AA-41-3	Base (B-3)	m	146.0					
AA-42-1	Wall Finishing (W-1)	m ²	793.6					
AA-43-3	Ceiling (C-3)	m ²	575.8					
AA-43-4	Ceiling (C-4)	m ²	137.4					
AA-44-2	Aluminum Window (Double Glass)	m ²	76.8					
AA-44-6	SD (w/ insulation)	m ²	11.3					
AA-44-9	Rolling Door	m ²	42.0					
AA-51-1	Roofing Metal Sheet w/ insulation	m ²	87.8					
AA-51-2	Roofing Polycarbonate Sheet	m ²	58.5					
AA-60-1	Roofing 1	m ²	217.0					
AA-61	Roof Drain	pc	4					
AA-62	Downspout	m	43.2					
AA-74	Building Base	m	73.0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S28: Construction of Electrical House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S28	Electrical House							
	Architectural Works							
CC-01	Pile Installation Work, 300x300 L=8.05m	pc	20					
CC-10	Excavation	m ³	90.0					
CC-11	Back Filling	m ³	56.7					
CC-12	Embankment	m ³	0.0					
CC-13	Surplus Soil	m ³	33.4					
CC-14	Well-point work	m						
CC-20	Gravel	m ³	9.0					
CC-21	Lean Concrete	m ³	2.3					
CC-22	Re-bar	ton	8.421					
CC-23	Formwork	m ²	288.2					
CC-24	Scaffolding	m ²	357.8					
CC-25	Support	m ³	425.3					
CC-26	R.Concrete	m ³	126.5					
CC-27	Plain Concrete	m ³	23.9					
CC-28	Mortar Coating	m ²	0.0					
CC-30	Acid proof sheet	m ²	144.0					
CC-31-1	Acid proof coating	m ²	135.0					
CC-31-2	Corrosionproofing paint	m ²	0.0					
AA-32	Brick wall w/ insulation, w=470 mm	m ²	192.5					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S28: Construction of Electrical House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
AA-40-5	Floor Finishing (F-5)	m ²	121.5					
AA-41-2	Base (B-2)	m	45.0					
AA-42-1	Wall Finishing (W-1)	m ²	153.0					
AA-43-6	Ceiling (C-6)	m ²	121.5					
AA-44-2	Aluminum Window (Double Glass)	m ²	11.5					
AA-44-6	SD (w/ insulation)	m ²	7.5					
AA-30	PC Panel (1.041.1-2 series)	m ²	121.5					
AA-60-2	Roofing 2	m ²	121.5					
AA-61	Roof Drain	pc	2					
AA-62	Downspout	m	8.0					
AA-70	Handhole cover	pc	2					
AA-35	Scarsement	m ²	40.5					
AA-74	Building Base	m	45.0					
	(Utility Work)							
AU-14-1	Lighting facilities in buildings	Lot	1					
AU-14-2	Outdoor lighting facilities covering premises of the plants including cables	Lot	1					
AU-14-3	Power distribution system in buildings including power outlets	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S31: Yard Work

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S31	Yard Work							
	Civil Works							
	Yard Piping							
CC-300-1	DIP Dia 50 mm	m	1,874.6					
CC-300-2	Valves and fittings	Lot	1					
CC-300-3	Flexible Joint Pipe	pc	8					
CC-301-1	DIP Dia 100 mm	m	789.5					
CC-301-2	Valves and fittings	Lot	1					
CC-301-3	Flexible Joint Pipe	pc	6					
CC-302-1	DIP Dia 150 mm	m	1,224.2					
CC-302-2	Valves and fittings	Lot	1					
CC-302-3	Flexible Joint Pipe	pc	12					
CC-303-1	DIP Dia 200 mm	m	215.5					
CC-303-2	Valves and fittings	Lot	1					
CC-303-3	Flexible Joint Pipe	pc	6					
CC-304-1	DIP Dia 250 mm	m	1,254.1					
CC-304-2	Valves and fittings	Lot	1					
CC-304-3	Flexible Joint Pipe	pc	10					
CC-305-1	DIP Dia 300 mm	m	579.5					
CC-305-2	Valves and fittings	Lot	1					
CC-305-3	Flexible Joint Pipe	pc	6					
CC-306-1	DIP Dia 400 mm	m	65.5					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S31: Yard Work

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-306-2	Valves and fittings	Lot	1					
CC-306-3	Flexible Joint Pipe	pc	1					
CC-307-1	DIP Dia 500 mm	m	90					
CC-307-2	Valves and fittings	Lot	1					
CC-307-3	Flexible Joint Pipe	pc	8					
CC-308-1	DIP Dia 600 mm	m	44.5					
CC-308-2	Valves and fittings	Lot	1					
CC-308-3	Flexible Joint Pipe	pc	6					
CC-309-1	DIP Dia 800 mm	m	379					
CC-309-2	Valves and fittings	Lot	1					
CC-309-3	Flexible Joint Pipe	pc	10					
CC-310-1	DIP Dia 1200 mm	m	93					
CC-310-2	Valves and fittings	Lot	1					
CC-310-3	Flexible Joint Pipe	pc	4					
CC-311-1	SP Dia 800 mm	m	806					
CC-311-2	Valves and fittings	Lot	1					
CC-311-3	Flexible Joint Pipe	pc	46					
CC-312-1	SP Dia 1200 mm	m	1,072.6					
CC-312-2	Valves and fittings	Lot	1					
CC-312-3	Flexible Joint Pipe	pc	20					
CC-313-1	SP Dia 1500 mm	m	118					
CC-313-2	Valves and fittings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-1: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 1)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-1	Sewage Intermediate Pump Station (No. 1)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	904.8					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	904.8					
CC-38	Oil Paint	m ²	904.8					
	Architectural Works							
	(Repair Work)							
AR-12-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-12-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-12-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-12-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-12-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-12-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-18-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-2: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 2)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-2	Sewage Intermediate Pump Station (No. 2)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	325.2					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	325.2					
CC-38	Oil Paint	m ²	325.2					
	Architectural Works							
	(Repair Work)							
AR-13-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-13-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-13-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-13-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-13-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-13-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-19-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-3: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 3)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-3	Sewage Intermediate Pump Station (No. 3)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	854.5					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	854.5					
CC-38	Oil Paint	m ²	854.5					
	Architectural Works							
	(Repair Work)							
AR-14-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-14-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-14-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-14-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-14-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-14-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-20-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-4: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 4)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-4	Sewage Intermediate Pump Station (No. 4)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	490.1					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	490.1					
CC-38	Oil Paint	m ²	490.1					
	Architectural Works							
	(Repair Work)							
AR-15-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-15-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-15-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-15-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-15-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-15-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-21-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-5: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 6)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-5	Sewage Intermediate Pump Station (No. 6)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	452.4					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	452.4					
CC-38	Oil Paint	m ²	452.4					
	Architectural Works							
	(Repair Work)							
AR-16-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-16-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-16-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-16-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-16-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-16-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-22-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-6: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 7)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-6	Sewage Intermediate Pump Station (No. 7)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	1,809.6					
	(Wall Repairing Wwork)							
CC-28-1	Mortar coating	m ²	1,809.6					
CC-38	Oil Paint	m ²	1,809.6					
	Architectural Works							
	(Repair Work)							
AR-17-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-17-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-17-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-17-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-17-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-17-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-23-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-7: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 10)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-7	Sewage Intermediate Pump Station (No. 10)							
	Civil Works							
	Deterioration removal work							
CC-40-3	Concrete Wall Scrubbing	m ²	1,005.3					
	Wall repairing work							
CC-28-1	Mortar coating	m ²	1,005.3					
CC-38	Oil Paint	m ²	1,005.3					
	Architectural Works							
	Repair Work							
AR-18-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-18-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-18-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-18-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-18-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-18-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	Utility Work							
AU-24-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-8: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 11)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-8	Sewage Intermediate Pump Station (No. 11)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	207.3					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	207.3					
CC-38	Oil Paint	m ²	207.3					
	Architectural Works							
	(Repair Work)							
AR-19-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-19-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-19-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-19-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-19-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-19-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-25-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-9: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 15)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-9	Sewage Intermediate Pump Station (No. 15)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	188.5					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	188.5					
CC-38	Oil Paint	m ²	188.5					
	Architectural Works							
	(Repair Work)							
AR-20-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-20-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-20-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-20-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-20-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-20-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-26-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-10: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 16)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-10	Sewage Intermediate Pump Station (No. 16)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	169.6					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	169.6					
CC-38	Oil Paint	m ²	169.6					
	Architectural Works							
	(Repair Work)							
AR-21-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-21-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-21-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-21-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-21-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-21-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-27-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-11: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 17)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-11	Sewage Intermediate Pump Station (No. 17)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	70.7					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	70.7					
CC-38	Oil Paint	m ²	70.7					
	Architectural Works							
	(Repair Work)							
AR-22-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-22-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-22-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-22-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-22-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-22-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-28-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-12: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 21)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-12	Sewage Intermediate Pump Station (No. 21)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	207.3					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	207.3					
CC-38	Oil Paint	m ²	207.3					
	Architectural Works							
	(Repair Work)							
AR-23-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-23-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-23-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-23-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-23-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-23-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-29-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S51-13: Rehabilitation of Sewage Intermediate Pump Station (P/S No. 24)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-13	Sewage Intermediate Pump Station (No. 24)							
	Civil Works							
	(Deterioration Removal Work)							
CC-40-3	Concrete Wall Scrubbing	m ²	125.7					
	(Wall Repairing Work)							
CC-28-1	Mortar coating	m ²	125.7					
CC-38	Oil Paint	m ²	125.7					
	Architectural Works							
	(Repair Work)							
AR-24-1	Repair of Roof Leakage by bitumen sheet	Lot	1					
AR-24-2	Painting of External and Internal Wall, Door and Window	Lot	1					
AR-24-3	Exchange/Repair of Damedged Door and Window	Lot	1					
AR-24-4	Exchange/Repair of Damedged Water Supply and Drainage Pipes	Lot	1					
AR-24-5	Exchange/Repair of Damedged Ventilation System	Lot	1					
AR-24-6	Exchange/Repair of Damedged Heating Equipment and Pipes	Lot	1					
	(Utility Work)							
AU-30-1	Lighting facilities in buildings	Lot	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S64-1: Construction of Sewage Intermediate Pump Station (P/S No. 28)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S64-1	Sewage Intermediate Pump Station (No. 28)							
	Civil Works							
CC-10	Excavation	m ³	41					
CC-34-1	Temporaly Work	Lot	1					
CC-34-2	Method	Lot	1					
CC-26	R.Concrete	m ³	32.9					
CC-22	Re-bar	ton	3.946					
CC-27	Plain Concrete	m ³	0.8					
CC-23	Formwork	m ²	157.1					
CC-24	Scaffolding	m ²	86.6					
CC-30	Acid proof sheet	m ²	4.9					
CC-31-1	Acid proof coating	m ²	65.6					
CC-31-2	Corrosionproofing paint	m ²	86.6					
CC-51	PC Cover, Dia. 2,600 mm	m ²	4.7					
CC-52	GRP Cover, Dia. 900 mm	m ²	0.6					
CC-58	Foot Step	pc	18					
CC-63	Screenings Cage	set	1					
CC-66	Back Cover	m	5.1					
CC-67	Intermediate Slab	m ²	1.6					
CC-300-4	Flexible Joint Pipe Dia 150 mm	pc	1					
S64-5	Control Panel House	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S64-2: Construction of Sewage Intermediate Pump Station (P/S No. 34)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S64-2	Sewage Intermediate Pump Station (No. 34)							
	Civil Works							
CC-34-1	Temporaly Work	Lot	1					
CC-34-2	Method	Lot	1					
CC-10	Excavation	m ³	28.2					
CC-26	R.Concrete	m ³	23.4					
CC-22	Re-bar	ton	2.809					
CC-27	Plain Concrete	m ³	0.8					
CC-23	Formwork	m ²	109.7					
CC-24	Scaffolding	m ²	59.6					
CC-30	Acid proof sheet	m ²	4.9					
CC-31-1	Acid proof coating	m ²	45.2					
CC-31-2	Corrosionproofing paint	m ²	59.6					
CC-51	PC Cover, Dia. 2,600 mm	m ²	4.7					
CC-52	GRP Cover, Dia. 900 mm	m ²	0.6					
CC-58	Foot Step	pc	9					
CC-63	Screenings Cage	set	1					
CC-66	Back Cover	m	2.5					
CC-67	Intermediate Slab	m ²	1.6					
CC-300-4	Flexible Joint Pipe Dia 300 mm	pc	1					
S64-5	Control Panel House	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S64-3: Construction of Sewage Intermediate Pump Station (P/S No. 37)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S64-3	Sewage Intermediate Pump Station (No. 37)							
	Civil Works							
CC-34-1	Temporaly Work	Lot	1					
CC-34-2	Method	Lot	1					
CC-10	Excavation	m ³	29.7					
CC-26	R.Concrete	m ³	24.5					
CC-22	Re-bar	ton	2.94					
CC-27	Plain Concrete	m ³	0.8					
CC-23	Formwork	m ²	115.1					
CC-24	Scaffolding	m ²	62.7					
CC-30	Acid proof sheet	m ²	4.9					
CC-31-1	Acid proof coating	m ²	47.5					
CC-31-2	Corrosionproofing paint	m ²	62.7					
CC-51	PC Cover, Dia. 2,600 mm	m ²	4.7					
CC-52	GRP Cover, Dia. 900 mm	m ²	0.6					
CC-58	Foot Step	pc	10					
CC-63	Screenings Cage	set	1					
CC-66	Back Cover	m	2.8					
CC-67	Intermediate Slab	m ²	1.6					
CC-300-4	Flexible Joint Pipe Dia 100	pc	1					
S64-5	Control Panel House	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
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Bill No. S64-4: Construction of Sewage Intermediate Pump Station (P/S No. IH)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S64-4	Sewage Intermediate Pump Station (No. IH)							
	Civil Works							
CC-34-1	Temporaly Work	Lot	1					
CC-34-2	Method	Lot	1					
CC-26	R.Concrete	m ³	32.5					
CC-22	Re-bar	ton	3.902					
CC-27	Plain Concrete	m ³	0.8					
CC-23	Formwork	m ²	155.2					
CC-24	Scaffolding	m ²	85.5					
CC-30	Acid proof sheet	m ²	4.9					
CC-31-1	Acid proof coating	m ²	64.8					
CC-31-2	Corrosionproofing paint	m ²	85.5					
CC-10	Excavation	m ³	40.5					
CC-51	PC Cover, Dia. 2,600 mm	m ²	4.7					
CC-52	GRP Cover, Dia. 900 mm	m ²	0.6					
CC-58	Foot Step	pc	18					
CC-63	Screenings Cage	set	1					
CC-66	Back Cover	m	5					
CC-67	Intermediate Slab	m ²	1.6					
CC-316-4	Flexible Joint Pipe Dia 100	pc	1					
S64-5	Control Panel House	Lot	1					
CC-10	Excavation	m ³	40.5					
	Total							

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Bill No. S64-5: Construction of Control Panel House

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S64-5	Control Panel House							
	Architectural Works							
CC-10	Excavation	m ³	67.8					
CC-11	Back Filling	m ³	62.4					
CC-12	Embankment	m ³	16.9					
CC-13	Surplus Soil	m ³	5.4					
CC-14	Well-point work	m						
CC-20	Gravel	m ³	1.6					
CC-21	Lean Concrete	m ³	0.4					
CC-22	Re-bar	ton	1.644					
CC-23	Formwork	m ²	33.6					
CC-24	Scaffolding	m ²	35.2					
CC-25	Support	m ³	12.0					
CC-26	R.Concrete	m ³	11.0					
CC-27	Plain Concrete	m ³	0.0					
CC-28	Mortar Coating	m ²	0.0					
CC-30	Acid proof sheet	m ²	4.0					
CC-31-1	Acid proof coating	m ²	27.2					
CC-31-2	Corrosionproofing paint	m ²	0.0					
AA-32	Brick wall w/ insulation, w=470 mm	m ²	28.4					
AA-40-2	Floor Finishing (F-2)	m ²	4.0					
AA-41-2	Base (B-2)	m	8.0					
AA-42-1	Wall Finishing (W-1)	m ²	23.2					

**Astana Water Supply and Sewerage Project
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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S80	Sewer Network							
	Civil Works							
	Pipe Installation Work							
	Route No.1							
CC-508-1	DIP Dia 700 mm	m	453.5					
CC-508-2	90 Bend	pc	0					
CC-508-3	45 Bend	pc	0					
CC-508-4	22.5 Bend	pc	0					
CC-508-5	Valve	pc	0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.2							
CC-503-1	DIP Dia 250 mm	m	802.0					
CC-503-2	90 Bend	pc	4					
CC-503-3	45 Bend	pc	2					
CC-503-4	22.5 Bend	pc	2					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-503-5	Valve	pc	2					
CC-504-1	DIP Dia 300 mm	m	5.0					
CC-504-2	90 Bend	pc	0					
CC-504-3	45 Bend	pc	0					
CC-504-4	22.5 Bend	pc	0					
CC-504-5	Valve	pc	0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.3							
CC-522	DIP Dia 250 mm (Double)	m	329.0					
CC-503-2	90 Bend	pc	0					
CC-503-3	45 Bend	pc	2					
CC-523	22.5 Bend	pc	0					
CC-503-4	Valve	pc	3					
CC-505-1	DIP Dia 400 mm	m	4.0					

**Astana Water Supply and Sewerage Project
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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-505-2	90 Bend	pc	0					
CC-505-3	45 Bend	pc	0					
CC-505-4	22.5 Bend	pc	0					
CC-505-5	Valve	pc	0					
CC-523	DIP Dia 400 mm (Double)	m	182.4					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.4							
CC-509-1	DIP Dia 800 mm	m	1,872.4					
CC-509-2	90 Bend	pc	0					
CC-509-3	45 Bend	pc	0					
CC-509-4	22.5 Bend	pc	0					
CC-509-5	Valve	pc	0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					

**Astana Water Supply and Sewerage Project
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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.5							
CC-500-1	DIP Dia 100 mm	m	990.0					
CC-500-2	90 Bend	pc	4					
CC-500-3	45 Bend	pc	1					
CC-500-4	22.5 Bend	pc	1					
CC-500-5	Valve	pc	4					
CC-502-1	DIP Dia 200 mm	m	5.0					
CC-504-1	DIP Dia 300 mm (Double)	m	8.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					

**Astana Water Supply and Sewerage Project
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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.6							
CC-504-1	DIP Dia 300 mm	m	385.5					
CC-504-2	90 Bend	pc	0					
CC-504-3	45 Bend	pc	0					
CC-504-4	22.5 Bend	pc	0					
CC-504-5	Valve	pc	0					
	CC-520 Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.7							
CC-500-1	DIP Dia 100 mm	m	852.1					
CC-500-2	90 Bend	pc	6					
CC-500-3	45 Bend	pc	2					

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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-500-4	22.5 Bend	pc	1					
CC-500-5	Valve	pc	6					
CC-504-1	DIP Dia 300 mm (Double)	m	8.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.8							
CC-502-1	DIP Dia 200 mm (Double)	m	2,319.5					
CC-502-2	90 Bend	pc	3					
CC-502-3	45 Bend	pc	10					
CC-502-4	22.5 Bend	pc	2					
CC-502-5	Valve	pc	0					
CC-505-1	DIP Dia 400 mm	m	6.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					

**Astana Water Supply and Sewerage Project
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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.9							
CC-501-1	DIP Dia 150 mm	m	1,946.0					
CC-501-2	90 Bend	pc	0					
CC-501-3	45 Bend	pc	2					
CC-501-4	22.5 Bend	pc	0					
CC-501-5	Valve	pc	0					
CC-502-1	DIP Dia 200 mm	m	4.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					

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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.10							
CC-523	DIP Dia 500 mm (Double)	m	1,527.2					
CC-506-1	DIP Dia 500 mm	m	43.3					
CC-506-2	90 Bend	pc	14					
CC-506-3	45 Bend	pc	4					
CC-506-4	22.5 Bend	pc	10					
CC-506-5	Valve	pc	13					
CC-509-1	DIP Dia 800 mm	m	5.0					
CC-508-1	DIP Dia 700 mm (Double)	m	52.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
CC-553	Pipe Jacking, Railway Crossing, Dia. 800 mm (Double)							
CC-553-1	Tempotrary Work	Lot	1					

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Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-553-2	Shaft Constrution Work (start Shaft)	Lot	1					
CC-553-3	ditto (Arrival Shaft)	Lot	1					
CC-553-4	Pipe Jacking Work (Double)	m	118.0					
CC-553-5	Other Necessary Works	Lot	1					
	Sub-total							
	Route No.11							
CC-504-1	DIP Dia 300 mm	m	759.8					
CC-504-2	90 Bend	pc	5					
CC-504-3	45 Bend	pc	2					
CC-504-4	22.5 Bend	pc	2					
CC-504-5	Valve	pc	4					
CC-523	DIP Dia 500 mm (Double)	m	18.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
	Route No.12							
CC-504-1	DIP Dia 300 mm	m	435.5					
CC-504-2	90 Bend	pc	0					
CC-504-3	45 Bend	pc	0					
CC-504-4	22.5 Bend	pc	0					
CC-504-5	Valve	pc	0					
CC-505-1	DIP Dia 400 mm	m	790.0					
CC-505-2	90 Bend	pc	0					
CC-505-3	45 Bend	pc	0					
CC-505-4	22.5 Bend	pc	0					
CC-505-5	Valve	pc	0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.13							
CC-504-1	DIP Dia 300 mm	m	750.0					
CC-504-2	90 Bend	pc	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-504-3	45 Bend	pc	1					
CC-504-4	22.5 Bend	pc	0					
CC-504-5	Valve	pc	2					
CC-505-1	DIP Dia 400 mm	m	5.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.14							
CC-503-1	DIP Dia 250 mm	m	412.0					
CC-503-2	90 Bend	pc	2					
CC-503-3	45 Bend	pc	1					
CC-503-4	22.5 Bend	pc	0					
CC-503-5	Valve	pc	4					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. S80: Installation of Sewer Network

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax/Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							
	Route No.15							
CC-522	DIP Dia 250 mm (Double)	m	1,946.0					
CC-503-2	90 Bend	pc	3					
CC-503-3	45 Bend	pc	2					
CC-503-4	22.5 Bend	pc	0					
CC-503-5	Valve	pc	2					
CC-505-1	DIP Dia 400 mm	m	4.0					
CC-520	Manhole installation work							
CC-520-1	Precast Type Basement Dia. 2000 mm	pc	0					
CC-520-2	PC Wall, Dia. 1500 mm, H=900 mm	pc	0					
CC-520-3	PC Wall, Dia. 1500 mm, H=600 mm	pc	0					
CC-520-4	PC Slab, Dia. 1750 mm, t=150mm	pc	0					
CC-520-5	PC Basement, Dia. 900 mm	pc	0					
CC-520-6	PC Wall, Dia. 700 mm, H=900 mm	pc	0					
CC-520-7	PC Wall, Dia. 700 mm, H=600 mm	pc	0					
CC-520-8	PC Wall, Dia. 700 mm, H=300 mm	pc	0					
CC-520-9	Manhole cover with frame	pc	0					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S00		General Items	Lot					
S01		Inflow Tank	Lot					
S02		Influent Pump Station	Lot					
S03		Grit Chamber	Lot					
S05		Primary Sedimentaion Tank	Lot					
S08		Blower House	Lot					
S10		Secondary Sedimentation tank	Lot					
S11		Return Sludge pump Station	Lot					
S12		Discharge Pump Station	Lot					
S21		Gravity Thickener	Lot					
S23		Digester & Pump House	Lot					
S24		Sludge Treatment Building	Lot					
S25		Hopper House	Lot					
S26		Gas Holder	Lot					
S27		Boiler Building	Lot					
S51		Intermadeate Pump Station No.1	Lot					
S52		Intermadeate Pump Station No.2	Lot					
S53		Intermadeate Pump Station No.3	Lot					
S54		Intermadeate Pump Station No.4	Lot					
S55		Intermadeate Pump Station No.6	Lot					
S56		Intermadeate Pump Station No.7	Lot					
S57		Intermadeate Pump Station No.10	Lot					
S58		Intermadeate Pump Station No.11	Lot					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S02		Influent Pump Station (1/4)						
	S02-MM-01	Removal of Existing Inlet Gate	1					
	S02-MM-02	Fine Screen	3					
	S02-MM-03	Removal of Existing Fine Screen	3					
	S02-MM-04	Channel Gate	3					
	S02-MM-05	Removal of Existing Channel Gate	3					
	S02-MM-06	Influent Pump A	3					
	S02-MM-07	Influent Pump B	2					
	S02-MM-08	Removal of Existing Influent Pump	5					
	S02-MM-09	Check Valve A	3					
	S02-MM-10	Delivery Valve A	3					
	S02-MM-11	Removal of Existing Check Valve	5					
	S02-MM-12	Check Valve B	2					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S02		Influent Pump Station (2/4)						
	S02-MM-13	Delivery Valve B	2					
	S02-MM-14	Removal of Existing of Delivery Valve	5					
	S02-MM-15	Suction Valve A	3					
	S02-MM-16	Suction Valve B	2					
	S02-MM-17	Removal of Existing of Suction Valve	5					
	S02-MM-18	Connection Valve	4					
	S02-MM-19	Removal of Existing of Connection Valve	4					
	S02-MM-20	Bridge Crane	1					
	S02-MM-21	Removal of Existing of Bridge Crane	1					
	S02-MM-22	Temporary Pump	3					
	S02-MM-23	Sump Drainage Pump	2					
	S02-MM-24	Removal of Existing of Sump Drainage Pump	2					
	S02-MM-25	Hoist Block (Container)	1					
	Sub-total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S02		Influent Pump Station (3/4)						
	S02-MM-26	Hoist Block	1					
	S02-MM-27	Removal of Existing of Hoist Block (Container)	1					
	S02-MM-28	Removal of Existing of Hoist Block	1					
	S02-MM-29	Screen Container	6					
	S02-MM-30	Exhaust Fan	1					
	S02-MM-31	Removal of Existing of Exhaust Fan	1					
	S02-MM-32	Air Intake Fan (1)	1					
	S02-MM-33	Air Intake Fan (2)	1					
	S02-MM-34	Air Intake Fan (3)	1					
	S02-MM-35	Removal of Existing of Air Intake Fan (1)	1					
	S02-MM-36	Removal of Existing of Air Intake Fan (2)	1					
	S02-MM-37	Removal of Existing of Air Intake Fan (3)	1					
	S02-MM-38	Piping	Lot					
	Sub-total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S05		Primary Sedimentaion Tank (1/2)						
	S05-MM-01	Distribution Tank Weir	8					
	S05-MM-02	Removal of Existing of Distribution Tank Weir	6					
	S05-MM-03	Sludge Collector	2					
	S05-MM-04	Sludge Collector (Repair)	6					
	S05-MM-05	Suction Sludge Valve	8					
	S05-MM-06	Primary Sludge Pump	4					
	S05-MM-07	Removal of Existing of Primary Sludge Pump	4					
	S05-MM-08	Delivery Valve	2					
	S05-MM-09	Sump Drainage Pump	2					
	S05-MM-10	Scum Pump	4					
	S05-MM-11	Suction Scum Valve	4					
	S05-MM-12	Hoist Biocck	1					
	S05-MM-13	Removal of Existing of Hoist	1					
	S05-MM-14	Exhaust Fan	2					
	S05-MM-15	Removal of Existing of Exhaust	2					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S05		Primary Sedimentaion Tank (2/2)						
	S05-MM-16	Piping	Lot					
	S05-MM-17	Steel Works	Lot					
	S05-MM-18	Other Necessary Works	Lot					
	Sub-total							
		Total						

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S08		Blower House (1/2)						
	S08-MM-01	Air Blower	5					
	S08-MM-02	Removal of Existing of Air Blower	7					
	S08-MM-03	Air Filter	5					
	S08-MM-04	Removal of Existing of Air Filter	7					
	S08-MM-05	Delivery Valve	5					
	S08-MM-06	Removal of Existing of Delivery Valve	7					
	S08-MM-07	Clear Water Supply Pump	2					
	S08-MM-08	Removal of Existing of Clear Water Supply Pump	3					
	S08-MM-09	Hoist Bioclk	1					
	S08-MM-10	Removal of Existing of Hoist Bioclk	1					
	S08-MM-11	Sump Drainge Pump	1					
	S08-MM-12	Removal of Existing of Sump Drainge Pump	1					
	S08-MM-13	Clear Water Tank	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S11		Return Sludge Pump Station						
	S11-MM-01	Return Sludge pump	5					
	S11-MM-02	Waste Sludge pump	2					
	S11-MM-03	Delivery Valve	5					
	S11-MM-04	Suction Valve	5					
	S11-MM-05	Partition Valve	4					
	S11-MM-06	Check Valve	5					
	S11-MM-07	Bridge Crane	1					
	S11-MM-08	Sump Drainage Pump	2					
	S11-MM-09	Connection Valve A	2					
	S11-MM-10	Connection Valve B	1					
	S11-MM-11	Piping	Lot					
	S11-MM-12	Steel Works	Lot					
	S11-MM-13	Other Necessary Works	Lot					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S12		Discharge Pump Station (1/2)						
	S12-MM-01	Inlet Chamber Gate	1					
	S12-MM-02	Discharge Pump A	3					
	S12-MM-03	Discharge Pump B	2					
	S12-MM-04	Removal of Existing of Discharge Pump	5					
	S12-MM-05	Suction Valve A	3					
	S12-MM-06	Suction Valve B	2					
	S12-MM-07	Removal of Existing of Suction Valve	5					
	S12-MM-08	Check Valve	3					
	S12-MM-09	Check Valve	2					
	S12-MM-10	Removal of Existing of Check Valve	5					
	S12-MM-11	Delivery Valve A	3					
	S12-MM-12	Delivery Valve B	2					
	S12-MM-13	Removal of Existing of Delivery Valve	3					
	S12-MM-14	Connection Valve	4					
	S12-MM-15	Removal of Existing of Connection Valve	4					
	S12-MM-16	Bridge Crane	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S21		Gravity Thickener (1/2)						
	S21-MM-01	Inlet Weir	2					
	S21-MM-02	Removal of Existing of Inlet Weir	2					
	S21-MM-03	Thickener Sludge Collectar	2					
	S21-MM-04	Removal of Existing of Thickener Sludge Collectar	2					
	S21-MM-05	Thickened Sludge pump	2					
	S21-MM-06	Removal of Existing of Thickened Sludge pump	2					
	S21-MM-07	Suction Sludge Valve	2					
	S21-MM-08	Sump Drainage Pump	1					
	S21-MM-09	Removal of Existing of Sump Drainage Pump	1					
	S21-MM-10	Hoist Block	1					
	S21-MM-11	Removal of Existing of Hoist Block	1					
	S21-MM-12	Exhaust Fan	1					
	S21-MM-13	Removal of Existing of Exhaust Fan	1					
	S21-MM-14	Piping	Lot					
	Sub-total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24		Sludge Treatment Building (1/2)						
	S24-MM-01	Waste Sludge Mixer	2					
	S24-MM-02	Waste Sludge Feed Pump	3					
	S24-MM-03	Mechanical Thickener	3					
	S24-MM-04	Polymer Feeder	2					
	S24-MM-05	Polymer Tank	2					
	S24-MM-06	Polymer Feed Pump	3					
	S24-MM-07	Thickened Sludge Mixer	2					
	S24-MM-08	Thickened Sludge Pump	2					
	S24-MM-09	Sludge Grinder	1					
	S24-MM-10	Air Compressor	2					
	S24-MM-11	Air Dryer	1					
	S24-MM-12	Hoist Block	3					
	S24-MM-13	Digested Sludge Mixer	2					
	S24-MM-14	Sludge Feed Pump	3					
	S24-MM-15	Dewatering Machine	3					
	S24-MM-16	Polymer Feeder	2					
	S24-MM-17	Polymer Tank	2					
	S24-MM-18	Polymer Feed Pump	3					
	S24-MM-19	Polymer Container	8					
	S24-MM-20	Waste Water Mixer	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24		Sludge Treatment Building (2/2)						
	S24-MM-21	Waste Water Pump	2					
	S24-MM-22	Hoist Block	1					
	S24-MM-23	Hoist Block (Dewatering Unit)	3					
	S24-MM-24	Hoist Block	2					
	S24-MM-25	Sump Drainage Pump	4					
	S24-MM-26	Scrubber	1					
	S24-MM-27	Odor Fan	2					
	S24-MM-28	Mist Separator	1					
	S24-MM-29	Elutriation Water Pump	2					
	S24-MM-30	Treated Water Supply Unit	2					
	S24-MM-31	Desulfuriser Pump	2					
	S24-MM-32	Water Supply Unit	2					
	S24-MM-33	Strainer Odor Scrubber	1					
	S24-MM-34	Strainer Grit Scrubber	1					
	S24-MM-35	Strainer Desulfurizer	1					
	S24-MM-36	Treated Water Valve	1					
	S24-MM-37	Piping	Lot					
	S24-MM-38	Steel Works	Lot					
	S24-MM-39	Other Necessary Works	Lot					
	Sub-total							
		Total						

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S27		Boiler Building (1/2)						
	S27-MM-01	Coal Boiler	2					
	S27-MM-02	Removal of Existing of Coal Boiler	2					
	S27-MM-03	Coal Grinder	2					
	S27-MM-04	Removal of Existing of Coal Grinder	2					
	S27-MM-05	Coal Conveyor	1					
	S27-MM-06	Removal of Existing of Coal Conveyor	1					
	S27-MM-07	Ash Conveyor (1)	1					
	S27-MM-08	Removal of Existing of Ash Conveyor (1)	1					
	S27-MM-09	Ash Conveyor (2)	1					
	S27-MM-10	Removal of Existing of Ash Conveyor (2)	1					
	S27-MM-11	Clear Water Tank	1					
	S27-MM-12	Water Supply Pump	2					
	S27-MM-13	Removal of Existing of Water Supply Pump	2					
	S27-MM-14	Water Softening Unit	2					
	S27-MM-15	Removal of Existing of Water Softening Unit	2					
	S27-MM-16	Soft Water Pump	2					
	S27-MM-17	Removal of Existing of Soft Water Pump	2					
	S27-MM-18	Generator	1					
	S27-MM-19	Removal of Existing of Generator	1					
	S27-MM-20	Heating Pump	2					
	Sub-total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51		Intermediate Pump Station No.1(1/3)						
	S51-MM-01	Inflow Valve	1					
	S51-MM-02	Fine Screen	1					
	S51-MM-03	Sewage Pump	4					
	S51-MM-04	Screenings Grinder	1					
	S51-MM-05	Sump Drainage Pump	2					
	S51-MM-06	Hoist Block (3t)	2					
	S51-MM-07	Removal of sewage pumps (800m ³ /hr)	3					
	S51-MM-08	Removal of sewage pumps (450m ³ /hr)	1					
	S51-MM-09	Removal of Drain Pumps	2					
	S51-MM-10	Installation of mechanical rakes	1					
	S51-MM-11	Installation of mechanical crushing machine	1					
	S51-MM-12	Removal of the hoisting devices (3t)	2					
	S51-MM-13	Removal of the suction pipeline (dia. 400mm)	4					
	Sub-Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51		Intermediate Pump Station No.1(2/3)						
	S51-MM-14	Removal of the pressure pipeline (dia. 250mm)	20m					
	S51-MM-15	Removal of the pressure sewer (dia. 400mm)	20m					
	S51-MM-16	Removal of discharge pipes (dia. 400mm)	60m					
	S51-MM-17	Removal of valves (dia. 400mm)	4					
	S51-MM-18	Removal of the back-pressure valve (dia. 250mm)	4					
	S51-MM-19	Removal of valves (dia. 250mm)	4					
	S51-MM-20	Removal of valves (dia. 400mm)	4					
	S51-MM-21	Removal of the bubbling pipeline (dia.50mm)	45m					
	S51-MM-22	Removal the bubbling valve (dia.100mm)	2					
	S51-MM-23	Removal of the ventilation	1					
	S51-MM-24	Removal of the inflow valve (dia. 800mm)	1					
	S51-MM-25	Removal of Exhaust Faan	1					
	S51-MM-26	Removal of Air Intake Fan	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S52		Intermediate Pump Station No.2 (1/2)						
	S52-MM-01	Sewage Pump	3					
	S52-MM-02	Screenings Grinder	1					
	S52-MM-03	Sump Drainage Pump	1					
	S52-MM-04	Hoist Block (2t)	1					
	S52-MM-05	Removal of sewage pumps (450m ³ /hr)	2					
	S52-MM-06	Removal of sewage pumps (350m ³ /hr)	1					
	S52-MM-07	Removal of drain pumps	1					
	S52-MM-08	Installation of the mechanical crushing machine	1					
	S52-MM-09	Removal of the hoisting devices (2t)	1					
	S52-MM-10	Removal of the suction pipeline (dia.200mm)	3					
	S52-MM-11	Removal of the pressure pipeline (dia.300mm)	10m					
	S52-MM-12	Removal of discharge pipes (dia.300mm)	30m					
	S52-MM-13	Removal of suction valves (dia.200mm)	3					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
		Intermediate Pump Station No.2 (2/2)						
	S52-MM-14	Removal of back pressure valves (dia.200mm)	3					
	S52-MM-15	Removal of pressure pipeline valves (dia.200mm)	3					
	S52-MM-16	Removal of pressure sewer valves (dia.300mm)	3					
	S52-MM-17	Removal of the bubbling pipeline	1					
	S52-MM-18	Removal of the ventilation	1					
	S52-MM-19	Removal of the inflow valve (dia.350mm)	1					
	S52-MM-20	Removal of Exhaust Faan	1					
	S52-MM-21	Removal of Air Intake Fan	1					
	S52-MM-22	Installation of Exhaust Faan	1					
	S52-MM-23	Installation of Air Intake Fan	1					
	S52-MM-24	Piping	Lot					
	S52-MM-25	Steel Works	Lot					
	S52-MM-26	Other Necessary Works	Lot					
	Sub-total							
		Total						

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S53		Intermediate Pump Station No.3 (1/2)						
	S53-MM-01	Inflow Valve	2					
	S53-MM-02	Fine Screen	2					
	S53-MM-03	Sewage Pump	5					
	S53-MM-04	Screenings Grinder	2					
	S53-MM-05	Sump Drainage Pump	2					
	S53-MM-06	Hoist Block (3t)	1					
	S53-MM-07	Hoist Block (1t)	1					
	S53-MM-08	Removal of sewage pumps (650m ³ /hr)	4					
	S53-MM-09	Removal of sewage pumps (450m ³ /hr)	1					
	S53-MM-10	Removal of drain pumps	2					
	S53-MM-11	Installation of the mechanical rakes	2					
	S53-MM-12	Installation of the mechanical crushing machine	1					
	S53-MM-13	Removal of the hoisting devices (3 t, 1 t)	2					
	S53-MM-14	Removal of the suction pipeline (dia.400mm)	5					
	S53-MM-15	Removal of the pressure pipeline (dia.200mm)	25m					
	S53-MM-16	Removal of the pressure sewer (dia.600mm)	25m					
	S53-MM-17	Removal of suction valves (dia.200mm)	5					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S53		Intermediate Pump Station No.3 (2/2)						
	S53-MM-18	Removal of the back-pressure valve (dia.200mm)	5					
	S53-MM-19	Removal of pressure pipelinevalves (dia.200mm)	5					
	S53-MM-20	Removal of pressure sewer valves (dia.600mm)	4					
	S53-MM-21	Removal of the bubbling pipeline (dia.50mm)	50m					
	S53-MM-22	Removal of the ventilation	1					
	S53-MM-23	Removal of the inflow valve (dia.600mm)	2					
	S53-MM-24	Removal of Exhaust Faan	1					
	S53-MM-25	Removal of Air Intake Fan	1					
	S53-MM-26	Installation of Exhaust Faan	1					
	S53-MM-27	Installation of Air Intake Fan	1					
	S53-MM-28	Piping	Lot					
	S53-MM-29	Steel Works	Lot					
	S53-MM-30	Other Necessary Works	Lot					
	Sub-total							
		Total						

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S54		Intermediate Pump Station No.4 (1/2)						
	S54-MM-01	Inflow Valve	1					
	S54-MM-02	Fine Screen	1					
	S54-MM-03	Sewage Pump	3					
	S54-MM-04	Screenings Grinder	1					
	S54-MM-05	Sump Drainage Pump	2					
	S54-MM-06	Hoist Block (2t)	1					
	S54-MM-07	Removal of sewage pumps (800m ³ /hr)	1					
	S54-MM-08	Removal of sewage pumps (450m ³ /hr)	4					
	S54-MM-09	Removal of drain pumps	2					
	S54-MM-10	Installation of the mechanical rakes	1					
	S54-MM-11	Installation of the mechanical crushing machine	1					
	S54-MM-12	Removal of the hoisting devices (2t)	1					
	S54-MM-13	Removal of the suction pipeline (dia.400mm)	5					
	S54-MM-14	Removal of the pressure pipeline (dia.200mm)	10m					
	S54-MM-15	Removal of the pressure sewer (dia.400mm)	8m					
	S54-MM-16	Removal of suction valves (dia.200mm)	3					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S54		Intermediate Pump Station No.4 (2/2)						
	S54-MM-17	Removal of the back-pressure valve (dia.200mm)	2					
	S54-MM-18	Removal of pressure pipelinevalves (dia.200mm)	2					
	S54-MM-19	Removal of pressure sewer valves (dia.400mm)	4					
	S54-MM-20	Removal of the bubbling pipeline (dia.50mm)	80m					
	S54-MM-21	Removal of the ventilation	1					
	S54-MM-22	Removal of the inflow valve (dia.800mm)	1					
	S54-MM-23	Removal of Exhaust Faan	1					
	S54-MM-24	Removal of Air Intake Fan	1					
	S54-MM-25	Installation of Exhaust Faan	1					
	S54-MM-26	Installation of Air Intake Fan	1					
	S54-MM-27	Piping	Lot					
	S54-MM-28	Steel Works	Lot					
	S54-MM-29	Other Necessary Works	Lot					
	Sub-total							
		Total						

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Water Supply and Sewerage System in Astana City

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S55		Intermediate Pump Station No.6 (1/2)						
	S55-MM-01	Inflow Valve	4					
	S55-MM-02	Sewage Pump	4					
	S55-MM-03	Sump Drainage Pump	2					
	S55-MM-04	Hoist Block (5t)	1					
	S55-MM-05	Removal of sewage pumps (1,600m ³ /hr)	3					
	S55-MM-06	Removal of sewage pumps (800m ³ /hr)	1					
	S55-MM-07	Removal of drain pumps	2					
	S55-MM-08	Removal of the hoisting devices (5t)	1					
	S55-MM-09	Removal of the suction pipeline (dia. 600mm)	4					
	S55-MM-10	Removal of the pressure pipeline (dia.400mm)	20m					
	S55-MM-11	Removal of suction valves (dia.300mm)	4					
	S55-MM-12	Removal of pressure pipeline valves (dia.400mm)	7					
	S55-MM-13	Removal of the ventilation	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S56		Intermediate Pump Station No.7 (1/3)						
	S56-MM-01	Inflow Valve	1					
	S56-MM-02	Fine Screen	2					
	S56-MM-03	Sewage Pump	6					
	S56-MM-04	Motor driven Valve	2					
	S56-MM-05	Motor driven Valve	1					
	S56-MM-06	Motor driven Valve	2					
	S56-MM-07	Screenings Grinder	2					
	S56-MM-08	Sump Drainage Pump	2					
	S56-MM-09	Hoist Block (5t)	2					
	S56-MM-10	Removal of sewage pumps (3,500m ³ /hr)	2					
	S56-MM-11	Removal of sewage pumps (1,600m ³ /hr)	2					
	S56-MM-12	Removal of sewage pumps (800m ³ /hr)	1					
	S56-MM-13	Removal of sewage pumps (450m ³ /hr)	2					
	S56-MM-14	Removal of drain pumps	2					
	S56-MM-15	Installation of the mechanical rakes	2					
	S56-MM-16	Installation of the mechanical crushing machine	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S56		Intermediate Pump Station No.7 (2/3)						
	S56-MM-17	Removal of the hoisting devices (5t)	1					
	S56-MM-18	Removal of the suction pipeline (dia.1,000mm)	4					
	S56-MM-19	Removal of the pressure pipeline (dia.800mm)	250m					
	S56-MM-20	Removal of the pressure discharge sewer (dia.400mm)	20m					
	S56-MM-21	Removal of suction valves (dia.300mm)	2					
	S56-MM-22	Removal of the back-pressure valve (dia.250mm)	3					
	S56-MM-23	Removal of motor valves (dia.800mm)	2					
	S56-MM-24	Removal of motor valves (dia.500mm)	2					
	S56-MM-25	Removal of motor valves (dia.400mm)	2					
	S56-MM-26	Removal of the bubbling pipeline(dia.200mm)	80m					
	S56-MM-27	Removal the bubbling valve (dia.200mm)	2					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S56		Intermediate Pump Station No.7 (2/3)						
	S56-MM-28	Removal of the ventilation	1					
	S56-MM-29	Removal of the inflow valve (dia.1,000mm)	1					
	S56-MM-30	Removal of Exhaust Faan	1					
	S56-MM-31	Removal of Air Intake Fan	1					
	S56-MM-32	Installation of Exhaust Faan	1					
	S56-MM-33	Installation of Air Intake Fan	1					
	S56-MM-34	Removal of Air Intake Fan	1					
	S56-MM-35	Installation of Air Intake Fan	1					
	S56-MM-36	Removal of Air Intake Fan	1					
	S56-MM-37	Installation of Air Intake Fan	1					
	S56-MM-38	Piping	Lot					
	S56-MM-39	Steel Works	Lot					
	S56-MM-40	Other Necessary Works	Lot					
	Sub-total							
		Total						

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S57		Intermediate Pump Station No.10 (1/2)						
	S57-MM-01	Inflow Valve	1					
	S57-MM-02	Fine Screen	1					
	S57-MM-03	Sewage Pump	5					
	S57-MM-04	Screenings Grinder	1					
	S57-MM-05	Pressure Sewer Valve	4					
	S57-MM-06	Hoist Block (3t)	2					
	S57-MM-07	Removal of sewage pumps (800m ³ /hr)	1					
	S57-MM-08	Removal of sewage pumps (450m ³ /hr)	4					
	S57-MM-09	Removal of drain pumps	2					
	S57-MM-10	Installation of the mechanical rakes	1					
	S57-MM-11	machine	1					
	S57-MM-12	Removal of the hoisting devices (3t)	2					
	S57-MM-13	(dia.400mm)	4					
	S57-MM-14	(dia.200mm)	20m					
	S57-MM-15	(dia.600mm)	25m					
	S57-MM-16	Removal of discharge pipes (dia.600mm)	30m					
	S57-MM-17	Removal of suction valves (dia.200mm)	5					
	Sub-Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S58		Intermediate Pump Station No.11 (1/2)						
	S58-MM-01	Sewage Pump	3					
	S58-MM-02	Hoist Block (2t)	1					
	S58-MM-03	Removal of sewage pumps (144m ³ /hr)	1					
	S58-MM-04	Removal of sewage pumps (114m ³ /hr)	1					
	S58-MM-05	Removal of the hoisting devices (1t)	1					
	S58-MM-06	Removal of the suction pipeline (dia.200mm)	2					
	S58-MM-07	Removal of the pressure pipeline (dia.150mm)	7m					
	S58-MM-08	Removal of the pressure pipeline (dia.200mm)	7m					
	S58-MM-09	Removal of suction valves (dia.200mm)	2					
	S58-MM-10	Removal of the back-pressure valve (dia.150mm)	2					
	S58-MM-11	Removal of pressure pipeline valves (dia.200mm)	3					
	S58-MM-12	Removal of the bubbling pipeline (dia.50mm)	45m					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S59		Intermediate Pump Station No.15 (1/2)						
	S59-MM-01	Sewage Pump	3					
	S59-MM-02	Hoist Block (1t)	1					
	S59-MM-03	Removal of sewage pumps (250m ³ /hr)	1					
	S59-MM-04	Removal of sewage pumps (114m ³ /hr)	1					
	S59-MM-05	Removal of the hoisting devices (1t)	1					
	S59-MM-06	Removal of the suction pipeline (dia. 150mm)	2					
	S59-MM-07	Removal of the pressure pipeline (dia. 150mm)	10m					
	S59-MM-08	Removal of the pressure pipeline (dia. 300mm)	6m					
	S59-MM-09	Removal of discharge pipes (dia. 300mm)	1					
	S59-MM-10	Removal of suction valves (dia. 150mm)	2					
	S59-MM-11	Removal of the back-pressure valve (dia. 150mm)	2					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S59		Intermediate Pump Station No.15 (2/2)						
	S59-MM-12	Removal of pressure pipeline valves (dia. 150mm)	2					
	S59-MM-13	Removal of pressure pipeline valves (dia. 300mm)	1					
	S59-MM-14	Removal of the bubbling pipeline (dia.50mm)	45m					
	S59-MM-15	Removal of the bubbling valve (dia. 100mm)	1					
	S59-MM-16	Removal of the ventilation	1					
	S59-MM-17	Removal of the inflow valve (dia. 300mm)	1					
	S59-MM-18	Removal of Exhaust Faan	1					
	S59-MM-19	Removal of Air Intake Fan	1					
	S59-MM-20	Installation of Exhaust Faan						
	S59-MM-21	Installation of Air Intake Fan						
	S59-MM-22	Piping	Lot					
	S59-MM-23	Steel Works	Lot					
	S59-MM-24	Other Necessary Works	Lot					
	Sub-total							
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S60		Intermediate Pump Station No.16 (1/2)						
	S60-MM-01	Sewage Pump	3					
	S60-MM-02	Hoist Block (1t)	1					
	S60-MM-03	Removal of sewage pumps (114m ³ /hr)	2					
	S60-MM-04	Removal of the hoisting devices (1t)	1					
	S60-MM-05	Removal of the suction pipeline (dia. 100mm)	2					
	S60-MM-06	Removal of the pressure pipeline (dia. 100mm)	20m					
	S60-MM-07	Removal of discharge pipes (dia. 100mm)	2					
	S60-MM-08	Removal of suction valves (dia. 100mm)	2					
	S60-MM-09	Removal of the back-pressure valve (dia. 100mm)	2					
	S60-MM-10	Removal of pressure line valves (dia. 100mm)	4					
	S60-MM-11	Removal of the bubbling pipeline (dia.50mm)	45m					
	S60-MM-12	Removal of the bubbling valve (dia. 100mm)	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S61		Intermediate Pump Station No.17 (1/2)						
	S61-MM-01	Sewage Pump	2					
	S61-MM-02	Hoist Block (1t)	1					
	S61-MM-03	Removal of sewage pumps (114m ³ /hr)	2					
	S61-MM-04	Removal of the hoisting devices (1t)	1					
	S61-MM-05	Removal of the suction pipeline (dia. 150mm)	2					
	S61-MM-06	Removal of the pressure pipeline (dia. 250mm)	8m					
	S61-MM-07	Removal of suction valves (dia. 150mm)	2					
	S61-MM-08	Removal of the back-pressure valve (dia. 150mm)	2					
	S61-MM-09	Removal of pressure line valves (dia. 150mm)	3					
	S61-MM-10	Removal of metal deck (t=5mm)	12.0 m2					
	S61-MM-11	Removal of the bubbling pipeline (dia.50mm)	45m					
	S61-MM-12	Removal of the bubbling valve (dia. 100mm)	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S62		Intermediate Pump Station No.21 (1/2)						
	S62-MM-01	Sewage Pump	2					
	S62-MM-02	Sump Drainage Pump	1					
	S62-MM-03	Hoist Block (1t)	1					
	S62-MM-04	Removal of sewage pumps (250m ³ /hr)	2					
	S62-MM-05	Removal of Drain Pumps	1					
	S62-MM-06	Removal of the hoisting devices (1t)	1					
	S62-MM-07	Removal of the suction pipeline (dia. 150mm)	2					
	S62-MM-08	Removal of the pressure pipeline (dia. 150mm)	10m					
	S62-MM-09	Removal of suction valves (dia. 150mm)	2					
	S62-MM-10	Removal of the back-pressure valve (dia. 150mm)	2					
	S62-MM-11	Removal of pressure line valves (dia. 150mm)	3					
	S62-MM-12	Removal of the bubbling pipeline (dia.50mm)	45m					
	S62-MM-13	Removal of the bubbling valve (dia. 100mm)	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SM: Mechanical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S63		Intermediate Pump Station No.24 (1/2)						
	S63-MM-01	Sewage Pump	2					
	S63-MM-02	Hoist Block (1t)	1					
	S63-MM-03	Removal of sewage pumps (80m ³ /hr)	1					
	S63-MM-04	Removal of the hoisting devices (0.5t)	1					
	S63-MM-05	Removal of the suction pipeline (dia. 150mm)	2					
	S63-MM-06	Removal of the pressure pipeline (dia. 100mm)	12m					
	S63-MM-07	Removal of discharge pipes (dia. 100mm)	10m					
	S63-MM-08	Removal of suction valves (dia. 150mm)	2					
	S63-MM-09	Removal of the back-pressure valve (dia. 100mm)	2					
	S63-MM-10	Removal of pressure pipeline valves (dia. 100mm)	3					
	S63-MM-11	Removal of ventilation	1					
	S63-MM-12	Removal of the inflow valve (dia. 100mm)	1					
	Sub-total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S00		General Items	Lot					
S02-1		Influent Pump Station / Low Voltage Switchgear	Lot					
S02-2		Influent Pump Station / Instrumentation Facilities	Lot					
S02-3		Influent Pump Station / Monitor Control Facilities	Lot					
S02-4		STP Facilities/Other Works	Lot					
S03-1		Grit Chamber / Low Voltage Switchgear	Lot					
S03-2		Grit Chamber / Instrumentation Facilities	Lot					
S05-1		Primary Sedimentation Tank / Low Voltage Switchgear	Lot					
S05-2		Primary Sedimentation Tank / Instrumentation Facilities	Lot					
S06-1		Primary Sludge Pump House / Low Voltage Switchgear	Lot					
S06-2		Primary Sludge Pump House / Instrumentation Facilities	Lot					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S08-1		Blower House / High Voltage Switchgear						
S08-2		Blower House / Low Voltage Switchgear						
S08-3		Blower House / Instrumentation Facilities						
S08-4		Blower House / Monitor Control Facilities						
S08-5		STP Facilities/Other Works						
S10-1		Secondary Sedimentation Tank / Low Voltage Switchgear						
S11-1		Return Sludge Pump House / Low Voltage Switchgear						
S11-2		Return Sludge Pump House / Instrumentation Facilities						
S11-3		Return Sludge Pump House / Monitor Control Facilities						
S11-4		STP Facilities/Other Works						
S12-1		Discharge Pump Station / Low Voltage Switchgear						
S12-2		Discharge Pump Station / Instrumentation Facilities (1/2)						
S12-3		Discharge Pump Station / Monitor Control Facilities						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S12-4		STP Facilities/Other Works						
S21-1		Gravity Thickener / Low Voltage Switchgear						
S21-2		Graviry Thickener / Instrumentation Facilities						
S22-1		Thickened Sludge Pump House / Low Voltage Switchgear						
S23-1		Digester & Sludge Pump House / Low Voltage Switchgear						
S23-2		Digester & Pump House / Instrumentation Facilities						
S24-1		Sludge Treatment Building / High Voltage Switchgear						
S24-2		Sludge Treatment Building / Low Voltage Switchgear						
S24-3		Sludge Treatment Building / Instrumentation Facilities						
S24-4		Sludge Treatment Building / Monitor Control Facilities						
S24-5		STP Facilities/Other Works						
S25-1		Hopper House / Low Voltage Switchgear						
S25-2		Sludge Cake Yard / Instrumentation Facility						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S26-1		Gas Holder / Instrumentation Facility						
S27-1		Boiler House / Low Voltage Switchgear						
S27-2		Boiler House / Instrumentation Facilities (1/2)						
S27-3		Boiler House / Monitor Control Facilities						
S27-4		STP Facilities/Other Works						
S28-1		Electrical House / High Voltage Switchgear						
S28-2		Electrical House / Low Voltage Switchgear						
S28-3		Electrical House / Instrumentation Facilities						
S28-4		Electrical House / Monitor Control Facilities						
S28-5		STP Facilities/Other Works						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-1		Pump Station No.1/ Low Voltage Switchgear						
S51-2		Pump Station No.1/ Instrumentation Facilities						
S51-3		Pump Station No.1/ Monitoring & Control Facilities						
S51-4		Pump Station No.1/ Wiring & Other Works						
S52-1		Pump Station No.2/ Low Voltage Switchgear						
S52-2		Pump Station No.2/ Instrumentation Facilities						
S52-3		Pump Station No.2/ Monitoring & Control Facilities						
S52-4		Pump Station No.2/ Wiring & Other Works						
S53-1		Pump Station No.3/ Low Voltage Switchgear						
S53-2		Pump Station No.3/ Instrumentation Facilities						
S53-3		Pump Station No.3/ Monitoring & Control Facilities						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S53-4		Pump Station No.3/ Wiring & Other Works						
S54-1		Pump Station No.4/ Low Voltage Switchgear						
S54-2		Pump Station No.4/ Instrumentation Facilities						
S54-3		Pump Station No.4/ Monitoring & Control Facilities						
S54-4		Pump Station No.4/ Wiring & Other Works						
S55-1		Pump Station No.6/ Low Voltage Switchgear						
S55-2		Pump Station No.6/ Instrumentation Facilities						
S55-3		Pump Station No.6/ Monitoring & Control Facilities						
S55-4		Pump Station No.6/ Wiring & Other Works						
S56-1		Pump Station No.7/ Low Voltage Switchgear						
S56-2		Pump Station No.7/ Instrumentation Facilities						
	Sub-total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S56-3		Pump Station No.7/ Monitoring & Control Facilities						
S56-4		Pump Station No.7/ Wiring & Other Works						
S57-1		Pump Station No.10/ Low Voltage Switchgear						
S57-2		Pump Station No.10/ Instrumentation Facilities						
S57-3		Pump Station No.10/ Monitoring & Control Facilities						
S57-4		Pump Station No.10/ Wiring & Other Works						
S58-1		Pump Station No.11/ Low Voltage Switchgear						
S58-2		Pump Station No.11/ Instrumentation Facilities						
S58-3		Pump Station No.11/ Wiring & Other Works						
S59-1		Pump Station No.15/ Low Voltage Switchgear						
S59-2		Pump Station No.15/ Instrumentation Facilities						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S59-3		Pump Station No.15/ Wiring & Other Works						
S60-1		Pump Station No.60/ Low Voltage Switchgear						
S60-2		Pump Station No.60/ Instrumentation Facilities						
S60-3		Pump Station No.60/ Wiring & Other Works						
S61-1		Pump Station No.61/ Low Voltage Switchgear						
S61-2		Pump Station No.61/ Instrumentation Facilities						
S61-3		Pump Station No.61/ Wiring & Other Works						
S62-1		Pump Station No.62/ Low Voltage Switchgear						
S62-2		Pump Station No.62/ Instrumentation Facilities						
S62-3		Pump Station No.62/ Wiring & Other Works						
S63-1		Pump Station No.63/ Low Voltage Switchgear						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S63-2		Pump Station No.63/ Instrumentation Facilities						
S63-3		Pump Station No.63/ Wiring & Other Works						
S64-1		Pump Station No.64/ Low Voltage Switchgear						
S64-2		Pump Station No.64/ Instrumentation Facilities						
S64-3		Pump Station No.64/ Wiring & Other Works						
S65-1		Pump Station No.65/ Low Voltage Switchgear						
S65-2		Pump Station No.65/ Instrumentation Facilities						
S65-3		Pump Station No.65/ Wiring & Other Works						
S66-1		Pump Station No.66/ Low Voltage Switchgear						
S66-2		Pump Station No.66/ Instrumentation Facilities						
S66-3		Pump Station No.66/ Wiring & Other Works						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S02-2		Influent Pump Station / Instrumentation Facilities						
	S02-EE-12	Temporary Pump station Level Switch	1					
	S02-EE-13	Influent Pump Station Reservoir Level	2					
	S02-EE-14	Influent Sewage Flow	4					
	S02-EE-15	Sump Pit Level Switch	1					
	S02-EE-16	Influent Sewage PH	1					
	S02-EE-17	Instrumentation Panel for Influent Pump Station	1					
S02-3		Influent Pump Station / Monitor Control Facilities						
	S02-EE-18	In fluent Pump Station PLC	1					
S02-4		STP Facilities/Other Works						
	S02-EE-19	Wiring Work for Influent Pump Station	Lot					
	S02-EE-20	Removal Work for Influent Pump Station	Lot					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S03-1		Grit Chamber / Low Voltage Switchgear						
	S03-EE-01	Grit Chamber MCC & Auxiliary Relay Panel	1					
	S03-EE-02	Inlet & Bypass Gate Local Operation Panel	1					
	S03-EE-03	Grit Pump & Collector Local Operation Panel	2					
	S03-EE-04	Grit Scrubber Local Operation Panel	1					
	S03-EE-05	Outlet Gate Local Operation Panel	1					
	S03-EE-06	Scum Screen Local Operation Panel	1					
S03-2		Grit Chamber / Instrumentation Facilities						
	S03-EE-07	Grit Pit Level Switch	2					
	S03-EE-08	Grit Scrubber Level Switch	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S06-1		Primary Sludge Pump House / Low Voltage Switchgear						
	S06-EE-01	Primary Sludge Pump Local Operation Panel	2					
	S06-EE-02	Suction Sludge & Delivery Valve Local Operation Panel	2					
	S06-EE-03	Scum Pump & Suction Valve Local Operation Panel	2					
	S06-EE-04	Sump Drainage Pump Local Operation Panel	2					
	S06-EE-05	Exhaust Fan Local Operation Panel	2					
S06-2		Primary Sludge Pump House / Instrumentation Facilities						
	S06-EE-06	Sump Pit Level Switch	2					
	S06-EE-07	Primary Sludge Flow	2					
	S06-EE-08	Primary Sludge Density	2					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S08-1		Blower House / High Voltage Switchgear						
	S08-EE-01	6kV Receiving Panels	2					
	S08-EE-02	GPT Panels	2					
	S08-EE-03	Blower Panel	5					
	S08-EE-04	Transformer Primary Panels	2					
	S08-EE-05	6kV Tie Breaker Panel	1					
S08-2		Blower House / Low Voltage Switchgear (1/2)						
	S08-EE-06	Transformer Panel	2					
	S08-EE-07	Transformer Secondary Panel	1					
	S08-EE-08	Low Voltage Feeder Panel	1					
	S08-EE-09	UPS	1					
	S08-EE-10	Air Blower Facilities MCC & Auxiliary Relay Panel	1					
	S08-EE-11	Blower Local Operation Panel	5					
	S08-EE-12	Clear Water Supply Pump Local Operation Panel	1					
	S08-EE-13	Sump Drainage Pump Local Operation Panel	2					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S08-3		Blower House / Instrumentation Facilities						
	S08-EE-14	Blower Flow	5					
	S08-EE-15	Blower Pressure	1					
	S08-EE-16	Air Temperature	1					
	S08-EE-17	Clear Water Tank Level Switch	1					
	S08-EE-18	Sump Pit Level Switch	1					
	S08-EE-19	Clear Water Tank Temperature	1					
	S08-EE-20	Instrumentation Panel for Blower House	1					
S08-4		Blower House / Monitor Control Facilities						
	S08-EE-21	Blower House PLC	1					
S08-5		STP Facilities/Other Works						
S08-5	S08-EE-22	Wiring Work for Blower House	Lot					
	S08-EE-23	Grounding Work for Blower House	Lot					
	S08-EE-24	Removal Work for Blower House	Lot					
	Sub-total							
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S11-1		Return Sludge Pump House / Low Voltage Switchgear						
	S11-EE-01	Low Voltage Feeder Panel	1					
	S11-EE-02	Return Sludge Pumps MCC & Auxiliary Relay Panel	1					
	S11-EE-03	Return Sludge Pump Local Operation Panel	5					
	S11-EE-04	Waste Sludge Pump Local Operation Panel	1					
	S11-EE-05	Partition Valve Local Operation Panel	1					
	S11-EE-06	Sump Drainage Pump Local Operation Panel	1					
	S11-EE-07	Connection Valve A Local Operation Panel	1					
	S11-EE-08	Connection Valve B Local Operation Panel	1					
S11-2		Return Sludge Pump House / Instrumentation Facilities						
	S11-EE-09	Return Sludge Flow	1					
	S11-EE-10	Sump Pit Level Switch	1					
	S11-EE-11	Instrumentation Panel for Return Sludge Pump House	1					
	Sub-total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S12-1		Discharge Pump Station / Low Voltage Switchgear						
	S12-EE-01	Low Voltage Feeder Panel	1					
	S12-EE-02	Discharge Pump station MCC & Auxiliary Relay Panel	1					
	S12-EE-03	Discharge Pump Panels	5					
	S12-EE-04	Temporary Discharge Pump Panels	3					
	S12-EE-05	Discharge Pump Local Operation Panel	5					
	S12-EE-06	Connection Valve Local Operation Panel	1					
	S12-EE-07	Sump Drainage Pump Local Operation Panel	2					
	S12-EE-08	Air Intake Fan Local Operation Panel	2					
S12-2		Discharge Pump Station / Instrumentation Facilities (1/2)						
	S12-EE-09	Temporary Pump Station Level	1					
	S12-EE-10	Discharge Pump Station Reservoir Level	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S12-2		Discharge Pump Station / Instrumentation Facilities (2/2)						
	S12-EE-11	Sump Pit Level Switch	1					
	S12-EE-12	Discharge PH	1					
	S12-EE-13	Instrumentation Panel for Discharge Pump Station	1					
S12-3		Discharge Pump Station / Monitor Control Facilities						
	S12-EE-14	Discharge Pump Station PLC	1					
S12-4		STP Facilities/Other Works						
	S12-EE-15	Wiring Work for Discharge Pump Station	Lot					
	S12-EE-16	Removal Work for Discharge Pump Station	Lot					
	Sub-total							
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24-1		Sludge Treatment Building / High Voltage Switchgear						
	S24-EE-01	6kV Incoming Panels	2					
	S24-EE-02	6kV Receiving Panels	2					
	S24-EE-03	GPT Panels	2					
	S24-EE-04	6kV Feeder Panels	8					
	S24-EE-05	Transformer Primary Panels	2					
	S24-EE-06	6kV Tie Breaker Panel	1					
	S24-EE-07	6kV Static Capacitor Panel	6					
S24-2		Sludge Treatment Building / Low Voltage Switchgear (1/2)						
	S24-EE-08	Transformer Panel	2					
	S24-EE-09	Transformer Secondary Panel	2					
	S24-EE-10	Low Voltage Feeder Panel	1					
	S24-EE-11	UPS	2					
	S24-EE-12	Mechanical Thickener MCC & Auxiliary Relay Panel	1					
	S24-EE-13	Sludge Dewatering Unit MCC & Auxiliary Relay Panel	1					
	S24-EE-14	Utility Water Facilities MCC & Auxiliary Relay Panel	1					

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24-2		Sludge Treatment Building / Low Voltage Switchgear (2/2)						
	S24-EE-15	Thickener Polymer Facilities Local Operation Panel	1					
	S24-EE-16	Air Compressor Local Operation Panel	1					
	S24-EE-17	Waste Sludge Mixer Local Operation Panel	1					
	S24-EE-18	Waste Sludge Feed Pump Local Operation Panel	1					
	S24-EE-19	Thickened Sludge Mixer & Grinder Local Operation Panel	1					
	S24-EE-20	Thickened Sludge Pump Local Operation	1					
	S24-EE-21	Dewatering Unit Polymer Facilities Local Operation Panel	1					
	S24-EE-22	Digested Sludge Mixer Local Operation	1					
	S24-EE-23	Sludge Feed Pump Local Operation Panel	1					
	S24-EE-24	Waste Water Mixer & Pump Local Operation Panel	1					
	S24-EE-25	Sump Drainage Pump Local Operation	2					
	S24-EE-26	Elutriation Water Pump Local Operation	1					
	S24-EE-27	Desulfurizer Pump Local Operation Panel	1					
	S24-EE-28	Treated Water Valve Local Operation	1					
	S24-EE-29	Odor Fan Local Operation Panel	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24-3		Sludge Treatment Building / Instrumentation Facilities						
	S24-EE-30	Sludge Holding Tank Level	2					
	S24-EE-31	Gravity Thickener Flow	1					
	S24-EE-32	Mechanical Thickener Flow	3					
	S24-EE-33	Thickened Sludge Holding Tank Level	2					
	S24-EE-34	Thickener Polymer Tank Level	2					
	S24-EE-35	Digester Flow	1					
	S24-EE-36	Treated Water Tank Level Switch	1					
	S24-EE-37	Utility Water Tank Level Switch	1					
	S24-EE-38	Digested Sludge Holding Tank Level	2					
	S24-EE-39	Digested Dewatering Sludge Density	1					
	S24-EE-40	Dewatering Unit Polymer Tank Level	2					
	S24-EE-41	Digested Dewatering Sludge Flow	3					
	S24-EE-42	Waste Water Tank Level Switch	1					
	S24-EE-43	Sump Pit Level Switch	2					
	S24-EE-44	Instrumentation Panel for Thickening	1					
	S24-EE-45	Instrumentation Panel for Dewatering	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S24-4		Sludge Treatment Building / Monitor Control Facilities						
	S24-EE-46	Monitoring System	1					
	S24-EE-47	Sludge Treatment Building PLC	1					
	Sub-total							
S24-5		STP Facilities/Other Works						
	S24-EE-48	Wiring Work for Sludge Treatment Facilities	Lot					
	S24-EE-49	Grounding Work for Sludge Treatment Facilities	Lot					
	Sub-total							
		Total						

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S27-1		Boiler House / Low Voltage Switchgear						
	S27-EE-01	Boiler MCC & Auxiliary Relay Panel	1					
	S27-EE-02	Coal Grinder Local Operation Panel	1					
	S27-EE-03	Coal Boiler Local Operation Panel	1					
	S27-EE-04	Coal Conveyer Local Operation Panel	1					
	S27-EE-05	Ash Conveyer Local Operation Panel	1					
	S27-EE-06	Water Supply Pump Local Operation Panel	1					
	S27-EE-07	Soft Water Pump Local Operation Panel	1					
	S27-EE-08	Heating Pump Local Operation Panel	1					
	S27-EE-09	Exhaust Fan Local Operation Panel	1					
S27-2		Boiler House / Instrumentation Facilities (1/2)						
	S27-EE-10	Coal Boiler Level	2					
	Total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S28-1		Electrical House / High Voltage Switchgear						
	S28-EE-01	6kV Receiving Panels	2					
	S28-EE-02	GPT Panels	2					
	S28-EE-03	Transformer Primary Panels	2					
	S28-EE-04	6kV Tie Breaker Panel	1					
S28-2		Electrical House / Low Voltage Switchgear						
	S28-EE-05	Transformer Panel	2					
	S28-EE-06	Transformer Secondary Panel	2					
	S28-EE-07	Low Voltage Feeder Panel	1					
	S28-EE-08	UPS	1					
S28-3		Electrical House / Instrumentation Facilities						
	S28-EE-09	Instrumentation Panel for Electrical House	1					
	Total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S51-1		Pump Station No.1/ Low Voltage Switchgear						
	S51-EE-01	Transformer Secondary Panel	1					
	S51-EE-02	Low Voltage Feeder Panel	1					
	S51-EE-03	Sewage Pump Control Panels	4					
	S51-EE-04	Pump Station Facilities Control Panel	1					
S51-2		Pump Station No.1/ Instrumentation Facilities						
	S51-EE-05	Pump Station Reservoir Level Switch	1					
	S51-EE-06	Sump Pit Level Switches	2					
S51-3		Pump Station No.1/ Monitoring and Control Facilities						
	S51-EE-07	No.1 Pump Station PLC	1					
S51-4		Pump Station No.2/ Wiring and Other Works						
	S51-EE-08	Wiring Work for Pump Station No.2	1					
	S51-EE-09	Removal Work for Pump Station No.2	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S52-1		Pump Station No.2/ Low Voltage Switchgear						
	S52-EE-01	No.1 & 2 Sewage Pump Control Panel	1					
	S52-EE-02	No.3 Sewage Pump & Others Control Panel	1					
S52-2		Pump Station No.2/ Instrumentation Facilities						
	S52-EE-03	Pump Station Reservoir Level Switch	1					
	S52-EE-04	Sump Pit Level Switch	1					
S52-3		Pump Station No.2/ Monitoring and Control Facilities						
	S52-EE-05	No.2 Pump Station PLC	1					
S52-4		Pump Station No.2/ Wiring and Other Works						
	S52-EE-06	Wiring Work for Pump Station No.2	1					
	S52-EE-07	Removal Work for Pump Station No.2	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S53-1		Pump Station No.3/ Low Voltage Switchgear						
	S53-EE-01	Transformer Secondary Panel	1					
	S53-EE-02	Low Voltage Feeder Panel	1					
	S53-EE-03	Sewage Pump Control Panels	5					
	S53-EE-04	Pump Station Facilities Control Panel	1					
S53-2		Pump Station No.3/ Instrumentation Facilities						
	S53-EE-05	Pump Station Reservoir Level Switch	1					
	S53-EE-06	Sump Pit Level Switches	2					
S53-3		Pump Station No.3/ Monitoring and Control Facilities						
	S53-EE-07	No.3 Pump Station PLC	1					
S53-4		Pump Station No.3/ Wiring and Other Works						
	S53-EE-08	Wiring Work for Pump Station No.3	1					
	S53-EE-09	Removal Work for Pump Station No.3	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S54-1		Pump Station No.4/ Low Voltage Switchgear						
	S54-EE-01	Transformer	1					
	S54-EE-02	Low Voltage Feeder Panel	1					
	S54-EE-03	No.1 & 2 Sewage Pump Control Panels	1					
	S54-EE-04	No.3 Sewage Pump Control Panel	1					
	S54-EE-05	Pump Station Facilities Control Panel	1					
S54-2		Pump Station No.4/ Instrumentation Facilities						
	S54-EE-06	Pump Station Reservoir Level Switch	1					
	S54-EE-07	Sump Pit Level Switches	2					
S54-3		Pump Station No.4/ Monitoring and Control Facilities						
	S54-EE-08	No.4 Pump Station PLC	1					
	Sub-Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S55-1		Pump Station No.6/ Low Voltage Switchgear						
	S55-EE-01	Transformer	1					
	S55-EE-02	Transformer Secondary Panel	1					
	S55-EE-03	Low Voltage Feeder Panel	1					
	S55-EE-04	Sewage Pump Control Panels	4					
	S55-EE-05	Pump Station Facilities Control Panel	1					
S55-2		Pump Station No.6/ Instrumentation Facilities						
	S55-EE-06	Pump Station Reservoir Level Switch	1					
	S55-EE-07	Sump Pit Level Switches	2					
S55-3		Pump Station No.6/ Monitoring and Control Facilities						
	S55-EE-08	No.6 Pump Station PLC	1					
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S56-1		Pump Station No.7/ Low Voltage Switchgear (1/2)						
	S56-EE-01	Transformer	1					
	S56-EE-02	Transformer Secondary Panel	1					
	S56-EE-03	Low Voltage Feeder Panel	1					
	S56-EE-04	Sewage Pump Control Panels for No.1, 2 and 3	3					
	S56-EE-05	Sewage Pump Control Panels for No.4 and 5	2					
	S56-EE-06	No.6 & 7 Sewage Pump Control Panel	1					
	S56-EE-07	Pump Station Facilities MCC & Auxiliary Relay Panel	1					
	S56-EE-08	Inflow Valve Local Operation Panel	1					
	S56-EE-09	Fine Screen Local Operation Panel	1					
	S56-EE-10	Sewage Pump Local Operation Panels	3					
	S56-EE-11	Sewage Pump Local Operation Panel	1					
	S56-EE-12	Connection Valve Local Operation Panel	1					
	S56-EE-13	Sump Drainage Pump Local Operation Panels						
	S56-EE-14	Exhaust Fan Local Operation Panel						
	Sub-total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S56-1		Pump Station No.7/ Low Voltage Switchgear (2/2)						
	S56-EE-15	Intake Fan Local Operation Panels	3					
S56-2		Pump Station No.7/ Instrumentation Facilities						
	S56-EE-16	Pump Station Reservoir Level	1					
	S56-EE-17	Sump Pit Level Switches	2					
S56-3		Pump Station No.7/ Monitoring and Control Facilities						
	S56-EE-018	No.7 Pump Station PLC	1					
S56-4		Pump Station No.7/ Wiring and Other Works						
	S56-EE-19	Wiring Work for Pump Station No.7	1					
	S55-EE-20	Removal Work for Pump Station No.7	1					
	Sub-total							
	Total							

Astana Water Supply and Sewerage Project
Bill of Quantities

Bill No. SE: Electrical Work (Sewerage System)

No.	Item No.	Name of Facilities/Equipment	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
S57-1		Pump Station No.10/ Low Voltage Switchgear						
	S57-EE-01	Transformer Secondary Panel	1					
	S57-EE-02	Low Voltage Feeder Panel	1					
	S57-EE-03	Sewage Pump Control Panels for No.1 to No.4	2					
	S57-EE-04	No.5 Sewage Pump Control Panel	1					
	S57-EE-05	Pump Station Facilities Control Panel -1	1					
	S57-EE-06	Pump Station Facilities Control Panel -2	1					
S57-2		Pump Station No.10/ Instrumentation Facilities						
	S57-EE-07	Pump Station Reservoir Level Switch	1					
	S57-EE-08	Sump Pit Level Switches	2					
S57-3		Pump Station No.10/ Monitoring and Control Facilities						
	S54-EE-09	No.7 Pump Station PLC	1					
	Sub-total							

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. OM: Construction of Operation and Maintenance Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
OM	Procurement of O&M Equipment	Lot	1					
SL	Procurement of STP Laboratory Equipmen	Lot	1					
SG	Procurement of STP Laboratory Glasware and Others	Lot	1					
SR	Procurement of STP Laboratory Reagent	Lot	1					
WL	Procurement of WTP Laboratory Equipme	Lot	1					
WG-C	Procurement of WTP Laboratory Glassware (Chemical Department)	Lot	1					
WG-B	Procurement of WTP Laboratory Glassware (Bacteriological Department)	Lot	1					
WR	Procurement of WTP Laboratory Reagent	Lot	1					
	Total							

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. EQ : Procurement of O&M Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
EQ	Operation and Maintenance Equipment							
	Heavy Machines and Vehicles							
OM-1	Bucket Loader	unit	1					
OM-2	Excavator: Backhoe Type A	unit	2					
OM-3	Excavator: Backhoe Type B	unit	3					
OM-4	Frozen Ground Excavator/Chain saw, Type A	unit	2					
OM-5	Frozen Ground Excavator/Chain saw, Type B	unit	1					
OM-6	Hydraulic Hammer For frozon ground	unit	1					
OM-7	Mobile Steam Generationg Plant	unit	2					
OM-8	Dump-truck	unit	5					
OM-9	Survice Emergency Truck	unit	5					
OM-10	Truck Crane Type A	unit	1					
OM-11	Truck Crane Type B	unit	2					
OM-12	Trailer Type A	unit	1					
OM-13	Trailer Type B	unit	1					
OM-14	Channel Washing Machine Type A	unit	2					
OM-15	Channel Washing Machine Type B	unit	2					
OM-16	Channel Washing Machine Type C	unit	2					
OM-17	Sewer Washing Machine	unit	1					
OM-18	Vacuum Vehicle	unit	10					
OM-19	Flusher Vehicle	unit	2					
OM-20	Off-road Patrol Vehicle Type A	unit	1					
OM-21	Off-road Patrol Vehicle Type B	unit	3					
OM-22	Off-road Patrol Vehicle Type C	unit	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. EQ : Procurement of O&M Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
OM-23	Pipe Layer	unit	1					
OM-24	Earth Boring Machine	unit	1					
OM-25	Compressor	unit	2					
OM-26	Welding Transformer	unit	5					
OM-27	Diesel Generator, Model ADC 8-230 Up to 2.2 kWt	unit	2					
OM-28	Diesel Generator, Model ADC 10-400 Up to 4.5 kWt	unit	2					
OM-29	Diesel Generator, Model ADC 135-400 Up to 13 kWt	unit	1					
OM-30	Diesel Generator, Model ADC 100CT-400PM2 Up to 100 kWt	unit	1					
OM-31	Submerged pump, GNOM 25*20	unit	2					
OM-32	Submerged pump, GNOM 53*10	unit	3					
OM-33	Submerged pump, GNOM 40*25	unit	3					
OM-34	Submerged pump, GNOM 100*25	unit	2					
OM-35	Pump	unit	2					
OM-36	Generator	unit	2					
OM-37	Pipe Detecting Equipment	unit	2					
OM-38	Water Leakage Detector	unit	2					
OM-39	Laboratory for Pipe Teleinspection	unit	1					
OM-40	Potable Flow Meter	unit	8					
OM-41	Flow Meter for chanals	unit	2					
OM-42	Mobile Electrical Laboratory	unit	1					
OM-43	Water Meter Test Bench	unit	1					

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. EQ : Procurement of O&M Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
OM-44	Passenger Bus	unit	2					
OM-45	Crane Tower Truck	unit	1					
OM-46	Maintenance and Repair Center	unit	1					
OM-47	Horizontal Boring Machine	unit	1					
OM-48	Trenchless Pipe Layer	unit	1					
OM-49	Ground Water Reduction System	unit	2					
OM-50	Polyethylene Pipe Welder Type A	unit	1					
OM-51	Polyethylene Pipe Welder Type B	unit	1					
OM-52	Vacuum Pump	unit	2					
Equipment for the Workshop for Maintenance and Repair of the Pump Equipment and Valves								
OM-61	Vertical Turing Lathe	unit	1					
OM-62	Horizontal Milling Lathe	unit	1					
OM-63	Vertical Milling Lathe	unit	1					
OM-64	Hydraulic Press	unit	1					
OM-65	Virtual Drilling lathe	unit	3					
OM-66	Tool Grinding Desk machine	unit	5					
OM-67	Screw - Cutting Lathe	unit	4					
OM-68	Screw - Cutting Lathe	unit	3					
OM-69	Slotting Machine	unit	2					
OM-70	Jig saw	unit	2					
OM-71	Guillotine Crank Shears	unit	2					
Entire Monitoring System for Local Pump Stations								
Master Station								

**Astana Water Supply and Sewerage Project
Bill of Quantities**

Bill No. EQ : Procurement of O&M Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
OM-81	UHF desktop repeater VXR-7000	set	2					
OM-82	Radio Modem CD-711	set	2					
OM-83	Data Concentrator K-501	set	1					
OM-84	Trunk Controller ST-853	set	2					
OM-85	Electrical cabinet CRN	set	1					
OM-86	UPS 220V	set	1					
OM-87	Computer Pentium 4, 21' monitor, Software	set	2					
OM-88	Notebook Computer Pentium 4	set	1					
OM-89	Omni Directional Anthenna	set	1					
OM-90	Cable, Mounting and other material	lot	1					
OM-91	Assembling, primary setting-up and test	lot	1					
	Local Station (The quantities shall be for each station.)							
OM-92	UHF desktop repeater VXR-7000	set	120					
OM-93	Radio Modem CD-711	set	120					
OM-94	Control Unit	set	120					
OM-95	UPS 220V	set	120					
OM-96	Anthenna	set	120					
OM-97	Cable, Mounting and other material	set	120					
OM-98	Assembling, primary setting-up and test	set	120					
OM-101	Necessary Equipment Required	lot	1					
OM-121	Training of Employer's Operators	man-day	100					20days x 5 operators
	Total							

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. SL : Procurement of STP Laboratory Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
SL-22	BOD-tester	unit	1					
SL-23	COD-tester	unit	1					
SL-24	DO meter	unit	3					
SL-25	Bottle heater	unit	2					
SL-26	Electric range	unit	4					
SL-27	Extractors-1	unit	1					
SL-28	Extractors-2	unit	1					
SL-29	Extractors-3	unit	1					
SL-30	Rotary evaporator	unit	1					
SL-31	Personal Computer	unit	2					
SL-32	Refrigerator	unit	3					
SL-33	Electric storve	unit	1					
SL-34	Apparatus for Kjeldani nitrogen determination	unit	1					
SL-35	Residual chlorine meter	unit	3					
SL-36	GOST samples of contents of water solutions (30 items)	unit	1					
SL-37	Centrifuge	unit	1					
SL-38	Exhaust hood	unit	3					
SL-39	Laboratory table-1 (central)	unit	3					
SL-40	Laboratory table-2 (side)	unit	3					
SL-41	Laboratory table-3 (side)	unit	4					
SL-42	Laboratory table-4 (side)	unit	6					
SL-43	Work bench	unit	2					
SL-44	Table corner	unit	6					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. SG : Procurement of STP Laboratory Glasware and Others

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
SG	Sewerage-Laboratory-Glasware and Others							
SG-1	Phenol detector (glass)	pcs	1					
SG-2	Phenol distillation equipment	pcs	1					
SG-3	COD detector (glass)	pcs	10					
SG-4	Set of ion-selective electrodes	pcs	1					
SG-5	Liquid measuring unit	pcs	10					
SG-6	Water bath	pcs	1					
SG-7	Desiccator	pcs	2					
SG-8	Gutters for photo-calorimeter	pcs	1					
SG-9	Division funnels (1,000ml x 2, 250 ml x 8)	pcs	10					
SG-10	Cover glass for micro-units	pcs	4					
SG-11	Pipettes	pcs	200					
SG-12	Cylinders	pcs	100					
SG-13	Measuring Flasks	pcs	60					
SG-14	Glasses	pcs	100					
SG-15	BOD detectors	pcs	100					
SG-16	Porcelain bowls	pcs	40					
SG-17	Ash value detectors	pcs	20					
SG-18	Flat-bottomed conical flasks	pcs	150					
SG-19	Overalls	pcs	24					
SG-20	Towel	pcs	24					
SG-21	Bandages	pcs	100					
SG-22	Gauze	pcs	30					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. SR : Procuremrnt of STP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
SR	Sewerage-Laboratory-Reagent							
Q-SR-1	Detergent	pack	24					
Q-SR-2	Soap	dozen	12					
Q-SR-3	Soda	kg	50					
Q-SR-4	Journals	set	20					
Q-SR-5	Pens	num.	50					
Q-SR-6	Membrane filters	m ²	3					
Q-SR-7	Parchment	kg	25					
Q-SR-8	Filter paper red	pack	50					
Q-SR-9	Filter paper blue	pack	100					
Q-SR-10	Standard titer for pH detecting	box	4					
Q-SR-11	Potassium bichromate	box	2					
Q-SR-12	Mor salt	box	2					
Q-SR-13	Trilon B	num.	2					
Q-SR-14	Sodium thiosulfate	num.	3					
Q-SR-15	Nitric acid	num.	1					
Q-SR-16	Endo nutrient medium	kg	0.5					
Q-SR-17	Feeding agar	kg	0.5					
Q-SR-18	Glucose	kg	0.5					
Q-SR-19	Chloric tripheniltetrasolium	kg	0.2					
Q-SR-20	Alpha-naphthol	kg	0.2					
Q-SR-21	Dimethul-p-phenylenediamine	kg	0.2					
Q-SR-22	Natrium nitrate	kg	2					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. SR : Procuremrnt of STP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
Q-SR-23	Ammonia	liter	25					
Q-SR-24	Natrium hydroxide	kg	10					
Q-SR-25	Potassium hydroxide	kg	10					
Q-SR-26	Potassium Iodide	kg	6					
Q-SR-27	Potassium permanganate	num.	1					
Q-SR-28	Dissolved starch	kg	1					
Q-SR-29	Sulfuric acid	kg	40					
Q-SR-30	Hydrochloric acid	kg	30					
Q-SR-31	Manganese sulfate	kg	10					
Q-SR-32	Chloride Manganese	kg	10					
Q-SR-33	Silver sulfate	kg	0.2					
Q-SR-34	Diphenyl carbazon (C ₁₃ H ₁₂ N ₄ O)	kg	0.1					
Q-SR-35	Mercury nitrate	kg	0.2					
Q-SR-36	Ammonia molybdate	kg	0.5					
Q-SR-37	Nessler reactive	liter	1					
Q-SR-38	Acetic acid	liter	5					
Q-SR-39	Natrium Salicylate	kg	0.01					
Q-SR-40	Sulfo salicylic acid	kg	1					
Q-SR-41	Tartaric acid	kg	1					
Q-SR-42	Citric acid	kg	0.5					
Q-SR-43	Sulfarsazanium	kg	0.01					
Q-SR-44	Diphenyl-carbazide (C ₁₃ H ₁₄ N ₄ O)	kg	0.05					
Q-SR-45	Ammonia persulfate	kg	0.3					
Q-SR-46	Methylene blue	kg	0.01					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WL : Procurement of WTP Laboratory Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WL	Water Supply-Laboratory-Equipment							
WL-1	Dry oven	unit	2					
WL-2	Instruments dryer	unit	2					
WL-3	Drying sterilizing box	unit	5					
WL-4	Autoclave-1	unit	1					
WL-5	Autoclave-2	unit	2					
WL-6	Washing machine	unit	1					
WL-7	Washing accesary	unit	1					
WL-8	Ultrasonic pipette washer	unit	1					
WL-9	Ultrasonic washer	unit	1					
WL-10	Incubator-1	unit	1					
WL-11	Incubator-2	unit	5					
WL-12	Muffle furnace	unit	1					
WL-13	Water bath-1	unit	1					
WL-14	Water bath-2	unit	1					
WL-15	Electric stove	unit	3					
WL-16	Hot plate	unit	2					
WL-17	Magnetic stirrer with hot plate	unit	1					
WL-18	Magnetic mixer	unit	5					
WL-19	Shaker-1	unit	1					
WL-20	Shaker-2	unit	1					
WL-21	Analytical balance	unit	2					
WL-22	Specrtophotometer	unit	2					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WL : Procurement of WTP Laboratory Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WL-23	Turbidity tester	unit	1					
WL-24	Transparency tester	unit	10					
WL-25	Water collector	unit	1					
WL-26	Water collector with vessel	unit	1					
WL-27	pH meter	unit	3					
WL-28	Electro-conductivity meter	unit	1					
WL-29	Centrifuge-1	unit	1					
WL-30	Centrifuge-2	unit	1					
WL-31	Microscope	unit	3					
WL-32	Refrigerator for laboratory-1	unit	4					
WL-33	Refrigerator for laboratory-2	unit	2					
WL-34	Rotary evaporator	unit	1					
WL-35	Residual chlorine meter	unit	1					
WL-36	Water purification apparatus	unit	1					
WL-37	Vacuum pump-1	unit	1					
WL-38	Vacuum pump-2	unit	1					
WL-39	Thermometer	unit	2					
WL-40	Timer	unit	2					
WL-41	Thermometer & humidity meter	unit	1					
WL-42	Liquid analyzer	unit	1					
WL-43	Gas chromatograph	unit	1					
WL-44	Atomic absorption spectrometer	unit	1					
WL-45	Apparatus for bacteriological cultivation and colony calculation	unit	1					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WL : Procurement of WTP Laboratory Equipment

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WL-46	Apparatus of colony calculation	unit	1					
WL-47	Jar tester	unit	2					
WL-48	Exhaust hood	unit	3					
WL-49	Laboratory table-1	unit	1					
WL-50	Laboratory table-2	unit	1					
WL-51	Laboratory table-3	unit	3					
WL-52	Laboratory table-4	unit	14					
WL-53	Laboratory table-5	unit	3					
WL-54	Laboratory table-6	unit	1					
WL-55	Work bench-1	unit	3					
WL-56	Work bench-2	unit	3					
WL-57	Table corner	unit	4					
WL-58	Sink-1	unit	1					
WL-59	Sink-2	unit	3					
WL-60	Sink-3	unit	3					
WL-61	Storage cabinet-1	unit	7					
WL-62	Storage cabinet-2	unit	3					
WL-63	Balance table	unit	2					
WL-64	Van lack case	unit	1					
WL-65	Laboratory cabinet	unit	1					
WL-66	Steel shelf-1	unit	5					
WL-67	Steel shelf-2	unit	4					
WL-68	Chair-1	unit	20					
WL-69	Chair-2	unit	20					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WG-C : Procurement of WTP Laboratory Glassware (Chemical Department)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WG-C	Water Supply-Laboratory-Glassware-Chemical Department							
WG-C-1	Flasks for BOD	num.	10					
WG-C-2	Ditches for photo calorimeters	num.	50					
WG-C-3	Forceps-Metal	num.	4					
WG-C-4	Forceps-Plastic	num.	4					
WG-C-5	Wire brushes for test tube	num.	2					
WG-C-6	Wire brushes for glasses	num.	2					
WG-C-7	Wire brushes for flasks	num.	2					
WG-C-8	Desiccators (D 14cm x H 12cm)	num.	2					
WG-C-9	Electrodes for pH-meter	num.	4					
WG-C-10	Sandglass timer-5min.	num.	1					
WG-C-11	Sandglass timer-3min.	num.	1					
WG-C-12	Sandglass timer-2min.	num.	2					
WG-C-13	Sandglass timer-1min.	num.	1					
WG-C-14	Measuring flasks	num.	3					
WG-C-15	Measuring flasks-2,000 ml	num.	4					
WG-C-16	Measuring flasks-1,000 ml	num.	10					
WG-C-17	Measuring flasks-500 ml	num.	5					
WG-C-18	Measuring flasks-250 ml	num.	5					
WG-C-19	Measuring flasks-200 ml	num.	5					
WG-C-20	Measuring flasks-100 ml	num.	50					
WG-C-21	Measuring flasks-50 ml	num.	50					
WG-C-22	Measuring flasks-25 ml	num.	20					

Astana Water Supply and Sewerage Ptroject

Bill of Quantities

Bill No. WG-C : Procurement of WTP Laboratory Glassware (Chemical Department)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WG-C-23	Mesuring glasses-1,000 ml	num.	30					
WG-C-24	Mesuring glasses-500 ml	num.	10					
WG-C-25	Mesuring glasses-250 ml	num.	10					
WG-C-26	Mesuring glasses-150 ml	num.	50					
WG-C-27	Mesuring glasses-100 ml	num.	100					
WG-C-28	Mesuring glasses-50 ml	num.	50					
WG-C-29	Mesuring test-tubes-25 ml	num.	50					
WG-C-30	Mesuring test-tubes-15 ml	num.	50					
WG-C-31	Mesuring test-tubes-10 ml	num.	50					
WG-C-32	Mesuring cylinders-1,000 ml	num.	5					
WG-C-33	Mesuring cylinders-500 ml	num.	5					
WG-C-34	Mesuring cylinders-250 ml	num.	5					
WG-C-35	Mesuring cylinders-100 ml	num.	20					
WG-C-36	Mesuring cylinders-50 ml	num.	10					
WG-C-37	Conical funnel-D5 mm	num.	20					
WG-C-38	Conical funnel-D8 mm	num.	30					
WG-C-39	Conical funnel-D10 mm	num.	20					
WG-C-40	Conical funnel-D12 mm	num.	30					
WG-C-41	Conical flasks(flat-bottom)-2,000 ml	num.	5					
WG-C-42	Conical flasks(flat-bottom)-1,000 ml	num.	5					
WG-C-43	Conical flasks(flat-bottom)-500 ml	num.	20					
WG-C-44	Conical flasks(flat-bottom)-250 ml	num.	25					
WG-C-45	Conical flat-bottom flask-1,000 ml	num.	5					
WG-C-46	Conical flat-bottom flask-500 ml	num.	50					

Astana Water Supply and Sewerage Ptroject

Bill of Quantities

Bill No. WG-C : Procurement of WTP Laboratory Glassware (Chemical Department)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WG-C-47	Conical flat-bottom flask-250 ml	num.	200					
WG-C-48	Conical flat-bottom flask-100 ml	num.	200					
WG-C-49	Burettes-100 ml	num.	10					
WG-C-50	Burettes-20 ml	num.	10					
WG-C-51	Burettes-2 ml	num.	10					
WG-C-52	Mor pipette-100 ml	num.	10					
WG-C-53	Mor pipette-50 ml	num.	10					
WG-C-54	Mor pipette-25 ml	num.	20					
WG-C-55	Mor pipette-20 ml	num.	20					
WG-C-56	Mor pipette-15 ml	num.	20					
WG-C-57	Mor pipette-10 ml	num.	20					
WG-C-58	Mor pipette-5 ml	num.	20					
WG-C-59	Mor pipette-1 ml	num.	20					
WG-C-60	Graded pipette-10 ml	num.	50					
WG-C-61	Graded pipette-5 ml	num.	50					
WG-C-62	Graded pipette-2 ml	num.	50					
WG-C-63	Graded pipette-1 ml	num.	50					
WG-C-64	Porcelain glasses-1,000 ml	num.	5					
WG-C-65	Porcelain glasses-500 ml	num.	3					
WG-C-66	Porcelain cups-1,000 ml	num.	2					
WG-C-67	Porcelain cups-500 ml	num.	2					
WG-C-68	Thermal resistance cups for evapolation-100 ml	num.	20					

Astana Water Supply and Sewerage Ptroject

Bill of Quantities

Bill No. WG-C : Procurement of WTP Laboratory Glassware (Chemical Department)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WG-C-69	Thermal resistance cups for evapolation-50 ml	num.	10					
WG-C-70	Thermal resistance cups for evapolation-25 ml	num.	30					
WG-C-71	Thermal resistance cups for evapolation-10 ml	num.	10					
WG-C-72	Glass flasks for storage of acids reaction-1,000 ml	num.	10					
WG-C-73	Glass flasks for storage of acids reaction-500 ml	num.	10					
WG-C-74	Glass flasks for storage of acids reaction-250 ml	num.	30					
WG-C-75	Glass flasks for storage of acids reaction-100 ml	num.	30					
WG-C-76	Glass flasks for storage of acids reaction-50 ml	num.	20					
WG-C-77	Plastic flask-500 ml	num.	50					
WG-C-78	Plastic flask-250 ml	num.	10					
WG-C-79	Plastic flask-100 ml	num.	20					
WG-C-80	Plastic flask-50 ml	num.	10					
WG-C-81	Plastic flask-30 ml	num.	10					
	Total							

Astana Water Supply and Sewerage Ptroject

Bill of Quantities

Bill No. WG-B : Procurement of WTP Laboratory Glassware (Bacteriological Department)

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WG-B	Water Supply-Laboratory-Glassware-Bacteriological Department							
WG-B-1	Petri dishes	num.	5,000					
WG-B-2	Non graded flasks (thermal resistance)-250 ml	num.	500					
WG-B-3	Pipettes-5 ml	num.	100					
WG-B-4	Pipettes-1 ml	num.	50					
WG-B-5	Flasks for samples with rubber corks-500 ml	num.	1,000					
WG-B-6	Non graded test tubes-15 ml	num.	2,000					
WG-B-7	Spirit burner	num.	10					
WG-B-8	Cover glasses for miscracoping	num.	1,000					
WG-B-9	Obaject plate	num.	500					
WG-B-10	Measuring thermal resistance glasses	num.	50					
WG-B-11	Conic flat botformed retorts	num.	20					
WG-B-12	funnels-D5 mm	num.	50					
WG-B-13	funnels-D8 mm	num.	100					
WG-B-14	Ceramic glasses	num.	10					
WG-B-15	Sterilizer for membrene filters	units	5					
WG-B-16	Platinum bail with a handle	num.	5					
WG-B-17	Stands (supports) for retorts	num.	10					
WG-B-18	Stands for burettes	num.	5					
WG-B-19	Enamel saucepang for medium preparation- 2 liters	num.	3					
WG-B-20	Enamel saucepang for medium preparation-5 liters	num.	3					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WR : Procurement of WTP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
WR	Water Supply-Laboratory-Reagent							
Q-WR-1	Persulfic acid of ammonium (persulfate)	kg	1					
Q-WR-2	Ammonium sulfuric (sulfate)	kg	1					
Q-WR-3	Molybdeic acid of ammonium (geptamolybdate of ammonium)	kg	0.3					
Q-WR-4	Sal ammonia	kg	0.5					
Q-WR-5	Aluminium sulfuric (sulfate)	kg	1					
Q-WR-6	Barium chloride	kg	1					
Q-WR-7	Beryllium sulfuric (sulfate)	kg	0.5					
Q-WR-8	Benzonic acid	g	10					
Q-WR-9	Glycerin	liter	0.5					
Q-WR-10	Natrium hyposulphite	kg	2					
Q-WR-11	Hydrazine sulfuric (sulfate)	kg	0.1					
Q-WR-12	(hydroxyaminehydrochloride)	kg	0.1					
Q-WR-13	Gryss reagent	liter	1					
Q-WR-14	Dithizone (1.5-diphenyltoocarbazone)	g	50					
Q-WR-15	Diethylparaphenylendiamine sulfat	kg	0.5					
Q-WR-16	Three-choride 6-aqueous iron (III-chloride iron)	kg	0.1					
Q-WR-17	Ferrous (iron) sulfat 7-aqueous	kg	0.2					
Q-WR-18	Potassium dichromic (potassium dichromate)	kg	4					
Q-WR-19	Potassium chromic (potassium chromate)	kg	0.3					
Q-WR-20	Potassium bromide (for pharmacopia)	kg	0.2					
Q-WR-21	Potassium chloride	kg	0.2					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WR : Procurement of WTP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
Q-WR-22	Potassium persulfuric (potassium persulfate)	g	50					
Q-WR-23	Potassium sulfate	g	50					
Q-WR-24	Potassium hydrate	kg	0.2					
Q-WR-25	Potassium-sodium tartrate (potassium-sodium D-tartrate)	kg	2					
Q-WR-26	Potassium ferrocyanide (yellow blood salt)	kg	0.5					
Q-WR-27	Potassium ferrocyanide (red blood salt)	kg	0.5					
Q-WR-28	Potassium nitrate	kg	0.3					
Q-WR-29	Potassium iodide	kg	10					
Q-WR-30	Monobasic potassium phosphate	kg	20					
Q-WR-31	Potassium thiocyanate	kg	0.1					
Q-WR-32	Cobalt sulfate 7-aqueous (cobalt II-sulfate)	kg	1					
Q-WR-33	Calcium chloride	kg	1					
Q-WR-34	Calcium chloride waterless for exiccator	kg	0.2					
Q-WR-35	Starh (amylodextrine)	kg	0.5					
Q-WR-36	Calsium carbonic	kg	0.2					
Q-WR-37	Potash alum	kg	0.2					
Q-WR-38	Potash Iron-ammonim 12-aqueous	kg	0.1					
Q-WR-39	Sodium lauryl sulfate	kg	0.1					
Q-WR-40	Magnesium chloride 6-aqueous	kg	0.1					
Q-WR-41	Magnesium sulfate 7-aqueous	kg	0.4					
Q-WR-42	Magnesium choloride 4-aqueous	kg	0.4					
Q-WR-43	Magnesium sulfate 5-aqueous	kg	0.1					
Q-WR-44	Copper sulfate 5-aqueous	kg	0.1					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WR : Procurement of WTP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
Q-WR-45	Natrium acetate	kg	2					
Q-WR-46	Natrium phosphorus 2-substituted	kg	25					
Q-WR-47	Natrium fluoride	kg	0.1					
Q-WR-48	Sodium nitrate	kg	0.1					
Q-WR-49	Sodium hydrate	kg	3					
Q-WR-50	Sodium sulfate waterless	kg	0.1					
Q-WR-51	Sodium-N, N-diethyldithycarbonate	kg	0.1					
Q-WR-52	Sodium citric acid 3-substituted	kg	3					
Q-WR-53	Sodium carbonate	kg	0.1					
Q-WR-54	carbonate acid	kg	0.1					
Q-WR-55	Sodium tetrabonate	kg	1					
Q-WR-56	Sa;licylic acid of sodium	kg	0.5					
Q-WR-57	Sodium chromicum 4-aqueous	kg	0.3					
Q-WR-58	Nessler reagent	kg	2					
Q-WR-59	Tin doublechloride 2-aqueous (tin oxide)	kg	0.5					
Q-WR-60	Tin iron	kg	0.1					
Q-WR-61	Ammonium iron II-sulfuric (sulfate)	kg	0.4					
Q-WR-62	2-nitro-2-arsonobenzol-1, 4-diazoamynoazobenzol-4, sulfo-acid monosodium	kg	0.05					
Q-WR-63	Selenium	kg	0.02					
Q-WR-64	Selenium gel treated	kg	1					
Q-WR-65	Lead nitrate	kg	0.1					
Q-WR-66	Lead acetate	kg	0.1					
Q-WR-67	Mercury nitrate II	kg	0.1					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WR : Procurement of WTP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
Q-WR-68	Trilon B (complexone of III dinitrate salt of athylediamintetraacetic acid)	kg	1					
Q-WR-69	Zinc metallic	kg	2					
Q-WR-70	Zinc nitrate	kg	0.1					
Q-WR-71	Zinc acetate	kg	0.1					
Q-WR-72	Citric acid	kg	1					
Q-WR-73	Boric acid	kg	0.5					
Q-WR-74	Ascorbic acid	kg	0.5					
Q-WR-75	Sulfosalicylic acid	kg	1					
Q-WR-76	Sulfonul acid	kg	1					
Q-WR-77	Urotropine	kg	0.05					
Q-WR-78	Sulfuric acid	ampoul	5					
Q-WR-79	Hydrochloric acid 0.1 H	ampoul	30					
Q-WR-80	Trizlon "B"	ampoul	10					
Q-WR-81	Oxalic acid 0.1H	ampoul	20					
Q-WR-82	Potassium manganese acid 0.1H	ampoul	20					
Q-WR-83	9.18)	ampoul	5 each					
Q-WR-84	Magnesium sulfate 7-aqueous	ampoul	10					
	(Indicators)							
Q-WR-85	Aluminon	g	50					
Q-WR-86	Methyl-orange	g	2					
Q-WR-87	Phenolphtalein	g	5					
Q-WR-88	Phenol red water soluble	g	5					
Q-WR-89	Chromic dark blue	g	10					

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WR : Procurement of WTP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
Q-WR-90	Methyl-blue	g	1					
Q-WR-91	Silver-nitrate	g	50					
Q-WR-92	Azure-eosine by Romanovsky	g	5					
Q-WR-93	Murexide	g	5					
Q-WR-94	Tropeolin "OO"	g	2					
Q-WR-95	Erychrome black	g	2					
Q-WR-96	Morin	g	5					
Q-WR-97	Benzoic acid	g	20					
Q-WR-98	2.3-Diaminonaphthalin (DAN)	g	5					
Q-WR-99	Sulfic acid	kg	40					
Q-WR-100	Hydrochloric acid	kg	10					
Q-WR-101	Carbon 4-chlorous	kg	20					
Q-WR-102	Chaloroform	kg	20					
Q-WR-103	Ammonium	kg	20					
Q-WR-104	Ethylenglycol	kg	10					
Q-WR-105	Hexane	liter	1					
Q-WR-106	Isoamyl alcohol	liter	1					
Q-WR-107	Nitric acid	kg	10					
Q-WR-108	Acetic acid ice	kg	20					
Q-WR-109	Acetic acid	kg	20					
Q-WR-110	Ortophosphorous acid	kg	5					
Q-WR-111	Chloroc acid	kg	5					
	(Bacteriological Test)							

**Astana Water Supply and Sewerage Ptroject
Bill of Quantities**

Bill No. WR : Procurement of WTP Laboratory Reagent

Item No.	Description of Works	Unit	Quantity	Rate		Total Amount		Import Tax / Remarks
				Local Component Tenge	Foreign Component Yen	Local Component Tenge	Foreign Component Yen	
Q-WR-112	Nutrient medium for enterobacterias, dry (ENDO medium)	kg	25					
Q-WR-113	Menbrane filters No. 7, 8, 10	kg	25					
Q-WR-114	Nutrient medium for sterile control, dry (thioglycolic nutrient medium)	kg	5					
Q-WR-115	Nutrient agar for bacteria cultivation, dry	kg	25					
Q-WR-116	Nutrient medium for identification of enterobacterias, dry (Nutrient Gyss with lactose)	kg	3					
Q-WR-117	Nutrient medium for identification of enterobacterias, dry (Nutrient Gyss with glucose)	kg	3					
Q-WR-118	Beef-extract broth	liter	15					
Q-WR-119	Nutrient medium for separation and defferentiation of enterobacterias, dry (Coda	ml	3					
Q-WR-120	Immersion oil for microscope test	ml	100					
Q-WR-121	Alcohol	liter	200					
Q-WR-122	Natrium sulfuric acid	kg	10					
Q-WR-123	P-gulcose	kg	1					
Q-WR-124	Tracisng papers	kg	50					
Q-WR-125	White filter paper	kg	50					
Q-WR-126	Gauze	ml	50					
Q-WR-127	Filter paper standard with D-5 and D-10	kg	50 each					
Q-WR-128	a-naphthylamine	kg	1					
Q-WR-129	N, N-dimerhyl-p-phenylenediamine	kg	1					
Q-WR-130	Fuchsin, basic for midrobiological	kg	1					
Q-WR-131	Fuchsin, basic for dry nutrient medium	kg	1					

Section 6.3 Daywork Schedule

Section 6.3

ASTANA WATER SUPPLY AND SEWERAGE PROJECT
BILL OF QUANTITIES
Daywork Schedule

Item No.	Work	Unit	Quantity	Foreign Currency (Yen)		Local Currency (Kax. Tg)	
				Unit Price	Amount	Unit Price	Amount
1.	Daywork Labor						
/001	Skilled labor	hrs	10,000.00				
/003	Unskilled labor	hrs	10,000.00				
	Total of Item 1						
2.	Daywork Materials						
/001	Ordinary portland cement	ton	30.00				
/002	Reinforcement bar, round	ton	10.00				
/003	Reinforcement bar, deformed	ton	10.00				
/004	Sand for concrete	m ³	150.00				
/005	Aggregate, coarse, maximum size 20 mm	m ³	150.00				
/006	Aggregate, coarse, maximum size 40 mm	m ³	150.00				
/007	Ready mixed concrete, Grade 150	m ³	50.00				
/008	Ready mixed concrete, Grade 250	m ³	50.00				
/009	Timber for forms and shuttering	m ³	100.00				
/010	Sand for filling	m ³	500.00				
/011	Rubble stone, maximum size 300mm	m ³	100.00				
/012	Crusher-run for base course	m ³	200.00				
/013	Cut back bitumen	litre	500.00				
/014	Bitumen emulsion	litre	500.00				
/015	Chipping stone for pavement	m ³	100.00				
	Total of Item 2						
3.	Daywork Contractor's Equipment						
/001	Bulldozer, 11 ton	hrs	50.00				
/002	Swamp bulldozer, 7 ton	hrs	50.00				

Item No.	Work	Unit	Quantity	Foreign Currency (Yen)		Local Currency (Kax. Tg)	
				Unit Price	Amount	Unit Price	Amount
/003	Backhoe, 0.6 m ³	hrs	100.00				
/004	Backhoe, 0.3 m ³	hrs	100.00				
/005	Dump truck, 8 ton	hrs	100.00				
/006	Dump truck, 4 ton	hrs	200.00				
/007	Truck, 6 ton	hrs	100.00				
/008	Vibration roller, 3-4 ton	hrs	100.00				
/009	Pneumatic tire roller, 10-20 ton	hrs	100.00				
/010	Macadam roller, 10 ton	hrs	100.00				
/011	Vibration roller, 1 ton hand type	hrs	100.00				
/012	Rammer, compactor, 80-100 kg	hrs	200.00				
/013	Water pump, 50 mm, H=20m	hrs	200.00				
/014	Water pump, 100mm, H=20m	hrs	200.00				
/015	Concrete mixer, 0.2 m ³	hrs	100.00				
/016	Concrete vibrator, 50 mm	hrs	200.00				
/017	Water sprinkler truck, 5 kl	hrs	200.00				
/018	Engine sprayer, 200 lit	hrs	50.00				
/019	Diesel generator, 20 kVA	hrs	100.00				
/020	Truck crane, 10 ton	hrs	50.00				
/020	Truck Crane, 20 ton	hrs	50.00				
	Total of Item 3						
4.	Percentage increase for overtime	%					
	Total of Item 4						
	Total						

Note: Percentage increase for overtime shall be nominated by the Bidder.