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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL

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.

JULY 20, 1898

No. 25.

THE CANADIAN CONTRACT RECORD,
PUBLISHED EVERY WEDNESDAY
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NOTICE TO CONTRACTORS

Sealed proposals will be received by the Trustees of the Petrolia Methodist Church, until 12TH DAY OF AUGUST, 1898, at 12 o'clock noon, for furnishing all the material and performing all the work required to construct a CHURCH BUILDING in accordance with plans and specifications in the office of the Architect, I. Erb, Sarnia; also in the office of the undersigned at Petrolia.

Bids will be received on the foundation, on the superstructure and on the completed building.
The right is reserved to reject any or all bids.
T. VANDELINDER,
Secretary of Board of Trustees.

TENDERS WANTED

Tenders will be received at our office until 4 p.m., MONDAY, AUGUST 15TH, for the several works required in the

ERECTION OF A BRICK SABBATH SCHOOL
in connection with Dunn Avenue Presbyterian Church, Toronto.

Plans and specifications may be seen on and after Friday, 22nd inst.

No tender necessarily accepted.

SIMPSON & ELLIS, Architects,
9 1/2 Adelaide St. E., Toronto.
Phone 2033.

ARC LIGHT ELECTRIC PLANT

Tenders for Dynamos, Lamps, Poles, Wiring, and all necessary electrical plant for the full equipment of a 350 2,000 c.p. Electric Arc Light Plant, together with all the necessary Engines, Boilers, etc., required for the steam plant to operate same, will be received at this office up to WEDNESDAY, AUGUST 3RD, 1898, where specifications and forms of tender may be obtained.

ORMSBY GRAYDON, City Engineer,
London, Canada.

ALD. SAMUEL STEVELY,
Acting Chairman No. 3 Committee.

TENDERS FOR SEWER WORK

Tenders will be received at this office (where plans and specifications may be seen) up to 5 o'clock on

THURSDAY, 28TH JULY, 1898,

for the supplying and laying of about 3,300 feet of 30-inch Cast Iron Sewer Pipe and 300 feet of Steel Pipe 20 inches diameter, together with the construction of all Syphon Chambers, etc., shown on plans.

ORMSBY GRAYDON, City Engineer,
ALD. N. COOPER,
Chairman Sewage Committee.

WILLIS CHIPMAN, C.E.,
Consulting Engineer.
London, Ont., July 8th, 1898.

Sealed Tenders

Will be received up to noon on SATURDAY, JULY 30TH, for all Trades except Plumbing and Heating required in the ERECTION OF A RESIDENCE on the South-East Corner of Huron and Bloor Streets.

Plans and specifications may be seen at the office of the Architect, to whom tenders are to be addressed.
The lowest of any tender not necessarily accepted.

F. S. BAKER, Architect,
90 Yonge St., Toronto.

Tenders For Sidewalks

Tenders will be received up to 6 o'clock p.m., FRIDAY, JULY 29TH, for the Construction of Artificial Stone Sidewalks and Curbing in the Town of Waterloo. Specifications may be had from J. McBride, Esq., Barrister, Town Clerk, or from the undersigned.

JAMES WARREN,
Town Engineer.

Waterloo, July 16th, 1898.

TENDERS

Enclosed in a sealed envelope, accompanied by a specification, addressed to the undersigned and marked "Tender for Sidewalk," will be received by the Corporation of the Town of Walkerville until Noon on TUESDAY, THE 26TH DAY OF JULY, 1898, for Constructing about 8,000 Square Feet (more or less) of

Silex Stone or Granolithic Walk

on South Side of Sandwich Street and West Side of Walker Road, in said Town of Walkerville.

The work to be completed on or before the 1st day of September, 1898.

A satisfactory guarantee required for the perfect condition of the walk for a fixed period.

An accepted cheque for 10% of the contract price, payable to the order of the Treasurer of the Town of Walkerville, must accompany each tender, as a guarantee for the fulfilment of contract, otherwise tender will not be considered.

This cheque will be returned in case of non-acceptance of tender.

The lowest or any tender not necessarily accepted.

CECIL H. ROBINSON, Town Clerk,
Walkerville.

Walkerville, 16th July, 1898.

TENDERS

Bulk or separate tenders will be received by the undersigned up to 6 o'clock p.m., MONDAY, JULY 25TH, 1898, for the different trades required for the erection of a MUNICIPAL BUILDING in the City of Stratford.

Plans and specifications may be seen and all information and forms of tender obtained at the offices of Geo. W. King, Architect, and J. W. Siddall, Associated Architect, Room 42, James Bldg., Toronto, also at the City Clerk's office, Stratford.

Tenders must bear the bona fide signatures of the tendering contractor and his two sureties. With each separate tender is required a deposit of \$100, and with each bulk tender a deposit of \$750, made payable to the order of the City Treasurer, and which will be returned to the unsuccessful tenderers immediately on the signing of the contract by the accepted contractors. Cheques of accepted contractors will be returned upon signing of the bonds.

The lowest or any tender not necessarily accepted.

G. F. INGRAM,
Chairman Market and Police Committee.
Stratford, July 5th, 1898.

Tenders will also be received by the undersigned for the rebuilding of the old City Hall, plans of which can be seen at the office of Alex. Hepburn, Architect, Stratford.

Similar conditions for tendering as above mentioned are to be complied with for these tenders.

G. F. INGRAM,
Chairman Market and Police Committee.
Stratford, July 5th, 1898.

NOTICE OF REMOVAL

Messrs. Darling & Pearson, Architects, have removed their offices to Toronto Railway Chambers, North-West corner King and Church Streets, Toronto.

To Contractors

Tenders will be received by the undersigned up to 6 p.m. FRIDAY, 29TH JULY,

1st. For Construction of Superstructure Steel Highway Bridge,
2nd. For Construction of Concrete Abutments,

on Stover Street, in the Village of Norwich.
Plans and specifications may be seen and all information obtained at the office of Davis & VanBuskirk, Civil Engineers, Woodstock.

The lowest or any tender will not necessarily be accepted.

C. G. HULET,
Chairman Committee on Streets and Walks,
Norwich.



Notice to Contractors

Tenders will be received, by registered post only, addressed to the Chairman of the Board of Control, City Hall, Toronto, up to noon on WEDNESDAY, AUGUST 3RD, 1898, for the construction of the following pavements and sidewalks:—

ASPHALT PAVEMENT:

On York Street, from King Street to Front Street.

BRICK PAVEMENT:

On Ross Street, from Cecil Street to College Street.
On Major Street, from College Street to Bloor Street.

GEDAR BLOCK PAVEMENT:

On Scollard Street, from Yonge Street to Hazelton Avenue.

MACADAM ROADWAY:

On Temulay Street, from Queen Street to Albert Street.

CONCRETE WALKS:

On Queen Street, north side, Simcoe to St. Patrick's Market.

On Queen Street, north side, Temulay Street to Chestnut Street.

On Lombard Street, south side, Church Street to Victoria Street.

On Homewood Avenue, both sides, Carlton Street to Wellesley Street.

On Huron Street, east side, Wilcox Street to Classic Place.

On Wilcox Street, north side, St. George Street to Huron Street.

BRICK WALK:

On Portland Street, west side, Front Street to King Street.

Plans and Specifications may be seen and forms of tender obtained at the office of the City Engineer, Toronto, on and after Monday, July 25th, 1898.

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 signature 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, July 19th, 1898.

TENDERS

Tenders will be received up till NOON, THE 30th INST., for all the various trades required in the erection of a building for the Canadian Bank of Commerce, corner of Yonge and Bloor streets. Plans and specifications may be seen at the office of

MESSERS. DARLING & PEARSON,
Architects,
Toronto Railway Chambers, Toronto.
Lowest or any tender not necessarily accepted.

CONTRACTS OPEN.

BUCKINGHAM, QUE.—W. H. Kelly will rebuild his saw-mill lately burned.

LYNDHURST, ONT.—Steps are being taken to erect a new brick school house.

MILLBROOK, ONT.—The erection of another large grain elevator is proposed.

BRANDON, MAN.—Work has been commenced on the new Methodist church.

RAPID CITY, MAN.—A new equipment of machinery is to be installed in the woollen mills here.

BRYSON, ONT.—Mr. Joseph White is getting material on the ground for the erection of a residence.

LUCAN, ONT.—Messrs. Wray & Hawkshaw have decided to rebuild their flour mill recently destroyed by fire.

MULL, QUE.—Wooden sidewalks will be constructed at a cost of \$3,500, and granolithic walks at a cost of \$5,000.

WALLACEBURG, ONT.—A by-law has been carried appropriating \$5,000 for the construction of granolithic sidewalks.

JEANNETTE'S CREEK, ONT.—The Methodists have decided to commence work immediately on their new church.

TRENTON, ONT.—Mr. George H. Gordon, town clerk, writes that contracts for the water works have not yet been awarded.

PARRY SOUND, ONT.—Mr. Joseph Farrer invites tenders until noon of the 23rd inst. for the erection of agricultural buildings.

VICTORIA, B.C.—The council have decided to expend the sum of \$4,000 in constructing sewers, the work to be done by day labor.

PAISLEY, ONT.—Robert Scott will receive tenders until the 22nd inst. for painting and decorating the interior of Knox church.

HAWKESBURY, ONT.—Mr. Charles Riordan, of Merriton, has decided to erect a pulp and paper mill here to cost about \$200,000.

LACHINE, QUE.—The council has adopted a by-law granting a bonus of \$15,000 to George Harrington & Sons to establish factories here.

JOLIETTE, QUE.—At a recent meeting of the council of this town Mr. L. A. Herdt, E.E., was appointed consulting engineer to the municipality.

NORTH TORONTO, ONT.—Mr. James Rogers, of Brunswick ave., has purchased land on Oriole road, on which he will erect a modern dairy.

BRIDGEWATER, ONT.—The Kalader and Anglesea Gold Mining Co. will at once commence the erection of a separating plant at this place.

SOUTHAMPTON, ONT.—The town council have granted \$10,000 by way of loan to the Knechtel Furniture Co., to enable them to extend their factory.

THORNBURY, ONT.—A committee of the council have recommended the submission of a by-law to property owners to raise \$6,500 for water works.

SPRINGHILL, N.S.—Mr. A. E. Fraser proposes to erect a warehouse on Elgin street, the upper part of the building to be arranged as an opera house.

NEWCASTLE, N.B.—Allan A. Davidson will receive tenders until the 28th inst., at

noon, for supplying the heating apparatus for the Newcastle engine house.

HARRISTON, ONT.—W. D. Ebbels, town treasurer, invites tenders until the 26th inst. for the purchase of \$25,000 worth of consolidated debentures.

WOODSTOCK, ONT.—The council has under consideration a by-law appropriating \$25,000 for the purpose of inducing the location of additional manufactories here.

HALIFAX, N.S.—The corner stone of the new library building of Pine Hill College was laid a few days ago. The building will be of brick and will cost \$18,000.

PRESCOTT, ONT.—The council has decided to submit a by-law to the property owners to raise \$100,000 for the construction of a water works and sewerage system.

MAPLE, ONT.—J. W. Stewart invites tenders until the 27th inst. for painting, woodwork and decorating ceiling and walls of church two miles north of this place.

WINDSOR, N.S.—John Nalder will receive tenders until the 25th inst. for the erection of a Baptist church. Plans and specifications may be seen at Mr. Nalder's office here.

BROCKVILLE, ONT.—Plans and specifications are being prepared for the new factory of the Brockville Packing & Provision Co., for which the town council recently purchased a site.

AMHERSTBURG, ONT.—The town authorities have invited Dr. Bryce, secretary of the Provincial Board of Health, to confer with the citizens with regard to instituting a drainage system.

LETHBRIDGE, N.W.T.—The Alberta Irrigation Co. will immediately commence the construction of extensive irrigation works under the superintendence of J. Anderson, Denver, Col.

SARNIA, ONT.—M. Lowrie, township clerk of Sarnia, invites tenders until the 23rd inst., for the repair of the 6th and 7th concession drains. Plans and specifications at the clerk's office.

BELLEVILLE, ONT.—The city council has instructed the city solicitor to take steps to institute arbitration proceedings to determine the value of the water works, which the city propose to purchase.

TRURO, N.S.—W. D. McCallum, town clerk, invites tenders until noon of the 31st inst. for the erection of a fire hall, engine room and hose house. Plans and specifications at the town office here.

PETERBORO', ONT.—The officials of the congregation of Bethany Mission Christian Alliance have selected a site for a new church building, and it is probable that the new structure will be erected this season.

EDMONTON, N.W.T.—Messrs. A. G. Blair, jr., and George McAvittie have obtained control of the Edmonton District Railway, which it is proposed to extend north and west towards the Athabaska or Peace rivers.

WINNIPEG, MAN.—A number of tenders have been received for the erection of a new central fire hall. The council have deferred action thereon until the value of the material in the old hall can be determined.

ARNPRIOR, ONT.—The council has appointed a committee to deal with the construction of a new iron bridge, a short distance above the present one, plans for which have been prepared by Mr. Hibbard, C.E., of Ottawa.

THOROLD, ONT.—The council has decided to advertise for tenders for the extension of the electric light plant, subject to the passing of a by-law authorizing the necessary expenditure. The estimated cost of the work is \$7,161.

HENSALL, ONT.—A. G. Smellie, clerk, invites tenders till 1 o'clock of August 4th, for the construction of the Broadfoot and Sproat creek drains as per plans and specifications to be seen at his office. The estimated cost of the work is \$4,100.

ACTON, ONT.—The trustees of school section No. 8, Erin, represented by Robert Johnston, R. H. Wansbrough and Simon McLachlan, will receive tenders until the 23rd inst. for reflooring with maple lumber the school house in that section.

LINDSAY, ONT.—The Board of Works have been authorized by the Council to open tenders for the construction of South Kent street sewer.—Messrs. Walters and Palkie have been appointed by the Council to inspect the Lindsay street bridge and report regarding the necessity of a new structure.

ST. THOMAS, ONT.—City Engineer Bell and Neil Darrach, architect, are at present engaged in the preparation of plans for the remodelling of the court house.—A charter has been granted to the Peoples Telephone Co., capital \$60,000, to construct a telephone system in this city. The president is Mr. Joseph Mickleborough.

QUEBEC, QUE.—The city engineer invites tenders for a new steel swing bridge on the site of the present Bickell's bridge and lock gates.—J. A. Wood, secretary-treasurer Quebec Harbor Commissioners, invites tenders until noon of August 8th for the purchase of first preference bonds to the amount of \$150,000.

FORT WILLIAM, ONT.—On August 10th the ratepayers will vote on a by-law to authorize a loan of \$40,000 for the construction of a system of waterworks, for which tenders have been taken.—The by-law authorizing the construction of a system of water works will be finally considered and passed by the council on August 16th.

ST. JOHN, N.B.—A mission hall is to be built in connection with the Mission church.—Thomas Cogger, grocer, of Port Howe, will erect a three-storey building.—Representatives of the City Council recently inspected the Alms House, and decided that the alterations recommended by Mr. R. C. John Dunn, architect, should be carried out. These include new heating apparatus.

WOOD'S HARBOR, ONT.—Tenders will shortly be invited for work in connection with the public landing at this place, for which purpose a grant of \$2,500 has been made by the Dominion government.—A new public hall will probably be erected by the Aberdeen council, and a similar building is in contemplation further up the harbor by the members of Welcome Lodge I.O.G.T.

PARIS, ONT.—A deputation of Toronto gentlemen approached the council recently on the subject of the construction of an electric railroad between this town and Ayr. It is understood that a charter has been applied for. A company is also seeking a charter under the name of the Grand River Electric Light & Power Co., to construct a stone dam across the river at Mr. Cavan's farm, with the object of supplying light and power. Mr. Fair, of Brantford, is the company's engineer.

KINGSTON, ONT.—H. P. Smith, architect, is at work on plans for remodelling two houses on William street for E. T. Steacy. The same architect is preparing designs for carved oak pedestals for statuary, in the Church of the Holy Name, Cushtendale.—The Standard Oil Co. are said to have invited tenders for the construction of 8 or 10 steel tank barges in which to convey oil from the company's refineries to their distributing station.

BRANTFORD, ONT.—Messrs. Gould, Shapely & Muir Co. invite tenders until

noon of the 20th inst. for 75,000 to 125,000 face, arch and soft brick, to be delivered at the Verity Works between August 1st and November 1st, also tenders for building, for said and gravel, and for teaming and carting.—The council have decided to engage Mr. M. J. Butler, of Napanee, as consulting engineer with Mr. Jones, city engineer, in connection with the proposed flood prevention works.—The Gas Company propose to fit up a new office building and make extensive improvements to their plant.—The directors of the Brantford Electric Light Co. have instructed their manager, Mr. Wyse, to proceed at once to purchase the necessary plant for the extension of the works.—Messrs. Schultz Bros. will erect additions to their buildings to accommodate the company who are about to begin the manufacture here of scissors.

HAMILTON, ONT.—Mr. Henry Symons, Q.C., has returned from England with estimates for the construction of the proposed works of the Welland Power & Supply Canal Co. The total cost of carrying out the scheme is placed at \$12,000,000.—Mr. A. T. Wood, M.P., has advised the Harbor Committee that the government will probably appropriate next year from \$50,000 to \$75,000 for the improvement of the Hamilton harbor.—F. P. Foster & Co. have been granted a permit for a brick factory on Main street, to cost \$1,450. Other permits have been granted as follows: Hon. W. E. Sanford, dwelling on West avenue, cost \$2,100; Hamilton Coffee & Spice Co., factory on McNab street, cost \$5,000.—S. H. Kent, acting city clerk, invites tenders marked "Tender for Pumping House Repairs," until noon of August 3rd, for repairs at the Beach pumping house.

OTTAWA, ONT.—Sufficient capital has been subscribed for the erection of an abattoir and cattle market. Mr. Kidd is solicitor of the promoters.—L. K. Jones, secretary Department Railways and Canals, will receive tenders until noon of the 30th inst. for the removal of such portion of the present timber superstructure of the west entrance pier at Port Dalhousie, as may be directed, and for the renewal of the portion removed.—Members of the City Council have recently stated that a site will probably be purchased in the autumn for a hospital for contagious diseases.—The Ottawa Electric Co. will increase their plant at their No. 2 power house by adding a 60-inch water wheel and a 125-light arc generator.—It is reported that the Parry Sound Railway has been transferred from Mr. J. R. Booth to the C.P.R., and that the road between Ottawa and Parry Sound will be double-tracked.—Building permits have been granted as follows: T. B. Caldwell, two brick veneered houses on John street, each costing \$2,700; C. G. Folkes, brick veneered dwelling, Hickey street, \$2,200; G. B. Caldwell, brick veneered dwelling, Hickey street, \$2,600; James Graham, brick veneered dwelling, McLaren street, \$2,200; trustees Knox church, iron roof and repairs to church, \$2,000.

LONDON, ONT.—The city council gives notice of its intention to construct artificial stone sidewalks and tile sewers on a number of streets at a total estimated cost of \$5,336.—H. C. McBride, architect, invites competitive plans and specifications until the 25th inst. for heating and ventilating the Victoria Hospital. Plans to be accompanied by estimates of cost.—A permit has been granted to George Chantler for a brick veneer cottage, cost \$1,000.—The Board of Education have approved of the plans prepared by Mr. Matthews, architect, for a two-room school building on North Richmond street. Construction will be at once proceeded with.—At a meeting of the citizens held recently, it was decided to recommend to the Minister of Education, as a suitable site for the proposed Normal School, the

McKenzie property on Wortley road and Elmwood avenue east, and that the erection of the building be proceeded with as soon as possible.—The Sewers Committee at its last meeting decided to recommend the Council to adopt the plan of the International Sewage Purification Co., of Detroit, for the improvement of the city sewerage system. The estimated cost is \$41,300.

MONTREAL, QUE.—The awarding of tenders for the construction of the Westmount public library was deferred until yesterday. The building is to be of pressed brick, with sandstone dressing. It is said to be the intention to erect other buildings in conjunction with this one at an early date.—It is stated to be the intention of the C.P.R. to build a line of railway from Woodstock to Brantford. Surveys have also been completed by the company for a line from Toronto to Sudbury.—The Fire Committee have received seven tenders for the new fire hall, prices ranging from \$17,500 to \$29,900, exceeding by about \$10,000 the estimates. The committee have instructed the architect to so amend the plans and specifications as to bring the work within the amount of the appropriation.—The Faculty of Arts of Laval University have acquired the Cooper property adjoining St. James square, and propose to erect thereon a fine school building.—The Minister of Public Works has signed and forwarded plan 12A2, and the plan for closing the guard pier in connection with the harbor improvements.—A number of citizens have protested against the proposal to lay an asphalt pavement on Craig street, on the ground that this class of pavement is not adapted to heavy traffic.—Mr. James Gardiner will shortly erect a residence on Upper Stanley street. The building will be constructed of buff stone and brick.—The proprietors of the Osborne street block are opposing the expropriation proceedings instituted by the C.P.R. in connection with the enlargement of the Windsor street station.—The Finance Committee has refused to concur in the action of the works committee in awarding a tender for asphaltting Craig street, on the ground that the contract was not given to the lowest tenderer.—L. O. David, city clerk, invites tenders until the 25th inst., at 10.30 o'clock p.m., for the various works required in the erection of a fire station corner Notre Dame and Beaudry streets. J. B. Resther & Sons, architects.

TORONTO, ONT.—Contracts for heating, hardware and mantels of residences on Jamieson ave. will shortly be awarded

by Mr. G. W. Gouinlock, architect, Temple Building.—The Board of Control have decided to ask the Council for authority to advertise for tenders for two elevators for the main building, and one for the tower of the new municipal buildings. Tenders will be invited for both hydraulic and electric elevators, and tenderers will be required to state the price of the pumping plant apart from the bulk cost.—Arnold Morphy, bursar of Upper Canada College, Deer Park post-office, will receive tenders until noon of the 30th inst. for 500 tons of soft coal screenings, 50 tons of anthracite coal and 10 tons of soft coal.—The Massey-Harris Co. propose to expend \$250,000 on extensions to their works here and at Brantford.—A permit has been granted the Allen Mfg. Co. for an extension to their factory to cost \$30,000.—The William Davies Packing Co. will expend \$60,000 on the enlargement of their factories.—Firstbrook Bros. will expend about \$25,000 in additional buildings and plant.—The authorities of Upper Canada College will shortly invite tenders for the construction of a cottage hospital in connection with the college for the treatment of contagious illness. Plans are also being prepared for a lodge at the entrance to the college grounds.—The Council have given notice of their intention to construct concrete sidewalks on Carlton street, south side, from Church to Jarvis street, 6 feet in width; on York street, east side, from Front street to 285 feet north, 12 feet in width; and on Front street, south side, from Scott to Church street, 12 feet in width.—In this issue F. S. Baker, architect, invites tenders up to July 30th for all trades except plumbing and heating required in the erection of a residence, south-east corner Huron and Bloor streets. Same architect is preparing plans for two houses to be built in Parkdale, and for a store building on King street west.—The plans of Simpson & Ellis, architects, have been accepted, in competition, for a new Sunday school building for the Dunn ave. Presbyterian church, Parkdale. Same architects are preparing plans for an addition to Conboy's factory, King street west.—J. F. Brown, architect, is preparing plans for artistic grain warehouses of frame, to be built along the line of the Toronto, Hamilton & Buffalo Railway. He will also take tenders at once for a residence on Palmerston ave.—E. J. Lennox, architect, is taking tenders for a new shop front for the Manning Arcade, and is preparing plans for extensive alterations and additions to the Fred Victor Mission,

(Continued on page 4.)

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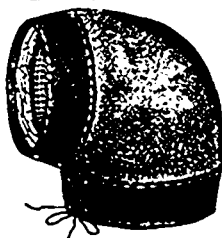
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corner Queen and Jarvis street, and for a suburban residence to be built in the north-eastern extremity of the city.—A. R. Denison, architect, is preparing plans for new buildings for the Toronto Glass Co., one to be of brick, 30x40 feet, three stories and basement, and the other of frame, 186x60 feet. Mr. Denison will invite tenders next week for the second building for Hees & Co., Davenport road.—The Canada Permanent Loan & Savings Co. will expend \$16,000 in remodelling their building on Toronto street. The work will include the installation of an elevator. R. J. Edwards, architect.—The Commissioner of Public Works for Ontario will receive tenders until noon of the 21st inst. for the erection of a root house on the grounds of the Asylum for the Insane at Brockville.—The Langmuir Mfg Co. have purchased land on which to erect new offices and additions to their factory.—The Board of Control will meet to-day to award paving contracts.—Building permits have been granted as follows: Mrs. Heatherington, alterations c.s. St. Nicholas st., near St. Mary st., cost \$3,500; A. Bender, shop fronts 117-117 King st. w., cost \$4,000; M. Boyd, alterations 118-120 Isabella street, cost \$1,500; Chas. Rogers Co., coal shed and engine house, Yonge st., cost \$2,200; W. A. Murray & Co., bk. stable, Sherbourne st., cost \$1,000; J. W. Siddall, architect.

FIRES.

The fires of the past week include the following: Two hotels and other buildings at Georgeville, Que.; loss \$30,000.—Smith's foundry, Durham, Ont.; loss \$2,500, insurance \$800.—Thompson's block, Magog, Que.; loss \$7,000, partially insured.—Two business blocks at Colborne, Ont.; loss \$15,000.—R.C. Ladies' College, Mount St. Bernard, N.S.; badly damaged.—Two-story frame residence of Henry Geiger, 76 Oak street.—McDonald Tinware Mfg. Co., Montreal; \$10,000 to \$15,000 loss.

CONTRACTS AWARDED.

WARDSVILLE, ONT.—Methodist church; Mr. Acheson.

LA SALETTE, ONT.—R. C. parsonage; Quance Bros., Delhi.

ROSSLAND, B.C.—Bank of Montreal; Serl. Cameron, contractor.

TRURO, N. S.—Iron roof for canning factory; Londonderry Iron Co.

KINGSTON, ONT.—Penitentiary supplies; Groceries, A. R. Martin and J. Crawford; flour, Hunt Bros.; fresh meat,

J. C. Metcalfe; coal, James Stewart and R. Crawford; leather, Jacobi & Co., Toronto.

PETERBORO, ONT.—Granolithic walks; McFayden & Sab n, 12½ cents per square foot.

CASSELMAN, ONT.—School houses at this place and at Moose Creek; J. T. Gagnon.

GATINEAU POINTE, QUE.—Waterworks system; Lewis H. Tache, Montreal, \$30,000.

DURHAM, ONT.—Granolithic sidewalks; The Royal Artificial Stone Paving Co., Guelph, Ont.

KEMPTVILLE, ONT.—Granolithic sidewalks; The Royal Artificial Stone Paving Co., Guelph, Ont.

ST. JOHN, N. B.—Store and office building, for James P. Byrne, Thomas L. Daley, contractor.

BRAMPTON, ONT.—Street lighting; Pearen Bros., \$50 a lamp per annum for 1500 candle power lamps.

LISTOWEL, ONT.—Artificial stone sidewalks; Silica Barytic Stone Co., Ingersoll, 10½ cents per square foot.

MITCHELL, ONT.—Steel bridge over Sauble river, township of Usborne; Mitchell Bridge & Iron Works Co.

FREDERICTON, N. B.—Civic debentures, amounting to \$14,500; R. Wilson Smith, Montreal. Premium \$111.65.

LONGUEIL, QUE.—Additions to waterworks building; A. Vincent, \$950.—Fire alarm service; Bell Telephone Co., \$1,400.

CHATHAM, ONT.—Fire alarm system; Bell Telephone Co.—Local improvement debentures amounting to \$15,396.96; ex-Alderman Marx, price \$16,111.50.

BRANDON, MAN.—Mr. Charles Whitehead, of this city, has been awarded the

contract for the Big Boyne Marsh drainage work, amounting to 3,000,000 cubic yards. Contract price, 11 cents per yard.

CORNWALL, ONT.—Drainage work, sections 1, 2, 3, 4 and 5, Payne river, and section 1, Beaver Creek; J. T. Gagnon, Moose Creek, 20 cents, 15 cents and 14 cents per yard. Total of contract, about \$20,200.

OTTAWA, ONT.—Diamond Jubilee statue of Queen Victoria; Philip Hebert, Montreal, \$25,000.—Paving Sussex st.; Warren Scharf Asphalt Co., \$2.55 per yard.—Sewer for Ottawa Land Association; J. T. Gagnon, \$10,000.

TORONTO, ONT.—Mr. Geo W. Gouinlock, architect, has let contracts for a pair of semi-detached houses on west side Jamieson ave. to the following contractors: Masonry and brickwork, R. Chalkley & Son; carpentry and joinery, George Rathbone; plumbing, etc., W. Mashinter & Co.; lathing and plastering, Howdge & Sons; painting, glazing, etc., H. W. Johnston; slating and roofing, H. Williams & Co.; galvanized ironwork, Tucker & Dillon.—F. S. Baker, architect, has let contracts as follows for alterations to a pair of houses on Isabella st.: Masonry, Teagle & Son; carpentry, J. Stewart; plumbing, Keith & Fitzsimmons Co.; hot water heating, J. Seager; electric bells and wiring, Toronto Electrical Works. Mr. Baker has also let the masonry and carpenter work of a new residence in Rosedale for E. A. Kantle to T. A. Ouderkirk, the plastering work to R. Charles, and the electric bells and wiring to the Jones & Moore Electric Co.; other trades not yet let.—E. J. Lennox, architect, has let the plaster work in connection with the Bijou Theatre alterations to J. M. Gander.—Simpson & Ellis, architects, have accepted the bulk tender of John Richardson, East Toron-

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to, for the erection of the new school at Scarborough.—The contract for fixtures for the ground floor of the Cawthra building, corner Yonge and Temperance streets, has been awarded to the Cobban Mfg. Co. The fixtures will be of quartered oak, Mycenian marble, dead brass and bevelled edge plate glass. The electric fixtures will be furnished by the Keith & Fitzsimmons Company. The architect is A. R. Denison, who has also let to the Fensom Co. the contract for one passenger and one freight elevator for the same building, and a freight elevator in W. R. Brock & Co.'s warehouse.—The plumbing of the new Firstbrook building has been let to the Keith & Fitzsimmons Co., and the roofing to R. Rennie & Son. J. F. Brown, architect,

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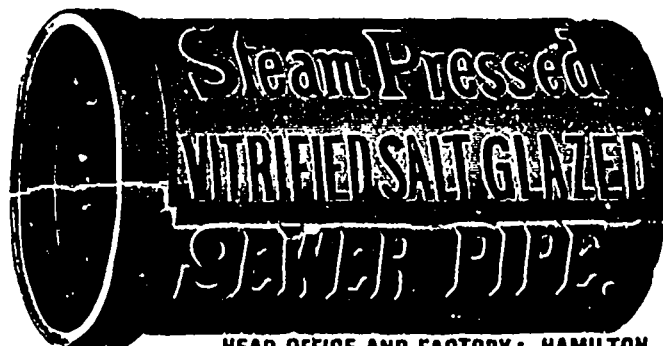
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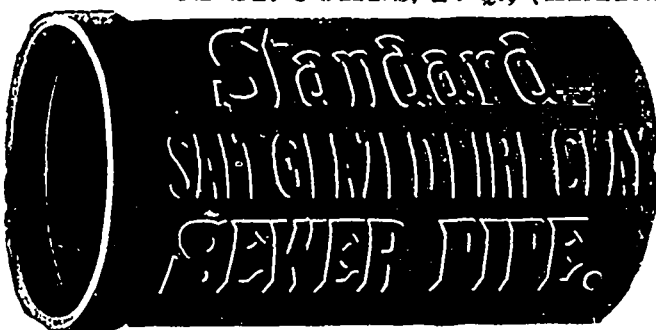


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THE CONSTRUCTION OF STREET PAVEMENTS.

Mr. A. W. Campbell, Provincial Instructor in Road Making for Ontario, recently presented a very valuable report to the city of St. John, N. B., from which the following extracts are taken:

STONE BLOCK PAVEMENTS.

Stone block is the oldest of paving materials; is extensively used in cities, and is the toughest and most durable that can be had. It is well adapted to grades up to ten per cent., yields little dust, requires little repair and suits all classes of traffic. It is, however, very noisy and is rather rough. It is therefore not suited to residence streets nor business streets on which there are retail stores and offices. It is best adapted to streets such as Water street, on which there is a large amount of slow, heavy traffic. It should be used also on steep grades in place of asphalt.

The stone generally used is granite or trap. Excessively hard stone wears to a smooth surface and becomes slippery. No examination or test which can be made of stone is perfectly satisfactory in distinguishing the best variety. Different kinds of the same stone and even stone taken from different parts of the same quarry, have different wearing qualities. The trap rocks of Carleton Heights or the quartz diorites at the end of Sandy Point, will prove satisfactory. Quartzites, of which varieties are found at the west of Lily lake, on the slope of the ridge north of Douglas avenue and on the road to the lake after passing Seely street, are apt to wear away too rapidly. White marble, of which some is found back of Lily lake and elsewhere in the vicinity, is too soft.

The stone blocks should be cut into rectangular blocks about seven inches deep, three inches wide and nine inches long. The price paid for quarrying and making these blocks will average about thirty dollars per thousand. Slabs of a kind which can be handled by one man are split out in the usual manner. These are sub-divided into sections corresponding to the size of paving blocks, which are then trimmed and finished.

In constructing a stone block pavement the natural earth is first prepared by draining, grading and rolling with a steam roller. On this a layer of concrete is laid, say six or eight inches in thickness, according to the traffic to be supported. On this is spread a layer of sand about one inch in thickness, and in this the stone blocks are embedded.

The blocks are laid stone to stone in courses at right angles to the street line and so that the joints will be broken. A slight variation in the size of the blocks

is permissible as regards depth and length, but the width (if three inches as previously specified) should be exact.

On hills and grades a better foothold for horses may be obtained by using rough-finished blocks, or the blocks may be so embedded in the layer of sand on a slight incline in such a way as to present a series of steps. At street intersections the blocks are laid obliquely in what is termed the "herring bone" fashion so as to give a sure foothold to horses turning the corners. The joints between the blocks are filled with sand and tar cement.

The State of Maine, adjoining New Brunswick, is one of the largest producers of stone paving blocks.

ASPHALT.

The materials of which asphalt pavements are composed may be either natural or artificial. Natural asphalt is obtained by grinding to powder bituminous limestones found in Texas, Utah and elsewhere, or the bituminous sandstones found in California, Kentucky, Texas, etc. This powder is then heated until soft, and is spread while hot on the roadway. The chief source of artificial asphalt is the Island of Trinidad, W.I., where crude asphaltum is obtained, is then refined and mixed with sand and stone dust; is heated and applied to the roadway.

Owing to the skilled labor and machinery needed in laying this pavement it is, in the great majority of cases laid and kept in repair by contract. When properly laid its durability cannot be questioned, but there is some difficulty in surrounding a contract with such safeguards as will insure first-class material and workmanship. A reliable company should be employed and the maintenance of the pavement guaranteed for ten or fifteen years. A common guarantee is for a term of five years, but this is not sufficient. Breaks in asphalt pavement must be immediately repaired, otherwise they quickly shear off under wheels, and the size of the hole increases with great rapidity.

On the business streets of St. John, where the traffic is severe, where noise is objectionable, and where smoothness, cleanness, ease of travelling, are desirable, stone blocks are not suitable. Asphalt is the most durable material filling these conditions. It is not, however, suitable for steep grades, and stone blocks would necessarily be retained for grades greater than three per cent. Nor should

asphalt be used between and adjacent to street car tracks. The gutters, too, should be formed of concrete or flagstone, as asphalt decays rapidly from the effect of moisture.

VITRIFIED BRICK.

Vitrified brick for street paving are different in composition and manufacture from the ordinary building brick. They are made from shale, or clay, or a mixture of the two, which is heated to the point of vitrification and then slowly and gradually cooled. The size of each brick is about $2\frac{1}{2} \times 4 \times 8\frac{1}{2}$ inches. They are laid in the same manner as stone blocks, viz., in courses at right angles to the direction of the street, with broken joints, etc. The durability is not equal to that of asphalt or stone blocks. But they are less noisy than stone blocks. The pavement is adapted to business or residential streets on which the qualities, but not the strength, of asphalt are required. They are manufactured in the province of Ontario, in the States of Ohio, New York, and Pennsylvania and elsewhere. There is room for much variation in the quality of brick. The process of manufacture is one which requires an extensive plant and much skill in burning. The composition of clay or shale used is of great importance. It may contain, for example, too much lime, which will destroy the brick on exposure to moisture. Care must therefore be taken in selecting the brick to be used.

WOOD PAVEMENTS.

Cedar blocks and pine pavements have been used in St. John to some extent. In Canada and the United States wooden pavements are very much in disrepute. They have been found to decay rapidly, settle unevenly, become rough and unsanitary, absorbing filth and giving off bad odors. Much of this is unquestionably due to the methods of constructing these wooden pavements in this country.

In England and France they are regarded with favor, but the timber used there is carefully selected, so as to exclude any blocks showing signs of decay. Oblong blocks are cut all of equal size. They are treated with creosote, tar, and other preservatives, and are laid on concrete foundations. Some soft woods are used, and the life of such pavements is about ten years. The best wooden pavements are made, however, from Australian hardwoods, particularly the jarrah, karri and other of the eucalyptus woods of South Australia.

In the absence of actual experience in this climate with wooden pavements constructed in the careful manner outlined in the foregoing paragraph, their use cannot be recommended. Certainly cedar block and pine pavements as commonly laid in this country are not a success and should not be tolerated.

(To be Continued)

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Large index table listing various building materials and services with their respective advertiser names and page numbers. Categories include Architects, Cements, Interior Decoration, Roofers, Builders' Supplies, etc.

Table listing prices for dimensioned lumber (per cu. ft.) for Kent Free stone Quarries Moncton, N.B., River John, N.S., etc.

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