

ANNUAL REPORT OF THE ENGINEERING AND PUBLIC WORKS DEPARTMENT

1932



YEARLY REPORT OF CITY ENGINEER

FREDERICTON, N.B.

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Office Copy.

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YEARLY REPORT OF CITY ENGINEER

FREDERICTON, N.B.

1932.

TO HIS WORSHIP THE MAYOR AND THE ALDERMEN
OF THE CITY OF FREDERICTON:-

Gentlemen:-

This report is a statement of the work done in the different City Departments under the direct supervision of the City Engineer.

It covers the period of time from the first of December, 1931 to first of December, 1932.

All figures, and statements derived from them, appearing in this report have been carefully compiled and, I believe, are correct and fit to be used in working out costs for future expenditures.

GOVERNMENT AIDED UNEMPLOYMENT RELIEF.

During 1932 there have been two schemes of this relief work carried on in the City.

Scheme No. 1:-

The City submitted a proposed plan of unemployment relief work and an estimate of costs to the Government. The Government O.K.'d the proposed work and the amount of expenditure. The work was done by the City and the costs were borne, $\frac{1}{4}$ by the Provincial Government, $\frac{1}{4}$ by the Federal Government and $\frac{1}{2}$ by the City.

At the end of each month, while this kind of work was in progress, the City submitted a certified Pay Roll and invoices for material to the Provincial Government who O.K.'d the accounts and passed them along to the Federal Government. One half the monthly amount so expended by the City was repaid to the City by the Two Governments, one quarter by each Government.

Under Scheme No. 1, the expenditure for wages was...\$5,436.10
The expenditure for material..... 3,321.86
Making a total expenditure of....\$8,757.96

The Government returned to the City one-half of
this amount or..... 4,378.98

For this expenditure the following pieces of work were done:-

5000 cubic yards of River Gravel dug and delivered to City.

1784 tons trap rock quarried and delivered to City Yard.

1500 tons trap rock crushed.

1700 Double team loads or about 3000 cubic yards of Field Stone hauled, mostly from Experimental Farm and used as Rip Rap on Saint John Road.

All Municipal Wood deliveries made.

Labor on cement floor for Victoria Public Hospital.

Some \$158.60 spent in labor in repairs to City Hall.

Scheme No. 2:-

This plan was known as the "Direct Relief Scheme", and like Scheme No. 1, only applied to men who were able to work but were unable to find employment.

Under this scheme the relief expenditure was borne, one-third by the Provincial Government, one third by the Federal Government, and one third by the City.

Under this scheme no direct cash payment was made to any person on relief, but the person entitled to relief was given food, clothes, fuel and rent. This plan was so made between the City and Government as to allow the City to call on men who were receiving this direct relief to work for the City in payment of same.

Under Scheme No. 2, some \$5,452.20 worth of labor was used by the City from Oct. 7th, 1932 the time the plan went into effect, up until 31st Dec., 1932. During the same time \$9,382.79 worth of goods under the four headings of Food, Fuel, Clothing and Rent was given out to the men.

TABLE SHOWING RELIEF UNDER SCHEME NO. 2.

Period	Relief given out	Value of Relief Pay Rolls.	Percentage of Relief worked out.
Oct. 7 to			
Nov. 4/32	\$1585.34	\$1598.10	100%
Nov. 5 to			
Nov. 30/32	3762.45	1957.20	52%
Dec. 1 to			
Dec. 31/32	4035.00	1896.90	47%
Totals	9382.79	5452.20	59.2%
1933 Jan 1 - 31/33	2239.61	733.88	32.7%
1933 Jan 1 - 31/33	3941.38	1231.20	31%
Feb 1 - 28/33	3836.16	1069.80	28%
March (Feb 26 - Nov 13/33)	4208.15	141.30	3.4%
April 1 - 30/33	3981.44	70.84	1.8%
May 1 - 31/33	2793.44	583.52	21%

This labor was utilized in the following manner:-

Roads and Streets:-

Cleaning Streets.....	\$242.70	
Yard.....	1.50	
Streets.....	20.40	
Drying Sand.....	3.60	
Patching Streets.....	2.40	
Patching Sidewalks.....	(Tarvia repair 2.40	
Surface Sewers.....	375.00	
Outlying Roads.....	357.60	
Saint John Road.....	314.40	
Maryland Road.....	82.80	
		\$1,402.80

Public Works.

Unforeseen Acot.....	3.00	
Back Drain.....	1158.00	
Back Drain Diversion.....	2322.60	
Trees.....	6.00	
		\$3,489.60
Fire Station.....	3.60	3.60
City Hall.....	17.40	17.40

Water.

Hydrants.....	25.50	
Water.....	45.30	
Pumping Station.....	10.80	
		81.60
Domestic Sewerage.....	35.40	35.40
Market.....	.60	.60
Park.....	15.60	15.60
Municipal Home.....	405.60	
		405.60
		\$5,452.20

I will not here describe the work accomplished in detail, as it will be so taken up under the different department headings.

ROADS AND STREETS.

Gross Expenditure.....	\$ 39,101.62
Credits.....	4,822.19
Net Expenditure.....	<u>34,279.43</u>
1932 Appropriation.....	25,000.00
1932 Roads and Streets over expenditure.....	\$ 9,279.43

The above credits are made up as follows:-

Amount received from New Brunswick and Federal Governments as their share of unemployment relief work carried out by the City during Dec. 1931 and Feb. 1932 under unemployment Relief Scheme No. 1.....	\$ 4,378.98
Received from other City Departments for work done or material received from Roads and Streets Department.....	300.94
Work done for, and material sold to private citizens from Roads and Streets Department.....	<u>142.27</u>
	\$ 4,822.19

The above gross expenditure is made up as follows:-

Labor.....	\$25,430.98
Material costs and Workmen's Compensation.....	<u>13,670.66</u>
	\$39,101.62

The Labor Charge of \$25,430.96 is made up as follows:-

<u>Snow Ploughing Sidewalks</u> :-.....	\$ 234.13
<u>Snow Control</u> :- Shovelling and hauling snow, ploughing or scraping roads, clearing gutters of ice or snow, and any other means of snow control.....	1,548.55
<u>Streets</u> :- General work on maintenance of streets and sidewalks and any other item such as building culverts, curbs and gutters, or pavements which is not mentioned under some particular heading.....	617.40
<u>Surface Sewers</u> :- Cleaning, flushing and repairing surface sewers and building new surface sewers within street limits.....	450.20
<u>Sanding Walks</u> :- Hauling, drying and storing sand in winter storage piles and spreading on slippery walks....	203.02
<u>Yard</u> :- Men working at blacksmith and repair work in City Yard, taking out summer equipment and storing winter equipment, etc.....	<u>995.31</u>

Forward.....\$ 4,048.61

Brought Forward..... \$ 4,048.61

Gravel:- Supervising and tallying gravel dug and delivered by contractor to City also all spreading of gravel on City streets other than the roads listed under individual cost item headings..... 921.89

Street Sprinkling:- Watering Carts..... 693.45

Stone Crushing:- Repairs to crusher and crushing stone.. 713.71

Saint John Road:- All work done on river road from Alexandra Street to eastern city line, other than work done by power maintainer.....2,812.73

Doak and Wilsey Road:- All work done on these roads other than work done by power maintainer.....2,390.52

Woodstock Road:- All work done on this road other than work done by power maintainer..... 238.83

New Maryland Road:- From C.P.R. crossing to southern city line, all work done on this road other than that done by power maintainer.....6,941.61

Outlying Roads:- Hanwell Road, cross roads lying between Brick Kiln Road and College Hill road, Brick Kiln Road, Poorhouse Hill road, College Hill road, and Forest Hill roads, all work done on these roads other than that done by power maintainer.....1,317.08

Street Cleaning:- All cleaning and removal of dirt from streets.....2,256.16

Tarvia Repairs:- Mixing patching material and repairing asphalt and tar sidewalks and pavings, and applying seal coat of light tar or asphalt to pavements or to gravel or McAdam roads..... 453.66

City Road Patrol:- Patrolling all unpaved streets and roads within the City limits with power maintainer..... 750.61

Quarry:- Quarrying and hauling trap rock from City Quarry to City Yard.....1,892.10

Total.....\$ 25,430.96

These above items are made up entirely of labor costs however, they give a good idea of the amount and kind of work done by the Roads and Streets Department. Following will be found some

information and explanations with regard to the above listed items, and a table comparing the Labor expenditure in these items from 1928 to 1932.

TABLE COMPARING YEARLY COSTS IN ROADS AND STREETS

LABOR ITEMS.

Item	1928	1929	1930	1931	1932.
Snow Ploughing Sidewalks	184.63	113.95	326.01	264.10	234.13
Snow control	441.36	726.55	3047.00	3619.50	1548.55
Streets	4840.09	1425.01	1578.32	2968.98	617.40
Surface Sewers		601.55	593.25	1609.15	450.20
Sanding Walks	416.19	328.16	142.47	42.66	203.02
Yard	1024.33	1196.92	1527.15	427.98	995.31
Gravel	383.81	1321.00	1101.13	1194.58	921.89
Street Sprinkling	1120.53	686.35	739.85	644.74	693.45
Stone Crushing	829.34		1165.56	522.44	713.71
Saint John Road	1566.65	1348.50	750.36	558.44	2812.73
Doak and Wilsey Road	749.87	225.30	565.33	1952.93	2390.52
Woodstock Road	410.99	241.00	336.05	43.04	238.83
New Maryland Road	294.64	385.85	91.32	237.12	6941.61
Outlying Roads	1157.25	770.70	294.56	1053.83	1317.08
Street Cleaning	1478.40	2735.15	2599.33	2366.01	2256.16
Tarvia Repairs	962.02	1042.70	453.29	775.62	453.66
City Road Patrol	489.30	636.80	1143.78	921.09	750.61
Quarry					1892.10
Cinders from Mari-					
time Electric	171.13	210.98	78.77	94.71	
Paving	601.92			6727.62	
Totals...	17122.45	14490.47	16533.53	26024.54	25430.96
Paving not paid out of regular Roads and Streets Appropriation		4525.10			
	17122.45	19015.57	16533.53	26024.54	25430.96

Streets:-

Unlike last year we had no expenditure for new curbs and gutters under this heading. Our only comparatively outstanding jobs were the turnpikeing and gravelling of Albert Street extension at a Labor cost of \$110.77 and the placing of new stringers and deal floor on the culvert on Regent Street near the C.P.R. Track. At this time this culvert was given 6" more head room.

Surface Sewers:-

As usual all catch basins in the City were cleaned and repaired

and all surface sewers flushed. A survey was made and plans and profiles drawn up of Smythe Street surface sewer, which will, I believe have to be extensively repaired or entirely renewed within the next few years.

A surface sewer was laid in St. John Street from Charlotte Street to McLeod Street a distance of some 1460 feet. Before this construction commenced, there already existed a surface sewer on St. John Street extending south to Union Street. However, the south end of this sewer in place was too high to permit of it being extended any further south, and it was necessary to dig up and relay it at a lower grade from the north side of Charlotte Street to Union Street. The pipe and man hole cover for this work were all taken from material which we had on hand and did not necessitate any new expenditure. The labor was mostly done under the unemployment relief plan, Scheme No. 2, and so did not count as an actual labor charge against Roads and Streets Department. Practically all the charges for this piece of construction actually taken out of the Roads and Streets Department are the cost of brick for man holes and some \$56.68 spent in Ordinary Pay Roll.

Gravel:-

Some 5000 cu. yds. of Gravel were dug from the River and delivered to the City by F. Boone and Son at 59¢ a cu. yd. The delivery of this gravel started Jan. 19, 1932 and the operation was finished Feb. 17, 1932. The gravel was delivered as follows:

City Hall Wharf.....	4501.5	cu. yd s.
Salamanca.....	247.5	" "
Doak Station.....	251.0	" "

This work was done under Scheme No. 1, Government Aided Unemployment Relief.

Street Sprinkling:

The Street Sprinkling this year was all handled by Motor Driven Water Cart and by one, one-horse watering cart, this work continues from about the 1st of May to the middle of October.

The one-horse watering cart was operated 88 days.

Some 6½ tons of Calcium Chloride was used in this work during the season.

Stone Crusher:

The Stone Crusher ran 17 days between December 9th, 1931 and January 5th, 1932. Crushing some 1500 tons stone at a labor cost per ton of 46¢.

This work was done under Scheme No. 1, Government Aided Unemployment Relief.

Saint John Road:-

This years large expenditure of \$2,812.73 as compared with labor expenditure for last year of \$558.44 was caused by a labor expenditure of \$2,224.82 spent in hauling rock and rip rapping a piece of this road, from Thomas Blizzard's residence to Fraser's Mill. This work was carried on from 1st to 29th of December, 1931 as unemployment relief measure under Scheme No. 1. The rest of the work on this road was our usual maintenance work, consisting of light application of gravel, cutting bushes, etc.

This fall just before freeze up, this road was reditched and had shoulder reshaped by Road Machine and tractor. This work, however shows a very small cost in the actual City Pay Rolls, as most of the labour was provided under unemployment relief, Scheme No. 2.

Doak and Wilsey Roads:-

The total labor expended on these roads amounted to some \$2,390.52 exceeding our estimate of \$500.00 for this section by \$1,890.52. This was because it was thought advisable to reconstruct portions of these roads as an unemployment relief measure.

The Wilsey Road from the River Road to Doak Station was widened and turnpiked, ditches and culverts were repaired and two new culverts installed. This section was then given a light coat of gravel.

The Doak Road from Doak Station back to the end of the inhabited portion of what is known as the Flanagan Road was widened and turnpiked, a number of small cuts were made in order to get material to widen fills. This road crosses a bog, located on the Doak Road just before it joins what is known as the Flanagan Road, the road here was widened and built up and the bog thoroughly drained by side ditches on both sides of the road. The hill known as Mooney Hill located on the Flanagan Road was considerably eased, by widening the road and using the material to widen and raise the fill at the bottom of the hill.

All the culverts on this road had to be widened.

The road was gravelled as sparingly as possible using some local gravel and some river gravel taken from a storage pile at Doak Station.

About one-half a mile of the Wilsey Road, back from Doak Station was gravelled with river gravel.

All of these roads were patrolled about once a week by single team Road Patrol.

New Maryland Road:-

Our estimate of \$250.00 labor expenditure was made with the view of merely maintaining this piece of road in a passable shape for this year, however, it was later decided to reconstruct this road as an

unemployment relief measure, and our actual labor expenditure here was \$6,941.61.

The Maryland Road from the C.P.R. track to the southern City line a distance of 3.69 miles was reconstructed to a width of 30 ft.

This was not a particularly heavy job from the C.P.R. track south to the top of the hill, a distance of 1.4 miles, as the alignment and grade of the road did not have to be much changed and there was practically no rock to contend with.

The remainder of the road south to the City line, a distance, of 2.29 miles was an expensive piece of reconstruction. This section is through the College land and is all wooded and particularly rough and rocky. The road limits were cleared and burnt a distance of 66 feet; in a number of cases the centre line of the road was considerably changed to ease curves. As this piece of road is practically all ledge and boulders, no great attempt was made to lower grades in cuts, but the material which had to be moved in widening was used to widen and raise fills, in this manner greatly improving the old grades.

The first section of road from C.P.R. track to top of hill was gravelled with river gravel from storage pile on City Hall Wharf. The next section from top of hill to City line was gravelled from a gravel pit in New Maryland owned by Joseph Fletcher. Some 2250 yards were taken from this pit, for which the City paid Mr. Fletcher at the rate of 10¢ a load or about 6 and 2/3 cents a cu. yd.

About 1/2 mile from the City line this road is built for some ten hundred feet over a bog. This bog is from 12 feet to 18 feet deep beneath the road. Portions of the road over this bog from year to year sink a foot or more and have had to be built up again. When the road was rebuilt this year the water level in the bog was lowered about three feet by digging a drainage ditch some 1200 feet long, six feet wide and of an average depth of 5 feet. It is hoped that when the water level in the bog is lowered the surface of the bog will harden enough to hold up the road.

Outlying Roads:-

The following amount in labor was expended on Outlying Roads:-

Flanagan Road.....	\$ 81.70
Forest Hill Road.....	257.59
Hanwell Road.....	25.89
Poorhouse Hill Road.....	340.81
Cross Roads.....	322.81
Brick Kiln Road.....	51.60
College Hill Road.....	236.68
Total.....	\$1,317.08

The above labor expenditures show very closely the amount of work done on these different roads, excepting that listed against Forest Hill Road. Most of the labor on this road was provided under the

unemployment relief, Scheme No. 2, and the work therefore shows a small expenditure on the Actual City Pay Rolls.

This road was turnpiked from the river road to the Corbett farm, a distance of about 1 and $\frac{3}{5}$ miles. The front mile of this was gravelled with rive gravel. The back part of the road was made only about 15' to 18' wide as the traffic here is very light.

Tarvia Repairs:-

Our tar and asphalt pavements were maintained with the idea of keeping expenditure as low as possible. This year, however, they were not allowed to become broken and a light seal coat was applied in places where it was absolutely necessary.

The car traffic in the City this season not being so heavy as for the last few years, made pavement maintenance slightly less heavy.

Following table shows Bituminous material used in 1932.

	Heavy Tar or Asphalt.	Light Tar or Asphalt.	K.P.	Asphalt Emulsion.
Gal. in stock Spring of 1932	44	1848	616	0
Gal. purchased 1932				810
Available for season of 1932	44	1848	616	810
Stock on hand fall of 1932	44	225	0	0
Used season of 1932	0	1623	616	810

Quarry:-

From 1st Dec., 1931 to Feb. 13, 1932 some 1784 tons of stone were quarried at the City Quarry and delivered to City Stone Yard. This work was carried on as an unemployment relief measure under Scheme No. 1, Government Aided Unemployment Relief.

TABLE SHOWING COMPARATIVE ROADS AND STREETS COSTS

Year	Expenditure for Labor	Gross Expenditure Labor and Materials	Credit	Net Costs Labor & Material	Appropriation
1927	15,692.00			25,245.00	26,000.00
1928	17,122.45			26,058.70	26,000.00
1929	14,490.47			26,682.98	31,000.00
1930	16,533.53			34,556.33	32,500.00
1931	26,024.54	50,849.60	15,511.97	35,337.63	31,000.00
1932	25,430.96	39,101.62	4,822.19	34,279.43	25,000.00

PUBLIC WORKS.

Gross Expenditure.....	\$ 4,992.98
Credits.....	<u>322.35</u>
Net Expenditure.....	4,670.63
1932 Appropriation.....	<u>2,500.00</u>
1932 Public Works over expenditure.....	\$ 2,170.63

The above credits are made up as follows:-

Paid by Government for work done under
unemployment relief Scheme No. 1.....\$ 47.65

Paid by Victoria Public Hospital for
concrete floor..... 121.50

Paid by Victoria Public Hospital for
grading at Nurses' Home..... 121.50

Trees cut by City on private property..... 31.70
322.35

The above gross expenditures is made up as follows:-

Labor.....	\$ 3,797.65
Material costs and Workmen's Compensation..	<u>1,195.33</u>
	\$ 4,992.98

Labor Account.

Dump.....	\$ 751.20
River Roads.....	8.10
Surface Sewers (Not within street limits)..	720.84
Back Drain.....	<u>735.74</u>
Forward.....	\$ 2,215.88

Ditch on
Mungah Rd.

Brought Forward	\$ 2,215.88
Unforeseen Account.....	894.32
Trees.....	687.45
	\$ 3,797.65

This unforeseen account is itemized as follows:-

Work on Flat (Clearing, cutting bushes, covering up old card and turnpiking road).....	\$ 235.07
Cement floor at Hospital (162 sq. yds.).....	79.70
Spraying oil for mosquitos.....	9.15
Clearing refuse back of Skating Rink.....	18.48
Palyground (Queen's Square).....	88.77
Surveying.....	119.65
Nurses' Home (Lawn and driveway).....	121.50
Exhibition Grounds (Gravel).....	10.80
Trotting Park (cutting and burning brush and clearing refuse).....	135.00
Drain at Wilmot Park.....	4.80
Repairs to Band Stand east end.....	1.20
Drain from Park to Children's Home.....	65.70
Refuse from Fire Station.....	4.50
Total Unforeseen Account.....	\$ 894.32

Back Drain:-

During the winter and spring it was necessary to spend some \$68.93 on snow and ice removal.

During August, 1932 it was found necessary to do some cleaning out of back drain at which time some \$249.25 was spent in labor, there being practically no material charges.

Again during the months of November and December considerable work was done on the back drain under the unemployment relief Scheme No. 2. This work, however, necessitated a labor expenditure of teams, trucks, etc. At this time the drain was widened at the bottom to a width of 10' and had sides sloped to a $1\frac{1}{2}$ to 1 slope from Smythe Street to Regent Street. A stone wall, wooden top culvert was placed over the drain at the extension of Northumberland Street. The stone walled culvert at York Street was widened out about five feet and had new stringers and wooden floor placed.

The value of the unemployed relief labor on this work was \$1,158.00

Making the total amount of labor used in actual Pay Roll and paid in kind under relief Scheme No, 2, some \$1,417.07.

On November 23, 1932 was started a job which is listed under the Back Drain diversion. This consisted of building a 66 feet long, 8 foot Concrete Arch Culvert on University Ave., to replace the stone culvert which now carries the back drain, and the digging of a new course for the back drain to and from this culvert. These

diversion ditches are to be 10' wide at bottom and have both sides rip raped. This new course considerably shortens the back drain at this location, and also moves it to the south side of Alexandra Street thus doing away with the necessity of a culvert on this street. This new diversion ditch ran for its entire length on the east side of University Avenue, through land owned by Mr. Wm. Scott and on the west side of University Avenue, through land owned by Mr. Batt and C.N.R. Permission was obtained from Mr. Scott and Mr. Batt without any charge. The C.N.R. agreed to lease to the City the piece of land taken over from them at the price of \$1.00 per year.

This work was almost entirely discontinued the last part of December 1932, as the ground had frozen hard and also the work had progressed to a stage where it was safer to complete it in the spring. However, at this time the Concrete Arch Culvert and the eastern diversion, and about $\frac{1}{2}$ of the western ditch were completed.

This Back Drain Diversion work cost in labor charges up to the end of December, 1932:-

Ordinary Pay Roll.....	\$ 829.71
Relief Pay Roll paid in kind under	
Relief Scheme No. 2.....	2,322.60
Labor Total.....	\$3,152.31

The actual material charges up to the end of December 1932, for new material, which had to be purchased for the job, consisting of lumber, cement, gravel, dynamite, etc., amount to.....\$1000.00

TABLE SHOWING COMPARATIVE YEARLY COSTS OF PUBLIC WORKS

Year.	Expenditure for Labor.	Gross Expenditure Labor and Materials.	Credits.	Net Costs Labor & Material	Appropriation.
1927	1,204.90			2,520.00	4,000.00
1928	2,470.39			3,156.87	3,000.00
1929	1,685.59	2,626.00		2,626.00	5,000.00
1930	2,279.82	3,397.09	237.00	3,159.19	5,000.00
1931	1,574.17	1,982.91	61.95	1,920.96	2,500.00
1932	3,797.65	4,992.98	322.35	4,670.63	2,500.00

CEMENT WALKS.

No cement walks were laid this year.

STREET LIGHTS.

Gross Expenditure.....	\$ 6,532.51
Credits.....	000.00
Net Expenditure.....	6,532.51
1932 Appropriation.....	6,000.00
1932 Street light over expenditure	532.51

The Expenditures are made up as follows:-

Current from Nov. 27, 1931 to Nov. 27, 1932, 175980 K.W.H.	4824.99
Maintenance labor on 16,548 miles of line @ \$20.00.....	330.96
Lamps purchased for replacement and new installation	
0 - 600 O.P. Lamps	
238 - 250 O.P. Lamps @ 1.50.....	\$ 432.00
110 - 100 O.P. Lamps @ .84.....	92.40.....
	524.40
Material purchased for new installation and maintenance of lamp fixtures (including only such articles as, standards, lamp brackets, heads, sockets, shades, etc.).	326.18
Material and extra labor used in line maintenance.....	114.82
Miscellaneous, as telephone, ground rent, Pay Roll etc..	161.16
Paid to Dr. John Stephens for investigations and report on electrical energy conditions and rated in Fredericton	250.00
	\$6532.51

TABLE SHOWING CURRENT CHARGES FOR 1932.

Date of Bill	K.W.H.	Demand in K.W.	Average No. of burning hrs. per night.	Bill per month	Days per bill	Burning hours in each bill
Nov. 27th to Dec. 26th/31	19080	48	14½	\$495.52	29	420.5
Dec. 26th to Jan. 28th/32	20640	48	14½	526.60	33	478.5
Jan. 28th to Feb. 27th/32	17640	48	13	466.84	30	390.
Feb. 27th to Mar. 28th/32	15300	46.8	11½	416.81	30	337.5
Mar. 28th to Apr. 26th/32	11940	43.2	9½	341.52	29	232. 268.25
Apr. 26th to May 25th/32	11220	42.6	8	325.55	29	232.
May 25th to June 27th/32	10320	44.2	7½	310.63	33	239.25
June 27th to July 26th/32	9000	44.2	7½	284.31	29	210.25
July 26th to Aug. 26th/32	16860	44.2	8	442.96	31	248.
Aug. 26th to Sept. 27th/32	9420	51.6	10	308.22	32	320.
Sept. 27th to Oct. 27th/32	15840	45	11¾	424.03	30	352.5
Oct. 27th to Nov. 25th/32	18720	45	12½	482.00	29	355.25
	175980			\$4824.99	364	3852.00

The following statements are correct:-

	1931.	1932.
Average monthly demand in K.W.....	49.57	45.9
Total K.W.H. consumed by Street lights.	189,840	175,980
Number of nights streets lighted	366	364
Total hours light burned.....	3,879	3,852
Total cost for year for demand and energy	\$5196.52	\$4824.99
Average cost per K.W.H. for demand and energy.....	2.74¢	2.74¢
Average cost for demand and energy for burning hour.....	\$ 1.34	\$ 1.34
Average cost per burning for energy alone.....	.99¢	92.5¢
Total cost per year for Street Lighting, all charges included.....	6672.23	6532.51

TABLE SHOWING COMPARATIVELY YEARLY COSTS IN STREET LIGHTING.

Year.	Total Yearly Cost.	Yearly Appropriation.
1927	\$ 8038.41	\$ 8000.00
1928	7323.41	7000.00
1929	7434.72	7000.00
1930	7115.40	7000.00
1931	6672.23	10000.00
1932	6532.51	6000.00

Assuming Fredericton has a population of 9000 persons then the total per capita charge for street lighting for 1932 equals $\frac{6532.51}{9000} = 73¢$

The Electrical Digest issued in Toronto, Canada, January, 1933 states that "Taking twenty of the larger towns and cities in one province for the sake of actual figures, it is found that the cost of street lighting per capita per year averages 87¢."

BATHING BEACH.

The Bathing Beach near the Water Works, at the west end of the City was continued with the caretaker, Mr. Chas. Williams in charge.

The Beach cost the City this year \$340.44 made up of \$332.29 in Pay Roll and \$8.15 in material charges.

CITY WHARF.

The total expenditure in this department are made up as

follows:-

Pay Roll.....	\$	488.65
Material.....		<u>359.69</u>
Total expenditure....	\$	848.34

The ice run in the Saint John River this spring, destroyed the brick warehouse owned by the City at the City Wharf located at the North end of Regent Street.

At first it was decided not to rebuild but to salvage the brick and lumber from the destroyed warehouse. On May 4, 5 and 6th most of the brick and lumber was cleaned up and taken to the City Yard at a cost of \$53.31

A few days later it was decided to rebuild the warehouse on the same site as before. Construction was started by the City crew under a City foreman on May 12th and finished on May 28th.

The concrete floor and foundation of the old warehouse were used in the new warehouse, which was built, giving the same floor space, but about 6" (inches) higher than the destroyed building. It was necessary to hire brick layers at a labor cost of \$149.00, all the rest of the work except the electric wiring, being done by the regular City men.

The total cost of salvaging material and reconstructing warehouse was \$828.09. Made up as follows:-

Pay Roll, including Brick Laying.....	\$	468.40
M. Ryan and Son (Brick).....		49.60
E.M. Young Co. (Hardware, line, roofing, paint, etc)		167.29
J.O. Risteen (Windows, doors, etc.).....		32.38
Fraser Co. (Lumber).....		65.01
Clayton (Lumber).....		13.01
Devon Lumber Co. (Sand).....		10.50
W. Allan Staples (Electric Wiring).....		<u>21.90</u>
	\$	828.09

MUNICIPAL HOME.

I am not going to attempt here to make a report on the amount expended by the City in 1932, under the Municipal Home Department, but only to explain the expenditure of \$657.05 paid out in our Ordinary City Pay Rolls and charged to the Department in 1932.

This expenditure of \$657.05 is the total expenditure shown on City Pay Rolls against Municipal Home. It is made up altogether of money paid to City employees, in cutting, sawing, and delivering wood to the poor of the City.

From Dec. 1st, 1931 to November 30th, 1932 the City delivered 420 cords of wood. 214 cords were purchased from Mr. W. Boyce at \$4.50 per cord, and 100 cords from Mr. Hanford Dunphy at \$4.50 per cord. The rest of the wood, some 106 cords were cut by the City when building the Maryland and Wilsey Roads, and from pruning and cutting shade trees in the City.

Some thirty-five cords of wood were cut, with no stumping charge, on farm of Mr. W.G. Clark, some five miles above the City, but none of this wood was delivered to the poor of the City until after 1st December, 1932. The actual money spent on Pay Roll on this operation was \$34.20. Considerable more labor was supplied however, by the unemployed under unemployment relief Scheme No. 2, as primarily this operation was undertaken to provide work for these men.

The actual cost to the City of supplying and delivering wood to the City poor from 1st, December, 1931 to 30th November, 1932 is made up as follows:-

214 cords of wood from Mr. W. Boyce @ \$4.50.....	\$ 963.00
100 cords of wood from Mr. Hanford Dunphy @ 4.50....	450.00
106 cords of wood salvaged by City from different operations.....	000.00
Cash paid by City through City Pay Rolls for sawing and delivering wood.....	657.05
Total cost.....	\$2,070.05

To get this wood, saw it up and deliver it to the poor in the City cost \$4.20 a cord.

CITY HALL.

Like Municipal Home expenditures, I am not attempting to give an account here of the total expenditure in this Department, but only of the actual expenditure as made through the actual City Pay Rolls which amounted to \$354.76.

This Pay Roll expenditure is divided as follows:

Repairs and changes to City Hall.....	\$ 719.04
Usual work, such as night man in cold weather, putting on outside doors and windows, etc.....	135.72
	854.76

This \$719.04 classed as repairs and changed to City Hall is divided as follows:-

Plastering breaks in walls and ceilings.....	\$ 32.40
New office for City Engineer; carpenter work.....	100.00
painting.....	58.25
	158.95
Painting Mayor's Office and Main Hall.....	77.40
Painting Council Chamber.....	160.55
Forward.....	\$ 429.30

Brought Forward.....\$	429.30
Cleaning Council Chamber and Mayor's Office for meeting.....	9.15
Painting Treasurer's Office.....	66.52
Painting front porch and front door.....	36.75
Painting outside woodwork.....	144.97
General expenses.....	32.35
Total.....\$	719.04

The above list of labor expenditures gives a very good idea of the amount and location of work done to the City Hall this year. This work made a very decided improvement to the interior of the building. The exterior work had been long neglected and was very much in need of the attention it received this year.

Two new offices were made for the City Engineer at the back of the Council Chamber out of space which had formerly been old theatre dressing rooms. The bill for material for the construction of these new offices was \$181.66 which together with the above listed labor charge of \$158.95 makes a total expenditure for these two offices of \$340.61.

SEWERAGE DOMESTIC

Gross expenditure.....\$	1,174.16
Credits.....	120.90
Net expenditures.....\$	1,053.26

The credit of \$120.90 is made up of work done on Domestic Sewers for private citizens, and has been billed to these citizens.

The gross expenditure is made up as follows:-

Pay Roll.....\$	718.85
Material charges.....	455.31
Total gross expenditure.....\$	1,174.16

No extension to our sewerage system was made this year.

This year three new customers were connected to the City Sewerage system.

Twenty-four (24) sewer connections, out of 100, which were reported stopped, had to be dug out and partially relaid, mostly on account of growth of roots within the connection.

The entire domestic sewerage system was flushed out twice during the year, once in May with a labor charge of \$92.40 and once in October with a labor cost of \$31.60.

TABLE SHOWING PRINCIPAL PURCHASES OF MATERIAL USED
BY DEPARTMENT HERE BEFORE MENTIONED.

Material	Amount Purchased 1932.	Average Price	Amount in stock 1st. Jan. 1933.
8" T.C. Pipe	200 Lin. ft.	\$ 52.20 per hun.	25 lin. ft.
5" T.C. Pipe	500 " "	28.66 " "	70 " "
30" Corrigated Iron Pipe	4 " "	6.39 a ft.	None
24" Corrigated Iron Pipe	84 " "	3.43 a ft.	None
18" Corrigated Iron Pipe	84 " "	2.05 a ft.	None
15" Corrigated Iron Pipe	166 " "	1.76 a ft.	None
12" Corrigated Iron Pipe	48 " "	1.44 a ft.	None
Portland Cement	957 bags	0.75¢ retail 0.69 carload	60 bags.
Dynamite	751 lbs.	34.50 - 50% 32.00 - 40%	None
Brick	4500	18.00 a thous.	None
Stone (Trap Rock)	1784 tons	0.85¢ delivered	2000 tons crushed 500 tons not crushed.
Gravel (River)	5000 cu. yds.	0.59¢ delivered	None.
Gravel (Pit)	2250 cu. yds.	6 and 2/3¢ in pit	None.
Calcium Chloride	5 1/2 tons	28.30	None.
10' Rd. Machine Blades	25	8.10	5
Heavy Tar			44 gal.
Asphalt			None
Asphalt Emulsion	810 gal.	0.25¢	None
Tar K.P.			None
Light Tar			225 gal.

WATER.

The expenditure in this department is divided into two headings namely Water Ordinary and Pumping Station.

WATER ORDINARY.

This heading takes in all expenditures for water outside the Pumping Station and Pumping Station grounds.

Gross expenditures.....	\$ 4,520.36
Credits.....	<u>122.47</u>
Net expenditures.....	\$ 4,397.89

The credit of \$122.47 is made up as follows:-

Work done on Water Service for customers on their own private property. (The City bears the expenses of work done within the street limits).....	\$ 91.35
Material paid for by Water Department but used by Roads and Street Department.....	9.95
Material sold to Town of Devon.....	<u>21.17</u>
Total credits.....	\$ 122.47

The gross expenditure is made up as follows:-

City Pay Roll for Hydrants.....	\$ 202.12
City Pay Roll for Meters.....	1113.85
City Pay Roll for Distribution System.....	<u>1350.33</u>
	\$2,666.30
Material and other charges.....	<u>1,854.06</u>
Total gross expenditure...	\$4,520.36

Hydrant:-

We have installed in the City 151 Hydrants. Our labor cost per hydrant this year, for inspection and maintenance is \$1.34.

Meters:-

We have in the City 1037 Meters in use and 481 customers on flat rate.

The labor cost this year per meter for reading, testing, repairing etc., is \$1.07.

All meters are read four times a year, we also have 30 customers whose meters are read once a month.

Meters found stopped during year.....	41
Services metered first time this year.....	20
New meters purchased this year (5/8" Trident Meters).....	25
Meters in Stock Room 1st, January, 1933:	
14 - New 5/8" Trident	
15 - 5/8" different type meters. Not fit for service but can be repaired.	
1 - 1" Meter used, but repaired and fit for service.	

Distribution System:-

New Water Services put in this year.....	3
Old services dug up and repaired or relaid....	24
Services which froze and had to be thawed.....	2

Our Water system was not extended this year as far as laying any new mains, but a number of new customers were taken on at the south end of Northumberland Street and the South end of Smythe Street. To pick up these new customers it was necessary to run from the end of our main, 2, one inch extensions. One of these was pushed under the valley track at the south end of Smythe Street.

The Water main in Camperdown Alley, of 2" galvanized iron pipe, which had given us trouble during the winter of 1931-1932, was relaid again using 2" galvanized iron pipe. I can find no record as to when the 2" pipe taken out this summer, was laid, but would think the life of this installation would be at least twenty-five years.

The net expenditure in Water Ordinary this year was \$4,397.89 as against that of last year of \$7,933.55.

WATER PUMPING STATION

This cost includes all labor and material used at Water Pumping Station and grounds.

Gross expenditure.....	\$ 16,915.58
Credits.....	<u>3,520.46</u>
Net expenditures.....	\$ 13,395.12

The credit is made up as follows:-

Coal charged to Pumping Station and sold to workmen or other City Departments.....	\$ 236.82
Containers returned to Imperial Oil Co.....	8.64
Water charged to Sewerage domestic for flushing domestic sewers.....	65.00 ✓
Fire Department for hydrant charges on 140 hydrants @ \$20.00.....	2800.00 ✓
Water for City Hall building.....	50.00 ✓
Water for Municipal Home.....	25.00 ✓
Water for City Yard.....	10.00 ✓
Water for old Street Light Building, Carleton St.	25.00 ✓
Water used by Roads and Streets Department to sprinkle streets and flush surface sewers...	250.00 ✓
Water used at Wilnot Park.....	<u>50.00</u>
	\$3,520.46

The gross expenditure is divided as follows:-

City Pay Roll of salaries of engineers at Pumping Station.....	\$ 5,367.04
Work done by other City employees in and around Pumping Station.....	<u>806.93</u>
Total City Pay Roll.....	6,173.97
Material and other charges.....	<u>10,741.61</u>
	\$16,915.58

Nov 1932

Our crib pier and guard pier on the end of our intake pipe in the river were repaired at a labor cost of \$168.20 and a material cost of \$101.85.

The guard pier was refaced on front and sides above low water mark, with hard wood deal. The crib pier was cut down about one foot and given a new top of hard wood deal. This work was carried out from March 11th to March 24th, 1932.

During the spring the interior of the Pumping Station was painted. The Filter Room, Air Compressor Room and Allis Chalmers Room, each receiving one coat of pain. The Allis Chalmers Engine was also repainted.

The usual work requiring extra labor was done in and around Pumping Station. This work consists of periodical cleaning of coagulating basin and pumping well, hauling chemicals, etc. and the pay of a relief man who works for eight weeks each summer while the regular pumping Station employees each get two weeks holidays.

The material and other charges is divided as follows:-

Item #	1	Light and power supplied by Maritime Electric Co. Ltd. 289,660 K.W.H.....	\$ 6,120.87
" #	2	Transformer charges.....	151.92
" #	3	Lime 6349 lbs.(best price \$2.10 and tax).....	142.20
" #	4	Alum 74861 lbs.(best price \$1.23 F.O.B. F'ton tax included).....	946.85
" #	5	Coal used by other City Departments.....	236.82
" #		Coal, 233 tons for Pumping Station use.....	1,199.95
" #	6	Fuel oil none.....	000.00
" #	7	Engine Oil, Renown, 46 gal.....	20.13
" #	8	Motor Oil, Polarine heavy 45 gal; Gargoyle Mobil-oil, 26 gal.....	56.73
" #	9	Gasoline, 125 gal.....	33.75
" #	10	Maintenance and repairs to building & machinery..	586.33
" #	11	New installation.....	000.00
" #	12	Supplies, packing rags, etc.....	88.67
" #	13	Stationery, forms, charts, etc.....	94.40
" #	14	Workmen's Compensation Board.....	62.50
" #	15	Dr. Hagerman's salary.....	884.25
" #	16	Hoisting chemicals.....	100.00
" #	17	Miscellaneous (Telephone, etc).....	16.24
			<u>\$10,741.61</u>

Page 23 of this report consists of a table showing Water pumped and material and machinery used in pumping for this year This table is compiled from the daily charts made out by the Pumping Station engineer. These charts are kept on file in the City Engineer's office.

This table shows under heading "Gallons of Water Pumped" only the water pumped into City Mains. It must be remembered that this water is first pumped from the river into the coagulating basin from which it flows through the filters to the clear water basin and is then pumped into the City Mains.

Table compiled from Daily Pumping Station Charts, showing
water pumped and material and machinery
used in pumping.

Total Hours Month	Month of	Gal. of Water Pumped	Lbs. Coal Used	K. W. H.	Hours Power Supplied by			Fuel & Lubricants		Low lift Pump Hours run	Service Pumps		
					Mari- time	Oil Eng.	Gas	Pts. Eng. Oil	Gal. gas used		# 1 Motor	# 2 Motor	Gas.
744	1931 Dec.	14,055,000	47,930	21,136	744			31	5	516½	541½	10½	
744	1932 Jan.	14,450,000	50,150	25,517	744			30½	4	505	743	1	
696	Feb.	15,165,000	63,300	23,257	696			30	4	527	695	1	
744	Mar.	14,915,000	48,155	23,699	744			33½	7	537½	744		
720	Apr.	13,975,000	29,950	20,984	720		1	31	5	518	720		
744	May.	14,547,000	15,500	22,304	744		10 min	32	4	539½	732½	11½	1
720	June	13,870,000	6,350	24,423	720			30½	5	504½	642½	71½	10 min.
744	July	13,065,000	---	19,966	739½	3	1¼	31	12	478½	742	2	1¾
744	Aug.	13,570,000	---	19,732	744			33	4	482½	716	4	
720	Sept.	14,670,000	3,650	23,470	720			25½	4	497	744		
744	Oct.	15,190,000	17,150	22,308	744		1½	27½	3	523	704		1½
720	Nov.	13,560,000	28,300	22,864	720			33½	2	442			
8784		171,032,000	319,480	269,660	8779½	3	4.25	368½	64	6066¾	8467	101½	4.25

*Probably incorrect
do not enough material down road dug*

(Yearly Gross Expenditure
at Pumping Station)

COMPARISON OF WATER PUMPED AND COSTS FOR LAST SEVEN YEARS.

Year	I.G. Water Pumped	Yearly Cost Pumping Station	Pumping Station Costs per 1000 gal.	Total Yearly Water Costs	Total Yearly cost per 1000 gal.
1926	206,076,526	\$	\$	\$	\$
1927	198,165,000	18,040.65	9.10 cents	24,636.62	13.0 cents
1928	192,890,000	18,245.05	9.46 "	26,122.73	13.5 "
1929	195,590,000	17,722.44	9.00 "	32,142.34	16.4 "
1930	204,405,000	16,791.22	8.21 "	22,752.37	11.1 "
1931	187,164,000	16,425.55	8.8 "	24,359.10	13.0 "
1932	171,032,000	16,915.53	9.9 "	21,313.47	12.5 "
1933	175,080,000	16,482.67	9.5 "	20,390.32	11.6 "

TABLE SHOWING RESULTS OF FILTERS AND CHEMICAL TREATMENT.

FREDERICTON WATER SUPPLY - SUMMARY FOR YEAR 1932

1932 Date	Bacteria per cubic centimeter.			Per cent removal
	Raw Water	Effluent	Tap Water	
Jan. 12	1200	1	3	99.9
" 24	6000	5	7	99.9
Feb. 11	900	0	2	100.0
" 23	1000	2	2	99.8
Mar. 6	1100	1	5	99.9
" 22	3000	1	1	99.9
Apr. 11	15000	12	8	99.9
" 23	3000	1	6	99.9
May 13	1500	1	5	99.9
" 23	1800	2	0	99.9
June 12	1000	7	2	99.8
" 19	400	0	0	100.0
July 12	400	1	1	99.3
" 30	800	7	4	99.1
Aug. 8	400	1	5	99.3
" 17	500	3	4	99.4
Sept. 13	240	0	0	100.0
" 27	900	2	6	99.8
Oct. 13	2000	3	5	99.8
" 24	2000	1	1	99.9
Nov. 15	6000	5	5	99.9
" 30	2600	1	6	99.9
Dec. 17	900	0	1	100.0
Average	2288	2.48	3.43	99.77%
1931	1736	2.1	4.1	99.7%

Fredericton, N.B.
January 6, 1933

-24-

Signed - H.H. Hagerman

This year to deliver 1000 I.G. of water to the City Mains took 1.58 K.W.H.

The Pumping Station cost this year of deliver ing 1000 I.G. of water to the City mains is 9.9¢

The total cost of delivering 1000 I.G. to City main and making it available to the customer is 12.5¢

This cost includes all water costs excepting, collection of Water Bills and other overhead charges included in City Government costs, and bond interest and sinking fund.

The result of the filter and chemical treatment under the direct charge of Dr. H.H. Hagerman are this year, as usual, very satisfactory, and are well shown by table inserted on Page 24.

All of which is respectively submitted.

City Engineer,
Fredericton, N.B.
31st. Jan. 1933.

SNOW CONTROL

Nov. 30, 1931 to April 5, 1932, \$ 1503.45

Hauling Snow off Streets

Nov. 30 to Dec. 15	1931	\$ 56.65
Dec. 16 to Dec. 31	"	139.25
Jan. 1 to Jan. 15	1932	54.35
Jan. 16 to Jan. 31	"	58.61
Feb. 1 to Feb. 15	"	218.95
Feb. 16 to Feb. 27	"	82.65
Feb. 29 to Mar. 15	"	121.00
Mar. 16 to Mar. 31	"	50.82
		<u>782.28</u>

Ploughing Roads and Streets

Dec. 16 to Dec. 31	1931	\$ 64.04
Jan. 1 to Jan. 15	1932	6.00
Jan. 16 to Jan. 31	"	15.50
Feb. 1 to Feb. 15	"	46.15
Feb. 16 to Feb. 27	"	48.70
Feb. 29 to Mar. 15	"	25.25
Mar. 16 to Mar. 31	"	27.75
		<u>237.39</u>

Shoveling Roads

Feb. 16 to Feb. 27	1932	\$ 28.50
Feb. 29 to Mar. 15	"	32.40
Mar. 16 to Mar. 31	"	6.60
Apr. 1 to Apr. 5	" Maryland Hill	107.70
		<u>175.20</u>

Catch Basins

Feb. 29 to Mar. 15	1932	\$ 73.99
Mar. 16 to Mar. 31	"	127.04
Apr. 1 to Apr. 5	"	7.75
		<u>208.78</u>

Cleaning Ice from Gutters

Feb. 29 to Mar. 15	1932	\$ 33.60
Mar. 16 to Mar. 31	"	66.20
		<u>99.80</u>

January 28, 1933,

Cost of Labour for cutting Wood at Mr. W. G. Clarks,
and charged to

		MUNICIPAL	HOME	(Relief	Acct)	
Nov.	14	1932	.....	\$	12.00	
"	15	"	.....		12.00	
"	16	"	.....		12.00	
"	17	"	.....		12.00	
"	18	"	.....		9.60	
"	19	"	.....		12.00	
"	21	.....	"	.....	9.60	
"	22	"	.....		7.20	
"	23	"	.....		19.20	
"	24	"	.....		21.60	
						127.20

Dec.	20	1932	.....	\$	14.40	
"	30	"	.....		2.40	
"	31	"	.....		1.80	
						18.60

Jan.	3	1933	.....	\$	4.35	
"	4	"	.....		4.80	
"	5	"	.....		4.80	
"	6	"	.....		4.80	
"	7	"	.....		4.80	
"	9	"	.....		2.40	
"	10	"	.....		1.20	
						27.15

Total\$ 172.95

Ordinary

$$\begin{array}{r} 68.40 \\ 30 \overline{) 241.35} \\ \underline{7.} \end{array}$$

About 30 Cords.

January 28, 1933,

Cost of Labour for cutting Wood at Mr. W. G. Clarks,
and charged to

MUNICIPAL HOME Ordinary Pay Roll

Nov. 12	1932	\$	2.80	Grinding Axes
" 14	"		2.80	
" 15	"		3.40	
" 16	"		2.00	
" 17	"		3.40	
" 18	"		.60	
" 19	"		4.20	
" 21	"		4.20	
" 22	"		3.70	
" 23	"		3.70	
" 24	"		3.40	
				34.20

Dec. 20	1932	\$	6.00	
" 30	"		2.40	
" 31	"		.90	
				9.30

Jan. 3	1933	\$	2.40	
" 4	"		2.40	
" 5	"		2.40	
" 6	"		2.40	
" 7	"		2.40	
" 9	"		1.20	
" 10	"		.90	
" 26	"		7.20	
" 27	"		3.60	
				24.90

Total\$ 68.40

November 22, 1932

DOMESTIC SEWERAGE

1732

Date	Name	Address	
Dec. 2/31	Edward King	394 Northland St.	Dug Out
Feb. 26/32	Jacks Service Sta.	Regent Street	Dug Out
May. 13	Limerick,	Saint John St.	Dug Out
May 20	John Bird	Charlotte St.	New Service
May 25	Palmer	Northland St.	Dug Out
May 26	Amos Wilson	248 Saint John St.	Dug Out
May 26	Misses Sweeney	286 " " "	Dug Out
June 4	McLoughlin	60 Brunswick St.	Dug Out
June 7	Jaffreys	University Ave.	Dug Out
June 9	Fred Tims (Cor. King & Northumberland St.)		Dug Out
June 13	Benj. Griffiths	George St.	Dug Out
June 14	Sutherland	97 Northland St.	Dug Out
June 15	Robinson	768 Brunswick St.	Dug Out
June 23--7	William Dalong	Regent St.	New Service
June 29	Dr. Wainwright	Queen St.	Dug Out
July 4	David Campbell	Campbell St.	Dug Out
July 5	W. A. Good	Brunswick St.	Dug Out
July 7 - 8	Estey & Curtis	York Street	Dug Out
July 8 - 9	Brunswick St. Baptist Church (Brunswick St.)		Dug Out
July 14--18	H. L. Smith	Alexandria St.	New Service
July 19	Murray	York Street	Dug Out
Aug. 30- 31	Werguson	Northland St.	Dug Out
Oct. 19	A. A. Shute	Saint John St.	Dug Out
Oct. 20	Dover	York St.	Dug Out
Nov. 2	Imperial Oil Co.	Westmorland St.	Dug Out
Nov. 5	Foyal Stores	York Street	Dug Out
Nov. 17	Fred Tims	Brunswick St.	Dug Out