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# CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF  
PUBLIC WORKS • TENDERS • ADVANCE INFORMATION • AND MUNICIPAL PROGRESS

EVERY WEDNESDAY

This paper reaches every week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers Purchasers of Municipal Debentures and leading Contractors in all lines throughout Canada.

VOL. 9.

MARCH 30, 1898

No. 9.

## THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY WEDNESDAY

As an Intermediate Edition of the "Canadian Architect and Builder."

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), \$2 per annum, payable in advance.

C. H. MORTIMER, Publisher,

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## FOR SALE

The Best Limestone Quarry in Ontario.

36 acres, conveniently situated on G. T. R., one mile north of Longford Station. The quarry is thoroughly equipped with good machinery, five guy derricks, two steam drills, a large duplex steam pump, engine, boiler, good house, large barn, blacksmith shop, etc. Quarry contains 21 stratified beds, varying in thickness from 2 to 28 inches. R.R. siding into quarry. Terms: part cash, balance easy; or would exchange for timber limit. Apply A. TAIT, Orillia, Ont.

## MASONRY PIERS

Sealed tenders will be received up to 7:00 p.m., TUESDAY, APRIL 5TH, 1898, for the following:

- (1) The raising of four piers and building of an abutment and retaining wall at the Queen Street Bridge, requiring about 225 cubic yards of masonry work.
- (2) The building of an abutment and retaining wall at the Main Street Bridge, requiring about 230 cubic yards.

A certified cheque for the sum of 10%, of the amount of the tender must accompany it.

The lowest or any bid not necessarily accepted. Specifications and all information will be furnished on application to the undersigned.

A. J. McPHERSON,  
Town Engineer.

Galt, March 22nd, 1898.

## WATERWORKS

FORT WILLIAM, ONT.

Sealed Tenders, addressed to the Secretary, will be received by the Board of Water and Light Commissioners up to 8 p.m. on

Friday, 15th April, 1898.

Lump tender wanted, covering all material and labor, for Power House, Pumping Machinery, Seven Miles of Mains, Elevated Storage Tank, Etc.

Full particulars can be had and plans and specifications seen at Fort William and at the head office of the Consulting Chief Engineer, John Galt, Esq., C.E. and M.E., Canada Life Building, Toronto.

Marked bank cheque, payable to Board of Water and Light Commissioners, for 6 per cent. of tender, must accompany bid.

The lowest or any tender not necessarily accepted.

T. ED. OAKLEY,  
Secretary-Treasurer.

## TO ARCHITECTS

For Sale—Large Safe, specially made for large plans in portfolios. Will go cheap. VINCENT & DUPRE, 17 St. James Street, Montreal.

## TENDERS WANTED

Tenders addressed to the undersigned (and marked "Tender for Church Work") will be received up to noon of

MONDAY, APRIL 11TH,

for the Mason and Plaster, Carpenter and Joiner, Plumbing, Metal Work, Heating, and Painting and Glazing trades required in the enlargement of the First Methodist Church and School Buildings, in the Town of Picton, Ont.

Plans and specifications may be seen at the offices of the Secretary, Picton, and Power & Son, Architects, Kingston.

The lowest or any tender not necessarily accepted

W. H. WILLIAMSON,  
Secretary Building Committee,  
Picton, Ont.



## TENDERS

For Roadways and Sidewalks.

Tenders will be received by registered post only, addressed to the Chairman of the Board of Control, Toronto, up to noon on WEDNESDAY, APRIL 13TH, 1898, for the following works:

### ASPHALT PAVEMENT:

On Carlton Street, from Jarvis Street to Yonge Street.

### CONCRETE PAVEMENT:

On Lane, from Leader Lane easterly to east end.

### BRICK PAVEMENT:

On Clinton Street, from College Street to 2,305 feet north.

### MACADAM ROADWAY:

On Queen's Park Road, from the Crescent to Bloor Street

On John Street Ramp.

### GRAVEL ROADWAY:

On Tyndall Avenue, from King Street to Springhurst Avenue.

### CONCRETE WALKS:

On Church Street, w. s., from Adelaide Street to Queen Street.

On Lakeview Avenue, n. e., from Harrison Street to Churchill Avenue.

### BRICK SIDEWALKS:

On Bond Street, w. s., from Shuter Street to Wilton Avenue.

On Gould Street, n. s., from Mutual Street to Church Street.

Specifications may be seen and forms of tender obtained at the office of the City Engineer, City Hall, Toronto.

A deposit, in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 2 1/2 per cent on the value of the work tendered for, must accompany each and every tender, otherwise they will not be entertained.

Tenders must bear the bona-fide signatures of the contractor and his sureties or they will be ruled out as informal.

Lowest or any tender not necessarily accepted.

JOHN SHAW, Mayor,  
Chairman Board of Control.

City Hall, Toronto, March 28th, 1898.

## TO CONTRACTORS—TENDERS

Tenders will be received by the undersigned up to 5 p.m. on WEDNESDAY, APRIL 6TH, for the whole of the various trades required in the erection of

## A NEW HOTEL

on Jarvis Street for the MacFarlane Estate. Plans and specifications may be seen and all information obtained at the office of the undersigned. The lowest or any tender not necessarily accepted

F. H. HERBERT, Architect,  
9 Toronto Street, Toronto.

## TO CONTRACTORS

Tenders will be received by the undersigned up to WEDNESDAY, APRIL 6TH, at 1 p.m., for the several trades required in

## REMODELLING A RESIDENCE

into a pair of semi-detached houses, also for erecting a new pair of semi-detached houses on Bloor Street West for J. F. Eby, Esq.

Plans and specifications may be seen and all other information obtained at the offices of the Architect.

GEO. W. GOURLock, Architect,  
714 Temple Building, Toronto.

The lowest or any tender not necessarily accepted.

## TENDERS

FOR THE ERECTION OF A

Cottage at the Gravenhurst Sanitarium

Will be received by the undersigned until

Monday, 11th April, 1898.

Plans and specifications may be seen on application to Mr. Campbell, at the Sanitarium, or at the Architect's office.

The lowest or any tender will not necessarily be accepted.

D. B. DICK, Architect,  
17 Toronto Street, Toronto.

## CONTRACTS OPEN.

GALT, ONT.—The town will purchase a road roller.

COLCHESTER SOUTH, ONT.—Asa Fox will erect a residence.

GUELPH, ONT.—Plans are being prepared for a new fire hall.

MANIWAKE, QUE.—A convent, to cost \$10,000, will be erected here.

WOOLER, ONT.—There is a talk of an English church being erected here.

MERRITON, ONT.—Chas. Tenbrook is preparing to build a dwelling house.

WEST LORNE, ONT.—Stephen Cook is preparing to build a brick residence.

CHESLEY, ONT.—It has been decided to build a new Methodist church, to cost \$6,000.

RIDGETOWN, ONT. Ten tenders have been invited for a parsonage for St. Michael's church.

NEW DENVER, B. C. Wharton's saw mill is to be refitted with modern machinery

ORMSTOWN, QUE.—A. McDougall has given \$3,000 for the building of a hall in this village.

BUNESSAN, ONT.—Duncan McArthur

is preparing to build a brick residence next summer.

ARNPRIOR, ONT.—Mc.Lachlin Bros. purpose making improvements to their saw mills.

ST. GEORGE, N. B.—The South Dumfries Council is considering the purchase of a road roller.

ST. JOHNS, QUE.—The feasibility of erecting a curling and skating rink is being discussed.

BROCKVILLE, ONT.—John Borthwick contemplates erecting a brick residence on Perth street.

CASSELMAN, ONT.—A presbytery will be built here this spring, to replace the one destroyed by fire.

TORONTO JUNCTION, ONT.—An addition 225 feet in length will be built to the C.P.R. machine shops.

KEARNEY, ONT.—Tenders close April 10th for the erection of a school house. J. F. Mann, secretary.

ESSEX, ONT.—J. A. Maycock, of Leamington, has prepared plans for a new town hall to be built here.

GLENDORA, MAN.—J. F. Fumerton & Co. are taking tenders for the erection of a brick and stone block.

ST BONIFACE, MAN.—The authorities of the hospital have under consideration the building of an addition.

ST. THOMAS, ONT.—B. H. Rothwell has announced his intention of reconstructing the Grand opera house.

ROSSLAND, B. C.—The question of building an outlet sewer into the Columbia river is under consideration.

AYLMER, QUE.—At the next Council meeting a by-law to establish a system of sewerage will be considered.

NANAIMO, B. C.—Andrew Haslam is preparing plans for a large saw mill and door factory to be built here.

SKEAD'S MILLS, ONT.—The Methodist congregation have purchased a site and intend building at an early date.

NORTH TORONTO, ONT.—The extension of the waterworks system is now under consideration by the town council.

CALEDONIA SPRINGS, ONT.—A scheme is on foot to build an Anglican church here, of brick or stone, to cost \$3,000.

LINDSAY, ONT.—The town purposes constructing sewers on several streets, the sum of \$1,500 to be expended annually.

AMHERST, N.S.—Rhodes, Curry & Co. will at once rebuild their foundry and planing mill, recently destroyed by fire.

LEAMINGTON, ONT.—The building to be erected by the Oddfellows Society will be 100 by 80 feet and three stories high.

LENNOXVILLE, QUE.—A complete waterworks system for the town will be constructed, to be completed by September 1st.

RENFREW, ONT.—B. Dillon, architect, has prepared plans for an English church to be erected at Seeley's Bay, Leeds County.

PORT ARTHUR, ONT.—Simpson & Ellis, architects, Toronto, are preparing plans for a residence for J. L. Mickle, this town.

WESTMEATH, ONT.—Tenders for building a stone church at Westmeath Front will be received by Andrew Elliott until April 9th.

WABIGOON, ONT.—Mr. Rutland, of London, England, will build a mineral water manufactory, to cost \$25,000, and a residence.

EAST ANGUS, QUE.—A rumor is current that the Royal Paper Mill Co. intend building a new pulp mill to manufacture sulphite pulp.

ALEXANDRIA, ONT.—Tenders for an addition to the Commercial Hotel will

be received by A. L. Smith, barrister, until April 4th.

MARKDALE, ONT.—Tenders are wanted by April 4th for the construction of a brick hall. For particulars apply to Jas. Adams, Walter's Falls.

LITTLE CURRENT, ONT.—A deputation from this place last week interviewed the government authorities regarding the building of a bridge.

PARRY SOUND, ONT.—Plans are being prepared by Simpson & Ellis, architects, Toronto, for a block of stores for John McLellan, this place.

MAGOG, QUE.—Several new buildings will be commenced this spring. Gauvin Bros. will build a large wholesale and retail hardware store.

COWICHAN, B. C.—The Boyd saw mill Co. are seeking a charter to build a tramway from Cowichan river to the bay, and also a dam on the river.

GODERICH, ONT.—Mr. Troumanhauser, architect, of Minneapolis, has arrived here to arrange for the erection of the proposed grain elevator.

VICTORIA, B. C.—The city has invited tenders for a steam pump—T. C. Sorby, architect, wants tenders for business premises for Weller Bros.

VANCOUVER, B. C.—The Board of Works is considering the question of drainage for Mount Pleasant, the cost of which will be about \$150,000.

PETROLEA, ONT.—I. Erb, architect, has been instructed to prepare plans and invite tenders for a new Methodist church. The pastor is Rev. W. Smythe.

SCHOMBERG, ONT.—C. B. Smith, C. E., of Montreal, has been surveying the route for the James Bay Railway between Kleinburg, Schomberg and Coldwater.

GRAND MANAN, N. B.—It has been decided to build a new school house, for which tenders have been invited. Particulars from Geo. E. Dalzell, secretary.

ST. JEROME, QUE.—Ed. Marchand, secretary-treasurer of the municipality, will receive offers until April 4th for the purchase of \$50,000 four per cent. bonds.

NAPANEE, ONT.—Tenders have been invited for the erection of a frame school house in the third concession of Adolphustown. Mark Trumpour, Secretary-Treasurer.

CHATHAM, ONT.—Tenders for the erection of a grand stand for the Maple City Athletic Association are wanted by Saturday, April 2nd. Address, M. C. McBrayne.

ST. PAUL, QUE.—Tenders have been invited by the town for the construction of two sewers, according to plans by J. Emile Vanier. R. G. Dunn, Secretary-Treasurer.

SYDNEY, C. B.—No plans have been made for a sewerage system, and as a vote of the ratepayers has to be taken, it is improbable that anything will be done this year.

BELLEVILLE, ONT.—Tenders will be received up to the 31st inst. for additions and improvements to John street Presbyterian church school room. Plans at office of A. J. Northrup.

PERTH, ONT.—Henry Taylor, Secretary St. Andrew's church, will receive tenders until April 12th for alterations and addition to building, from plans by Wm. Newlands, architect, Kingston.

MONCTON, N. B.—It is understood that R. C. John Dunn, architect, of St. John, is preparing plans for a large block, containing opera house, etc., to be built in this town by J. W. Y. Smith.

WILLOWDALE, ONT.—Peter S. Gibson & Sons, civil engineers, are asking for tenders for the construction of a 250-foot wooden bridge, and also for an iron bridge of about same length, to be completed by 1st June.

DESERONTO, ONT.—A by-law will be submitted to the ratepayers authorizing a grant of \$25,000 to the Bay of Quinte Railway. Should it carry, it is probable that the building of smelting works will be commenced at an early date.

BRANTFORD, ONT.—The Gould, Shapley & Muir Co. have secured the old buildings of the Verity Plow Co., and will remodel the same.—The Massey-Harris Co. contemplate building an addition to their works, to cost \$25,000.

COLLINGWOOD, ONT.—The G. T. R. have decided to postpone the erection of a grain elevator here until dredging operations are further advanced.—C. E. Stevens has had plans prepared for a new residence; estimated cost, \$8,000.

MITCHELL, ONT.—The corporation wants tenders by April 2nd for artificial stone sidewalk on south side of Main street. Fred Davis is chairman of Board of Works.—It is the intention of Dr. Wood to build a new block on Huron street.

WOODSTOCK, ONT.—Building operations this season promise to be fairly brisk, several contracts having already been let.—Thos. Dent will let the contract this week for a two story brick residence to be built on his farm east of the town; cost \$3,000.

RAT PORTAGE, ONT.—Specifications are being prepared for the proposed waterworks system, which is estimated to cost \$75,000. The engineer is J. Chalmers.—Jacob Hose, hardware dealer, has had plans prepared for a three-story business block.

HINTONBURG, ONT.—A movement is on foot to have a permanent pavement constructed on Richmond Road.—Plans are being prepared for an addition to the public school buildings.—Fred Heney will erect a brick residence on the Heney homestead, to cost \$6,000.

FREDERICTON, N. B.—W. E. Smith, manager Bell Telephone Co., will probably build a residence this season. It is also reported that H. H. Pitts, M.P.P., and B. A. Everett will each erect new buildings.—P. D. McKenzie will make some improvements to Long's Hotel.

ST. CATHARINES, ONT.—A by-law authorizing the construction of an electric railway between this city and Port Dalhousie has received its first reading in Council.—The Fire and Light Committee has decided to purchase an aerial truck, supply wagon, and 500 feet of hose.

WINDSOR MILLS, QUE.—There is an agitation in favor of the Canada Paper Co. and the municipalities of Brompton and Windsor buying out the present stockholders of the St. Francis Bridge Company, and approaching the government for assistance to build a free bridge.

TRURO, N. S.—The town council has decided to purchase the McRobert property for new fire department buildings.—Plans have been prepared for a reel house, with rooms for caretaker, and three cells.—Hollis Ryan has purchased a lot on Falkner street on which to build a cottage.

HARTLAND, N. B.—Preparations are being made for the erection of a number of new buildings, including a parsonage for the Free Baptist church.—It has been decided to form a joint stock company of citizens for the purpose of building a bridge. The government will be asked to guarantee the bonds for a term of 15 years.

INGERSOLL, ONT.—The reconstruction of the Wonham street bridge is being urged by certain members of the council.—It is reported that the Traders Bank of Canada have an option on the O'Callaghan property, opposite the new post office site, and that a new building may be erected thereon.

**ST. JOHN, N. B.**—The St. John Sulphite Pulp Co., the local representatives of which are Messrs. M. F. Mooney and P. Grosset, will commence work at once on the proposed pulp mill at Mispic, about 6 miles from this city. Buildings will be of brick, and sufficiently large for a daily capacity of sixty tons of pulp. Most of the machinery required will be purchased in Canada, the digesters and filtering plant have already been contracted for.

**LONDON, ONT.**—Hon. G. W. Ross, Minister of Education, was in the city last week for the purpose of inspecting the available sites for the proposed Normal school. As soon as a location is decided upon, tenders will be invited and the work proceeded with.—The city engineer has been requested to submit to council an estimate of the cost of a permanent break-water at West London.—It is proposed to issue debentures for \$16,000 for building new school.—Tenders are wanted by 30th inst. for brick residence on Elmwood avenue; McBride & Farncombe, architects.

**FORT WILLIAM, ONT.**—Steps are being taken to secure, if possible, the erection of a hospital.—Mr John Galt, C. E., who has charge of the proposed waterworks system, recommends that a water tower be placed near the centre of the town. The cost of this was not considered in the original estimate, and a vote of the rate-payers may be taken on a by-law to provide \$45,000, rescinding the present by-law, and making the rate of interest 4% instead of 5%. The time for receiving tenders has been extended until Friday, April 15th.—Simpson & Ellis, architects, Toronto, have been instructed to prepare plans for a row of houses for Jos. G. King, to be erected here.

**HAMILTON, ONT.**—The council has decided to advertise for tenders for a new steam road roller, and also for repairing the old one.—The ratepayers of school section No. 8, Barton, have decided to purchase a site on Terauley street and erect thereon a two-room school.—Building permits have been granted as below: Geo Mills, brick addition to B. Greening Co.'s wire factory, cost \$1,000; E. B. Patterson, four brick houses for J. Page, cost \$3,000; Larkin and McCrady, four two story brick dwellings on Wentworth street, cost \$7,000; W. W. LaChance, architect, two story brick dwelling on Herkimer street for Jos. Kemp, cost \$2,000.

**KINGSTON, ONT.**—B. McCarey, grocer, has leased the Central hotel and will make extensive alterations thereto.—Contracts will be let this week by Arthur Ellis, architect, for building an addition to a residence on Gore street.—Tenders have been invited for an elevator for the general hospital.—It is rumored that the Minister of Militia is considering the erection of a new barracks on the Royal Military College grounds.—The Dominion Cotton Mills Co. will ask the city for a bonus of \$50,000 to assist them in enlarging their works here.—The question of street pavements is being considered.—W. Newlands, architect, has prepared plans for alterations to four stores on Princess street.—Henry P. Smith, architect, wants tenders by April 2nd for two dwelling houses on University avenue.

**WINNIPEG, MAN.**—T. L. Morton, M. P. P., will erect a warehouse at Glenella, and another at Valley river, on the Dauphin Railway.—It is reported that the Molsons Bank have purchased property, corner Main and McDermott streets, and will erect a five story block thereon.—A new building will be erected opposite the C. P. R. telegraph office.—Engineers of the C. P. R. are preparing plans for twelve new stations to be erected this year in Manitoba and the Northwest Territories. The largest one will be at Calgary, 29 by 65 feet, frame, on stone foundation.

Smaller stations will be built at Sintaluta, Altona, Winkler, La Riviere, Rathwell, Elva, Pipestone, Reston, Pierson, Maple Creek and Dinorwic.—Contracts have not been awarded as yet for the alterations to the Richardson building for the Bank of Hamilton. D. B. Dick, Toronto, architect.

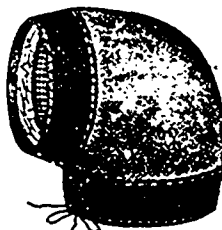
**QUEBEC, QUE.**—Improvements will be made to the Garrison Club, at a cost of \$10,000.—E. M. Talbot, architect, is preparing plans for a new building, three stories, 80 by 36 feet, to be erected on the site of the Maison Blanche. Same architect is preparing plans for the enlargement of a store for Thos. Dallaire, at St. Marie Beauce, also for a residence for Jos. Berheron, on St. Valier street, and for a city hall and fire station at Limoulou.—D. Ouellet, architect, has prepared plans for a considerable addition to the Hotel Dieu, work on which will shortly be commenced.—At the last meeting of the Finance Committee, it was decided to dispose of the corporation property on St. Louis street, the purchaser to erect buildings thereon within one year to cost not less than \$35,000.—Tenders will be invited for the purchase of city debentures.—P. T. Legare, secretary Quebec Exposition Co., will receive tenders up to Thursday, April 7th, for the construction of sheep pens, pig pens, horse stables and other buildings.—The city wants tenders for iron casting, lead pipe, cement, drain pipes, etc.—David Ouellet, architect, is preparing plans for interior decoration of St. Tite church at Charlevoix.

**OTTAWA, ONT.**—Mr. J. R. Booth states that work will shortly be commenced on the new depot and car shops to be built in Ottawa East for the Canada Atlantic Railway.—At a congregational meeting held in Knox church last week, it was decided to place a new roof on the building and remodel the interior, the walls and ceiling of basement to be of metallic sheeting; estimated cost, \$4,500.—The Hull Lumber Co. will not rebuild their saw mill, as recently reported.—It is rumored that a well-known hotel-keeper has purchased property at the corner of Rideau and Nicholas street on which to build a large hotel. The St. Jean Baptiste Society are said to have purchased property on the opposite corner on which to erect a new building during the coming summer, four stories, of brick, with granite points, and to cost \$30,000. The lower flat will consist of stores and the second flat of a hall for the society.—W. J. Conroy, of Deschenes, and A. McLaren, of Buckingham, are forming a company to purchase one of the Bronsons and Weston Lumber Co.'s mills, with the intention of putting in machinery for the manufacture of harvesting implements.—Building permits have been granted as follows: E. Derenzy, Florence street, brick veneer residence, cost \$1,500; Geo. Tomlinson, Waverly street, brick residence, cost \$2,400; W. A. Hamilton, McLaren street, brick veneer residence, cost \$1,200.—The prospectus of the "Union Canadienne," of Ottawa, has been issued. The purpose of this organization is to erect a building for the French Canadian societies of the city. It will be three stories, 66 by 140 feet, and will cost \$55,000. Plans for the same have been prepared.—The Canadian Electric Water Power Co., capital \$100,000, is applying for incorporation, to es-

tablish waterworks and manufacture electrical machinery. Hon. John Haggart, A. Charlevoix, R. G. Code, and others, are interested.—It is announced that plans are being prepared by the Public Works Department for a geological museum to be built opposite the printing bureau.—St. Patrick's Literary and Scientific Society will take steps in the near future to erect permanent quarters.—G. M. Bayley, architect, has invited tenders for a residence on Gilmour street and for alterations and additions to Bell street Methodist church.—Dr. J. D. Courney has purchased Mr. Murphy's residence, corner Lisgar and Metcalfe streets, and will make improvements.—The School Board of Ottawa East have decided to postpone the erection of new schools until next year.—The item of \$4,500 for a fire station in St. George's ward has been struck out of the city estimates.—The Public School Board has decided to reduce its estimates, and will only ask for \$50,000 for new schools.—J. O'Gara has prepared plans for a residence for A. Greenfield, Ottawa East.—Mr. G. E. N. Slinger contemplates building an addition to his hotel, to accommodate 60 guests.—D. T. Masson, Chairman Fire and Light Committee, will receive tenders until April 8th for combined gas and electrical fixtures for No. 2 fire station.

**MONTREAL, QUE.**—J. Alcide Chausse, architect, is preparing plans for one residence and six dwellings to be erected on DeLorimer ave. for Mr. C. Bourdon, and an office building for himself to be erected at corner Shaw and St. Catherine streets.—The competition for plans for new church buildings for the parishioners of St. Jean Baptiste, to replace those destroyed by fire in January last, closes on April 25th. Twenty architectural firms are said to have decided to submit plans. The cost of the church, sacristy and presbytery is not to exceed \$140,000. The buildings will be of Montreal limestone, fire-proof construction, with seating capacity for 1,800 persons.—Jos. Perrault, architect, has submitted to the Road Committee of the City Council plans for lowering the grade of Cote des Neiges hill, at an estimated cost of \$15,000. Mr. St. George, city surveyor, has also submitted to the same committee estimates and plans for the protection of the city in connection with the proposed new harbor improvements. The details and estimates of cost are as follows: Widening Commissioners street, \$53,500; macadamizing street, \$40,000; raising present wharves, \$50,000; revetment walls, \$155,730; ramps (macadamized at Queen, McGill and Victor streets), \$19,126; ramp from gates complete, \$39,000; C.P.R. descent (earthwork embankment), \$1,500; filling in deep water, 600,000 cubic yards, \$6,000; wharf frontage, \$87,141; alterations to Victoria pier, \$7,000; engineering and contingencies, \$15,000. Total, \$448,598.—Tenders are invited until April 4th for the construction of drains throughout the city. Specifications at the office of P. W. St. George, city surveyor.—The Road Committee has recommended to the government the adoption of a plan prepared by Francis Lapointe, architect, for the proposed bridge across the Lachine canal at Atwater avenue.—The Montreal Street Railway Co. have invited tenders for building stone founda-

(Continued on page 4.)



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tion for new engines and plant for the Montreal Belt Line Railway.—It is the intention of the Lachine Rapids Hydraulic & Land Co. to invite tenders for the construction of a switchboard, to cost about \$25,000, and to be placed in the sub-station of the company at the corner of McCord and Seminary streets. The specifications call for one built of blue Vermont marble, with an iron frame.—The question of erecting a fire station in St. Denis was discussed at the last meeting of the Fire and Light Committee.—A memorial will be presented to the Dominion government asking that work on the harbor improvements here be proceeded with at once.—Plans are being prepared by Mr. Bruce Price, architect, of New York, for the large hotel to be built at the corner of St. John and St. James streets, referred to some time ago. It will be about 10 stories, with all modern appliances.—Macduff & Lennieux, architects, have been instructed to prepare plans for the fire station to be built at the corner of Notre Dame and Gareau streets, St. Henri, for the corporation. The building will be of stone and pressed brick. Same architects are preparing plans for alterations to a house for Eug. Guay, Mayor of St. Henri, and for tenement houses to be built on Lusignan street for J. H. Foisy.—W. E. Doan, architect, is calling for tenders for three houses and stables to be built at Westmount for S. Price.—C. St. Jean, architect, invites tenders for tenement houses to be erected on St. Urban street for M. Leclere.—Chas. Chausse, architect, has called for tenders for five houses to be built on Nonancourt street for Jos. Larmarche.

TORONTO, ONT.—C. W. Postlethwaite, Harbor Master, will receive tenders until the 31st inst. for the dredging required in Toronto harbor during the year.—Ald. Burns, Denison, Hanlan and McMurrich have been appointed a sub-committee to look into the question of improvements on the water-front. Ald. Lamb and McMurrich favor the extension of Yonge street wharf to the new windmill line.—Tenders have been invited for the erection of stables on the Woodbine race track for the Ontario Jockey Club.—The City Engineer will request the Street Railway Company to lay a single line of track along Station street, from Simcoe to York, the track allowance to be paved with scoria blocks, at a cost of \$2,500. He will also ask for \$1,700 to macadamize the ramp leading up to John street bridge.—E. Pole, 76 Church street, wants tenders for sodding the grounds of the Canada Bowling and Lawn Tennis Club.—The City Engineer, in his last report to the Board of Works, recommended the following works: Cedar block pavement on Elizabeth street, from College to Grenville, cost \$566; cedar blocks on Murray street, from Caer Howell to north end, cost \$1,700; 24-foot brick pavement on Victor avenue, from Broadview avenue to Logan avenue, cost \$8,440; 24-foot brick on Langley avenue, from Broadview ave. to Logan ave.; 24-foot gravel roadway on May street, from South drive to May place, cost \$700; 32-foot asphalt on Gerrard street, from Jarvis to Church, cost \$8,100; 22-foot brick on concrete on Dundas street, from Queen to Arthur, cost \$11,870; 24-foot brick on Boulton ave., Gerrard to Queen, cost \$10,600; 22-foot asphalt pavement on McCaul street, from Queen to College, cost \$29,360; 33-foot macadam roadway on Isabella street, from Jarvis to Sherbourne, cost \$1,360. A sufficiently signed petition has been re-

ceived against a brick sidewalk on Richmond street, from Church to Jarvis.—It is said that the Grand Trunk Railway Company have been instrumental in inducing capitalists to build a series of first-class hotels in the Muskoka district, and that the work will be proceeded with this season.—Robins & Burden have sold to Geo. Spencer a block of property, 103 by 80 feet, on the south side of Pearl street. It is understood to be the intention of the purchaser to build a factory.—The premises occupied by J. Cleghorn & Sons, fruit merchants, Yonge street, are to be remodelled.—The annual meeting of the Toronto Smelting Co. was held in this city last week, at which James Kendry, M.P., was elected president. The company propose to establish smelting works at Madoc, Duora or Marmora.—At the last meeting of the Board of Works, it was agreed that \$4,100 be placed in the estimates for the Island bicycle path. It was also resolved to memorialize the government to proceed with the construction of seven additional groynes to protect the south side of the Island west of the breakwater. This work is in accordance with the recommendation of the government engineer, Mr. Temple.—At a conference of a committee of the Canadian Wheelmen's Association and the city aldermen, the question of improving the street pavements was considered. It was decided to endeavor to secure the construction of

asphalt pavements on Adelaide street, from Bay to York street and from Church to Jarvis, and on Victoria street, from Queen to Gerard.—A building permit has been granted to Ed. Musgrove for a two-story brick dwelling, west side Roncesvalles ave., north of Queen street, cost \$2,300.—Mr. F. H. Herbert, architect, has prepared plans and taken tenders on the new residence to be erected in Rosedale for Mrs. Emily M. Davies, the cost of which will be in the neighborhood of \$13,000. The same architect invites tenders in this issue, to close at 5 p.m. April 6th, for a new three-story hotel to be erected on the east side of Jarvis street, opposite Adelaide street, for the McFarlane Estate. The size will be 58 x 59 ft., of cream pressed brick and terra cotta, with red and buff stone trimmings, and equipped with the latest improvements.—It has been decided to use pressed brick for the new building for the Cawthra estate, corner Yonge and Temperance streets, of which Mr. A. R. Denison is architect.—Members of the city council had an interview with Mr. W. J. Gage on Monday last regarding a site for public swimming baths, for the erection of which Mr. Gage has agreed to give from \$15,000 to \$20,000.

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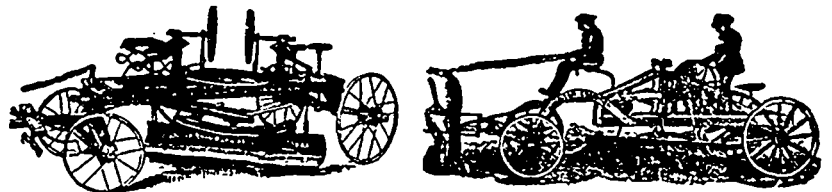
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**FIRES.**

Tremblay's saw mill on William street, Montreal, was damaged by fire last week to the extent of \$20,000.—The dwelling house of James Hammond, at Crosshill, Ont., was burned recently; small insurance.—The Convent of St. Maurice, and two houses adjoining, at Three Rivers, Que., were burned on the 23rd inst.—The house of J. L. Morrison, Ashburn Lake Road, St. John, N. B., was recently destroyed by fire; insured.—The residence of Jas. Wallis, at Peterboro, Ont., valued at \$16,000, was consumed by fire last week, loss partially covered by insurance.—Theodule Charette's saw mill in the township of Hull, near Ottawa, was recently burned; loss \$2,000.—The school building in connection with the provincial agricultural farm, Truro, N. S., was burned a few days ago, at a loss of \$6,000.—At Windsor Mills, Que., the Canada Paper Co.'s warehouse and G. T. R. freight shed were burned.—A brick block in Collingwood, Ont, owned by Jos. Reaves, of Parkdale, was badly damaged by fire — St. John's rectory at North Seguin, Ont., occupied by Rev. A. J. Cobb, was consumed by fire on Sunday last; loss \$2,000.—The Methodist parsonage at Harrow, Ont., has been almost completely destroyed by fire.—J. B. Oke & Co.'s oil warehouse at Port Hope, Ont., was burned on the 25th inst.—A block of stores at Belleville, Ont., owned by Jas. Gordon, was burned recently; loss \$3,000.—The American Hotel at Delhi, Ont., owned by V. Z. Gibson, of Branford, was burned on Monday last; loss \$3,000.

**CONTRACTS AWARDED.**

**WALKERVILLE, ONT.**—The Kerr Engine Co. have been awarded the contract for a compound condensing pumping engine of 3,000,000 gallons capacity in 24 hours, for Hiram Walker & Sons.

**COLLINGWOOD, ONT.**—Since last issue a change has been made in the contracts for Chas Stephens' residence. The contract for the wood-work has been given to the Bryan Mfg. Co., instead of Wilson Bros.

**MAISONNEUVE, QUE.**—Architect J. Alcide Chausse, of Montreal, has accepted the following tenders for the school building to be erected at this place for the R. C. School Commissioners: Stone work, Massy & Guilbault; brickwork, John Bombray; woodwork, A. Pauze & Son; steel work, Dominion Bridge Co.; plastering, P. Leclair; painting and glazing, T. A. Gauthier; plumbing, W. Chatillon & Co.; heating, David Quimet; roofing and ventilation, Lessard & Harris; tile flooring and w.c. fixtures, A. Vervort. The building will cost \$60,000 when completed. Same architect has accepted the following tenders for six dwellings on Nonancout street: Stone and brickwork, J. Durocher & Frere; woodwork, Aug. Messier; plastering, Beauchamp & Labelle; other works not given.

**TORONTO, ONT.**—The Toronto Radiator Company have secured orders for Safford radiators for the heating throughout of the Ruchell hospital, Glasgow, Scotland, and for the Bethnal Green Infirmary hos-

pital, London, Eng. They have also just received a cable order for the Mutual Insurance building, in Wellington, New Zealand.—Mr. F. H. Herbert, architect, has awarded contracts for the following works: Alterations to 94-96 Yonge st. for the Cawthra Estate — Brickwork, R. Chalkley; carpenter work, Young & Co.; plastering, George Rudlen; roofing, W. D. Hutson & Sons; painting, Charles Davis & Co.; galvanized iron, A. B. Ormsby & Co.; heating, Toronto Furnace Co.; plumbing, Fred Armstrong. Rebuilding factories on Adelaide street for Mr. C. H. Hubbard—Galvanized iron, Douglas Bros.; roofing, Duncan Forbes; elevators, Leitch & Turnbull; painting, F. E. Phillips; plastering, C. B. Simpson; plumbing and heating, Purdy, Mansell & Mashinter; cementing, A. Gardner & Co.

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# MUNICIPAL DEPARTMENT

## SUDBURY WATERWORKS.\*

By L. V. RORER O.I.S.

In designing the Sudbury system we were handicapped in one particular; it was necessary to keep the expenditure down to the lowest possible notch, and give the ratepayers water. The corporation was enterprising but not wealthy, and the engineers, being residents, were fully aware that the "town fathers" were compelled to finance carefully as well as supply necessary demands, and were willing to co-operate with them and keep down expense, but not, however, with a "penny wise, pound foolish" motto, but only in such cases where the town would not materially suffer and where changes and extensions could be made in future with little additional expense. The principal clippings were: All ornamental designing, extensions of mains to outlying portions, extension of conduit, and filtration. Therefore, while not being able to present to the engineering profession a perfect system, we present, at least, the foundation for such, as well as fulfilling the requirements and meeting the wishes of even an enterprising and ambitious town.

The only available source of supply was Lake Ramsey, which is situated about three-quarters of a mile from the central part of town, and is 25 feet below the level of same, rendering a pumping system necessary. Lake Ramsey, which is so named after the late W. A. Ramsey, chief engineer of the C.P.R. construction, is 5 miles long and from one-half to one mile wide, and is fed by small streams and springs from its immediate vicinity, its position on the height of land separating the watershed of the Wahnapitae river from that of the Whitefish river, excluding it from being the receiver of any great extent of surface drainage, and while the water is not rated as first-class, there is nothing injurious or obnoxious in its constituents.

The pumping station is built upon the shore of the lake, and consists of pump and boiler room 26 x 30 feet, electric light room 26 x 34 feet, with a 1½-story commodious dwelling above electric light part for the electrician and engineer. Just outside of station is built a well, into which the water from lake gravitates by means of 500 feet of steel conduit 11 inches in diameter. The walls of well are built from 18-inch brickwork at bottom to 9-inch at top, laid and lined with cement.

The intake at end of conduit is a steel funnel placed upright to pipe, with a perforated lid 30 inches in diameter.

About one-third of a mile from the lake and towards the town a rocky hill stands out as though Nature had placed it there purposely on which to erect the water tank. The top of the hill is 100 feet above the lake surface or 75 feet above the town.

Upon this is built a steel tower 80 feet high, and supporting the steel water tank 24 feet in diameter and 24 feet high.

The tower, built by the Canadian Bridge & Iron Co., of Montreal, consists of six columns of 6-inch T iron, set on bases 3 feet square of cut stone from Longford quarries, set in cement and bolted to the solid rock below. These columns are braced by three sets of horizontal girders of same dimensions, and with wrought iron inch tie rods. The columns are placed with 50-foot spread at base, and converge to 25 feet at top.

Water is pumped into this elevated tank through a 10-inch main, and from thence gravitates through 10, 8, 6 and 4-inch mains throughout the system.

The pumping plant consists of two direct acting duplex Northey pumps, each guaranteed to pump at a safe and reliable fire speed 30,000 gallons per hour with steam pressure of 80 lbs. per square inch. These are connected to delivery main with proper valves, to allow single or double action.

The surface of water in well at low water mark is 9 feet below the pump valves.

The system comprises approximately:

500 feet steel conduit,	11 inches diameter
1,800 "	10-inch main
3,500 "	8-inch "
7,000 "	6-inch "
4,000 "	4-inch "
26 fire hydrants, with double hose connection and 14 valves.	

The principal portion of mains in the town is connected in circuit, there being only two dead ends upon the entire system. The distributing main to town branches from the main leading to tower about 400 feet from same at foot of hill, thus enabling the tank to be shut off at any time by means of a gate valve and allow direct pressure from pumps over the system in case of repairs at any time to tank, or in case of large fires, but owing to the high pressure obtained from tower, the latter may never be required. Indeed, some householders grumbled that the pressure at tap was too great (a good fault), but to insure sufficient pressure at higher points within the town it was necessary to give 80 lbs. in the lowest portion. The water mains throughout are laid to give a 5-foot covering.

The upright pipe to tank was protected from frost as follows: A boxing of 2-inch plank 24 inches square was built over the 10-inch main, and the interior space around pipe thoroughly packed with mineral wool. A second boxing of 2-inch plank 36 inches square was placed over all, thus leaving an air space. The outer box was covered on all sides with a coating of hot coal tar.

Water tank was enclosed, both roof and sides, with inch lumber, tar paper, and shingles coated with mineral paint outside of studding, and dressed and matched lumber on inside. A space of 2 feet was allowed between the tank and covering, and a 3 foot walk outside with iron railing.

The connection of delivery pipe with tank is made with a special cast iron slip

joint to relieve the strain caused by expansion or contraction due to the temperature.

## SEWERS.

A system of separate sewers was included in the work for the thickly populated portion of the town.

Junction Creek, a stream 20 to 30 ft. wide, flowing as it does around the eastern and southern border of town, is the outlet for the disposal of sewage matter, and for the present population meets with the requirements, though in time the main sewer may need extending further down the stream before discharging.

This stream empties into Kelly Lake some two miles to the south-west of the town and situated further down the watershed than Lake Ramsey, the source of water supply.

The main sewer which extends along Lisgar street in a southerly direction to Junction Creek is of 18 inch extra hard salt glazed sewer pipe. The laterals extending east and west along the several cross streets are of 12, 10 and 9 inch pipe, as the case demands. The house laterals are of 6 and 4 inch pipe.

In laying the mains, junctions were placed every 50 feet (the width of lots), and these where present connections was not needed were plugged by means of a circular wooden cap sawn to fit, and cemented in. Extra precaution in all sewer joints was necessary owing to the nature of the soil, which was at that depth a "running sand" if at all wet, and would find its way through joints like water.

The greatest depth on main sewer was 20 feet, and this trench had to be timbered throughout to prevent caving in. The lower 4 feet of excavating had to be bucketed, shovelling being impracticable. All sewer trenching had to be tightly cribbed to enable safe and sure as well as speedy work. As a support or foundation for the pipe in main sewer two layers of 2-inch planking sawn in 3 foot lengths were laid angling across the bottom of trench, the upper layer angling in an opposite direction to that of the lower.

The depth at which this "running sand" is found varies according to the amount of rain fall. In a very wet season 3½ ft. is the maximum depth, while in a dry season one can dig 5 feet at the same place without fear of caving. When exposed to the drying elements this sand becomes quite hard and compact in a short time, but powders very finely.

Man-holes were built of brick and cement, with cast iron covers over main sewer at all junctions with street laterals, and also at upper ends of street laterals and bends. Through these the sewers are flushed by means of hose attached to hydrants.

On all house laterals a cesspool trap is placed at street line for the protection of mains, which has served as a good check, as shown in a few cases where inferior plumbing and careless occupants would ruin a sewer system if not protected by supervision or check as above.

In most cases a uniform grade of three inches per 100 feet was adhered to. The smallest grade which I had to resort to was 7 inches per 100 feet.

At outlet of main sewer there is quite a steep grade for 100 feet down the bank of creek, and the discharge is effected below the surface of the water. A solid retaining wall of brick and cement on face and rubble work behind is built around outlet for protection.

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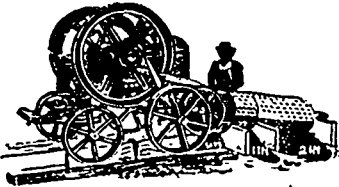
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Machinery.

Table listing machinery companies, such as Jenck & Machine Co.

Mantles, Grates, and Tiles.

Table listing mantle, grate, and tile companies, including Holbrook & Mollington.

Mail Chutes.

Table listing mail chute companies, such as The Cutter Mfg. Co.

Mortar Colors and Shingle Stains.

Table listing mortar color and shingle stain companies, including Cabot, Samuel.

Ornamental Iron Work.

Table listing ornamental iron work companies, such as Dennis Wire & Iron Co.

Painters.

Table listing painters, including Montreal Directory.

Plasterers.

Table listing plasterers, such as Gander, J. M.

Paints & Varnishes.

Table listing paint and varnish companies, including Muirhead, Andrew.

Parquet Floors.

Table listing parquet floor companies, such as Elliott, W. H.

Plate Glass.

Table listing plate glass companies, including Hobbs Glass Works.

Plumbers.

Table listing plumber companies, such as Montreal Directory.

Reflectors.

Table listing reflector companies, including Frink, I. P.

Roofing Materials.

Table listing roofing material companies, such as Ormsby & Co.

Roofers.

Table listing roofer companies, including Campbell & Gilday.

Sanitary Appliances.

Table listing sanitary appliance companies, such as Garth & Co.

Shingle Stains.

Table listing shingle stain companies, including Cabot, Samuel.

Stained and Decorative Glass.

Table listing stained and decorative glass companies, such as Horwood & Sons.

Stained and Decorative Paints.

Table listing stained and decorative paint companies, including Mackey Stained Glass Co.

Stained and Decorative Tiles.

Table listing stained and decorative tile companies, such as The Robt. M. C. Co.

Stained and Decorative Wood.

Table listing stained and decorative wood companies, including Wood & Co.

Stained and Decorative Metal.

Table listing stained and decorative metal companies, such as Metal Shingle & Siding Co.

Stained and Decorative Paper.

Table listing stained and decorative paper companies, including Ormsby & Co.

Stained and Decorative Glass.

Table listing stained and decorative glass companies, such as Toronto Foundry Co.

Stained and Decorative Iron.

Table listing stained and decorative iron companies, including Hillcock & Co.

Stained and Decorative Steel.

Table listing stained and decorative steel companies, such as Williams Mfg. Co.

Stained and Decorative Wood.

Table listing stained and decorative wood companies, including Boston Builders Co.

Stained and Decorative Metal.

Table listing stained and decorative metal companies, such as Wallberg, E. A.

Stained and Decorative Paper.

Table listing stained and decorative paper companies, including Albert Mfg. Co.

Toronto. Montreal.

Table listing prices for various building materials in Toronto and Montreal, including Hydraulic Cements, Lime, Plaster, etc.

HARDWARE.

Table listing hardware prices, such as Cut nails, Steel, and various sizes of nails.

Table listing iron pipe prices in various sizes and quantities.

Table listing lead pipe and waste pipe prices.

Table listing galvanized iron prices in various gauges and quantities.

Table listing structural iron prices, including steel beams and plates.