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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.

MAY 18, 1898

No. 16.

THE CANADIAN CONTRACT RECORD, PUBLISHED EVERY WEDNESDAY

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MCINTYRE BLOCK, WINNIPEG

Arrangements are being made for erection of a new building, 174 ft. (frontage) x 92 ft. deep x 3 stories high, with modern improvements, to replace the old one lately destroyed by fire. Manufacturers and others who can quote such prices for building materials, etc. as will allow their being laid down in Winnipeg at a satisfactory cost, are invited to send me descriptive price lists of their specialties. In case of orders, satisfactory guarantees as to payment will be given. Address, JAS. H. CADHAM, Builder and Contractor, Winnipeg.

TENDERS

Sealed tenders will be received, addressed to the undersigned and marked "Tenders," up to the 28TH MAY, 1898, for the construction (fire proof) of the SEMINARY of St. Charles Marromée, at Sherbrooke, P. Q.

Plans and specifications may be seen at my office and at Tanguay & Vallée's office, architects at Quebec.

The lowest or any tender not necessarily accepted.
JOS. J. B. VERRET, Architect.
42 Grove St., Sherbrooke, P. Q.

TO ARCHITECTS

The undersigned will receive, up to Noon, WEDNESDAY, JUNE 15TH NEXT, Competitive Plans and Specifications for the

Erection of a New Municipal Building

in the City of Stratford; also Plans and Specifications for reconstruction on the walls of old building lately destroyed by fire.

Architects wishing to submit Plans and Specifications for the above work can have full information sent them by addressing the undersigned

GEO. F. INGRAM,
Chairman Market and Police Committee.
Box 268, Stratford, Ont.

ARCHITECTURAL DRAUGHTSMAN wanted at once.

BOX 18, CONTRACT RECORD.

WANTED - PARTNER WITH CAPITAL; Freestone Quarry, north of Georgetown. Wm. IRVING, Limehouse, Ont.

STONE FOR SALE

A quantity of large flat Rubble Immediate shipment. Apply to B. BEAR, Glenwilliams, Ont.

NOTICE FOR TENDERS

Sealed tenders will be received by the undersigned Secretary of the Andover Water Commissioners up to SATURDAY, THE FOURTH DAY OF JUNE NEXT, at 4 o'clock p.m., for the furnishing of all necessary material and construction of a SYSTEM OF WATERWORKS for Andover Village, in accordance with plans and specifications to be seen at the office of said Commissioners in Andover, N.B.

The Commissioners do not bind themselves to accept the lowest or any tender.
Estimated cost of work, \$8,000.00.

F. J. CARTER,
Secretary.

Andover, N. B., May 9th, 1898.

TENDERS

Sealed tenders will be received by the undersigned up till Noon, 31ST DAY OF MAY NEXT, for all Mason Work, Cut Stone Work, Carpenter Work and Slate Roofing required in the erection of a CITY HALL for the City of St. Thomas, Ont. Tenders separate or in bulk.

Plans and specifications may be seen and forms of tender obtained at the office of N. R. Darrach, Architect, St. Thomas, Ont., on and after Monday, 16th day of May.

The lowest or any tender not necessarily accepted. A deposit of 2½ per cent. of the amount of offer will be required to accompany each tender.

R. SANDERS,
Chairman Building Committee.

St. Thomas, Ont., May 13th, 1898.

Corporation of the City of Three Rivers

Sealed tenders, addressed to the undersigned, and endorsed "Tender for Gallery and Stairs," will be received at this office until MONDAY, THE 30TH DAY OF MAY INSTANT, inclusively, for the construction of a Gallery and Two Stairs in rear of the City Hall, according to a plan and specification to be seen at the office of the undersigned.

Each tender must be accompanied by an accepted cheque made payable to the order of the Corporation of the City of Three Rivers, equal to five per cent of amount of the tender. This cheque will be forfeited if the party decline the contract or fail to complete the work contracted for, and will be returned in case of non-acceptance of tender.

The lowest or any tender not necessarily accepted.

L. T. DESAULNIERS,
Sec. Treas. T. R. Corporation.

City Hall, Three Rivers, 13th May, 1898.

Germain & Therin, contractors, Montreal, have dissolved partnership.

Barks & Ricketts have commenced business in Montreal as contractors.

CONTRACTS OPEN.

MEDDAN, N.B.—Ten cottages will be built here by the C.P.R.

PERTH, ONT.—Mr. T. A. Code will erect a new factory building.

MOUNT ALBERT, ONT.—Mr. D. Bedford will erect a residence.

REGINA, N.W.T.—R. H. Williams will erect an addition to his store building.

BALDUR, MAN.—A. W. Playfair and George Creamer will erect residences.

NEPIGON, ONT.—The Hudson Bay Co. propose to erect a large store building.

TRURO, N.S.—The Condensed Milk & Canning Co. will rebuild their factory.

JEANNETTES CREEK, ONT.—The Methodists intend building a church here.

ALMONTE, ONT.—The C.P.R. will build a new depot at this place and at Arnprior.

LISKEARD, ONT.—Mr. Birell, of York Mills, proposes to erect an hotel building.

CHATHAM, ONT.—The Kent flour mills are to be remodelled at a cost of \$10,000.

OIL SPRINGS, ONT.—An effort is being made to secure the construction of a flour mill.

GLENCOE, ONT.—A site has been selected for a new station building for the C.P.R.

WIARTON, ONT.—The Hepworth Mfg. Co. will erect a new building 100 x 50 feet in size.

GALT, ONT.—A manufacturing firm of Macon, Georgia, are seeking a location for a factory.

RAVENSWOOD, ONT.—Mr. Henry Ford is getting material on the ground for a residence.

CHILLIWACK, B.C.—Tenders are being received for a church for the Methodist congregation.

ALVINSTON, ONT.—The Council will obtain estimates of cost for the erection of a hose tower.

EAST ANGU, QUE.—It is reported that the Royal Paper Mills Co. will erect another pulp mill.

THAMESVILLE, ONT.—Mr. D. Rapelje of Kent Bridge is preparing to erect a brick hotel here.

GRANBY, QUE.—A by-law authorizing a loan of \$50,000 by the corporation was passed May 3rd.

LINDSAY, ONT.—It has been decided to macadamize William and Kent streets to the railway station.

NORTON, N.B.—W. H. Hime and Alex. McKinnon have purchased a site on which to erect a large warehouse.

OTTAWA EAST, ONT.—A special meeting of the Council will be held to discuss the question of a waterworks system.

PORTSMOUTH, ONT.—The congregation of St. John's church have decided to erect a new Sunday school building.

MIDLAND, ONT.—The G. T. R. will shortly proceed with the erection of 450 feet of new dock and a grain elevator.

GLENORA, MAN.—A new brewery is to be erected here by Mr. M. D. Wehrfritz.

ESSFN, ONT.—Diebel & Bricker are making arrangements to erect a storehouse, 80 x 30 feet.

CORNWALL, ONT.—Petitions have been presented to the Council for the construction of granolithic sidewalks.

COLLINGWOOD, ONT.—The Council give notice of their intention to construct additional granolithic sidewalks.

WALLACEBURG, ONT.—The local electric light company have agreed to instal an incandescent plant within eight months.

TILBURY, ONT.—Tenders are being invited for the erection of a new brick separate school and brick veneer convent.

LIMOILOU, QUE.—A by-law has been adopted sanctioning the expenditure of \$7,000 for the erection of a new town hall.

ARLINGTON, N. S.—Mr. T. Jackson will build a residence.—The Prest Lumbering Co. will erect a new steam saw mill.

BERLIN, ONT.—It is reported that the G.T.R. may purchase the Berlin & Waterloo street railway and extend the line to Weston.

TILBURY CENTRE, ONT.—Mr. Wilson, architect, of Chatham, is preparing plans for a brick residence for M. Stewart, to cost \$3,000.

SARNIA, ONT.—The Council gives notice of its intention to construct a tile sewer on Wellington street at an estimated cost of \$5,180.

WESTMOUNT, QUE.—A committee has under consideration plans and estimates for a new library in connection with Melville church.

BELLEVILLE, ONT.—The Works Committee will recommend the construction of a granolithic pavement on the north side of Bridge street.

SOUTH OSGOOD, ONT.—A new R.C. church is to be erected here. Particulars may be obtained from Rev Father McAuley, of this place.

LISTOWEL, ONT.—The town council gives notice of its intention to construct artificial stone sidewalks, at a total estimated cost of \$4,500.

PILOT MOUND, MAN.—Mr. Bethune proposes to erect a brick veneered store 26 x 50 feet.—J. M. Fraser is preparing to erect a residence 24 x 35 feet.

VICTORIAVILLE, QUE.—Hon. R. R. Dobell, of Quebec, and Mr. Pamveton, of Three Rivers, are said to be about to erect a pulp mill at this place.

HARRISTON, ONT.—Mr. George W. Gray, architect, is now preparing plans for an electric light and power station to be built on Grand river at Aboyne.

FERGUS, ONT.—The town council have under consideration a request from the school board for a grant of \$3,000 for the improvement of school buildings.

SANDWICH SOUTH, ONT.—The township council have sold township bonds to the amount of \$5,200, the proceeds to be used in the construction of drains.

MORDEN, MAN.—W. J. Steele has broken ground for a stone block on Stephen street. The building will be 70 x 25 feet, and will be used as a general store.

KINGSTON, ONT.—It is reported that Principal Grant, of Queen's University, will endeavor to raise by subscription the sum of \$60,000, with which to erect new buildings.

PORTAGE LA PRAIRIE, MAN.—The congregation of St. Mary's church are about to erect new buildings from plans prepared by T. C. Silverthorne, architect, of Brandon.

SHERBROOKE, QUE.—Messrs. Cliff & Pope, architects, of Montreal, are prepar-

ing plans for a new building for the Sun Life Assurance Co., and also for a new church in this town.

HALIFAX, N.S.—The Eastern Canada Savings & Loan Co. offer for sale debentures to the amount of \$20,000, bearing interest at 4½ per cent., for periods of from one to five years.

DURHAM, ONT.—An appropriation of \$400 has been granted to the Board of Works for gravelling streets.—The town will invite tenders for the purchase of consolidated town debentures.

ST. ANDREWS, N. B.—John Russell, James Dyer and W. Snodgrass, Committee on County Property, invite tenders until the 20th inst. for painting the exterior of the county court house.

KENTVILLE, N.S.—P. M. Holden, parish priest, invites tenders for the completion of the interior of St. Joseph's church. Plans and specifications at the office of J. W. Ryan. Tenders close May 20th.

ST. MARYS, ONT.—Mr. A. D. Martin is about to erect a residence on St. Andrew's street.—The by-law authorizing a loan of \$2,000 to build an iron bridge on Water street north has been carried.

HUMBERSTONE, ONT.—Mr. L. McGlashan, manager Ontario Silver Works, proposes to erect a brick addition, 100 x 40 feet, to the company's factory, and to instal therein a gas engine and dynamo.

ACTON, ONT.—The council has received a report from Mr. Parker, electrical engineer, regarding the cost of an electric light plant, with a capacity of 300 private incandescent lamps and 50 street lamps.

PORT ARTHUR, ONT.—Mr. J. A. Ellis, of the firm of Simpson & Ellis, architects, Toronto, has been here recently in connection with the erection of a number of new buildings, for which the firm are preparing plans.

ST. THOMAS, ONT.—The Management Committee of the Board of Education have decided to heat the new school buildings with hot air.—Mr. Jones, superintendent Wabash Railway, contemplates the erection of a repair shop.

INDIAN HEAD, N. W. T.—Plans have been prepared for new buildings as follows: Methodist church, brick, cost \$4,500; town hall, brick, \$7,500; block near Gordon Hotel, brick, \$3,500; frame implement warehouse, \$1,000.

BEAMSVILLE, ONT. Mr. J. E. Morrow will receive bulk or separate tenders until the 21st inst., for the erection of a new Presbyterian church here. Plans and specifications may be obtained of A. W. Peene, architect, Hamilton.

MAGOG, QUE.—Negotiations are in progress between the council and the Dominion Cotton Mills Co., whereby the company agree to make certain additions and improvements in consideration of a further exemption from taxation.

HINTONBURG, ONT.—The school board has applied to the council for a grant of \$7,000 for the erection of a new building, and the request has been complied with. A by-law will be submitted for the approval of the ratepayers.

GRAVENHURST, ONT.—Mr. Baxter, of Toronto proposes to erect a cottage at Bala.—Mr. S. Caldecott, of the same city, will build a new cottage on Laurie Island.—The Presbyterians at Windermere will erect a new church at a cost of \$1,200.

MOOSE JAW, N.W.T.—It is reported that Hamilton parties will erect a canning factory here to cost \$35,000.—Tenders will be received at the Brunswick Hotel until the 25th inst. for the erection of a three storey solid brick hotel building.

MONCTON, N.B.—L. W. McAnn and N. P. Crandell will erect a brick building adjoining the Allison block.—Mr. Peter McSweeney will erect a brick extension, 60 x 50 feet, three stories, in the rear of his

present premises.—The new building for the Merchants' Bank will cost \$20,000.

LEAMINGTON, ONT.—The Oddfellows have approved of plans prepared by A. Maycock, of this place, for a new opera block to be erected on the corner of Talbot and McGow streets.—A large amount of building is in prospect and in progress in this town, consisting principally of residences.

KASLO, B.C.—It is reported to be the intention of the C.P.R. to construct a wharf on the company's waterfront lot at the foot of Third street, at a cost of \$6,000.—The city corporation are asking for competitive plans for municipal buildings, to cost \$7,500. The sum of \$200 is offered as a premium.

OWEN SOUND, ONT.—Mr. James Price will erect a brick residence to cost \$2,000.—J. C. Forster, architect, will receive tenders until noon of June 1st, for improvements to High street school.—Keith Webster, chairman market committee, invites tenders until noon of the 25th inst., for repairing and reshingling the roof of the town hall.

WINDSOR, ONT.—The city council will submit a by-law to the ratepayers authorizing the purchase of a street macadamizing plant at a cost of \$9,000.—William McGregor, M.P., has received an inquiry from the government as to whether the city intends to provide a site for a drill shed and armoury, for the construction of which the sum of \$7,000 has been appropriated.

GUELPH, ONT.—Powell & Carswell, architects, invite tenders until noon of the 21st inst. for the erection of a two-storey frame house, with basement, hot air heating, plumbing, etc.; also for a frame residence for E. J. Toll, Ridge Road, Harwich, and for the construction of a brick veneer convent with stone basement and a brick school-house with stone foundations. Tenders for the latter must be addressed to Father Langlois and left at the office of the architects.

PETERBORO, ONT.—A deputation representing the town and county of Peterboro and township of Ennismore interviewed the Dominion government a few days ago and urged that a grant be given for the purpose of filling in Chenong Lake a distance of 1,700 feet from the Bridgenorth shore, erecting a pier between that and the Ennismore shore and a floating bridge in two sections capable of resisting the action of storms. The estimated cost of the work is \$30,000.

VICTORIA, B.C.—A by-law to authorize the city to expend \$15,000 in completing filter bed and reservoir at Beaver Lake has been read a first time in Council.—The legislature has adopted a resolution asking the Dominion government to erect a drill shed, for which the legislature offers to furnish a site.—W. S. Gore, deputy commissioner of lands and works, invites tenders until the 31st inst. for delivery of piles required in the construction of a highway bridge across the Thompson river at Kamloops, B. C.

VANCOUVER, B.C.—Mark Eschwege, of this city, representing a French syndicate, has instructions to make a survey for a cable from Vancouver to Dyea Skaguay and Wrangel.—Messrs. W. H. Leckie & Co. have commenced the erection of a new building opposite the post-office, from plans prepared by Mr. G. W. Grant, architect.—The City Council have decided to submit a by-law to the citizens to authorize the payment of a bonus of 50 cents per ton to the company, represented by Mr. H. W. Treat, who propose to erect a smelter in the vicinity of this city.

HAMILTON, ONT.—The council are again considering the question of the purchase of a municipal lighting plant.—A building permit has been granted to

Charles Mills for an addition to the Ontario Tack Factory. Stewart E. Mallock, secretary Hamilton Radial Electric Railway Co., invites tenders until the 23rd inst. for building the Birch avenue extension on the said road. Plans and specifications at Tyrell & Hughson's office.—Building permits have been issued to the Hamilton Bridge Company for a brick engine room, to cost \$1,500, and to Thos. Allen for a two-story brick dwelling on Walnut street, to cost \$1,400.

ROSSLAND, B. C.—The Bank of Montreal will commence the erection about June 1st, of a fireproof brick and stone building on the south-west corner of Washington street and Columbia avenue.—The Merchants' Bank of Halifax propose to build a stone block on the opposite corner.

ST. JOHN, N. B.—John H. McRobbie has purchased a lot on Queen Square on which to erect a residence.—A site has been selected at Norton Station for the new King's County Almshouse.—Fred Sandall, city chamberlain, invites tenders marked "Tenders for Debentures" until June 13th, for the purchase of city debentures to the amount of \$147,000, to be issued in sums of \$1,000 each, payable in forty years, bearing interest at 4 per cent. half yearly. The proceeds are to be applied to the extension of the water and sewerage service, the water supply service on the western side of the harbor and the laying of a new main from Spruce Lake to that part of the city on the western side of the harbor. For the latter purpose the sum of \$135,000 is required.

LONDON, ONT.—The council have under consideration the proposition to purchase a sewage purification plant from a Montreal firm at a cost of from \$50,000 to \$80,000 according to capacity.—J.D. Balfour, superintendent city hospital, invites tenders until the 19th inst., for cleaning walls and painting.—Walter M. English, M. D., will receive tenders until the 19th inst., at 5 p.m., for the erection and completion of a commercial building on Princess avenue in connection with the Collegiate Institute.—The city engineer has reported the probable cost of electric light under municipal control to be 25¢, 10 cts. per light, as compared with 23 cts., offered by the present company. The cost of installing an electric light plant of 350 light capacity is placed at \$80,236.50. The consideration of the matter has been laid over by the council.—The question of erecting a Home for Aged Oddfellows was considered at a meeting of the representatives of the lodges held in this city recently, and a resolution was passed asking the committee, who have the matter in hand, to furnish the lodges with a statement of the probable cost of erecting such a building as would be required, the annual cost of maintenance, probable revenue, etc.—Mr. J. E. Boomer will erect a dwelling on Waterloo street; cost \$1,800.—The Victoria Hospital Building Committee invite tenders until noon of the 23rd inst. for the erection of their new building. Bulk tenders only will be received.—The Main Building Committee of the Western Fair have under consideration plans prepared by Mr. Henry, architect, for an art gallery and art annex to the main building.

WINNIPEG, MAN.—The building committee of the Public School Board have recommended that tenders be called for the erection of new school buildings from plans prepared by Messrs. Hooper and Russell, architects.—Tenders for the Victorian wing to be added to the General Hospital have been received by the building committee, and contracts will shortly be awarded.—The Board of Works have recommended the construction of the following works: 12 foot block pavement on Dufferin avenue, from Main street to

Sinclair street, estimated cost \$11,000; 12 foot block pavement on Logan avenue, from Nena to McPhillips street, estimated cost \$8,000; 12 foot block pavement on Portage avenue, from end of present pavement to Ormaud bridge, estimated cost \$13,000; macadam pavement 46 feet wide, with stone curb and three inches of top dressing of crushed whin rock, granite or other hard stone, on Market street, from main street to the east line of Louise street, estimated cost \$3,500. The board have also recommended the purchase of a rock crushing plant, at a cost of about \$3,000, and the purchase of 25 feet of land, on the east side of Central fire hall, on which to erect additional buildings for fire purposes.—A special committee of the city council has recommended the extension of Colony street northwards from Ellice avenue to the western end of the eastern portion, at an estimated cost of \$3,200.—The secretary of the school board invites tenders until June 13th for \$75,000 worth of school debentures.—Mr. J. H. Rogers, of Toronto, has purchased additional land on Main street, and is said to be considering the question of erecting a new business block.

MONTREAL, QUE.—The Grand Trunk Railway Company have accepted a site on McGill street for a new building, to cost \$250,000.—It is said to be the intention of the Grand Trunk Railway authorities to construct 250 refrigerator cars.—The Board of Trade have addressed a communication to the Minister of Public Works enquiring as to the prospects of the harbor improvement works being commenced this season.—The city surveyor has recommended that the wooden block pavement on Craig street between Lacroix street and Victoria square be replaced with scoria granite blocks at an estimated cost of about \$75,000. The road committee have decided to ask tenders for rock Trinidad and Alchraz asphalt and granite and scoria block for this work.—Messrs. Roy & Content, 151 St. James street, have prepared plans for a house at Plymouth Grove, for Mr. A. J. Martin.—Messrs. Sincennes & Courval, 1808 Notre Dame street, are receiving tenders for all trades for the erection of a cottage at Cote St. Luc, for A. St. Germain.—Mr. James S. Smith, Nordheimer building, will receive tenders until the 21st inst. for a factory for the Toronto Rubber & Shoe Mfg. Co., at Hull, Que.; also for a villa at Cote St. Antoine road and Lansdowne avenue, Westmount, for the Rev. James Green; a cottage on Oliver avenue, Westmount, for Mr. John Stroud, tenders for which close on the

28th inst.; a residence on Duroucher street, tenders for which close on the beginning of June.—Mr. L. R. Montbriand, architect, 230 St. Andree street, is preparing plans for three stone and brick cottages to be erected on Esplanade street for Ald. Laudre Ouimet.

OTTAWA, ONT.—I. K. Jones, secretary Department Railways and Canals, invites tenders until noon, May 21st., for deepening of River St. Pierre.—Robert Kennedy has applied for a permit to erect a brick hotel on Sparks street, cost \$3,000, and William Weston a frame dwelling on Frank street, to cost \$1,400.—Ground has been broken for a new hotel building on Banks street, adjoining Grant's Hall.—Improvements are to be made to the Grand Opera House.—The Minister of Public Works has asked for the sum of \$5,000 for the construction of new green-houses on Parliament Hill.—The Finance Committee have requested the council to make an appropriation for the erection of a new fire hall in St. George's ward.—The Minister of Public Works has requested the sum of \$256,000 with which to purchase four dredges costing \$80,000 and construct two steam dredges costing \$75,000; two tugs, \$12,000; two scows, \$12,000; stone lifter, \$10,000; and testing scow, \$6,000.—Messrs. Band, Burritt & Meredith, architects, invite tenders until the 18th inst., at noon, for the various trades in connection with alterations to a building on Wellington street for Messrs. Slater and Sherwood.—The St. Patrick's Literary & Scientific Society is seeking to interest the Irish Catholic Societies of the city in the erection of a National Building.—Mr. Thomas Workman is about to erect a large fire-proof building at the corner of Mosgrove and George sts.—A building permit has been granted to John Bruce for a house on Nepean street, to cost \$3,200.—Messrs. Askwith & Neville have purchased land on which to erect a new building at the corner of Bank and Lisgar street.—Mr. Wm. Borthwick proposes to erect a large warehouse in the rear of his present premises on Rideau street.—The Ottawa Land Association are obtaining an estimate as to the cost of constructing a large sewer through Holland ave., Hintonburg.—The Grey Nuns are said to have had plans prepared for the improvement of the building on Porter's Island in the event of their offer for the property being accepted.—The government is said to have under consideration a scheme for deepening the channel of the river so as to prevent damage by floods.

(Continued on page 4).

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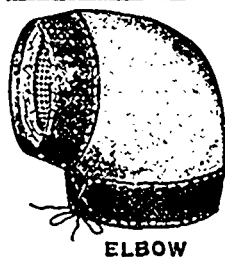
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TORONTO, ONT.—A new school room is to be added to the Parkdale Presbyterian church.—A sufficiently signed petition has been received by the Council for an asphalt pavement on York street from King to Front.—A new school building is to be added to the Bloor street Baptist church.—The Property Committee of the School Board will recommend the expenditure of \$20,000 in repairs.—The Board of Control recommend that the treasurer report \$109,141 funds required for repairs to track allowances.—The Fire and Light Committee will recommend that the 2,500 h.p. engine at Centre Island lighting station be replaced by one of 50 h.p., and that an extra dynamo be purchased.—The Council gives notice of its intention to carry out the following works on the local improvement plan: 26-foot brick pavement on Parliament street, from Queen to Gerrard street, estimated cost \$14,100; asphalt pavement with stone curbs on Station street, from York to Simcoe street, cost \$8,680; concrete walks on south side Lombard street, cost \$1,218; on north side Queen street, from Simcoe street to St. Patrick street, cost \$1,835; on south side Wellington street, between Bay and York streets, \$1,222; on north side Queen street, from Teravay to Chestnut street, cost \$1,455; on north side Queen street, from John street to a point 118 feet east of Beverley, cost \$342.—Mr. F. H. Herbert, architect, will close tenders on Friday next for the mason cut stone work only of a new solid stone detached residence to be erected on the n.w. corner of St. George street and Prince Arthur avenue for Thomas W. Horn.—Work will be commenced at once on the re-modelling of the property No. 12, 14 and 16 King st. west for the John L. Lawlor Estate, Mr. F. H. Herbert, architect, having awarded the principal contracts for the general constructional work.—The authorities of St. Clement's church are considering the advisability of enlarging the present building or erecting a new one, to meet the requirements of the congregation.—Building permits have been granted as follows: M. Jones, additions to houses, 145 to 151 George st., cost \$3,000; Jos. Carter, r. c. dwelling, 56 Elliott st., cost \$1,000; Dan. Casey, 2 story and attic bk. dwelling, 20 Denison square, cost \$2,500; Dr. Jos. Bascom, 3 story brick residence, Dunn ave., Simpson & Ellis, architects, cost \$4,000; Reuben Armstrong, 3 story bk. residence, e. side Brunswick ave., cost \$3,600; R. Magone, 3 story bk. residence and store, 191 Berkeley st., cost \$1,700; G. H. Duggan, alterations to 45 Yonge and No. 3 Wellington st., cost \$2,200; Geo. Coles, bk. addition, rear 719 and 721 Yonge st., cost \$1,100; Trustees German Lutheran church, bk. and stone church, 114 Bond st., cost \$7,000; Chas. F. Wagner, architect.—The city clerk has received a sufficiently signed petition for an asphalt pavement on Queen street, between John and Bathurst streets.—The Building Committee of the House of Industry has determined on the erection of two wings, three stories high, to cost \$13,000.

QUEBEC, QUE.—Mr. LeCardonell, architect is about to prepare plans for a new hotel to be erected on the site of the old city hall for Madame Pelletier.—P. T. Legare, 273 St. Paul street, will receive tenders until the 20th inst., addressed "Tenders for the Industrial Palace with two adjacent wings." Plans and specifications for the work will be furnished on application.—It has been decided to have St. Joseph and St. Louis streets paved

with asphalt at a cost of \$60,000. An asphalt sidewalk will also be built on the Esplanade for the Federal government.—Tenders are asked for 8,000 yards of stone piling, estimated cost \$26,000, and 10,000 feet of curbing, cost about \$7,000.—There is also a certain amount of appropriations and tearing down decided upon, the cost of which is to be taken from the \$250,000 appropriated for public works.—"La Compagnie de l'Electricite" are going to extend their line around the park, and thence to the exhibition grounds on one side and to the St. Charles cemetery on the other.—Berlinguet & LeMay, architects, who are finishing the interior of the cathedral of Charlottetown, P.E.I., will add \$10,500 to the cost for some some changes. These architects have much work on P.E.I., where they begin the Falkenwood asylum, at the approximate cost of \$30,000; the church of Tracadie, contractors, Schurman, Lefurgy, Clarke & Co., of Summerside, cost \$10,000; the church of Mont Carmel, in grey

Nova Scotia stone or brick, same contractors; extension of Tignish church, cost \$10,000; Kinkora church, in red stone from the island, cost \$15,000.—Tenders are in for the Prince of Wales College at Charlottetown, approximate cost \$35,000.—The new wing of the Parliament buildings, to cost \$14,000, will be begun after the session of the present legislature.—Same architects are preparing plans for a church at Souris, P.E.I., cost about \$18,000. They are asking for tenders for finishing the fine Gothic church of Beaufort, comprising two spires, 220 ft. high, and portal, and in the interior, galleries, seats, pulpit, etc.; approximate cost, \$35,000. They have besides the construction of a chalet for the Kenogami Club, the renovating of the residence of Hon. Justice H. C. Pelletier, Parloir street, and the instalment of the L'Anse-au-Loup bar-room facing the post office.—Peachy & Dusault, architects, have in course of construction the Y.M.C.A. baths, Glacis st., approximate cost, \$13,000. Tenders for

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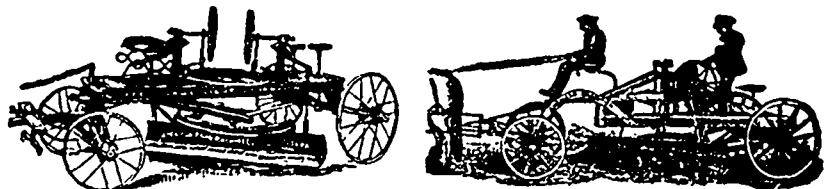
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MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

heating and plumbing were asked for the 10th.—Tenders are asked for the construction of the principal pavilion for the provincial exhibition, the total cost being about \$30,000.—Same architects have received instructions from Mr. D. Morgan for the reconstruction of the old building of the Journal de Quebec, and repairing of stores; cost \$20,000. They are also making plans for an annex to the residence of Mr. L. J. Demers, Grande Allee, \$1,000, and a project for four suburban villas, amounting to \$15,000.—Tanguay & Vallee, architects, are preparing plans for the repairing of the manufactory for Mr. G. E. Amyot (old Bresse factory), a suburban residence for Mr. C. J. Magnon, works at the Patronage Cote d'Abraham, the enlarging of the Sacred Heart asylum, and are collaborating with Mr. J. J. Verret for the plans of the new seminary at Sherbrooke. These works represent a value of about \$500,000.—David Ouellet, architect, has begun the construction of a new building for the Sisters of Charity, Richelieu street, and has also prepared plans for a group of city dwellings that Hon. Justice Chauveau is going to build on the site of the old city hall, and which comprises a block of 50 rooms 120 feet deep on Urseline lane and 40 feet frontage on St. Ursule street, and nine other residences, comprising five on St. Louis street and four on St. Ursule street. Mr. Ouellet has also prepared plans for the Bell Telephone Company's building, but the construction is postponed.—H. Stavelly, architect, has now in hand about \$50,000 worth of work, consisting of eight buildings in Quebec or neighborhood.—E. M. Talbot, architect, has in course of preparation plans for buildings to cost \$22,500 for Mr. G. Brocher, Bienville; C. E. Provost, Levis; Jos. Bergeron, Quebec; and four other residences in Quebec and Levis.—David Ouellet, architect, 117 St. John street, is asking tenders till June 1st for woodwork for the new building of the Sisters of Charity, Richelieu street. Copies of plans and

(Continued on page 6.)

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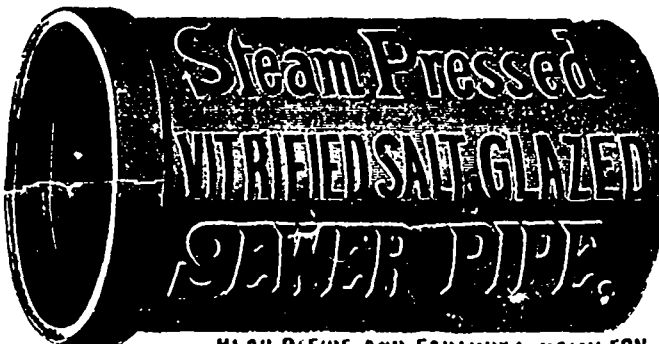
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specifications will be given to those asking for them till May 18, and will be returned to the architect with the tender.—Building permits have been issued as follows: Four houses for Vve. Drolet, St. Joseph street; P. Belanger, contractor. Five houses for J. Vaillancourt, 334 St. Joseph street; Mr. Guichereau, contractor. Seven houses for Mr. Bouchard, 241 St. Valer; N. Cauchon, contractor. Nine houses for D. Broomer, Ste. Madeline street, P. Breton, contractor. Nine houses for P. B. Dumoulin, 71 d'Auteuil street; E. Cote, contractor. Eleven houses for Mr. Robitaille, Franklin and Sauvageau streets; F. X. Blouin, contractor. Eleven houses for Mr. Baller, St. John street; Ch. Cote & Cie, contractors.

FIRES.

The fires of the past week are as follows: Woollen factory of Mr. E. Cantin, Warwick, Que.; loss \$15,000. C.P.R. dining hall, Moosejaw, N.W.T., totally destroyed.—Residence and barn of Rev. P. Concoran, La Salle, Ont.; loss \$5,000.—J. H. Conner's washing machine factory, Sussex street, Ottawa, Ont.; loss \$8,000.—Creaser House Hotel, at Dunchurch, Ont.—James Kerr's saw mill, at Havelock, Ont.; loss \$4,000.—Auxiliary building in connection with the General Hospital at St. Hyacinthe, Que., destroyed. Loss \$30,000.

CONTRACTS AWARDED.

BROCKVILLE, ONT.—Sewer pipe: E. D. Stacey, contractor.

CORINTH, ONT.—Methodist parsonage: William Andrews, Bayham, contractor.

BATHURST, ONT.—New school building: James Powell, contractor.

WINDSOR MILLS, N.S.—New Bridge: Dominion Bridge Co., contractors.

BARRIE, ONT.—Roofing town hall: Douglas Bros., Toronto, contractors.

TRAFALGAR, ONT.—Methodist church: John Somerville, Milton, contractor.

GALT, ONT.—Mill building for C. Turnbull Co.: Kribs & Co., Hespeler, contractors.

NIAGARA FALLS, ONT.—Heating Y.M.C.A. building: James Smart Mfg. Co., contractors.

HARRISTON, ONT.—Mr. George W. Gray has prepared and awarded contracts as follows. Township hall and court house to be built at Lion's Head—stone basement, frame superstructure; residence for Mr. John Noble, township of Maryborough—brick, hot air and plumbing; residence for Mr. F. B. Dale, Harriston—to be two storey brick, with latest improvements.

TORONTO, ONT.—Tuck pointing, Municipal Buildings: William Adams, price \$3,400.—Pavement contracts: Asphalt, Wilcox street, St. George to Robert, Constructing & Paving Co., \$8,494; asphalt, Howard street, Parliament to Sherbourne, Constructing & Paving Co., \$9,727; brick, Elm avenue and Glen road, Sherbourne to Hill, Dominion Paving & Constructing Co., \$1,737; brick, Winchester street, Parliament to Ontario, Dominion Paving & Constructing Co., \$3,117.—J. Francis Brown, architect, has let the masonry contract of the Firstbrook building to Richard Chalkley, and the carpenter work to Young & Co. Other trades will be let this week.—Heating apparatus, Christian Science church: James Smart Mfg. Co., contractors.

BIDS.

STRATFORD, ONT.—Bids were received by the city council for the construction of sewers on Cambria and Well streets as follows: For Cambria street system—Clark & Connely, Toronto, \$5,968.30; Kennedy & Wade, Owen Sound, \$7,958.29; W. F. Grant & Co., Toronto, \$6,029.52; E. A. Cawsey, \$5,772.79; Wm. Garson, St. Catharines, \$5,688.29; Pigeon & Crowley, Sebringville, \$6,608.21; Wm. Stevenson, Port Huron, \$5,425.35; J. H. McKnight, Toronto, \$5,930.69. For Well street—Clark & Connely, Toronto, \$681.88; Kennedy & Wade, Owen Sound, \$899.26; W. F. Grant & Co., Toronto, \$1,223.53; E. A. Cawsey, \$678.78; Wm. Garson, St. Catharines, \$749.92; Pigeon & Crowley, Sebringville, \$775.24; J. H. McKnight, Toronto, \$756.64.



THE SAVING EFFECTED BY GOOD ROADS.*

I said in the commencement of this address that many millions sterling—I might say between one and two hundred millions—might be expended with great profit on the construction of new roads, and the improvement and proper maintenance of our high roads. It is necessary to substantiate this by reference to fundamental facts. It is an indisputable fact that the number of horses required, or the distance which horses can haul a load is inversely proportional to the road resistance, and it is equally well known that speed and load taken together decrease more rapidly than the increase of tractive resistance when that is excessive. On the best surfaces the draught will vary from 25lb. to 30lb. per ton on the level. On good well-made macadam roads it may be from 38lb. to 60lb. per ton on the level. On broken stone road it rises to 90lb. to 100lb.; and on gravel road to 140lb. per ton on the level. On tramrails it varies from 15lb. to 40lb. per ton of load; and on railways from 6lb. to 12lb. per ton. Thus the resistance on good ordinary roads, which might be in use everywhere, is less than one-third that which is met with on common roads everywhere; or, again, it is from three to six times that it need be for the heavier vehicles, if wheelways were laid and properly maintained. Hence horses can haul on an asphalt road double the load they can on macadam, or they can continue at work much longer, or 10 horses will do instead of from 15 to 20. Even on a grooved tramway, with its high resistance compared with a flat rail, two horses will haul from 60 to 100 per cent. more load than the same horses can with equal fatigue haul an omnibus on an average macadam road. This sort of difference obtains with reference to every kind of haulage done on common roads, and I want to point out that it is not the omnibus or other ordinary vehicle owners who suffer this loss—it is the public; and the removal of all this would be to the public advantage in lesser fares, lower freights, greater distance carried for same fares, and great saving of time.

An equally or more important question is that of traction resistance on gradients. The increase in the power required to haul a load up a hill is directly proportional to the angle of inclination from the horizontal, and hence on a hill of 1 in 20, a very common gradient, the hauling power jumps from the average, on a good macadam road, of, say, 45lb. per ton to 45lb. + 125lb., or a total of 157lb. instead of 45lb. Bad as this is, it is insignificant as compared with the pull required on a gradient of 1 in 10 to 1 in 8, not at all infrequently met with. On 1 in 10 the hauling power required becomes 269lb. instead of 45lb., or no less than six times the power employed on the average nearly level road. It is to meet this heavy

* Abstract of the inaugural address of Mr. W. Worby Beaumont, M.I.C.E., etc., President Society of Engineers, London, Eng.

demand for power that two or three horses have often to be sent with a load which, but for the two or three short lengths of steep hill, could be taken by one horse, and it makes it necessary to put on a motor vehicle, boiler and engine power of from 12 h.p. to 16 h.p., where from 3 h.p. to 4 h.p. ought to be sufficient.

There are, it is estimated, in this country over a million horses. I will assume that 500,000 draught horses are at work. Each of these horses will cost for food alone and stabling about £30 per year, and I think I am entitled to assume, from what I have already pointed out, that at least one-third this number of horses could be dispensed with, or that the existing number of horses might be enabled to effect at least 33 per cent. more transport than they do at the present time. Ignoring for the minute the future increase in road traffic which must be provided for, this proves that about 170,000 horses less than the number now employed would need to be kept and fed. If we take only the cost of keep of these horses, and for the present say nothing of the reduced destruction of roads which would result from the removal of these horses, a saving of £30 per year per horse, or a total of £5,100,000, would be effected. Now this sum capitalized at 3 per cent. is £170,000,000 sterling, and enormous as this sum appears, there is no doubt that such a sum might profitably be invested in the roads of Great Britain if we consider the advantages to be derived from mechanical traction. It may, however, be reasonably assumed that the road traffic will grow so that even a larger sum than this may represent the possible saving. It is, in fact, the great advantages to be derived from mechanical road transport which will make road improvement desirable, and it is useless to expect either the proper development of mechanical traction, or the possible improvement in the many kinds of ordinary road vehicles, without a corresponding improvement in the roads upon which they are to run. The better the roads, the less destructive will be the vehicles and their tyres; for exactly the same reason as that which explains the wearing of thin light boots on the clean dry pavements of a well-kept city, or perhaps in a drawing room, by the man who finds it necessary to wear hob-nail boots on the rough roads of the country.

From a careful consideration of these points I am satisfied that at least one horse in every nine or ten could be saved, and that every draught horse in use could earn from £5 to £10 per year more. If, then, the saving of a horse only represents the cost of its keep, or say, £30 per year, and if only 2s. per week, or £5 per year, be taken as the greater average earning capacity of each horse, we have a saving per year on 500,000 horses of £1,500,000 for reduced horse keep, and of £5 per year on 450,000 horses, or £2,250,000, a total saving of £3,750,000 per year. This sum, capitalized at 3 per cent., the rate at which the Government or the country authorities could borrow money, is no less than £133,000,000. Thus, after basing every gain on the lowest estimate, it is obvious that an enormous sum could be usefully employed in the improvement of our national ways of communication, and that if only the most pressing of the work were done, a hundred millions of national capital, or from £5,000 to £10,000 per mile, could be expended by engineers to very great national advantage.

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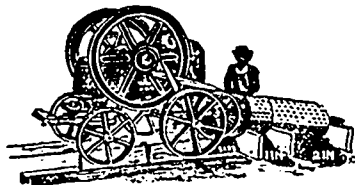
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