

power than is required to operate the above pump with good over-all efficiency.

STARTING COMPENSATOR

The starting compensator shall be of the hand-starting type and of standard design.

The coils in the starter shall be equipped with 4 sets of taps, giving 40, 60, 70 and 85 per cent of line voltage.

It shall include both overload and no voltage protection and shall be so encased that when in position no current-carrying parts are exposed.

OIL SWITCH

The oil switch to be provided by the contractor shall be a 60 Amp., 2500 volt, single-throw, hand-operated, wall-type oil switch of standard design.

It shall be properly insulated and mounted in a suitable iron body having holes for conduit connection.

All live parts shall be enclosed.

The operating handle shall be of such design and the case so marked on the outside that the operator can tell at a glance whether the switch is in the open or closed position.

OIL

A supply of suitable transformer oil for use in the starting compensator and oil switch shall be provided by the contractor.

FLOAT SWITCH

The float switch supplied by the contractor shall be a standard 220 volt, A. C., enclosed type float switch.

All electrical parts

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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ARCHIVES PUBLIQUES
CANADA

All electrical parts shall be mounted in a heavy cast-iron cover, drilled at the top for connection to 1½" conduit and having the lower half of the cover removable for inspection and making connections, etc.

The switch shall be operated by a weighted arm falling over centre, or some other device which will ensure a quick motion of the contacts when opening and closing.

A copper float, together with a counter-weight and chain of suitable dimensions, shall be included.

MISCELLANEOUS

All other electrical equipment, including lead-covered cable, wire, potheads, condulets, switches, cabinets, conduit, etc., shall be standard equipment and satisfactory to the engineer.

PIPE FITTINGS

SUCTION PIPE

Suction pipe shall be 8" diameter wrought-steel pipe.

It shall be flanged where required and connected to the pump by means of a cast-iron reducer.

FOOT VALVE

Foot valve shall be of cast-iron construction and of flap design.

It shall be suitable for connection to an 8" diameter wrought-steel suction pipe and the area of the foot valve shall be at least 150% of the area of the suction pipe.

The flaps shall be

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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CANADA

The flaps shall be so constructed that they rest against the sides of the valve when open and allow free passage for the water.

SCREEN FOR FOOT VALVE

The screen shall be of cast-iron of suitable size and design and shall be connected to the foot valve by bolts.

GATE VALVES

All gate valves called for in these specifications shall be good quality, iron-body, bronze-mounted gate valves, flanged or threaded as required, and equipped with non-rising stems.

CHECK VALVE

The check valve to be supplied by the contractor shall be a standard 6" diameter iron-body, bronze-mounted, horizontal swing check valve of such design that the check when it is open does not interfere with the passage of the water.

It shall be provided with a removable cover on top to permit of inspection, adjustment, etc.

CAST-IRON FITTINGS

All cast-iron fittings called for in these specifications, including all cast-iron tees, reducing tees, elbows, increasers, crosses, flanges, reducing flanges, etc., shall be of good standard quality and capable of performing the work for which they are designed.

They shall conform in size to the standard dimensions for such

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

PUBLIC ARCHIVES
ARCHIVES PUBLIQUES
CANADA

dimensions for such fittings and shall be subject to rejection by the engineer should he deem them unfit for the purpose for which they are required.

PIPE - MISCELLANEOUS

All other miscellaneous lengths of pipe required in the above installation and including priming pipe, drain pipe, pipe used for connection between valves, fittings, etc., shall be standard cast-iron, wrought-steel or wrought-iron pipe of suitable diameter, as required by the engineer.

PIPE JOINTS

Flanged joints shall be used throughout on all pipe and fittings over 3" in diameter.

GASKETS

Gaskets shall be of the required diameter, full-face and made from No. 27 gauge sheet copper.

BOLTS FOR CONNECTING FLANGES

All bolts used for connecting flanges shall be of steel of standard dimensions and not more than 1/8" smaller in diameter than the holes in the flanges through which they pass.

They shall be equipped with square heads and hexagon nuts and threaded so as to permit the nut to run the entire length of the thread.

NUTS

Nuts shall be hexagonal in shape and of sufficient thickness to ensure against stripping of threads.

Indian Affairs (RG 10 Volume 6448, file 382-5, part 5)

PUBLIC ARCHIVES
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W O R K

WORK - GENERAL

All work undertaken by the contractor, including all pipe fitting, pouring of concrete for machinery foundations, installation of machinery, setting of poles, wiring, etc., shall be carried out by such methods and in such a manner as to be satisfactory to the engineer, and the engineer may order the contractor to re-set, re-wire and re-install at the contractor's expense all or any part of the work which, in the opinion of the engineer, is found to be unsatisfactory when completed, except in such cases where the engineer has directed the contractor to perform a certain piece of work in a certain manner and has assumed direction of the operation, in which case all extra charges in this connection shall be borne by the Department, and the contractor shall be relieved of his responsibility for that portion of the work.

ELECTRICAL WORK

All electrical work undertaken by the contractor in connection with the above installation shall be performed by the contractor in such a manner that when it is completed it shall be satisfactory to the Electrical Superintendent for the City of Kamloops and to the Inspector of Electrical Energy for the Province of British Columbia, and the contractor shall perform the work in such a manner and adopt such methods as will ensure the lives and safety of the workmen engaged upon the work.

All 2,000 volt circuits shall be made dead

before any

before any work is carried out thereon.

GROUNDING

All metal non-current-carrying parts of the above installation, including pump casing, motor frame, pipes, conduit, starter housing, cabinets, etc., shall be thoroughly grounded by the contractor to the satisfaction of the engineer.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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PART 5.

SPECIAL CONDITIONS

INTERRUPTIONS TO POWER SERVICE

The contractor shall not interrupt the supply of power to the Kamloops Industrial school for the purpose of performing any work in connection with the above installation for a period in excess of 8 hours in any one day of 24 hours, and then only between the hours of 8 A.M. and 6 P.M. daily and after due notice (8 hours) has been given to the engineer of such intended interruption, and permission to do so obtained; and the engineer shall have the right to instruct the contractor to re-connect the above school with the power line so that power will be immediately available for use in the school and school buildings at any time that the engineer may consider it necessary, and the contractor shall conform to such an order, notwithstanding that the contractor may have given due notice to the engineer of the intended interruption and have obtained permission from the engineer for the interruption.

Additional charges incurred by such connection, other than loss of time to workmen, will be borne by the Department.

Interruptions shall be as far as possible continuous.

Not more than three interruptions in any one day will be allowed.

DISPUTES (Electrical Work and Material Only)

All disputes between the engineer and the

contractor with

contractor with reference to the methods to be adopted, safety of workmen engaged upon the work, suitability of work performed and material supplied by the contractor, shall be referred for decision to the Electrical Superintendent for the City of Kamloops, and in the absence of the Electrical Superintendent or upon his refusal or failure to act, to the Inspector of Electrical Energy for the Province of British Columbia, and the decision so rendered by one or other of the arbiters appointed by the engineer shall be accepted by the contractor and regarded by him as final.

PROTECTION OF INDIVIDUALS

The contractor shall not leave current-carrying parts of the above installation unguarded or exposed in such a manner that they can be reached, touched or interfered with by unauthorized persons, either during the progress of or after the completion of the work, until same is handed over to the engineer, and he shall take such steps as may be necessary to prevent unauthorized persons (children and others) from coming into contact with any electrical apparatus under his control.

Doors of pump house and switch cabinets, etc. to be securely locked by the contractor upon the completion of each day's work and at such other times during the day when apparatus contained therein is being left unattended, notwithstanding that this electrical apparatus may not be carrying current at the time it is left; and the contractor shall accept full liability for all damage suits, claims for compensation, etc., arising out of an injury to any unauthorized person (children and others) through contact with electrical apparatus under his control.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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CANADA

COMMENCEMENT, PROSECUTION
AND COMPLETION OF WORK

Work shall be commenced by the contractor within 5 days from the date on which he receives notice from the engineer that the site for installation is available, and shall be completed within 10 days from the date of commencement of work, provided that the contractor shall not be required to commence work before November 15th., 1928, unless satisfactory to the contractor.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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CONTRACT

THIS AGREEMENT made the 15th. day of October .
1928.

BETWEEN

FERNIE BROTHERS,
of Kamloops, British Columbia,

hereinafter called "the Contractor",
of the First Part,

And the

DEPARTMENT OF INDIAN AFFAIRS,

hereinafter called "the Department",
of the Second Part,

WITNESSETH AS FOLLOWS:-

1. In consideration of the covenants and agreements hereinafter contained and to be performed by the Department, the Contractor hereby covenants and agrees with the Department to do the following work, viz.:

Installation of a pumping unit which work will include the supply and installation of one (1) #3L - 95A Worthington High Efficiency Ball Bearing Centrifugal Pump, double suction, single stage, with bronze non-overloading type impeller, split casing, mounted on heavy cast iron extended bedplate and direct connected through flexible coupling to a 50 H.P., 3600 R.P.M., 2200 volts, 60 cycle, Westinghouse Squirrel Cage Induction Motor with type KL wall mounting auto starter embodying overload and low voltage protection, together with all other necessary equipment in a thorough and workmanlike manner and in every respect in strict accordance with this agreement and plans numbered 1, 3 and 5, respectively, and the Detailed Specifications and General Conditions of Contract hereunto annexed (and which for the purpose of identification have been signed by the Contractor and the Department and form a part of this Agreement as if embodied herein), and to commence such work within Five (5) days from the date of notification from the Engineer that the site for installation is available and shall be completed within ten days from the commencement of work. Provided that the Contractor shall not be required to commence work before November 15, 1928, unless satisfactory to the Contractor, or within any extended time allowed by the Engineer under these presents.

2. In consideration of the faithful performance by the Contractor of all and singular the covenants and agreements herein contained and to be performed by the Contractor, the Department hereby covenants and agrees with the Contractor to pay him for the

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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full completion by him of all work embraced in this agreement in the manner and within the time herein specified and limited for the completion thereof and subject as herein provided the amounts or at the unit rates mentioned in the Contractor's tender for the said work (copy of which tender is hereto annexed and for the purpose of identification has been signed by the Contractor and the Department, and forms part of this Contract as if embodied herein) upon completion of work and in the manner and subject to the drawbacks and penalties mentioned in the Specifications.

3. The term "work" or "works" in the said Specifications and Conditions shall, unless the context requires a different meaning, mean the whole of the works and materials, matters and things required to be done, furnished and performed by the Contractor under this Agreement.

4. The term "Engineer" in the said specifications shall mean the District Chief Engineer of the Dominion Water Power and Reclamation Service, Department of the Interior, and shall extend to and include any of his assistants acting for him under his instructions, and all instructions or directions or certificates given or made by anyone acting for him shall be subject to his approval, and may be cancelled, altered, modified and changed as to him may seem fit.

5. Wherever in this Agreement it is stipulated that anything shall be done or performed by either of the parties hereto, it shall be assumed that such party has thereby entered into a covenant with the other party to do or perform the same, and that such covenant is entered into only by, for and on behalf of the parties hereto, but is also entered into by and on behalf of their respective executors, administrators, successors and assigns, and whenever this Agreement is entered into by more than one person or party of the first part the word "Contractor" shall be read "Contractors" and the pronouns referring to the Contractor shall be read as plural, and whenever a corporation is the party of the first part the said pronouns shall be varied accordingly.

IN WITNESS WHEREOF the parties hereto have caused these presents to be executed.

Witness:

October 15,
1928.

M. J. Hall

FERNIE BROTHERS

Per *[Signature]*

Witness:

M. J. Hall

For DEPARTMENT OF INDIAN AFFAIRS,

C. E. Webb,
District Chief Engineer,
Dominion Water Power and
Reclamation Service,

Per *[Signature]*

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CANADIAN NATIONAL RAILWAYS

New
Form 225
replaces
G.T.R.-E11

Montreal, Que.

DO NOT USE FOR PRIVATE CORRESPONDENCE

Dominion Government
Department of Indian Affairs
Accountant
Ottawa
Ontario

Via

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- P R O P O S A L -

For the sum of \$ Twelve Thousand Six Hundred and Ninety-one
(\$12,691.00). Dollars.

We, the undersigned bidder, propose to do all the work
and to supply all the material and equipment necessary
for the installation and construction of the above-
described Water Supply System in accordance with and
in the manner required by the attached plans and specifications
accompanying this proposal; and bind ourselves upon the
acceptance of this proposal to execute a contract with
necessary bond, if required, of which this proposal and
the attached plans and specifications shall be a part,
for the performance and completion of the said work
within the time required by and in the manner called for
by these plans and specifications.

Accepted for Department
of Indian Affairs.

Signed E. J. RYAN CONTRACTING CO., LTD.,

[Signature]

[Signature]
Pres. Ryan Co.

13/10/28

In the presence of

Witness

[Signature]
[Signature]

Witness

[Signature]
[Signature]

Signed and dated at Vancouver, B.C. on the 6th
day of October 1928.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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- NOTICE TO BIDDERS -

Steel pipe called for under Paragraph 3, Page 3, Part 2 of these specifications as follows:

2750 - lineal feet 8" diameter bituminous-coated, burlap-wrapped steel pipe, having ordinary hub and spigot lead-filled joints throughout; or plain ends, having welded joints throughout; except where flanges are necessary to connect to flanged fittings.

The tender will specify the type and make of pipe and connection proposed to be used.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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- NOTICE TO BIDDERS -

Information contained under Part 2 of these specifications,

"MATERIAL AND FITTINGS TO BE SUPPLIED BY THE CONTRACTOR" has been compiled for general estimating purposes only.

Intending bidders must satisfy themselves that the number, amount, etc. of material and fittings called for under Part 2 of these specifications and which must be supplied by the contractor are sufficient in number and quantity to make a complete and satisfactory installation when they have been assembled together.

No extra charges for additional fittings under Part 2 of these specifications, except where such fittings may reasonably be included under the heading "Extra Work", will be allowed. (See Paragraph 3, Page 4, Part 1 of these specifications)

The contractor is not required under these specifications to supply any pumping machinery or to supply any fittings, valves or miscellaneous pipe necessary to connect this pumping unit with the water main. The above will be included under a separate contract.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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SPECIFICATIONS

for

The Supply and Installation of a Water Supply System

at the

Kamloops Industrial School,

Kamloops, B. C.

Prepared for

Department of Indian Affairs,

by

Dominion Water Power and
Reclamation Service,
Kamloops, B. C.

September 11th., 1928.

Approved


District Chief Engineer,
Dominion Water Power and
Reclamation Service,
Vancouver, B. C.

P A R T 1.

TERMS OF CONTRACT

The bidder to whom an award is made shall execute a written contract with the Department of Indian Affairs, and, if bond is required, furnish good and approved bond within seven days after receiving the form of contract and bond for execution.

If the bidder to whom an award is made fails to enter into a contract as herein provided, the award will be cancelled, and an award may be made to the bidder

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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to the bidder whose proposal is the next most acceptable in the opinion of the Department of Indian Affairs.

ENGINEER

The word "Engineer" used in these specifications or in the contract means the District Chief Engineer of the Dominion Water Power and Reclamation Service, Vancouver, B. C., acting on behalf of the Department of Indian Affairs, who will be represented by assistants or inspectors authorized to act for him.

On all questions concerning the acceptability of material or machinery, the execution of the work and the determination of costs, the decision of the engineer shall be final.

CONTRACTOR

The word "Contractor" used in these specifications or in the contract means the person, firm or corporation with whom the contract is made by the Department of Indian Affairs.

The contractor shall, during the erection of the plant, be represented on the works in person or by a foreman or duly designated agent, and instructions or information given by the engineer to the contractor, foreman or agent shall be considered as having been given to the contractor.

MATERIAL AND WORKMANSHIP

All machinery and material must be of the specified quality and equal to approved samples, if samples have been submitted.

All work shall be done and completed in a thorough workmanlike manner, notwithstanding any

omission from these

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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omission from these specifications or the drawings.

All material furnished and all work done must be satisfactory to the engineer; work not in accordance with these specifications in the opinion of the engineer shall be made to conform thereto.

Unsatisfactory work or material may be rejected by the engineer at any stage of the work and if so ordered by the engineer shall, at the contractor's expense, be immediately removed from the vicinity of the works.

The absence of an inspector at the time the work was carried out shall not relieve the contractor from his responsibility to perform a satisfactory class of work.

DELAYS

The contractor shall receive no compensation for delays or hindrances to the work, except when, in the judgment of the engineer, direct or unavoidable extra cost to the contractor is caused by the failure of the Dominion Water Power and Reclamation Service to provide necessary information or site for installation.

All decisions of the engineer with regard to any claims for compensation shall be accepted by the contractor and regarded by him as final.

CLIMATIC CONDITIONS

The engineer may order the contractor to suspend work at any time should he consider that this work may be damaged by climatic conditions.

When delay is caused by an order to suspend work given on account of climatic conditions,

the contractor shall

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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the contractor shall be entitled to a reasonable extension of time on account of such an order and the engineer's decision as to what constitutes a reasonable extension of time shall be considered as being final.

CHANGES

The engineer may, upon notice to the contractor and without notice to the sureties on the contractor's bond, make such changes in the work or in the design or in the amount of materials required as the engineer may deem advisable; if such changes result in an increase or decrease of cost to the contractor the engineer will make such additions or deductions on account thereof as he may deem reasonable and proper, and his action shall be final.

EXTRA WORK OR MATERIAL

In connection with the work covered by this contract, the engineer may order work or material not covered by these specifications. Such work or material will be classed as extra work and will be ordered in writing. No extra work will be paid for unless ordered in writing and only at the rate or amount fixed upon in the written order.

INSPECTION

All materials furnished and work done under this contract will be subject to inspection.

The contractor shall furnish complete facilities, including the necessary labour, for the inspection of all material and workmanship.

The engineer shall have at all times free

access to all

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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access to all places where materials under construction are being stored, manufactured or installed, and all materials or work that do not conform to the specifications, accepted through oversight or otherwise, may be rejected at any stage of the work.

ERRORS AND OMISSIONS

The contractor will not be allowed to take advantage of any error or omission in these specifications or drawings; suitable instructions will be given where an error or omission is discovered.

SPECIFICATIONS AND DRAWINGS

The engineer will furnish the contractor with such detailed plans and information as he may consider necessary for the contractor's guidance.

DATA TO BE FURNISHED BY THE CONTRACTOR

The contractor shall furnish the engineer reasonable facilities for obtaining such information as he may desire respecting the character of the material and the progress and manner of the work, including all information necessary to determine its cost, such as the number of men employed, their pay, the time during which they worked on the various classes of construction, etc.

DAMAGES

The contractor will be held responsible and required to make good, at his own expense, all damages to person or property caused by carelessness or neglect on the part of the contractor, his agent or employees.

CHARACTER OF WORKMEN

The contractor shall not allow his agents

or employees to

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or employees to trespass on lands or premises in the vicinity of the work; and shall, when required by the engineer, discharge any person in his employ who is, in the opinion of the engineer, disorderly, dangerous, incompetent or objectionable.

METHODS AND APPLIANCES

The methods and appliances adopted by the contractor shall be such as will, in the opinion of the engineer, secure a satisfactory quality of work and enable the contractor to complete the work in the time agreed upon.

If at any time the methods or appliances appear to be inadequate, the engineer may order the contractor to improve their character or efficiency and the contractor shall conform to such an order; but the failure of the engineer to order such improvement of methods or efficiency will not relieve the contractor from the obligation to perform a satisfactory class of work and to finish it in the time agreed upon.

PROTECTION

The contractor shall be responsible for all material furnished him and for the care of all work until its completion and final acceptance.

The contractor will be responsible for the safety of all men engaged upon the work and shall adopt such methods of construction as will ensure their well-being, and shall accept full liability for all damage suits, claims for compensation, etc. arising out of any injury to an employee working
under his control.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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under his control.

COMPLETION OF WORK

The contractor shall complete the work in the time agreed upon in this contract and shall, upon its completion, remove all plant, rubbish or unused material at his own expense.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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PART 2.

MATERIAL AND FITTINGS TO BE SUPPLIED BY THE CONTRACTOR

CONCRETE

84 cu. yds. 1:2:4 mixture,
comprising - cement 504 sacks,
sand 38 cu. yds.,
gravel or broken stone 75 cu. yds.,
water

REINFORCING STEEL

10400 lin. ft. 1/2" dia. round rods (6940 lbs.)
900 lin. ft. 1 1/8" dia. round rods (1134 lbs.)
50 lin. ft. 3/8" dia. round rods (100 lbs.)

STEEL PIPE

2750 lin. ft. 8" dia. bituminous-coated, burlap-wrapped steel pipe, having ordinary hub and spigot lead-filled joints throughout, or plain ends, having welded joints throughout, except where flanges are necessary to connect to flanged fittings

CAST-IRON PIPE

1 8'6" length 4" dia. C.I. pipe (plain ends)
1 12' length 4" dia. C.I. pipe (flanged)
1 12 in. length 8" dia. C.I. pipe (flanged)
1 10' length 8" dia. C.I. pipe (flanged)
1 10' length 8" dia. C.I. pipe (flanged one end)
1 4' length 10" dia. C.I. pipe (flanged)
1 10' length 10" dia. C.I. pipe (flanged one end)

DRAIN TILE

150 lin. ft. 4" dia. drain tile

VITRIFIED PIPE

120 lin. ft. 12" dia. vitrified sewer pipe

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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FITTINGS

Gate Valves

- 1 2½" dia. Iron-body bronze-mounted flanged gate valve (non-rising stem)
- 1 2" dia. Iron-body bronze-mounted threaded gate valve (non-rising stem)
- 2 4" dia. Iron-body bronze-mounted flanged gate valves (non-rising stem)
- 1 8" dia. Iron-body bronze-mounted flanged gate valve (non-rising stem) with 11'6" extension rod
- 1 12" dia. Iron-body bronze-mounted flanged gate valve (non-rising stem) with 23' extension rod

Water Relief Valve

- 1 standard cast-iron bronze-mounted water relief valve suitable for 8" dia. water main (to relieve at a pressure of 125 lbs. per square inch)

Air Relief Valve

- 1 standard air relief valve for connection to 8" dia. water main (normal working pressure 45 lbs. per square inch.)

Elbows

- 3 8" dia. cast-iron flanged elbows (special bends)
- 2 10" dia. cast-iron flanged elbows, 90°

Tees

- 4 8" dia. cast-iron flanged tees

Reducer Tees

- 2 8" to 4" cast-iron flanged reducer tees, run 8" outlet 4"
- 1 8" to 2½" cast-iron flanged reducer tee, run 8" outlet 2½"
- 1 8" to 2½" cast-iron reducer tee, run 8" flanged outlet 2½" threaded

Reducers (straight)

- 4 8" to 6" cast-iron flanged reducers

Flanged Spigots

- 1 18" x 10" dia. cast-iron flanged spigot
- 1 24" x 12" dia. cast-iron flanged spigot

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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Flanges

16 8" dia. cast-iron companion flanges

Reducing Flanges

1 4" dia. to 2½" dia. cast-iron reducing companion flange, 2½" outlet threaded

Gaskets

2 2½" dia. full-face copper gaskets
3 4" dia. full-face copper gaskets
4 6" dia. full-face copper gaskets
28 8" dia. full-face copper gaskets
5 10" dia. full-face copper gaskets
1 12" dia. full-face copper gasket

Bolts and Hex Nuts

24 5/8" dia. x 2 3/4" bolts and hex nuts
40 3/4" dia. x 3" bolts and hex nuts
232 3/4" dia. x 3 1/4" bolts and hex nuts
40 7/8" dia. x 3 1/2" bolts and hex nuts

Pipe Covers

1 cast-iron pipe cover for 4" dia. cast-iron vent-pipe
1 cast-iron cover for 8" dia. stand-pipe

MANHOLE FRAMES AND COVERS

3 18" dia. cast-iron manhole frames and covers

HYDRANTS

1 standard 4" dia. iron-body, bronze-mounted flanged fire hydrant for 4' trench with 1 - 2½" dia. hose connection outlet (City of Kamloops thread)
4 standard 6" dia. iron-body, bronze-mounted flanged fire hydrants for 4' trench with 2 - 2½" dia. hose connection outlets (City of Kamloops thread)

HYDRANT WRENCHES

5 standard cast-iron or steel hydrant wrenches

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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MISCELLANEOUS

- 6 Yds. gal. iron screen 36" wide, 1/4" mesh
- 1 standard wooden door and frame, complete with hinges, lock, catch, etc., size 7' x 3'
- 1 window light and frame 3' x 2' complete with hinges, catch, etc.
- 1 frame lattice door, 7' x 3', complete with hinges, lock, catch, etc.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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P A R T 3.

WORK TO BE PERFORMED BY THE CONTRACTOR

Upon receipt of this contract the contractor shall, at the place designated by the plans accompanying these specifications, install, lay and erect all fittings, pipes and buildings called for in this contract, which work shall include the proper installation of

2750 lin. ft. of 8" dia. steel pipe,
150 lin. ft. of 4" dia. drain tile,
120 lin. ft. of 12" dia. vitrified sewer pipe,

and the contractor shall perform all excavation necessary for the proper laying of the above pipe and shall, upon its completion, backfill all or such portions of the trench occupied by this pipe as may be deemed necessary by the engineer.

The contractor shall, in addition, erect at points shown in the plans and which will be staked out for him by the engineer, the following buildings:

- 1 reinforced concrete reservoir,
- 1 reinforced concrete pump house and intake well,
- 3 reinforced concrete valve boxes.

The dimensions and construction of the above buildings shall be as shown in the accompanying plans, and the work shall include all excavation for, all construction of forms and the performance of all labour necessary for their proper erection and completion.

The contractor shall, during the construction of, or upon the completion of the buildings, or at any

other time when

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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other time when specified by the engineer, install all pipes, hydrants, fittings, valves, etc., in accordance with these specifications and shall do such backfilling around and upon the completed buildings or fittings as may be required by the engineer.

PIPE LAYING

All 8" diameter steel pipe shall be laid in straight lines on even grades at a depth of not less than 4' below the surface of the ground when measured from the top of the pipe.

Where additional excavation is necessary to maintain these even grades, this excavation shall be undertaken by the contractor.

Where bends are required and elbows are not used for this purpose, the bends shall be made subject to the approval of the engineer.

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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P A R T 4.

DETAILED SPECIFICATIONS

RESERVOIR

The reservoir shall be of the following dimensions:

Inside length	25'	Outside length	26'8"
Inside width	10'	Outside width	11'8"
Inside height	11'	Outside height	12'8".

Roof, walls and floor shall be 10" in thickness.

It shall be of concrete construction, reinforced as shown in the plans with 1/2" diameter and 11/16" diameter round steel rods.

It shall be finished in a workmanlike manner and when completed the walls, floor and roof shall be given one coating of cement plaster on the inside.

PUMP HOUSE

The pump house shall be of the following dimensions:

Inside length	13'6"	Outside length	15'
Inside width	11'6"	Outside width	13'
Inside height	9'6"	Outside height	10'9"

Walls and floor shall be 9" in thickness.
Roof slab shall be 6" in thickness.

It shall be of

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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It shall be of concrete construction, reinforced as shown in the plans with 1/2" diameter round steel rods.

It shall be finished in a workmanlike manner so that when it is completed it shall be of neat appearance.

INTAKE WELL

The intake well shall be of the following dimensions:

Inside depth	26'9"	Outside depth	27'6"
Inside length	4'	Outside length	5'6"
Inside width	3'	Outside width	4'6".

Walls and floor shall be 9" in thickness.

It shall be of concrete construction, reinforced as shown in the plans with 1/2" diameter round steel rods.

It shall be finished in a workmanlike manner so that when it is completed it shall be of neat appearance.

VALVE BOXES

Valve boxes shall be of the following dimensions, approximately:

Height	5'6"
Inside length	3'
Inside width	3'

Walls and roof shall be 6" in thickness.

They shall be of concrete construction as shown in the plans and shall be finished in a workmanlike manner.

CONCRETE

Indian Affairs (RG 10 Volume 6448, file 882-5, part 5)

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