

# ANNUAL REPORT OF THE ENGINEERING AND PUBLIC WORKS DEPARTMENT

## 1958



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TO HIS WORSHIP THE MAYOR AND ALDERMEN  
OF THE CITY OF FREDERICTON.

Madam and Gentlemen:

I submit herewith this report which is a statement of the work done in the various City Departments under the direct supervision of the City Engineer.

This report covers the period January 1, 1958 to December 31, 1958 and is written for the purpose of maintaining an accurate record on file of the activities and costs of the various departments.

During the year, along with regular maintenance, city crews and contractors constructed the following work:-

New Pavement (Atlas Construction Co.).....	4.40 miles
Asphalt Sidewalk (Atlas Construction Co.)..	.98 miles
Hot Mix Seal 3/8" Minus (Atlas Const. Co.)	5.50 miles
Recap $\frac{3}{4}$ " Minus (Atlas Construction Co.) ...	.90 miles
Seal Coat (Diamond Construction Co.).....	3.90 miles
Gravel Road Construction or Partial Const..	.80 miles
Concrete Curb and Gutter .....	3.80 miles
Grading and Gravelling .....	6.64 miles
Concrete Sidewalk .....	1.41 miles
10" to 42" Surface Sewer .....	1.78 miles
8" to 36" Domestic Sewer .....	2.09 miles
6" to 12" C. I. Water Mains .....	3.19 miles

Contractors under contract with the City in 1958 constructed or began construction on the following projects:-

- Maritime Engineering Ltd. - Continuation of 1957 contract to constructing 1,000,000 Gallon Reservoir in Carleton Ward.
- Ashfield Construction Co. - Constructing Interceptor Sewer from St. John River near Forest Hill Road to Regent Street.
- Ashfield Construction Co. - To the laying and jointing of a 12" Water Main from the corner of Charlotte Street and University Avenue to the westerly entrance of the Experimental Farm, Lincoln Road.
- Atlas Construction Co. - To laying asphalt pavement on City Streets and sidewalks.
- The Canadian Fairbanks-Morse Co. Ltd. - To supplying and installing Pumping Station equipment on Lincoln Road.
- Canadian Westinghouse Supply Co. Ltd. - To supplying 1 motor control center for Main Pumping Station.

- Diamond Construction Co. - To construction of Booster Pumping Station on the Lincoln Road.
- John A. Kennedy & Co. Ltd. - To installing motor control center and rewiring main Pumping Station.
- Richards Electric Co. - To rewinding motors at main Pumping Station, Queen Street.
- E. S. Stephenson & Co. Ltd. - To supplying, delivering and installing Pumping Equipment to Pumping Station, Queen Street.
- Diamond Construction Co. - To application of RC<sub>3</sub> and  $\frac{1}{4}$ " Grit to various City Streets.

The regular expenditures for the twelve month period, January 1, 1958 to December 31, 1958 appear as follows:-

	<u>Appropriation</u>	<u>Net Expenditure</u>	<u>Debit</u>	<u>Credit</u>
Street Lights	33,500	36,038.79	2,538.79	
Public Works	18,000	22,034.94	4,034.94	
Roads and Streets	153,700	168,151.46	14,451.46	
Sanitation	52,000	60,264.32	8,264.32	
Wilmot Park	2,500	3,446.21	946.21	
O'Dell Park	3,800	3,682.34		117.66
Carleton Park	900	941.33	41.33	
Paint Department	9,750	9,774.94	24.94	
Old Burial Ground	1,600	1,959.42	359.42	
Loyalist Cemetery	500	244.57		255.43

	<u>Revenue</u>	<u>Net Expenditure</u>	<u>Credit</u>
Water Pumping Station)		42,850.14	
Water Ordinary )	191,382.83	47,338.05	72,952.45
Sewerage Domestic )		15,052.26	
Salaries )	196,700.37	13,189.93	

The City of Fredericton occupies a total of some 23.5 square miles. This square mileage excludes the water area occupied by the Saint John River within the boundaries of the City.

The preliminary report on the 1956 census shows the City's population as 18,303.

Following in the body of this report is a detailed statement of the work done, comparative expenditures and unit costs under the various departments. The detailed report of any particular department can be readily found by referring to the index on the preceding page.

Respectfully submitted,

City Engineer.

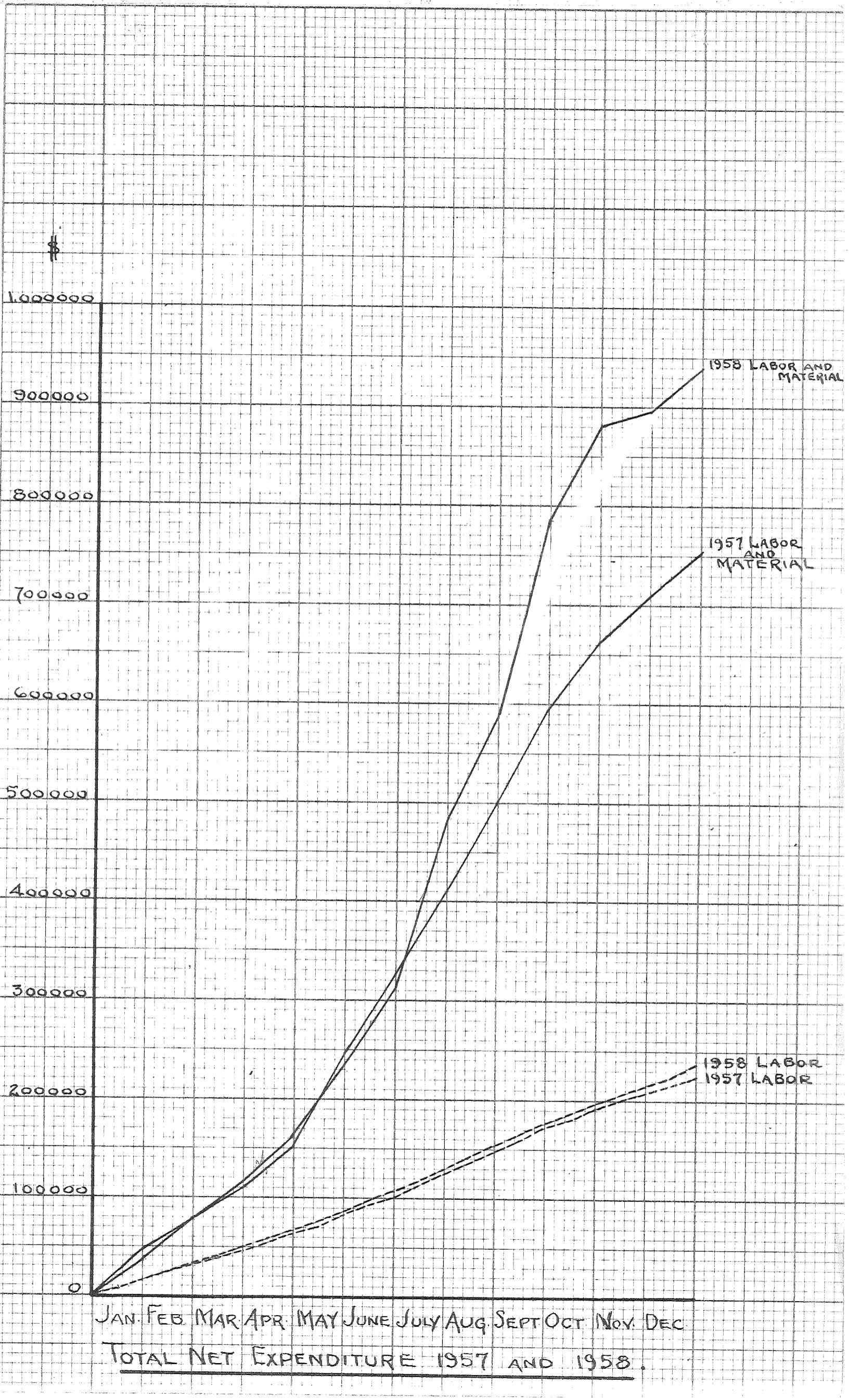
### TOTAL YEARLY EXPENDITURE

The total yearly net expenditure under the direct supervision of the City Engineer in 1958 amounted to \$940,200.76. This expenditure will be taken up in detail under the various headings in this report. The total gross expenditure for 1958 amounted to \$1,177,467.90.

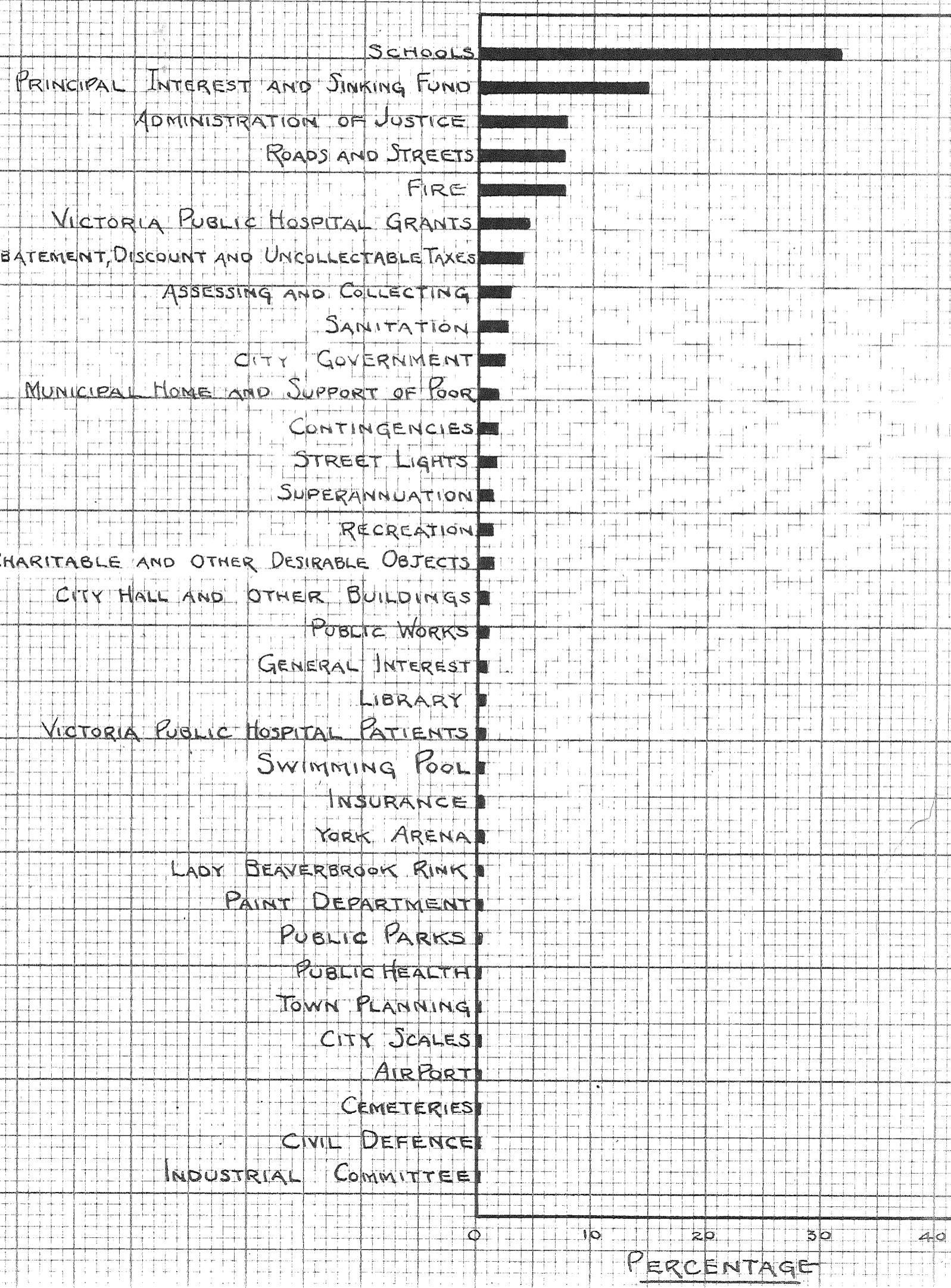
A graphic comparison of expenditures for labor and labor and material for the year 1957 and the year 1958 is shown on the following graph.

The location of new construction completed or commenced in 1958 is shown on two maps inserted after page 3 of this report.

Following the maps is a graph showing the distribution of the City of Fredericton Tax Dollar.



## DISTRIBUTION OF THE 1958 CITY DOLLAR



### ROADS AND STREETS

In 1958 the appropriation for Roads and Streets was \$153,700.

There are in Fredericton some 59.30 miles of Roads and Streets; 12.00 miles being located on the north side of the Saint John River and 47.30 miles on the south side. In addition there are 39.19 miles of concrete sidewalks; 6.45 miles on the north side and 32.74 miles on the south side of the Saint John River.

The paved and unpaved Roads and Streets are divided between the Rural and Urban districts. (Inside and Outside Tax Rate) as follows:-

<u>Roads and Streets</u>			
	<u>Urban</u>	<u>Rural</u>	<u>Total (Miles)</u>
Paved	35.55	4.76	40.31
Unpaved	<u>9.32</u>	<u>9.67</u>	<u>18.99</u>
TOTAL	44.87	14.43	59.30
	<u>      </u>	<u>      </u>	<u>      </u>

### Roads and Streets Expenditures - 1958

Gross Expenditure .....	\$ 228,329.85
Credits .....	<u>60,177.89</u>
Net Expenditure .....	\$ 168,151.96
1958 Appropriation .....	<u>153,700.00</u>
DEBIT .....	<u>\$ 14,451.96</u>

The above credits of \$60,177.89 are made up as follows:-

York Structural Steel (Sale of Scrap Iron and Batteries).	\$ 239.53
Board of School Trustees (Thawing Catch Basin, Connaught Street School) .....	7.24
Leo Hayes (To 1 hour Champion Grader Plowing) .....	7.55
N. B. Telephone Co. Ltd. (Rental on Steam Thawing Machine)	27.78
University of New Brunswick (Sale of 100 bags of salt @ \$1.10 per bag) .....	110.00
Fredericton Tire Ltd. (Sale of 2 bags of salt @ \$1.10 per bag) .....	2.20
Auto Machinery & General Supply Co. Ltd. (Sale of 6 bags of salt @ \$1.10 per bag).....	6.60
Donald Cochrane (Replacing post damaged on corner of Queen St. and Smythe Street)...	5.00
Fredericton Tire Ltd. (Sale of Sand) .....	29.50
W. L. Barrett (Rental on Jeep) .....	10.00
Board of School Trustees (Cleaning yard at Albert Street School) .....	<u>15.52</u>
Forward .....	\$ 460.92

	Brought Forward .....	\$ 460.92
Grant Mills Ltd. (Repairing manholes broken by moving Crane) .....	2.25	
Donald Raymond Hickey (Replacing posts, corner Smythe Street and Queen Street) .....	20.00	
Gordon Christenson (Rental on Truck) .....	2.00	
Edwin Coy (Rental on Truck) .....	2.00	
Dominion Experimental Farm (Patching Roads) .....	20.26	
Sobey's Ltd. (Flushing Parking Lot) .....	24.00	
J. L. Simms & Sons Ltd. (Working on grounds of Service Station, Dundonald Street) .....	7.69	
Dept. Public Works (Cleaning Wharf, Regent and Campbell Streets) .....	50.00	
#8 Works Co., Royal Canadian Engineers (Rental on Flusher and Sweeper) .....	200.00	
Byron McLeod (Replacing Curb, corner Aberdeen and Northumberland Streets) .....	6.00	
LaHave Equipment Ltd. (Repairing Pettibone Loader) ....	211.09	
Area Engineer (H.Q.N.B. Area, Rental on Flusher and Sweeper, St. Ann's Barracks) .....	50.00	
Harold Hawkins (Cleaning streets of spilled gravel)....	10.00	
S.C.R. Construction Co. Ltd. (Rental on equipment installing Water and Sewer) .....	20.58	
John Flood and Sons (Repairing sidewalks at Royal Bank of Canada) .....	80.00	
Denton Sullivan (Repairing culvert damaged by car)....	10.00	
Gerald Breau (Installing Surface Sewer) .....	56.44	
Diamond Construction Co. (Rental on Pettibone Loader and Labor) .....	36.48	
Horsnell's Ltd. (Use of Sand dryer at City Yard) ....	10.00	
Moncton Plumbing and Supply Ltd. (Rental on shovel and labor) .....	19.70	
James Blair (Labor on Surface Sewer) .....	8.64	
Waterloo Row Service Station (Sale of Sand) .....	10.85	
Fredericton Tire Ltd. (Sale of 206 Bags Calcium Chloride) .....	695.00	
Dominion Stores Ltd. (Sale of Sand) .....	2.50	
Journal Voucher (Materials sold to other departments) .....	406.77	
Journal Voucher (Machinery rental on other accounts) ...	50,678.25	
Journal Voucher (Labor) .....	46.00	
Journal Voucher (Gas and Oil) .....	4,353.69	
Journal Voucher (Holiday and Sick Leave Account) .....	<u>2,676.78</u>	
TOTAL .....	<u>\$60,177.89</u>	

The Gross Expenditure is divided as follows:-

<u>Labor</u> - being the total of Roads and Streets Pay Rolls, which includes the cost of hired trucks or any other machinery hired by the hour .....	\$ 98,447.83
<u>Material</u> -which includes Workmen's Compensation, <u>Charges</u> Unemployment Insurance and all material charges including purchase and repairs to City owned equipment .....	129,882.02

The Labor charges of \$98,447.83 are divided into the following items. These items give a good idea of the amount and kind of work done by the Roads and Streets Department during the year.

Item	1.	<u>Snowplowing Sidewalks</u> :- 39.19 miles .....	\$ 1,340.20
	2.	<u>Snow Control</u> :- Blowing, shovelling and hauling snow, plowing or scraping roads, cleaning gutters, thawing catch basins of ice and snow and any other means of snow control, 59.30 miles .....	21,490.11
	3.	<u>Sanding Streets and Walks</u> :- Storing sand in winter storage piles and spreading same on slippery streets and walks .....	9,055.78
	4.	<u>Streets</u> :- General work of maintenance of streets and sidewalks and any other items such as building culverts, curbs and gutters or pavements which are not mentioned under some particular heading .....	24,424.49
	5.	<u>Surface Sewers</u> :- Cleaning, flushing and repairing Surface Sewers and building new Catch Basins on existing streets .....	4,085.76
	6.	<u>Yard</u> :- Men working in Blacksmith Shop and repair work in City Yard .....	3,876.29
	7.	<u>Grading and Gravelling</u> :- Grading and application of gravel for maintenance on City Roads and Streets .....	1,298.49
	8.	<u>Saint John Road</u> :- All work done on the River Road from Alexandra Street to eastern City line, other than work done by the motor grader and pavement maintenance	785.45
	9.	<u>Doak Road</u> :- All work done on the Doak Road other than work done by the motor grader ...	17.12
	10.	<u>Wilsey Road</u> :- All work done on the Wilsey Road, other than work done by the motor grader .....	75.54
	11.	<u>New Maryland Road</u> :- Montgomery Street to southern City line. All work done on this road other than work done by motor grader or by special contract .....	1,113.52
	12.	<u>Rural Roads</u> :- Hanwell Road from C.N.R. Crossing to City line, portion of Forest Hill Road from residence #812 to end of road; Smythe Street from Montgomery Street to Trans Canada Highway; Priestman Street; Flanagan Road and Dunn's Road. All work done on these Roads other than work done by the motor grader .....	226.69
		Forward .....	\$ 67,789.44

	Brought Forward .....	\$ 67,789.44
Item 13.	<u>Street Cleaning</u> :- All cleaning and removing of dirt, leaves, etc. from streets .....	20,816.27
14.	<u>Tarvia Repairs</u> :- Patching and repairing Asphalt or Tar Pavement and applying seal coat or light tar or asphalt to pavements .....	8,719.14
15.	<u>City Road Patrols</u> :- .....	1,114.30
16.	<u>Parking Lots</u> :- All cleaning and removing papers, rubbish, leaves, etc. on Campbell Street Parking Lot .....	8.68
	TOTAL .....	<u>\$ 98,447.83</u>

Following is a table comparing Labor Expenditure in these items from 1955 to 1958:-

TABLE COMPARING YEARLY COSTS IN ROADS AND STREETS LABOR ITEMS

ITEM	1955	1956	1957	1958
1. Snowplowing sidewalks	1,656.29	1,304.90	721.59	1,340.20
2. Snow Control	33,709.50	24,996.36	17,654.53	21,490.11
3. Sanding Streets and Walks	4,327.59	5,360.02	4,093.77	9,055.78
4. Streets	16,816.70	16,656.23	25,934.35	24,424.49
5. Surface Sewers	1,852.13	1,762.75	2,864.58	4,085.76
6. Yard	3,653.97	5,093.09	5,338.31	3,876.29
7. Grading and Gravelling	1,993.82	2,146.68	1,668.43	1,298.49
8. Saint John Road	569.06	149.61	189.52	785.45
9. Doak Road )	738.67	137.02	1,497.87	17.12
10. Wilsey Road)				75.54
11. New Maryland Road	231.15	254.70	102.30	1,113.52
12. Rural Roads	461.63	3.36	249.56	226.69
13. Street Cleaning	13,186.69	14,956.40	21,725.37	20,816.27
14. Tarvia Repairs	5,513.19	4,389.59	6,939.11	8,719.14
15. City Road Patrol	856.41	559.37	878.56	1,114.30
16. Parking Lots				8.68
TOTAL .....	<u>\$ 85,566.80</u>	<u>77,770.08</u>	<u>89,857.85</u>	<u>98,447.83</u>

Some of the above items for Labor may be better understood by the following explanations:-

ITEM #1 - 39.19 miles of sidewalks were kept plowed this year. To the labor cost of \$1,340.20 must be added an approximate cost of \$899.59. (Workmen's Compensation, Pension Fund, Gas, Oil, Repairs and Depreciation), giving a total cost of \$2,239.79 or a unit cost for plowing of sidewalks of approximately \$57.15 per mile for 1958.

ITEM #2

<u>Snow Control</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>
Snowplowing Roads and Streets	5,655.80	4,059.22	3,778.67	4,339.59
Blowing, Shovelling and hauling Snow	25,679.55	19,118.99	11,298.73	14,794.07
Catch Basins	1,189.07	968.01	1,700.65	1,502.68
Snow Fences	849.96	505.20	480.63	560.21
Keeping Drains on the Hills open	259.32	254.14	250.06	230.60
Thawing Culverts	<u>75.80</u>	<u>90.80</u>	<u>145.79</u>	<u>62.96</u>
TOTAL ....	<u>\$ 33,709.50</u>	<u>24,996.36</u>	<u>17,654.53</u>	<u>21,490.11</u>

59.30 miles of Roads and Streets were plowed and maintained during the winter months.

The unit cost per mile of plowing and maintaining City Roads and Streets was approximately \$1,162.00 and was calculated as follows:-

Labor (Snow Control) .....	\$ 21,490.11
(Sanding Roads) .....	9,055.78
Workmen's Compensation .....	916.38
Pension and Holiday Fund paid by City	4,581.88
City Trucks (1988 hrs. @ \$2.00 per hr.)	3,977.00
(560 hrs. @ \$1.50 per hr.)	840.00
City Road Patrols (1343 hrs. @ \$6.00 per hour) .....	8,058.00
Sicard Truck Plow (56 hrs. @ \$10.00 per hour) .....	560.00
City Bulldozers (626 hrs. @ \$4.50 per hour) .....	2,817.00
(262 hrs. @ \$7.00 per hour) .....	1,834.00
City Thawing Machines (466 hrs. @ \$2.00 per hour) .....	932.00
Front End Loader (64 hrs. @ \$10.00 per hour) .....	640.00
City Shovel (144 Hrs. @ \$6.00 per hr.)	864.00
City Snow Blower .....	2,680.71
Sand (4000 yds. @ \$1.25 per yard) ....	5,000.00
Rock Salt (240 tons @ \$19.475 per ton)	<u>4,674.00</u>
TOTAL ....	<u>\$ 68,920.86</u>

It is interesting to note the account submitted to the Provincial Government for Snow Control. This account does not exactly coincide with this report as to dates, being the expenditure made from November 1, 1957 to May 1, 1958. It is a very exact account of Snow Control costs during the above period and is incorporated in this report for record purposes.

Department of Public Works  
Province of New Brunswick.

In Account With  
THE CITY OF FREDERICTON

City Pay Rolls charged to Snow Control.....	\$ 24,672.87
Workmen's Compensation .....	645.00
Pension, Holiday Fund, Paid by City .....	3,700.93

City Trucks:-

1953 Ford 3 ton Dump 388 hours @ \$2.00 .....	776.00
1957 Chev. 3 ton Dump 589 hours @ \$2.00 .....	1,178.00
1956 Fargo 3 ton Dump 480 hours @ \$2.00 .....	960.00
1955 Chev. 3 ton Dump 555 hours @ \$2.00 .....	1,110.00
1957 International $\frac{1}{2}$ ton 544 hours @ \$1.50 .....	816.00
1952 Ford $\frac{1}{2}$ Ton ..... 39 hours @ \$1.50 .....	58.50

City Jeeps - Sidewalk Plows:-

Jeep #11 213 hours @ \$1.50 .....	319.50
Jeep #12 185 hours @ \$1.50 .....	277.50
Jeep #17 243 hours @ \$1.50 .....	364.50

City Road Plows:-

Allis Chalmers Grader 503 hours @ \$6.00 .....	3,018.00
Austin Western Grader 437 hours @ \$6.00 .....	2,622.00
Champion Grader 425 hours @ \$6.00 .....	2,550.00
Sicard Truck Plow 56 hours @ \$10.00 .....	560.00

City Thawing Machines:-

395 hours @ \$2.00 .....	790.00
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City Shovel T6K:-

179 hours @ \$6.00 .....	1,074.00
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City Snow Blower - Sicard Junior:-

Total hours in use - 166 hours	
Gallons - Gas 885.75 Gallons @ .32¢ .....	283.44
Quarts of Oil 54 Quarts @ .33¢ .....	17.82
Gallons of Antifreeze 4.5 Gallons @ \$2.52 .....	11.34
Insurance .....	17.70
Repairs .....	670.14
Depreciation (10% of Depreciated Value \$4,997.11)	499.71

City Bulldozers:-

1953 D2 Cat. 233 hours @ \$4.50 .....	1,048.50
1953 D6 Cat. 216 hours @ \$7.00 .....	1,512.00
1957 D2 Cat. 397 hours @ \$4.50 .....	1,786.50
1948 Int. TD6 33 hours @ \$4.50 .....	148.50

Sand:-

Bemrose and Kilburn 849 yards @ \$1.00 .....	849.00
Douglas Saunders 1000 yards @ \$1.00 .....	1,000.00
S.S. Baird & Sons 968 yards @ \$1.00 .....	968.00

Rock Salt:-

225 tons Rock Salt @ \$19.475 .....	4,381.88
TOTAL .....	\$ 58,687.33

NOTE:- Wages of Operators of City Machines do not appear as they are included in Pay Rolls charged to Snow Control Account.

Certified Correct,

*W.L. Bennett*

City Engineer.

Snow Fall in Fredericton for the last five years was as follows:-

Dec. 1, 1953 to November 30, 1954 .....	117-3/10 inches
Dec. 1, 1954 to November 30, 1955 .....	136-9/10 inches
Dec. 1, 1955 to December 31, 1956 (13 Mos.) ....	139-6/10 inches
Jan. 1, 1957 to December 31, 1957 .....	81-3/10 inches
Jan. 1, 1958 to December 31, 1958 .....	111.25 inches

Snow Fences:- Eleven thousand feet of lath and wire snow fencing was erected to control snow.

#### ITEM #3

Sanding Streets and Walks:- 4629 cubic yards of sand was used during the winter of 1958. Cost of the labor for sanding streets and walks during the winter was \$9,055.78.

#### ITEM #4

##### Streets:-

Repairs to Streets (repairs to Curbs, driveways, sidewalks, bridges, culverts, erecting of guard rails, widening streets, constructing barricades, rip-rapping, etc.).....\$	2,467.77
Repairs to Machinery .....	8,908.86
Weather account (Holidays) .....	12,510.22
Unloading and spreading Calcium Chloride .....	<u>537.64</u>
TOTAL .....	<u>\$ 24,424.49</u>

In 1958, 160 tons of Calcium Chloride and 240 tons of Malagash Salt were purchased for dust control and de-icing.

#### ITEM #5

##### Surface Sewers:-

The Surface Sewers in the City were flushed where necessary and all Catch Basins were cleaned and repaired during the year and repairs were made to any breaks that occurred or extensions needed to the sewer outlets.

Under the heading, a 10" Surface Sewer, 17 $\frac{1}{4}$  feet in length was laid by City workmen on Shamrock Terrace along the lot line between W. E. McFarlane and C. Gerard Breau.

ITEM #7

Grading and Gravelling:-

2,509.515 tons of crushed gravel was used in the maintenance and repairs to Gravel Roads under Roads and Streets.

The crushed gravel was purchased from Forbes and Sloat at a cost of 85¢ per ton, 10¢ per ton for loading and 40¢ per ton for hauling, making a total cost per ton of crushed gravel, delivered to the job of \$1.35.

Under this heading the following roads were gravelled:-

Hanwell Road, McEvoy Street, York County Market Parking Lot, portion of Forest Hill near Trans-Canada Highway and along the shoulders of the St. John Road where necessary. A stock pile was also placed in the City Yard for spring frost boils and excavation repairs.

ITEM #8

St. John Road:-

The Labor cost under this heading amounted to \$785.25 and included replacing posts, cutting grass and bushes along the right of way to the eastern limit of the City of Fredericton and repairing the shoulders of the Saint John Road at various locations damaged by the high water conditions existing during the spring of 1958.

ITEM #9 and #10

Doak and Wilsey Roads:-

The bushes were cut along the right of way of the above roads and sections of the Wilsey Road were gravelled.

ITEM #11

New Maryland Road:-

The labor charge of \$1,113.52 was made up of cleaning the refuse (paper, garbage, etc.) repairing the shoulders of the road and cutting bushes.

ITEM #13

Street Cleaning:-

The labor expenditure charged to this account amounted to \$20,816.27. To this labor charge, to get the overall cost for cleaning streets, must be added a material charge of \$12,523.45, thus making a total cost for cleaning streets of \$33,339.72.

The material charge of \$12,523.45 is made up as follows:-

Labor on repairs to Sweeper .....	\$ 360.08
Repair material to Elgin Sweeper, including Gutter Broom Wire and Elco Hickory Fibre, etc.) .....	4,010.29
Gas (162 <sup>1/4</sup> Gallons @ 32¢ per Gallon) .....	519.68
Oil (98 Quarts @ 33¢ per Quart).....	32.34
Water (352,200 Gallons) .....	132.20
Insurance .....	53.95
Depreciation (Elgin Sweeper) .....	----
Sicard Flusher (Repairs) .....	432.26
Labor charge repairing Sicard Flusher.....	113.45
Sicard Flusher (Depreciation) .....	1,950.00
Water - Sicard Flusher (5,215,500 Gallons) .....	908.95
Oil - Sicard Flusher (190 Quarts @ 33¢) .....	62.70
Gas - Sicard Flusher (3048.17 Gallons @ 32¢) .....	975.36
Hand Brooms, Shovels, Repairs to Carts, etc. .....	539.51
Insurance - Sicard Flusher .....	96.68
City Machinery (Trucks) .....	<u>2,336.00</u>
TOTAL .....	<u>\$ 12,523.45</u>

The Elgin Street Sweeper worked 117<sup>1/4</sup> hours during 1958. The actual cost for cleaning streets with the machine was \$7,104.59 and was computed as follows:-

Labor on repairs to Street Sweeper .....	\$ 360.08
Repair materials to Elgin Street Sweeper, including Gutter Broom Wire and Elco Hickory, etc. ....	4,010.29
Gas (162 <sup>1/4</sup> Gallons @ 32¢ per Gallon) .....	519.68
Oil (98 Quarts @ 33¢ per Quart) .....	32.34
Water (352,200 Gallons) .....	132.20
Insurance .....	53.95
Depreciation (Elgin Street Sweeper) .....	----
Labor (including Workmen's Compensation, Holiday and Pension Fund) .....	<u>1,996.05</u>
TOTAL .....	<u>\$ 7,104.59</u>

The operating dates for the above machine were from April 10th to November 2nd, 1958.

In 1955 the City of Fredericton purchased a Sicard Master Flusher with a capacity of 2250 Imperial Gallons. The price of the machine was \$19,435.00 and was paid for in 1956.

The operating dates for the above machine were from March 29, 1958 to November 20, 1958.

The Flusher worked 1159 hours. The actual cost for cleaning streets with this machine was \$6,385.69 and was computed as follows:-

Repair material to Sicard Flusher .....	\$ 432.26
Labor charges repairing Sicard Flusher ....	113.45
Gas (3,048.17 Gallons @ 32¢ per Gallon) ...	975.36
Oil (190 Quarts @ 33¢ per Quart) .....	62.70
Water (5,215,500 Gallons) .....	908.95
Insurance .....	96.68
Depreciation .....	1,950.00
Labor (including Workmen's Compensation, Holiday and Pension Fund) .....	<u>1,846.29</u>
TOTAL .....	<u>\$ 6,385.69</u>

ITEM #14

Tarvia Repairs:-

Labor and Machinery .....	\$ 12,550.64
Materials .....	<u>21,043.45</u>
TOTAL ....	<u>\$ 33,594.09</u>

The labor expenditure charged to this account amounted to \$8,719.14. This amount was made up as follows:-

Patching .....	\$ 7,273.69
Seal Coating .....	<u>1,445.45</u>
TOTAL ....	<u>\$ 8,719.14</u>

Patching:-

In 1958 a large aggregate dryer and aggregate conveyor belt was purchased to facilitate the mixing of patching material in the City Yard. This equipment has made a big improvement in the quality of the patching material produced at the yard and has also accelerated the operation. All patching material used on the Streets was produced at the City Yard in 1958, with none being purchased from paving contractors in the area.

The total expenditure for Patching City Streets for 1958 was \$19,512.22 and was computed as follows:-

Asphalt (11,646 Gallons RC <sub>3</sub> ) .....	\$ 4,885.83
(2,250 Gallons RS-1) .....	<u>1,045.76</u>
Less Credit on return of Drums .....	<u>2,301.00</u>
Total Asphalt Cost .....	<u>\$3,630.59</u>
Kerosene (3,275 Gallons) .....	871.51
Sand and Gravel (1,687.225 tons) .....	1,682.29
Rock Dust and Chip (859.805 tons) .....	1,384.41
Cost of Conveyor Hopper and Dryer, installed (10% of \$6,526.86) .....	652.69
Miscellaneous Materials, etc. ....	755.54
Labor (City Employees) .....	7,273.69
City Machinery, Trucks, Roller, Loader, Boiler, etc.) .....	<u>3,261.50</u>
TOTAL .....	<u>\$19,512.22</u>

Seal Coating:-

This year 3.90 miles of City Streets were sealed by the Diamond Construction Company at a cost of \$12,066.42, made up as follows:-

18,955 Gallons RC <sub>3</sub> @ 29¢ per Gallon .....	\$ 5,496.95
1115.5 tons $\frac{1}{4}$ " Grit @ \$5.45 per ton .....	6,079.47
100 tons $\frac{1}{4}$ " Grit (City Yard) @ \$4.90 per ton..	<u>490.00</u>
TOTAL .....	<u>\$ 12,066.42</u>

In 1958 the aggregate for seal coating was  $\frac{1}{4}$ " double washed beach gravel, which contained very little fine material. This resulted in a practically dustless cover material and practically eliminated complaints from Citizens regarding dust nuisance.

The following Streets were sealed in 1958:-

<u>Location</u>	<u>Lineal Feet</u>
Saunders Street - O'Dell Avenue to York Street .....	2,500
George Street - St. John St. to University Avenue ....	1,330
George Street - Regent Street to Carleton Street .....	600
University Avenue - Shore Street to Underpass .....	950
MacLaren Avenue - Hughes Street to Fire Station line..	3,730
St. John Street - Charlotte St. to Aberdeen Street ...	800
Scully Street - Regent Street to St. John Street .....	600
Regent Street - #800 to Montgomery Street .....	1,000
Aberdeen Street - York St. to Westmorland Street ....	600
Clark Street - Union Street to C.P.R. tracks .....	400
Dobie Street - Medley Street to School Street .....	1,200
Neill Street - Dobie Street to MacLaren Avenue .....	950
Carney Street - Dobie Street to MacLaren Avenue .....	950
Northumberland St. - Saunders St. to George Street ...	800
Medley Street - Dobie St. to MacLaren Avenue .....	1,100
School Street - Dobie St. to MacLaren Avenue .....	900
Church Street - Aberdeen St. to Churchill Row .....	400
McKeen Street - Union Street towards River .....	500
Clark Street - MacLaren Avenue to Hillcrest Drive ....	550
Forbes Street - MacLaren Avenue to Hillcrest Drive ...	<u>750</u>
TOTAL .....	<u>20,610</u>

The preparatory work and cleaning up of excess grit for the above work was done by City workmen and city machinery at a cost of \$2,015.45. (City machinery \$570.00, City labor, \$1,445.45); thus the total cost for the above sealing was \$14,081.87, making approximately \$3,610.00 per mile for seal coating.

ITEM #15

City Road Patrol:-

The total repair charges on our Road Patrols for the last three years were:-

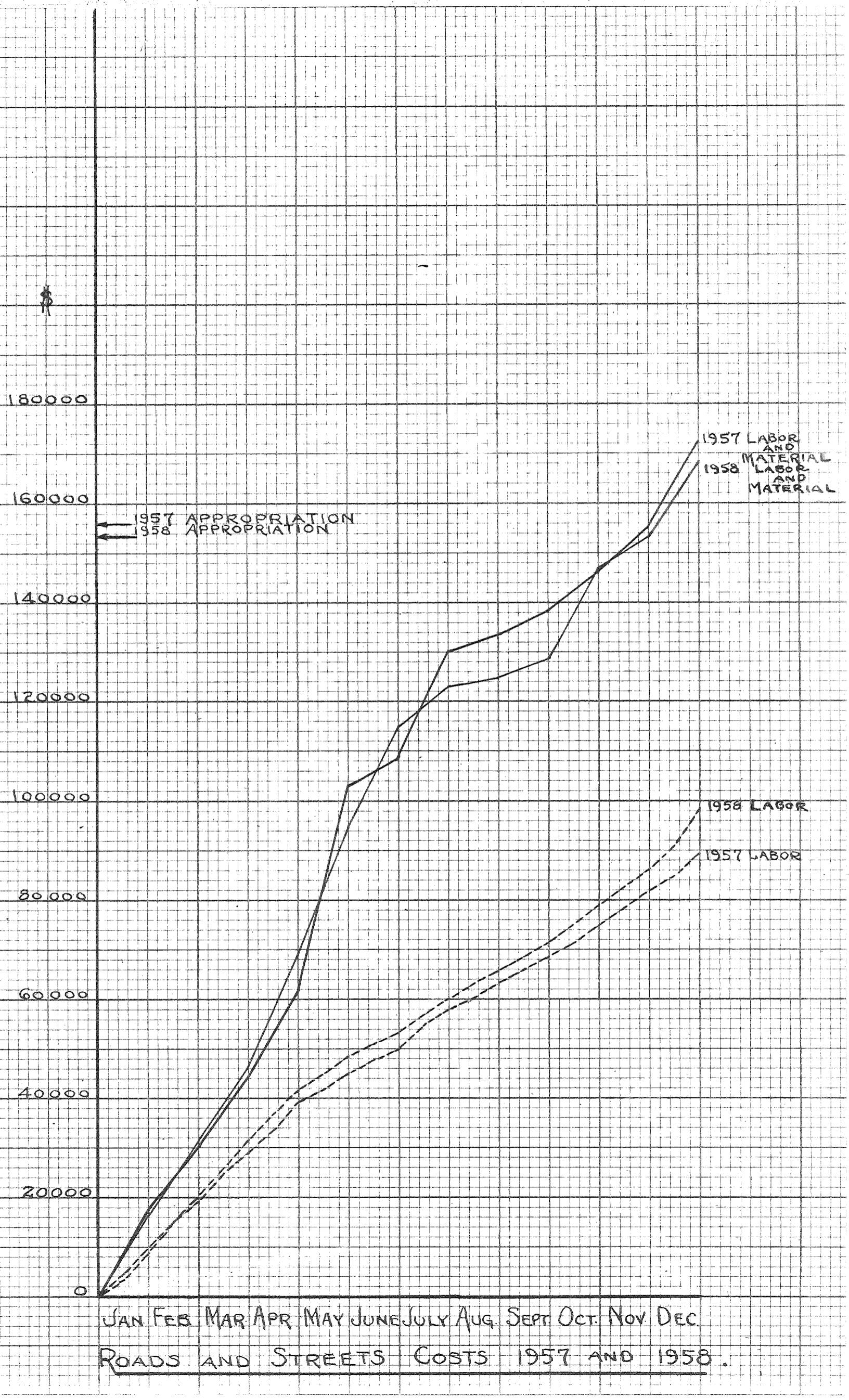
	<u>Date Purchased</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>
1950	Austin Western #99H	9,564.60	1,879.40	3,863.14
1953	Champion	1,094.25	1,731.33	2,324.45
1955	Allis Chalmers (AD-40)	91.88	1,590.93	1,992.45

The following were purchased this year and charged to Roads and Streets:-

1-1958	CJ5 - Willys Jeep, Serial #57548-76745, Motor #4J-194081 with Morrison Sno-Dozer, Full hydraulic, metal cab, 2 pair chains, \$3,572.00 less trade in allowance on 1955 Jeep and Flow \$1,072.00, plus 3% sales tax, \$75.00 .....	\$ 2,575.00
1-1958	G.M.C. - 3 ton, Serial No. 89653602688, Motor No. G13948, Cab and Chassis serviced front shocks, H.D. Rear Springs, Foam Rubber Seat, two speed axle, Dual horns, Dash heater and Defroster, Direction Light, front and rear, mud flaps on rear wheels 825 x 20-10 ply nylon tires, 825 x 20-10 ply nylon Tire and Tube spare, body and hoist, power take off, \$4,418.10, plus sales tax \$111.54, less trade in allowance on 1953 - 3 Ton Ford \$700.00 .....	3,829.64
1-427	AWPD Special Swing Loader No. 946, Motor No. 4C-6004 with cab, windshield wipers, bucket teeth, 4 yard snow bucket and all standard accessories \$22,465.00, plus 3% sales tax \$674.00, less trade in allowance on 1948 International TD6, \$4200.00 .....	18,939.00
1 -	Only Model 2416 Forano Portable Sand and Gravel Conveyor, 24' long, 16" wide, troughed belt, with 5 H.P., 1200 R.P.M., 3 ph., 60 cycle, 220 volt totally enclosed electric motor, without motor housing, complete with magnetic starter and disconnecting switch, weather proof cable plug and wall receptacle and 50 feet of 4 cond. cabtire cable No. 12, mounted on Rubber tired wheels, Serial #1376, \$1635.00 plus 3% Sales Tax \$49.05 .....	1,684.05
2 -	Hoppers made up for Forano Portable Sand and Gravel conveyor (Horsnell's) .....	645.70
	TOTAL .....	\$ 27,673.39

Following is the list of vehicles and machinery used and charged to Roads and Streets, showing a comparison of repair charges for 1957 and 1958, including tires and tubes.

<u>Name of Vehicle or Machine</u>	<u>Year Purchased</u>	<u>Repairs 1957</u>	<u>Repairs 1958</u>
Austin Western Grader #99H	1950	1,879.40	3,863.14
Champion Grader	1953	1,731.33	2,324.45
Allis Chalmers Grader AD-40	1955	1,590.93	1,992.45
International TD6 (Traded in June)	1948	779.01	197.38
Caterpillar D-6 Bulldozer 1958)	1953	1,299.70	1,920.74
Caterpillar D-2 Bulldozer	1954	2,008.77	1,766.41
Caterpillar D-2 Bulldozer	1957	81.29	729.19
Michigan T6K Shovel (3/8 yard)	1947	2,400.95	2,324.88
Unit Shovel	1957	759.22	1,513.63
Sicard Jr. Snow Blower	1949	273.31	1,010.53
Sicard Flusher (2250 I.G.Capacity)	1955	325.46	545.71
Willys Jeep #1 (Traded in May 1958)	1955	133.96	256.29
Willys Jeep #12	1955	404.40	381.56
Willys Jeep #17	1957	36.30	288.03
Willys Jeep #11	1958	----	94.22
Fargo 3 ton Dump Truck	1956	101.48	122.32
Ford 3 ton (Traded in May 1958)	1953	632.59	76.23
Chevrolet (3 ton Dump Truck)	1955	403.87	772.60
Chevrolet 3 Ton Dump Truck	1957	95.67	372.22
G.M.C., 3 ton Dump Truck (Bought-May)	1958	----	134.45
Ford $\frac{1}{2}$ ton Pick-Up (Traded in May)	1952	427.12	38.52
International $\frac{1}{2}$ ton Pick-Up	1957	7.83	209.11
Chevrolet $\frac{1}{2}$ ton Panel	1957	88.30	62.37
Chevrolet 1 ton	1953	407.61	399.16
Arpic Compressor	1953	525.60	490.28
Ingersol-Rand Compressor	1957	34.37	198.84
Elgin Street Sweeper	1953	6,373.67	4,370.37
Pettibone Mulliken Loader	1958	----	1,151.32
Tarvia Roller Model #157	1955	65.90	121.06
Ford - Tudor Coach	1957	162.17	234.65
<b>TOTAL</b>		<b>\$23,030.21</b>	<b>27,962.11</b>



CAPITAL ACCOUNT CURB and GUTTER

The net expenditure under this heading amounted to .....\$ 32,477.35

For the above expenditure of \$32,477.35 concrete curbs and gutters were laid at the following locations:-

<u>Location</u>	<u>Lineal Feet</u>
Dundonald Street, Northumberland St. to Smythe Street (both sides) .....	1,291
Connaught Street, Albert St. to Smythe St. (both sides) .....	1,464
Queen Street, Regent Street to Court House Square (north side) .....	242
Northumberland St., Dundonald St. to Connaught Street, (both sides) .....	886
Union Street, Smith Street to Friel Street, (both sides) and from Clark Street west to St. Mary's Parish Hall (north side) .....	1,158
Barker Street, Union Street to Canadian Pacific Railway (both sides) .....	2,305
Shamrock Terrace ... (both sides) .....	1,328
Sewell Street, MacLaren Avenue to Park Street (both sides) .....	1,252
Bridge Street, Union Street to Canadian Pacific Railway (both sides) .....	818
Gibson Street, Canadian Pacific Railway to west property line of Alta Ashfield (north side) .....	2,478
Woodstock Road, Hanwell Road to Golf Club Road, (both sides) .....	3,172
Campbell Street, Regent Street to the west property line of the Canadian Legion (south side) .....	267
Smythe Street, Edinburgh St. to Shamrock Terrace, (both sides) .....	345
Hillcrest Drive, Clark Street to west property line of S. Lean (both sides) .....	1,872
Hawthorne Terrace (both sides) .....	776
Park Street, Sewell Street to Gibson St. (both sides) .....	340
Miscellaneous (MacLaren Avenue, Dedham Street and St. Mary's Street, Saunders Street, Medley St.) .....	232
TOTAL .....	<u>20,226</u>

All the listed Curbs and Gutters were built by City crews.

All the concrete poured was purchased ready mixed on the job from the firm of Blakely Concrete Products Ltd. at a contract price of \$14.50 per cubic yard, less 1%. A cubic yard of concrete poured 20.6 lineal feet of Curb and Gutter.

The unit cost of one lineal foot of Curb and Gutter, found by dividing the total length laid which equals 20,226 lineal feet into the total cost of \$32,477.35 is \$1.60 per lineal foot.

CAPITAL ACCOUNT PAVING

Gross Expenditure .....	\$ 145,613.46
Credits .....	<u>1,964.76</u>
Net Expenditure .....	<u>\$ 143,648.70</u>

The above Credits of \$1,964.76 are made up as follows:-

Province of New Brunswick (Dept. Public Works), share of Road work on Woodstock Road at Phyllis Creek .....	\$ 1,874.34
N. B. Electric Power Commission, (To paving trench in front of building on Union Street) .....	15.00
N. B. Telephone Co. Ltd. (Raising 7 manholes on Union Street in preparation for paving) .....	<u>75.42</u>
TOTAL .....	<u>\$ 1,964.76</u>

The Gross Expenditure of \$145,613.46 is made up as follows:-

(1) New Pavement, hot mix Seal 3/8" minus and recap $\frac{3}{4}$ " minus .....	\$127,490.15
(2) Parking lot - Campbell Street .....	11,245.41
(3) Asphalt sidewalk - Union Street .....	<u>6,877.90</u>
TOTAL .....	<u>\$145,613.46</u>

(1) New Pavement was laid at the following locations:-

<u>Location</u>	<u>Tons of Asphalt</u>
Saunders Street, O'Dell Avenue to Parkhurst Drive ...	581.20
Wilmot Court .....	363.35
Woodfield Court .....	468.15
Rookwood Avenue .....	432.05
Parkhurst Drive (near Hanwell Road) .....	75.40
Hanwell Road, Woodstock Road to Parkhurst Drive ....	255.00
Woodstock Road, across Fill at Phyllis Creek .....	275.00
Smythe Street, Canadian National Railway to Shamrock Terrace .....	871.75
Tamarack Terrace .....	279.63
Westmorland Street, Dundonald St. to Connaught St. ..	167.30
Albert Street, York Street to Connaught Street .....	506.80
Connaught Street, York Street to Smythe Street .....	747.30
Aberdeen Street, Church St. to Canadian National Railway .....	120.30
Campbell Street, Regent Street to Carleton Street ...	332.55
Jaffrey Street, Union Street to Water Street .....	84.725
Smith Street .....	136.625
Union Street, across Fill at Friel Creek .....	300.00
Bridge Street, Union Street to Canadian Pacific Railway .....	217.80
MacLaren Avenue, Fire Station to Gibson Street .....	<u>485.05</u>
Forward .....	6,699.98

Cliff

<u>Location</u>	<u>Tons of Asphalt</u>
Brought Forward . . . . .	6,699.98
Sewell Street, MacLaren Avenue to Park Street . . . . .	229.40
Park Street, Sewell Street to Gibson Street . . . . .	112.30
Byng Street . . . . .	207.425
Bridge approach, north side of St. John River . . . . .	10.95
→ Mill Street . . . . .	63.75
Prince Street . . . . .	326.675
Ryan Court . . . . .	194.55
Hillcrest Drive, Clark Street to #538 (Sam Lean) . . . . .	432.50
Dundonald St., Northumberland St. to Smythe St. . . . .	311.90
Northumberland St., Dundonald St. to Connaught St.. . . . .	161.65
Shamrock Terrace . . . . .	269.55
Union Street, across fill at Grieves Creek . . . . .	358.20
Gibson Street, (narrow strip was laid from edge of old pavement to new curb and gutter on west side of Gibson Street from Canadian Pacific Railway to Alta Ashfield westerly property line) . . . . .	483.35
Barker Street (Narrow strip was laid from edge of pavement to new curb and gutter on both sides of Barker Street, from Gibson Street to Canadian Pacific Railway) . . . . .	216.10
Churchill Row, extending pavement to Canadian National Railway property . . . . .	78.40
Union Street, (narrow strips were laid on both sides of Union Street, thus widening the road from Bridge Street to Grieves Creek) . . . . .	100.00
TOTAL TONS of ASPHALT . . . . .	<u>10,256.68</u>

In addition to the above pavement laid, 86.95 tons of Asphalt was laid on Waterloo Row replacing old pavement due to the constructing of a new Domestic Sewer line and was charged to Capital Account Interceptor Sewer, and 143.00 tons of Asphalt was laid on Tweedsmuir, Albert and Regent Streets, replacing old pavement due to the new Domestic Sewer line following the above named Streets. This Asphalt was also charged to Capital Account Interceptor Sewer.

The above pavements were laid to a thickness of 3". The street grading and preparatory work, other than laying in place of the pre-mixed material was done by regular City crews. The pre-mixed pavement was supplied and laid by the Atlas Construction Company from their plants, one situated on the Richibucto Road and the other at Gagetown. The Company charged the City of Fredericton for this pavement in place, \$6.50 per ton for base and \$7.30 per ton for seal.

The following Streets were recapped this year:-

<u>Location</u>	<u>Tons of Asphalt</u>
Woodstock Road, Hanwell Road to City line . . . . .	445.90
Campbell Street, Carleton Street to York St. . . . .	124.25
Union Street, St. Mary's Street to City line . . . . .	282.775
Queen Street, Northumberland St. to Smythe St. )	
Smythe Street, Queen Street to King Street )	<u>345.10</u>
TOTAL TONS of ASPHALT . . . . .	<u>1,198.025</u>

In addition to the laying of new pavement and recapping, the following streets were sealed with hot mix 3/8" Minus:-

<u>Location</u>	<u>Tons of Asphalt</u>
Queen Street, Church Street to Northumberland St. ....	647.350
King Street, Church Street to Smythe Street .....	765.000
Brunswick Street, Underpass at University Avenue to Smythe Street .....	693.200
Underpass at University Avenue .....	114.150
Phoenix Square .....	174.150
Church Street, Queen Street to Brunswick Street .....	69.800
St. John Street, Queen Street to Brunswick Street ....	105.100
Regent Street, Queen Street to Brunswick Street .....	120.900
Carleton Street, Highway Bridge to Brunswick Street ..	174.600
York Street, Queen Street to Canadian National Railway	344.900
Campbell Street, Phoenix Square to Westmorland St. ...	97.500
Westmorland Street, Campbell St. to Brunswick Street..	142.500
Northumberland St., Queen Street to Brunswick Street..	93.750
Smythe Street, King Street to Brunswick Street .....	19.700
Union Street, Bridge Street to Gibson Street .....	506.900
Union Street, St. Mary's Street to Bridge Street.....	86.135
Bridge Street, Union Street to Water Street .....	108.425
Water Street, Bridge Street to St. Mary's Street .....	73.300
St. Mary's Street, Union Street to Water Street .....	70.375
<b>TOTAL TONS of ASPHALT .....</b>	<b>4,407.735</b>

In addition to the above mentioned streets sealed, 59.40 tons of hot mix 3/8" minus was applied to Shore Street. This application was necessary due to the laying and jointing of a 12" Cast Iron Water main to the Dominion Experimental Farm along this street. The above tonnage was charged to Capital Account Water Experimental Farm.

(2) Parking Lot, Campbell Street

Expenditure ..... \$ 11,245.41

This year the Parking lot on Campbell Street extending from the westerly street line of Phoenix Square to Carleton Street was paved.

The above expenditure of \$11,245.41 is made up as follows:-

Atlas Construction Company (1238.350 tons Asphalt) .....	\$ 8,170.02
Forbes and Sloat (1831.120 tons Gravel) .....	1,556.45
Hauling charges (Gravel) .....	669.49
City machinery (Trucks, Grader, Loader, etc.) .....	536.00
City Labor .....	313.45
<b>TOTAL .....</b>	<b>\$ 11,245.41</b>

(3)      Asphalt Sidewalk, Union Street

Expenditure ..... \$ 6,877.90

Under this heading an asphalt sidewalk was constructed on Union Street in Carleton Ward from the westerly City limits to Gibson Street. This sidewalk was laid on the southerly side of Union Street from the westerly City limits to St. Mary's Street and on the northerly side of Union Street from St. Mary's Street to Gibson Street. This work was necessary due to the fact the sidewalk was too low to allow drainage from the sidewalk to the Road.

The above expenditure of \$6,877.90 is made up as follows:-

Atlas Construction Company (618.25 tons Base) .....	\$ 4,078.91
Forbes and Sloat (1360.43 tons Gravel) .....	1,156.37
Hauling charges (Gravel) .....	465.17
J. L. Simms (1 sheet of Plywood) .....	2.66
Blakeny Concrete Products (3 yds. Concrete)....	43.06
City Spring Service Ltd. (Sharpening Picks) ...	4.00
City Machinery (Trucks, Grader, Loader) .....	402.00
City Labor .....	<u>725.73</u>
TOTAL .....	<u>\$ 6,877.90</u>

CAPITAL ACCOUNT - SEWER DOMESTIC

Gross Expenditure and Stocked Material.....	\$ 22,144.44
Less Inventory, Dec. 31, 1958 .....	<u>1,175.73</u>
	\$ 20,968.71
Credit .....	<u>2,926.34</u>
Net Expenditure .....	<u>\$ 18,042.37</u>

The above credits are made up as follows:-

Work done on Domestic Sewers for Private Parties .....	\$ 178.36
Grant Mills Ltd. (Repairing manholes broken by moving Crane) .....	77.18
University of New Brunswick (1 manhole Cover and Frame)...	40.38
Maritime Engineering Ltd. (2 manhole covers and Frames)...	80.76
Journal Voucher (Material paid for by Capital Account Sewer and used by other City Departments .....	<u>2,549.66</u>
TOTAL .....	<u>\$ 2,926.34</u>

Domestic Sewers were laid at the following locations:-

<u>Location</u>	<u>8" T.C.Pipe Lineal Feet</u>
Montgomery Street, York Street to Regent Street .....	1,490
Rookwood Avenue, Parkhurst Drive towards Woodfield Court .....	287
St. Mary's Street, Highland Avenue to City line .....	1,811
Sherwood Court .....	505
Windsor Street, Green Road to Fenety Street .....	<u>1,078</u>
TOTAL .....	<u>5,171</u>

Preparatory work was done on Fenety Street but no Sewer was laid in 1958.

An actual cost of installing the above listed Sewers at the above locations was kept, giving a unit price per foot of \$4.19 for labor and material.

<u>Location</u>	<u>Labor &amp; Machinery</u>	<u>Material</u>	<u>Total</u>
Fenety Street	48.90	57.72	106.62
Montgomery Street	2,437.38	2,578.70	5,016.08
Rookwood Avenue	170.88	459.22	630.10
St. Mary's Street	4,043.56	3,731.51	7,775.07
Sherwood Court	363.14	893.28	1,256.42
Windsor Street	<u>1,460.38</u>	<u>1,797.70</u>	<u>3,258.08</u>
TOTAL	<u>\$ 8,524.24</u>	<u>9,518.13</u>	<u>18,042.37</u>

Total lineal feet laid, 5,171 thus making the cost per lineal foot of \$3.49. To this must be added approximately 20% which includes Holidays for City workmen, Pension Fund, Workmen's Compensation, Unemployment Insurance and Engineering; thus making the overall cost of \$4.19 per lineal foot installed.

Material in stock December 31, 1958.

1,240 lineal feet of 8" T.C.Pipe @ 721¢ per foot...	\$ 894.04
12.5 lineal feet of 12" T.C.Pipe @ \$1.3287 per ft..	16.61
6 Manhole Covers and Frames @ \$44.18 each .....	<u>265.08</u>
TOTAL .....	<u>\$1,175.73</u>

#### CAPITAL ACCOUNT INTERCEPTOR DOMESTIC SEWER

Gross Expenditure .....	\$ 82,002.01
Credit .....	<u>4,532.72</u>
Net Expenditure .....	<u>\$ 77,469.29</u>

The above credit is made up of Journal Vouchers (materials paid for by Capital Account Interceptor Domestic Sewer and used by other City Departments.)

Due to increased housing south of the Canadian National and Canadian Pacific Railway tracks, it was found necessary to construct a new Domestic Sewer in order to alleviate the over-loading of the Reliever Sewer laid in 1948. This work was done under contract by Ashfield Construction Company. The sewer was laid from the Saint John River near the junction of Forest Hill Road and Waterloo Row, thence along the river bank to Mr. Louis Tims property; thence along the property line of Mr. Louis Tims to Waterloo Row; thence along the northerly side of Waterloo Row; thence crossing Waterloo Row and the Canadian National and Canadian Pacific Railway tracks near the residence of Mr. A. Charters; thence along the south side of the Canadian Pacific Railway through the University of New Brunswick property to University Avenue; thence along Beaverbrook Street to Tweedsmuir Street; thence along Tweedsmuir Street to Albert Street; thence along Albert Street to Regent Street. This sewer line was 5,821 feet in length consisting of 300 lineal feet of 36" Armco Pipe, 4,445 lineal feet of 36" Reinforced Concrete Pipe and 1,076 lineal feet of 30" Reinforced Concrete Pipe. 200 lineal feet of 36" Armco pipe was used on the outfall and 100 feet was laid under the Canadian National and Canadian Pacific Railway tracks. The 36" Reinforced concrete pipe extended to the intersection of Beaverbrook and Tweedsmuir Streets and the 30" from Beaverbrook and Tweedsmuir Streets to the intersection of Regent and Albert Streets. All existing Domestic Sewers along Beaverbrook Street, Tweedsmuir Street and Albert Street were connected to this sewer line.

This sewer line was so designed as to allow for extension at some future date, along Albert Street to York Street; thence southerly along York Street to a proposed street between Green Road and Montgomery Street; thence westerly along proposed street towards Smythe Street; thence southerly along a proposed street to Montgomery Street, where it will pick up the sewerage from future development between Montgomery Street, Trans Canada Highway and between O'Dell Woods and Regent Street.

Forest Hill outfall was also connected to this outfall.

The net expenditure for the above construction was \$77,469.29, made up as follows:-

Ashfield Construction Company .....	\$ 22,624.53
Material .....	51,502.02
Labor (City) .....	2,094.74
Machinery (City) .....	<u>1,248.00</u>
TOTAL .....	<u>\$ 77,469.29</u>

Not included in the above expenditure is a 15% hold back on Ashfield Construction Company, amounting to \$3,992.57 and which amount will be paid in 1959.

The Unit prices for the laying of the above Interceptor Sewer was as follows:-

36" Armco Asbestos Bonded Coated Corrugated Metal Sewer Pipe .....	\$ 4.00 per foot
36" Concrete Reinforced Sewer Pipe .....	4.35 per foot
30" Concrete Reinforced Sewer Pipe .....	4.00 per foot
Brick Manholes .....	60.00 each
Sand for backfill .....	1.00 per yard
Lumber left in place .....	80.00
Extra work allowed .....	2,000.00

The unit price for excavating, laying, and backfilling for the above Interceptor Sewer was \$5.14 per lineal foot and \$8.85 per foot for material charges, making an overall cost of \$13.99 per lineal foot.

CAPITAL ACCOUNT SURFACE SEWER

Gross Expenditure and Stocked Material...	\$ 58,962.43
Less Inventory 1958 .....	8,460.75
	<u>\$ 50,501.68</u>
Credit .....	8,884.51
Net Expenditure .....	<u>\$ 41,617.17</u>

The above Credit is made up as follows:-

Fredericton Housing Ltd. (3½ bags Cement @ \$1.46 per bag) .	\$ 5.11
Grant Mills Ltd. (½ Bag Cement) .....	.70
New Way Furniture Co. (750 Brick, 4 Bags Cement) .....	44.27
S.M.T. (Installation of Storm Sewer in yard at Garage, Carleton Ward) .....	182.63
R.C.M.P. (650 Brick, 4 Bags Cement) .....	38.79
U.N.B. (600 Brick, 3 Bags Cement) .....	34.90
Abe Budovitch (Installation of Storm Sewer in Yard, Squires Street) .....	159.37
S.C.R. Construction Co. Ltd. (1 Bag Cement) .....	1.45
T. J. Boyce (400 Brick, 2 Bags Cement) .....	23.42
Journal Voucher (Materials paid for by Capital Account Surface Sewer and used by other City Departments) ...	<u>8,393.87</u>
<b>TOTAL .....</b>	<b><u>\$ 8,884.51</u></b>

Under this heading Surface Sewers were laid at the following locations:-

Location	Concrete					
	42"	36"	30"	24"	12"	10"
Acacia Court						87
Back Drain	300		1426	80		
Beaverbrook Court						48
Bridge Street						30
Burden Sub-Division (outfall)			718	1029	92	
Carleton Street						195
Dedham Street						48
Dundonald Street						93
Friel Creek						225
Gibson Street					260	450
Grieves Creek						18
Mitchell Street						90
Montgomery Street				48		
St. Mary's Street				84		150
Sewell Street						48
Squires Street						30
Smythe Street					836	87
Shamrock Terrace						174
Sherwood Court					484	138
Union Street						100
University Avenue		104	188	350	700	36
Windsor Street					436	
Woodbridge Street						
<b>TOTALS</b>	<b>300</b>	<b>104</b>	<b>2332</b>	<b>1591</b>	<b>2816</b>	<b>2047</b>

An itemized account was kept of installing Surface Sewers at the above locations and expenditures were made as follows on the larger constructions:-

<u>Location</u>	<u>Labor and Machinery</u>	<u>Material</u>	<u>Total</u>
Back Drain	\$ 3,522.44	9,305.00	12,827.44
Burden Sub-Division (Outfall)	3,941.20	7,718.02	11,659.22
Carleton Street	136.98	288.77	425.75
Friel Creek	145.42	437.93	583.35
Gibson Street	478.54	765.48	1,244.02
Montgomery Street	154.58	248.86	403.44
St. Mary's Street	411.57	640.29	1,051.86
Smythe Street	1,367.24	1,803.81	3,171.05
Sherwood Court	826.56	1,073.21	1,899.77
University Avenue	300.29	771.46	1,071.75
Windsor Street	2,311.46	3,771.75	6,083.21
Woodbridge Street	447.76	495.92	943.68
<b>TOTAL</b>	<b>\$ 14,044.04</b>	<b>27,320.50</b>	<b>41,364.54</b>

The following is the total cost for laying the various sizes of pipe in place:-

42" Concrete Pipe .....	\$ 13.34 per lineal foot
36" Concrete Pipe .....	12.85 per lineal foot
30" Concrete Pipe .....	8.051 per lineal foot
24" Concrete Pipe .....	7.30 per lineal foot
12" Concrete Pipe .....	3.75 per lineal foot
10" Concrete Pipe .....	3.50 per lineal foot

Stock on hand, December 31, 1958:-

525 feet of 10" Concrete Pipe @ \$ .7326 per foot .....	\$ 3,846.15
531 feet of 12" Concrete Pipe @ \$ .89 per foot .....	472.59
264 feet of 24" Concrete Pipe @ \$3.937 per foot .....	1,039.37
184 feet of 30" Concrete Pipe @ \$4.706 per foot .....	865.90
128 feet of 36" Concrete Pipe @ \$7.313 per foot .....	936.06
Catch Basins (26 Gratings and Frames @ \$40.20) .....	1,045.20
(2 Gully Grates @ \$46.44) .....	92.88
3000 Brick @ \$51.56 per thousand .....	154.68
6 bags cement @ \$1.32 per bag .....	7.92
<b>TOTAL</b>	<b>\$ 8,460.75</b>

CAPITAL ACCOUNT - WATER

Gross Expenditure and stocked material ...	\$ 49,777.89
Less Inventory Dec. 31, 1958 .....	<u>23,356.97</u>
	\$ 26,420.92
Credits .....	<u>4,461.07</u>
Net Expenditure .....	<u>\$ 21,959.85</u>

The above Credits are made up as follows:-

New Way Furniture Store (Installing Sprinkler System and relaying Water Service on Queen Street) .....	\$ 241.02
R.C.M.P. (Installing Water at new Garage, Woodstock Road) .....	195.39
U.N.B. (Relocating Hydrant near Arts Building) .....	204.74
Forbes and Sloat (1-6" x 6" x 6" Tee, 1-8" x 6" Reducer, 1-6" Solid Sleeve) .....	106.37
Maritime Engineering Ltd. (To repairing Pipe at Reservoir) .....	131.86
Journal Voucher (Material paid for by Capital Account Water and used by other City Departments) .....	<u>3,581.69</u>
TOTAL .....	<u>\$ 4,461.07</u>

Installations were made at the following locations:-

Location	Size of C. I. Pipe		
	10"	8"	6"
Montgomery Street, York Street to Regent Street .....	1581	32	16
Sherwood Court .....		30	528
Windsor Street, Green Road towards Fenety Street .....		702	64
TOTAL .....	1581	764	608

An itemized account was kept of installing water at the following locations and expenditures were made as follows:-

Location	Labor and Machinery	Material	Total
Fenety St. (no pipe laid)	199.14	55.37	254.51
Montgomery Street	2,333.64	11,124.25	13,457.89
Sherwood Court	560.56	2,321.31	2,881.87
Windsor Street	1,448.18	3,917.40	5,365.58
TOTAL	<u>4,541.52</u>	<u>17,418.33</u>	<u>21,959.85</u>

The following is the total cost for laying the various sizes of pipe in place:-

10" Mechanical Pipe .....	\$ 8.50 per lineal foot
8" Mechanical Pipe .....	7.35 per lineal foot
6" Mechanical Pipe .....	6.95 per lineal foot

Stock on hand, December 31, 1958 was \$23,356.97.

In addition other projects were carried out under the heading Capital Water as follows:-

- (1) Water Pumping Station - Pumps
- (2) Water Pumping Station - Electrical
- (3) Carleton Ward Reservoir
- (4) Carleton Ward Feeder Mains
- (5) Drilled Wells
- (6) Supply to Dominion Experimental Farm
- (7) Smythe Street Booster Station

(1) Water Pumping Station - Pumps

The installation of a 100 H. P. motor and pump was completed in 1958 with expenditures as follows:-

E. S. Stephenson Co. Ltd. (Pump) .....	\$ 3,221.88
Flometric Co. Ltd. (Primer) .....	1,409.00
Canadian Westinghouse (60 H.P. 550 V Motor) .....	767.80
Material charges (Valves, pipes, concrete, etc.) .....	4,347.87
Labor and Machinery charges .....	<u>941.50</u>
TOTAL .....	<u>\$ 10,688.05</u>

Included in the above work was a new discharge header pipe with provisions made for the installation of two future pumps.

(2) Water Pumping Station - Electrical

A program for renovating the electrical system in the Fredericton Water Works was authorized in 1957 and tenders were called for a new switchboard to replace one installed in 1925, together with the rewinding of motors and rewiring of main pump room at the Waterworks.

The new switchboard has been installed and progress is being made on the rewinding of motors from 2300 volts to 550 volts. The rewiring has been completed except for connecting of motors that are being rewound and one 50 H.P. slip ring motor has been replaced with a 60 H.P. Induction Motor.

The total expenditure to date on this project is as follows:-

Canadian Westinghouse Supply Co. (1 motor control centre) .....	\$ 13,158.20
John A. Kennedy Co. Ltd. (Rewiring) .....	5,100.00
Chronoflo Indicator Recorder (Control and Metering Ltd., \$582. plus cartage and freight) .....	585.56
Richards Electric Co. (Connecting Recorder) .....	50.47
Evershed and Vignoles Co. Ltd. (Cabinet, switches and relays) \$510.00 plus freight .....	522.58
James A. McLaren Associates (Service on Revising Pumps, etc.) .....	2,534.38
Miscellaneous (City Labor and trucking) .....	<u>19.13</u>
TOTAL .....	<u>\$ 21,970.32</u>

(3) Carleton Ward - Reservoir

Maritime Engineering Ltd. has a contract with the City of Fredericton for the construction of a 1,000,000 Gallon Reservoir.

This company has made very slow progress, having started the contract in 1957.

All concrete work has been completed and three sides backfilled to finished grade, the remaining side is backfilled to within six feet of the top. The backfill has not been placed on the roof.

The reservoir can be used in its present condition and has had several leak tests carried out on it and cracks filled where leaks were found.

The reservoir will be entirely completed as soon as the frost is out of the ground, when finished grading can be carried out.

The expenditures on this project to date are as follows:-

1957 Expenditure .....	\$ 23,440.28
1958 Expenditure .....	<u>60,432.95</u>
TOTAL .....	<u>\$ 83,873.23</u>

(4) Carleton Ward - Feeder Main

Forbes and Sloat were awarded a contract in 1957 for the construction of a Feeder Main from the Bridge Street Pump House to the new 1,000,000 Gallon Reservoir.

The contract was completed in 1957 and the expenditures shown are for 20% hold back on the job as well as final connections made at the valve chamber by City workmen.

Expenditures 1958 were \$2,353.97.

Total cost of Pipe line, including materials:-

1957 .....	\$ 30,231.00
1958 .....	<u>2,353.97</u>
Completed Cost .....	<u>\$ 32,584.97</u>

(5) Drilled Wells

A new Well was drilled in 1957 on Saunders Street near the Fredericton Exhibition Raceway. The pump house was completed in 1958 and the pump installed.

The expenditure on this project was as follows:-

1957 .....	\$ 44,217.72
1958 .....	<u>7,641.01</u>
Total Expenditure .....	<u>\$ 51,858.73</u>

The water from this Well contains manganese and will have to be treated for the removal of manganese before the water can be used in any quantity.

The International Water Supply Co. Ltd. is making available a pilot treatment plant, so that experimental tests may be run to determine the most efficient and most economical method of manganese removal.

The Saint John River Valley has heavy deposits of soluble manganese according to Geologists and investigations carried out by others at Edmundston and Oromocto show that water supplies of both Municipalities contain manganese to the extent that other sources of water supply must be found.

Normally, Iron is the predominant mineral in ground water and manganese is found with iron in lesser amounts. When testing for Iron on a test Well, if the iron is beyond acceptable limits the hole is abandoned. If on the other hand, the iron is within acceptable limits the hole is recommended for development. However since exhaustive studies were made of Edmundston's well water in 1957-1958, it has been found that in the Saint John River Valley manganese may be present in greater quantities than iron, so that a complete analysis is now carried out to determine the quality of the water.

Both Iron and Manganese in soluble form in untreated water causes staining of sinks in Domestic supply and stains laundry.

Because of the damage that is caused, the water naturally should not be used as a municipal water supply without treatment.

Approximately 100 I.G.M. can be pumped from No. 2 Well and mixed with the water from No. 1 Well, together with the addition of Lime to neutralize the aggressiveness of both supplies, before any staining takes place on fabrics.

No. 2 Well therefore is only used in an emergency or at a low pumping rate, when No. 1 Well cannot supply the demand on the system.

During December 1958 a test Well was drilled in the rear of the Children's Home on Woodstock Road, but the iron and manganese content was so high that the Well was abandoned.

The International Water Supply Co. Ltd. recommended the re-pumping of the test holes drilled in 1953 to determine the chemical quality of the water, to see if there was a possible chance of developing at one of the test hole locations.

The test holes were pumped and analysis of the water made and the results sent forward to the Company.

After a study of these results the Company has recommended a test Well near the Filtration Plant, so that if the water has to be treated, the connection costs would be at a minimum.

(6) Supply to Dominion Experimental Farm

In 1958 the City of Fredericton entered into an agreement with the Federal Government to supply water to the Dominion Experimental Farm. The Federal Government is paying 90% of the cost, the City 10% and the City is to supply 30,000 gallons of water per day free of charge, with any water used over this rate per day, on a yearly basis, will be charged for at regular rate.

This project involved the laying of a 12" pipe line, 13,530 feet in length from the intersection of Charlotte Street and University Avenue, along University Avenue, Shore Street, Waterloo Row, the Flats to near the Princess Margaret Bridge, then along the Lincoln Road to the western entrance to the Experimental Farm.

A Booster Pumping Station was required to force the water to the high ground on which the "Farm" buildings are located. This Pumping Station is under construction and is to be completed in March 1959.

Ashfield Construction Co. Ltd. had the contract for the water main installation and Diamond Construction Co. Ltd. has the contract for the Booster Pumping Station. The Pumps are being supplied under contract with the Canadian Fairbanks Morse Co. Ltd.

Expenditure to December 31, 1958...\$	139,344.58
Less Federal Government	
Share to December 31, 1958..	<u>123,253.16</u>
Cost to City of Fredericton to.....\$	16,091.42
December 31, 1958	

(7) Smythe Street - Booster Pumping Station

Expenditure 1958 ..... \$ 1,014.90

The expenditure on this project consisted of a 15% hold back to Fairbanks Morse for Pumps installed in 1957.

CAPITAL ACCOUNT - GRAVEL ROADS

Gross Expenditure ..... \$ 53,387.09  
Credit ..... 571.51  
Net Expenditure ..... \$ 52,815.58

The above Credits are made up as follows:-

Board of School Trustees (42 yards Gravel  
Fill to Devon School @ 90¢ per cu.yd.) ..... \$ 37.80  
Province of New Brunswick (Provincial  
Government share of Road work on  
Woodstock Road at Phyllis Creek) ..... 533.71  
TOTAL ..... \$ 571.51

Included in the above expenditures are:-

- (1) Excavating and gravelling of newly curbed streets.  
(2) New road construction and gravelling.  
(3) Grading and gravelling streets.
- (1) The following newly curbed streets were excavated where necessary and gravelled:-

<u>Location</u>	<u>Lineal Feet</u>
Northumberland St., Dundonald St. to Connaught St. ....	330
Park Street, Sewell Street to Gibson Street .....	225
Sewell Street, MacLaren Avenue to Park Street .....	500
MacLaren Avenue, Fire Station property line to Gibson Street .....	830
Prince Street .....	850
Byng Street .....	620
Ryan Court .....	300
Mill Street .....	100
Grieves Creek .....	200
Hillcrest Drive .....	900
Bridge Street, Union Street to C.P.R. tracks .....	450
Jaffrey Street, Union Street towards River .....	270
Smith Street .....	<u>350</u>
Forward .....	5925

<u>Location</u>	<u>Lineal Feet</u>
Brought Forward.....	5925
Friel Creek .....	350
Bridge approach, Carleton Ward .....	150
Campbell Street, Regent Street to Carleton Street .....	620
Churchill Row .....	100
Aberdeen Street, Church Street to C.N.R. tracks .....	300
Saunders Street, O'Dell Avenue to Rookwood Avenue .....	970
Rookwood Avenue, Saunders Street to Woodfield Court ...	900
Woodfield Court .....	1,020
Wilmot Court .....	530
Woodstock Road, near Phyllis Creek .....	700
Hanwell Road .....	600
Smythe Street, C.N.R. track to Edinburgh Street .....	2,350
Gibson Street .....	400
Tamarack Terrace .....	400
Shamrock Terrace .....	550
Dundonald Street, Northumberland St. to Smythe St. ....	600
Connaught Street, York Street to Smythe Street .....	1,930
Westmorland Street, Dundonald Street to Connaught St...	330
Albert Street, York Street to Connaught Street .....	<u>1,200</u>
Total Lineal Feet....	<u>19,925</u>

In addition to the above mentioned streets, Gravel was also applied on Barker Street and Gibson Street from the edge of the pavement to the newly constructed curbs and also on Albert Street, Tweedsmuir Street and Waterloo Row due to the excavating for a new Domestic Sewer line, before the addition of Asphalt Pavement.

- (2) Under this heading the following streets were constructed or partially constructed and gravelled this year:-

<u>Location</u>	<u>Lineal Feet</u>
Sherwood Court .....	550
Windsor Street, Green Road towards Fenety Street .....	300
St. Mary's Street, Highland Avenue to City line .....	2,230
Carleton Street, Needham Street to Aberdeen Street ...	463
Elmwood Court .....	630
Montgomery Street, Regent Street to York Street .....	<u>1,500</u>
Total Lineal Feet ...	<u>5,673</u>

- (3) The following streets were gravelled under this heading:-

<u>Location</u>	<u>Lineal Feet</u>
Squires and Mitchell Streets .....	785
Hermitage Court .....	230
Myles Street .....	200
Woodbridge Street .....	500
Beaverbrook Court .....	600
Dundonald Street, York Street to Regent Street .....	<u>1,250</u>
Total Lineal Feet ...	<u>3,565</u>

The Parking Lot on Campbell Street from Phoenix Square to Carleton Street was gravelled before the application of Asphalt Pavement and a narrow strip of Gravel was applied on Queen Street from Northumberland Street to Smythe Street on the north side of Queen, thus widening Queen Street.

Under this heading Capital Account Gravel Roads, the approach to the Fredericton Highway Bridge in Carleton Ward was reconstructed. This consisted of the expropriation of land, laying of curb and gutter, concrete sidewalk, surface sewer and Asphalt Pavement. The expenditure for the above project for 1956 and 1958 was \$5,429.83, less land values as no claims have been made to the City to this date.

The gravel used under this heading was obtained from the following:-

	<u>Crushed Gravel</u>	<u>Base Gravel</u>	<u>Fill</u>
Forbes and Sloat .....	15,089.30 tons		
S. S. Baird .....	1,571.285 tons		
Bemrose and Kilburn ...		3819.24 tons	10,268 cu.yds.

The cost of the crushed gravel was 85¢ per ton plus 40¢ per ton for hauling, if using City loader or 50¢ per ton loaded and hauled by others.

The cost of Fill was 75¢ - 90¢ per cubic yard and base Gravel 65¢ per ton.

Also purchased under this heading was 817.70 tons of sand @ 60¢ per ton from S. S. Baird and Sons for sidewalk construction.

#### CAPITAL ACCOUNT - STREET LIGHTS

Gross Expenditure .....	\$ 10,307.17
Credit .....	<u>200.00</u>
Net Expenditure .....	<u>\$ 10,107.17</u>

The above Credit of \$200.00 was as follows, Maritime Electric Co. to 2 Street Light standards at \$100.00 each, \$200.00

The Gross Expenditure was as follows:-

Maritime Electric Co. (Labor trucking and material used installing 3-250 C.P.Series Lamps on Devon Avenue, 1 on Hanwell Road and 1 on Mitchell Street .....\$ 314.87

Maritime Electric Co. (Labor, trucking and material used rebuilding lighting platform, rerouting circuits and installing 27 fluorescent street lighting units on Union Street .....1,285.34

Forward .....\$1,600.21

	Brought Forward .....	\$ 1,600.21
Maritime Electric Co. (Labor, trucking and material used installing 2-250 C.P.Series		
Lighting on Green Road .....		69.94
Maritime Electric Co. (Labor and trucking installing 12 Fluorescent Lighting units on Smythe Street, 2-600 C.P.Series Lights on Hanwell Road and 2-600 C.P.Series Lights on Barker Street Crossing....		454.88
Northern Electric Co. (1-2206 Luminaire C/W Pole Plate, 4 F 100 T, 12/C.W./R.S.Lamp, including provincial tax) .....		206.00
Northern Electric Co. (100-5312 Pin, including tax) ....		173.53
Northern Electric Co. (250-12 Solid R Norcode S. B. Black, 250-12 Solid R Norcode S. B. White, including tax) .....		10.46
Northern Electric Co. (8-824 T 121 Steel Standards, including tax) .....		1,437.89
Canadian General Electric Co. (37-6804 fluorescent luminaires, complete with 50905-6.6 Amphere Ballasts, 6 F 48 T, 12 CW/H.O. Lamps, including tax) .....		302.82
Canadian General Electric Co. (800' - 2" Transite Korduct and 14-2" 90° Transite Korduct Elbows, including tax) .....		244.83
Canadian General Electric Co. (37-6804 Fluorescent luminaires Couple unit with 50905 Ballasts, two F 48 T, 12 CW/40 lamps and a two foot straight steel bracket, including tax) .....		4,115.88
Canadian General Electric Co. (510' - #8 Band S Guage Solid Copper conductor ozone resisting, rubber compound insulation, 5000 volts 10/64" Neoprene Jacket 4/64" for 6.6 Ampere Series Lighting plus 1-24" Reel, including tax \$161.29, less credit on goods returned, 35 sets 52720 G 3 lamps \$36.05, including tax .....		125.24
Canadian Line Materials Ltd. (AN - 2 - 120 RCOC Oil Switch 2 pole N/O 120 Volts 60 Cycle, including tax...)		297.41
Canadian Pacific Express Co. (Express on 2 Rolls Wire)....		1.45
James S. Neill - Miscellaneous .....		42.69
H. S. Gill (Lumber) .....		38.77
Horsnell's (Repairing fence, Queen Street and making brackets) .....		118.66
Blakeny Concrete Products (Ready mixed Concrete) .....		322.98
Journal Voucher (City Pay-Rolls) .....		608.53
Journal Voucher (Machinery) .....		<u>135.00</u>
TOTAL .....	\$ 10,307.17	

In 1958, seven new street light standards were installed on Queen Street between Carleton Street and City Hall. The remaining fixtures on Queen Street were converted to 400 Watt mercury lights.

The City of Fredericton supplied standards, concrete bases and conduit for underground wiring on this project and the Maritime Electric supplied wire, fixtures and lamps under the fixed contract price for 400 Watt mercury lamps @ \$90.00 per lamp per year.

Also under the above heading 27 new fluorescent lamps were installed on Union Street between Gibson Street and the Nashwaaksis line, 13 on Smythe Street between Brunswick Street and Victoria Street.

The above listed changes have greatly improved the street lighting on these streets and a planned program for improvements on other streets in 1959 is now under consideration.

The forty fluorescent fixtures installed were a 4 foot two tube fixture. Four six foot two-tube fixtures have been installed around the loop on St. Mary's Street and Water Street on approval.

These six foot fixtures have been installed at the intersections to improve the lighting at these points.

LOCAL IMPROVEMENT

In 1958, services were installed at the following locations under the Local Improvement By-Law:-

<u>Location</u>	<u>Service</u>	<u>Cost</u>	<u>Subdivider's Cost to City Share at By-Law Rates</u>	<u>of Fredericton</u>
Allied Building Construction Sherwood Crt. and Inglewood Dr.	Water Domestic Sewer Storm Sewer Gravel Road	2,881.87 1,051.39 2,018.67 3,517.98	1,385.95 1,673.75 2,067.50 1,624.50	1,495.92 ----- ----- 1,893.48
	Total Cost	<u>9,469.91</u>	<u>6,751.70</u>	<u>3,389.40</u>
Burden Subdivision Windsor St. and Fenety St.	Water Domestic Sewer Storm Sewer Gravel Road	5,620.09) 2,942.68) 6,888.37) 7,460.50)	2,486.23 3,049.15 3,673.71 2,814.60	3,133.86 ----- 3,214.66 4,645.90
	Total Cost	<u>22,911.64</u>	<u>12,023.69</u>	<u>10,994.42</u>
Budovitch Subdivision Squires St. and Mitchell St.	Water - 1957 Domestic Sewer (1957) Storm Sewer (Portion 1957) Gravel Road (Portion 1957)	4,379.41 1,300.01 2,253.20 2,901.05	1,514.41 1,804.88 2,138.73 1,666.05	2,865.00 ----- 114.47 1,235.00
	Total Cost	<u>10,833.67</u>	<u>7,124.07</u>	<u>4,214.47</u>

Under Cost Column, Engineering, Pension, Workmen's Compensation, Holiday and Sick Leave costs have not been taken into consideration. For a more realistic cost figure, 20% should be added to include these items.

## PUBLIC WORKS

Gross Expenditure .....	\$ 22,516.84
Credits .....	<u>481.90</u>
Net Expenditure .....	\$ 22,034.94
1958 Appropriation .....	<u>18,000.00</u>
Debit .....	\$ 4,034.94

The Credits of \$481.90 are made up as follows:-

Canadian Oil Co. (1 print of Map of City of Fredericton) .....	\$ 1.20
Board of School Trustees (removing tree at Charlotte Street School) .....	44.03
Board of School Trustees (preparing center field at Race Track for football field) .....	23.28
Mr. E. C. King (print of Map of City of Fredericton) ...	1.13
Mrs. Chalifor (print of Map of Saunders St. Extension) ..	.60
Mr. David Mooney (3 prints of Map of City of Fredericton) .....	3.60
Department of Northern Affairs, cleaning and repairing Fort Nashwaak Monument) .....	52.60
Journal Voucher (Labor and Trucking) .....	<u>355.46</u>
TOTAL .....	\$ <u>481.90</u>

The labor charge under the Public Works expenditure was incurred for the following:-

Trees .....	\$ 5,887.07
Surveying .....	297.39
Back Drain .....	116.95
King Street Parking Lot .....	577.64
Unforseen Account .....	<u>3,377.13</u>
TOTAL .....	<u>\$10,256.18</u>

### Trees:-

Expenditure .....\$ 10,169.12

The above expenditure includes \$5,887.07 for labor, \$3,202.00 for Machinery (Jeeps, Trucks, Shovels, etc.) and \$1,080.05 for material charges.

In 1958 some seventy-five trees were removed, on the recommendation of the Fredericton Tree Commission. The condemned trees were either in a decadent condition or were a menace to public safety.

The procedure followed at the present time is as follows:-

The trees are condemned by four members of the Fredericton Tree Commission, the list is then forwarded to the office signed by the four members.

Trees on private property which are condemned as possible breeding places for the Elm Bark Beetle, which carries the fungus of Dutch Elm Disease, are also being removed by City Crews.

Permission for the removal of trees on private property as well as a statement to the effect that no claim for damage will be filed by the property owner are obtained before proceeding with the work.

The System is working very well with a minimum of delay after the tree has been condemned.

Tree pruning was also carried out during the year as well as the usual planting program.

Trees were planted at the following locations:-

Acacia Court  
Elmcroft Place  
Waterloo Row  
Queen Street  
Woodstock Road  
Rookwood Avenue  
Woodfield Court  
Connaught Street  
MacLaren Avenue  
Clark Street  
Forbes Street

Tree work is an endless job, due to the fact that the Elm trees are reaching a very mature age and die-back on branches is very rapid.

Trees from which dead wood was removed in the fall of 1957 required practically the same amount of pruning in 1958.

A spraying program for the Fall Canker Worm with the new Mist Blower purchased in 1957, was carried out between York Street and Rookwood Avenue and in Devonshire Heights.

Mr. Charles Smith, Chairman of the Fredericton Tree Commission, has indicated that the spraying programs in 1957 and 1958 have been so successful that spraying will not be necessary in 1959, unless of course an infestation of Dutch Elm Disease appears.

The results of the spraying programs in 1957 and 1958 indicate that the City of Fredericton made a good investment in the purchase of the Mist Blower on the recommendation of the Fredericton Tree Commission.

Under the above heading the following trees were purchased in 1958 from the Brookdale-Kingsway Nurseries, Bowmanville, Ontario and from Mr. C. C. Smith, Lansdowne Street, Fredericton, N. B.

20	-	6-8 feet Crimson King Maple @ \$4.10 each .....	\$ 82.00
20	-	8-10 feet Silver Maples @ \$1.70 each .....	34.00
10	-	8-10 feet Lombardy Poplar @ \$1.05 each .....	10.50
10	-	5-6 feet Golden Weeping Willow @ \$1.20 each .....	<u>12.00</u>

Forward .....\$ 138.50

	Brought Forward .....	\$ 138.50
10	- 12-15" Red Barberry @ 35¢ each .....	3.50
10	- 8-10 feet Mountain Ash @ \$2.20 each .....	22.00
	Packing .....	13.95
20	- Norway Maples @ \$3.00 each .....	60.00
6	- London Plane @ \$3.00 each .....	18.00
6	- Little Leaf Linden @ \$2.75 each .....	15.00
2	- European Linden @ \$3.00 each .....	6.00
1	- Ginko .....	2.50
	Expressage .....	<u>3.60</u>
	TOTAL COST .....	<u>\$ 283.05</u>

#### SURVEYING

Under the heading the expenditure amounted to \$871.89 made up of \$297.39 for wages for labor and \$574.50 for material charges.

The labor charge of \$297.39 was for wages for helpers with the Engineers during the course of their work during 1958, on other than programmed projects.

The material charge of \$574.50 was made up as follows:- Surveys by Anric Engineering, rental on Level and Transit, purchase of wooden stakes and iron pins and miscellaneous items such as tapes, files, axes, etc.

#### BACK DRAIN

Expenditure .....\$ 137.75

The labor charge under this heading amounted to \$137.75 which was for cutting ice away from the culverts on York, Dundonald and the outlet at Phyllis Creek during the winter and for general maintenance to the Back Drain.

#### BRUNSWICK STREET PARKING LOT

In 1958 an agreement was executed between the City of Fredericton and Eaton's Ltd. for the use of property between Brunswick Street and King Street, owned by Eaton's as a paid Parking Lot.

City crews prepared the parking lot for use by grading, graveling, erecting posts, renovating a building for the caretaker and installing signs.

Five Street Lights were installed by Maritime Electric Company Limited for lighting.

The operation of the Parking Lot is under the supervision of the Safety Committee and the maintenance, such as snow plowing, sanding, etc. is under the supervision of the Public Works Committee.

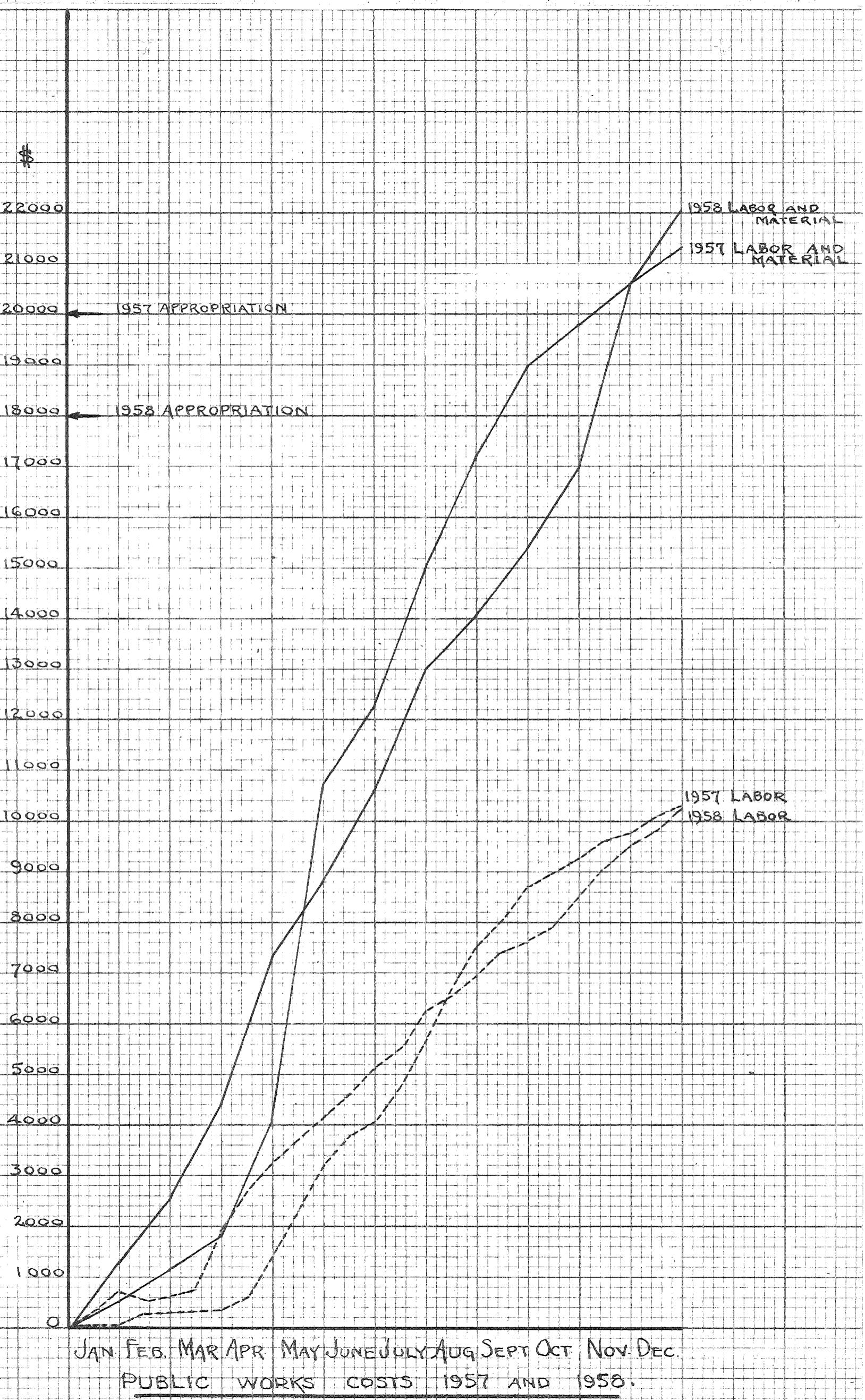
The expenditures for 1958 on this Parking Lot are as follows:-

J. L. Simms (Plywood, Arborite) .....	\$	123.05
J. S. Neill & Sons Ltd. (Lamps, varnish stain, roofing, nails, paint, links, keys, padlocks, etc.)		86.89
Lockhart Woodworkers Ltd. (Clapboards) .....		79.41
Parlee Woodworking (Doors, door frames, sashes, etc.) ...		74.50
S. S. Baird & Sons Ltd. (Loading and hauling crushed gravel) .....		611.18
Forbes and Sloat (1,222.35 tons crushed gravel) .....		1,039.00
H. Gill (cedar posts) .....		77.25
Risteen Co. (Lumber, moulding) .....		40.75
Stan Cassidy (Wiring) .....		90.00
Journal Voucher (City Machinery) .....		172.00
Journal Voucher (City Labor) .....		<u>577.64</u>
TOTAL .....	\$	2,971.67

UNFORSEEN ACCOUNT

Preparing for Civic Election .....	\$	110.39
Dedham Street (Fence) .....		24.23
Benches (Repairs, painting, etc.) .....		268.68
Greens (Cutting, raking, seeding, fill, etc.) .....		1,908.11
Repairs and painting speakers stand at Cenotaph .....		49.72
Hauling clothes to freight shed for Women's Institute..		8.84
Cleaning and Repairing Fort Nashwaak Monument .....		49.84
Spraying Swamps .....		19.78
Cleaning river bank, cutting bushes and repairing flats.		331.88
Cleaning Regent Street Wharf .....		2.24
Fire Department (Cutting branches) .....		243.18
Tourist Information Bureau .....		21.86
Victoria Public Hospital Ambulance Driveway .....		26.56
Christmas Tree .....		37.42
Retroactive Pay .....		<u>258.50</u>
<b>TOTAL .....</b>	<b>\$</b>	<b>3,361.23</b>

Under the above heading Public Works, 25 Concrete Park Benches were purchased at \$25.00 each, making a total cost of \$625.00. These new benches are practically vandal proof and will reduce maintenance costs.



O'DELL PARK

Expenditure ..... \$ 3,682.34

The above expenditure is made up as follows:-

Workmen's Compensation Board .....	\$ 100.57
Kilburn Equipment Ltd. (Repairs to Chain Saw) .....	32.49
Burtt's Harness Shop (1 Blanket) .....	9.01
James S. Neill & Sons Ltd. (Files, axes, axe handles, saw blades) .....	95.04
John Gibson and Son Ltd. (Oats) .....	30.25
H. S. Gill (Trucking Lumber and sawing logs) .....	193.62
Atlas Building Supplies Ltd. (1 Gal. Green Pentox) .....	4.64
N. B. Telephone Company .....	49.33
Journal Voucher (Pay Rolls) .....	2,740.69
Journal Voucher (Holidays) .....	195.20
Journal Voucher (Machinery) .....	<u>231.50</u>
TOTAL .....	<u>\$ 3,682.34</u>

CARLETON WARD - PARK

In 1958 further development of the Carleton Park off Union Street was carried out.

Paths were constructed, trees and shrubs were planted, posts were installed to prevent through-traffic in the Park, benches were placed near the river front for the convenience of citizens.

The grass was kept mowed, the paths scuffed and in general the Park was kept in a clean, orderly condition with many favorable comments from citizens as to the appearance of the area and appreciation for the construction of the Park.

The expenditures in Carleton Park for 1958 were as follows:-

D. Sewell and W. Thomas (Hauling crushed gravel) .....	\$ 20.71
Ian Saunders (Rock dust for paths) .....	72.35
Forbes and Sloat (Crushed Gravel) .....	49.20
J. C. Risteen Co. (stakes) .....	12.36
J. S. Neill and Sons Ltd. (wire, etc.) .....	7.85
Journal Voucher (Material) .....	18.20
Journal Voucher (Machinery) .....	122.00
Journal Voucher (Pay Rolls) .....	<u>638.66</u>
TOTAL .....	<u>\$ 941.33</u>

### OLD BURIAL GROUND

The Old Burial Ground, between Brunswick Street and George Street was kept in good condition in 1958.

The tombstones that could be repaired and were not too seriously damaged by vandals, were repaired. The grass was kept mowed and sodding and seeding were done where necessary.

The expenditures on the Old Burial Ground were as follows:-

Ian Saunders (Rock Dust) .....	\$ 24.22
A. H. VanWart and Son (Grass seed) .....	15.00
J. L. Simms (4 bags cement, 4 sheets plywood) .....	26.63
Craig Electric Co. (Repair to mower) .....	7.87
E. M. Young Ltd. (purchase of mower and wheelbarrow) .....	86.64
Fredericton Tire Service (Repair tire on mower) .....	1.00
J. S. Neill (Tools, etc.) .....	18.36
Riverview Service Station (5 Gallons Gas) .....	2.29
Journal Voucher (Machinery) .....	122.00
Journal Voucher (Pay Rolls) .....	<u>1,655.41</u>
TOTAL .....	<u>\$ 1,959.42</u>

1 - 18" DeLuxe 4 Cycle Swirl-Cut Maxwell Lawn Mower was purchased for the cutting of the grass in the Old Burial Ground at a cost of \$73.25 including tax. This expenditure is included in the above total.

### LOYALIST CEMETERY

On the recommendations of the Park Committee of Fredericton Town Planning Commission, the Loyalist Cemetery on the Flats adjacent to the back of the lots in Elmcroft Place, was improved in 1958.

Dead trees were removed, the weeds and underbrush were removed and the area was grubbed and raked. A rustic type fence was erected and flagstone steps were constructed on the sloped entrance to the Cemetery from the "Flats." It is intended that this area be used as a tourist attraction with pedestrian traffic only, from the Little League Ball Field on the "Flats."

The expenditure on the Loyalist Cemetery was as follows:-

City Labor (Pay Rolls) .....	\$ 234.57
City Machinery .....	<u>10.00</u>
TOTAL .....	<u>\$ 244.57</u>

### RECREATION

Expenditure ..... \$ 831.12

The above expenditure does not include all playground expenditures, but only those which appear on department pay-rolls or costs of materials ordered through the office of the City Engineer. The salaries of the Recreation Director and Playground Supervisors hired for the summer months, is not in the above costs, nor does the cost of equipment on the playgrounds appear here.

The above cost is divided as follows:-

Playgrounds (Labor, machinery, material) .....	\$ 685.88
Journal Voucher (Gas and Oil used by Recreation Truck) .....	<u>145.24</u>
TOTAL .....	<u>\$ 831.12</u>

### CITY HALL

Expenditure ..... \$ 1,963.24

The above cost is only the expenditure for City Hall made through the City Engineer's Department and is not the total expenditure made on City Hall.

The expenditure of \$1,963.24 is made up as follows:-

Labor at City Hall, including winding and repairs to clock, extra janitor and extra labor .....	\$ 461.24
E. T. Moran (Repairs to Furnaces) .....	50.00
Richards Electric (Repair to wiring) .....	3.47
J. C. Risteen Co. (Lumber) .....	4.10
J. S. Neill (Supplies) .....	49.63
Maritime Electric Co. (Light Bill for City Hall) .....	1,387.30
Journal Voucher (Machinery) .....	<u>7.50</u>
TOTAL .....	<u>\$1,963.24</u>

MUNICIPAL HOME

Expenditure ..... \$ 113.10

The above cost is of course, only part of the Municipal Home costs, but is the expenditure which was made through the office of the City Engineer and is therefore shown in this report.

The above expenditure is made up as follows:-

Journal Voucher (Pay Rolls, labor at Municipal Home) .....	\$ 70.10
Journal Voucher (Machinery charges) .....	<u>43.00</u>
TOTAL .....	<u>\$ 113.10</u>

SWIMMING POOL - QUEEN'S SQUARE

Expenditure ..... \$ 16,246.25

The above cost is only the expenditure for Swimming Pool made through the City Engineer's Department and is not the total expenditure made on the Swimming Pool.

The above expenditure is made up as follows:-

Canadian National Railway Company .....	\$ 11.35
Canadian National Express Company .....	2.36
Canadian Pacific Railway Company .....	2.91
A. C. Horn Co. Ltd. .....	76.33
Provincial Secretary-Treasurer .....	292.14
Federal Hardware .....	26.46
C. J. Toner .....	1.00
Canadian National Telegraph Company .....	1.25
L. E. Shaw Ltd .....	7.99
Harry C. Moore .....	15.00
J. L. Simms and Sons Ltd. .....	40.94
Thomas Transfer .....	14.63
Phillips and Pringle .....	24.31
Blakeny Concrete Products .....	14.35
Horsnell's Machine and Iron Works (Surge Tank) .....	761.75
James S. Neill and Sons Ltd. .....	160.67
James Robertson Co. Ltd. (Pipe & Fittings, Etc.) .....	2,275.63
Sparkler International Ltd. (Filtration Plant) .....	9,002.73
Maritime Forwarding Co. .....	3.36
Auto Machinery and General Supply Co. .....	.48
Estey and Curtis .....	13.45
Maritime Accessories Ltd. .....	69.01
E. T. Moran ....(Pipe Fitting) .....	1,310.95
Journal Voucher (Pay Rolls) .....	<u>1,285.24</u>
Journal Voucher (Machinery) .....	238.00
Journal Voucher (Material) .....	<u>593.96</u>
TOTAL .....	<u>\$ 16,246.25</u>

The water and sewer department crew connected the water and sewer lines to the swimming pool and also did some of the work on the internal piping for the filtration plant.

### SANITATION

Expenditure .....\$ 22,314.32

This expenditure is only part of the total Sanitation costs. It is only the expenditure which was made through the office of the City Engineer and is therefore shown in this report.

The expenditure on Sanitation has been kept under three headings, namely:- City Dump, City Incinerator and Sanitation Land Fill.

The City Dump has one dump tender. One of the City's Bulldozers works on the Dump from time to time helping the dump tender keep the dump in order. The total expenditure on the dump this year was \$5,135.13.

The City Incinerator is tended by two men who work a daily shift of nine hours, starting at 7:30 A.M. and finishing at 5:30 P.M. An extra man was added in 1957 at the Incinerator at night, cleaning out ashes, etc. from the days burning. This allows the operators a longer burning day and has improved the service considerably. Besides these three attendants, extra city labor was used in bulldozing incinerator dump, shifting tracks, etc. The total expenditure for City Incinerator was \$11,968.09.

In 1958, excavated gravel pits were purchased in Barker's Point adjacent to the worked out City gravel pit for the commencement of a Sanitary Land Fill.

The Incinerator has been unable to handle the volume of refuse and the dump on the Wilsey Road was becoming filled and was a poor advertisement for the City of Fredericton to the travelling public entering the City via the Canadian Pacific and Canadian National Railways.

The City Engineer's Department had recommended the purchase of land on Forest Hill, which contained a quarry where dumping and continuous burning could be carried out. However, since the property owner would not put a price on the property, another area had to be found.

On the recommendation of the Public Works Committee Chairman, the Barker's Point site was investigated and was purchased at very reasonable cost. Keith Scott \$1500; Lewis Hughes, \$500 and Mrs. Hazel Flowers \$1000, making a total of \$3,000 for the above properties.

A contract was entered into with Lewis Hughes for the services of a bulldozer and operator to compact the refuse and

cover with material stock piled by the City of Fredericton. The contract with Lewis Hughes is for \$20.00 per eight hour day.

A City of Fredericton employee is in attendance from 8:00 A.M. to 6:00 P.M. Monday through Saturday to direct and supervise disposal operations.

The estimated saving to the City of Fredericton under the Sanitary Land Fill scheme is approximately \$7,000.00 per year in labor charges. The estimated cost of excavating cover material is \$3,000 per year, making a net saving to the City of \$4,000 per year.

It is also estimated that the area acquired will take 10 years to fill. The expenditure on the Sanitary Land Fill was \$5,211.10.

The City Dump and City Incinerator were closed December 31, 1958 and all refuse now is disposed of at the Sanitary Land Fill, Barker's Point.

The contract for Garbage collection is held by Mr. J. Coates at a yearly cost of \$37,950.00.

#### SEWERAGE DOMESTIC

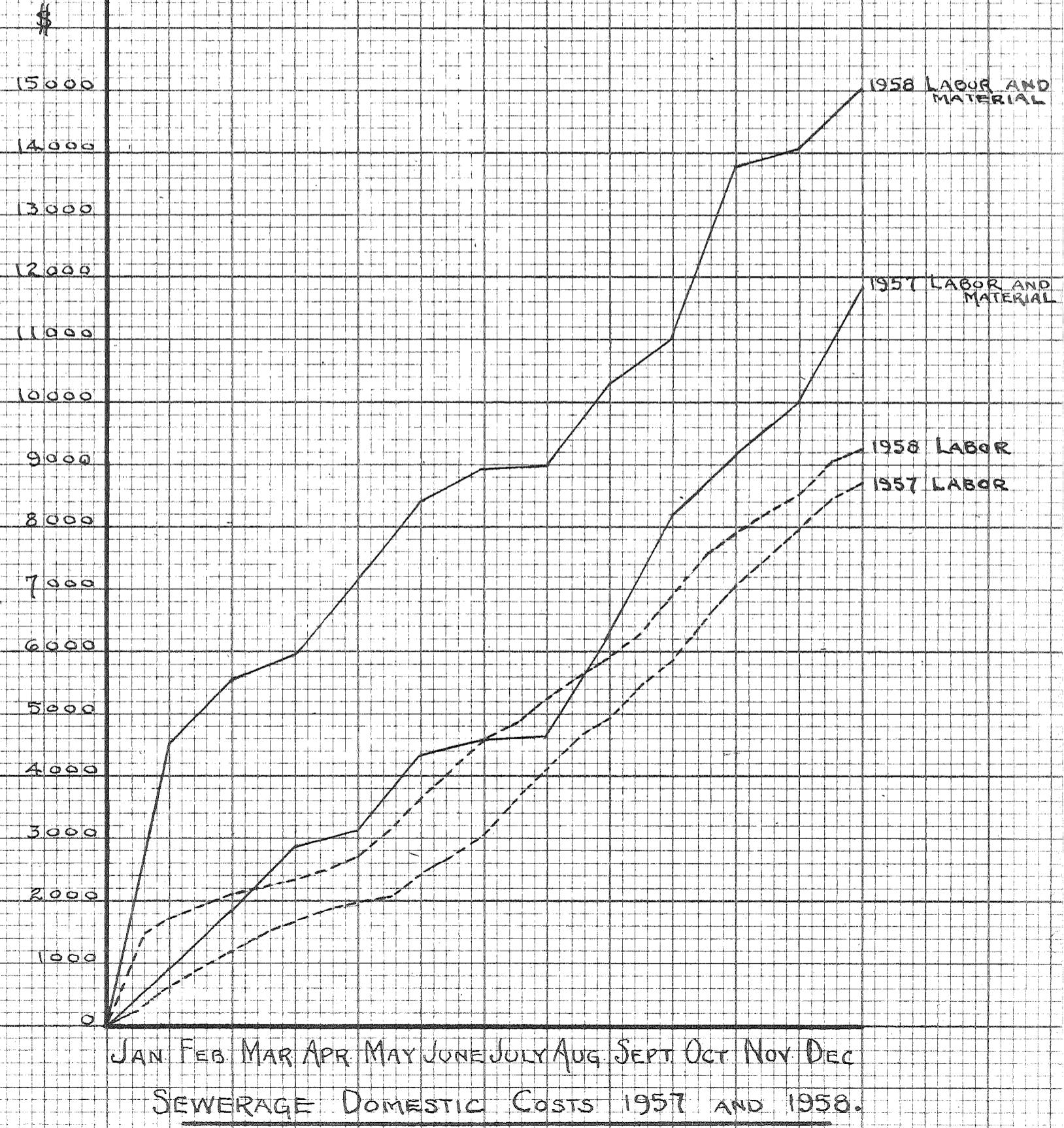
Gross Expenditure .....	\$ 24,603.43
Credits .....	<u>9,551.17</u>
Net Expenditure .....	<u>\$ 15,052.26</u>

The above Credits are made up as follows:-

Material and Labor supplied for house connections .....	\$ 9,402.68
Sussex Ginger Ale Ltd. (Cleaning Floor Drain) .....	17.81
Creighton Motors (Cleaning Floor Drain) .....	5.24
Area Engineer's, H.Q.N.B. Area (Rental on Pump) .....	10.00
Grant Mills Ltd. (Repairing manholes broken by moving crane) .....	8.64
John Palmer Co. (Cleaning Tannery Sewer) .....	7.64
Capital Co-op. Ltd. (Cleaning Sewer) .....	19.08
L. K. Richardson (Cleaning Floor Drain) .....	9.13
Journal Voucher (240 lbs. Sewertite @ 12¢) .....	28.80
Journal Voucher (5'-5" C.I.Pipes @ \$1.15 per foot) (65'-5" T.C.Pipe @ 50¢ per foot) .....	
(32½ lbs. sewertite @ 12¢ per lb.) .....	<u>42.15</u>
TOTAL .....	<u>\$ 9,551.17</u>

In January 1958, the 15" Terra Cotta Domestic Sewer under the tracks at the Union Freight Shed, Regent Street, broke down. This portion of the Sewer was replaced with 14" C.I.Water Pipe from manhole to manhole under the tracks, a distance of 87 feet.

New customers connected to City Sewer System this year were 129.



No Domestic Sewer extensions were made this year under this heading but appear under, "Capital Account, Sewerage Domestic."

The Fredericton Domestic Sewer System consists of 43.70 miles (10.93 miles in Carleton Ward and 32.77 miles in the City proper) of Sewer Mains and are made up as follows:-

36" Armco Pipe .....	0.05 miles
36" Concrete Pipe .....	0.84 miles
30" Concrete Pipe .....	0.20 miles
24" T. C. Pipe .....	0.54 miles
18" T. C. Pipe .....	1.29 miles
15" T. C. Pipe .....	1.63 miles
12" T. C. Pipe .....	6.12 miles
10" T. C. Pipe .....	.92 miles
8" T. C. Pipe .....	<u>32.11 miles</u>
TOTAL .....	<u>43.70 miles</u>

#### STREET LIGHTS

The City Street Lighting System at the present time consists of:-

1. A series Lighting System which lights most of the City on the south side of the Saint John River.
2. A multiple lighting system. *Fredericton*
3. A multiple lighting system in the C.N.R. Subway.
4. A series lighting system in Carleton Ward.

#### SYSTEM NO. 1

The series lighting system consists of some 22.48 miles of line and 360 lamps. This system is divided into five circuits one of which is controlled by a 25 K. W. constant current transformer, the other four of which are controlled by a 15 K. W. constant current transformer. Four of these transformers along with the main switchboard are housed in a building, the site of which was purchased from Willett Fruit Company on Carleton Street south of Needham Street. The fifth transformer is on a pole situated on Regent Street, between Green Road and Albert Street and controls the rear circuit for Maryland Heights.

The five circuits are made up as follows:-

<u>Lower Front Circuit</u>	<u>Transformer Size</u>
35 - 600 C.P. Lamps @ .350 K.W. demand	12.25 K.W.
18-250 C.P. Lamps @ .160 K.W. demand	<u>2.88</u> K.W. <u>15.13</u> K.W.
	15 K.W.
<u>Lower Rear Circuit</u>	
2 - 600 C.P. Lamps @ .350 K.W. demand	.70 K.W.
51 - 250 C.P. Lamps @ .160 K.W. demand	<u>8.16</u> K.W. <u>8.86</u> K.W.
	15 K.W.
<u>Upper Front Circuit</u>	
11 - Fluorscent Lamps @ .50 demand	5.50 K.W.
40 - 250 C.P. Lamps @ .160 demand	<u>6.40</u> K.W. <u>11.90</u> K.W.
	15 K.W.
<u>Upper Rear Circuit</u>	
25-600 C.P. Lamps @ .350 demand	8.75 K.W.
88-250 C.P. Lamps @ .160 demand	<u>14.08</u> K.W. <u>1.50</u> K.W.
3 - Fluorscent lamps @ .50 demand	<u>24.33</u> K.W.
	25 K.W.
<u>Maryland Heights</u>	
1 - 600 C.P. Lamp @ .350 demand	.350 K.W.
86-250 C.P. Lamps @ .160 demand	<u>13.76</u> K.W. <u>14.110</u> K.W.
	15 K.W.

#### SYSTEM NO. 2

The multiple lighting system consists of 413 units made up of 204 units of 500 Watts, 138 units of 200 Watts and 58 Units of 400 Mercury Vapor Lamps.

The 204 Units of 500 Watts are located as follows:-

Acacia Court 3, Elmcroft Place 1, Waterloo Row 13, Grey Street 1, Alexandra Street 5, University Avenue 20, Beaverbrook Rink 1, Charlotte Street 2, George Street 6, York Street 15, Aberdeen Street 1, Church Street 1, Chancery Lane 1, Queen Hotel Alley 1, Regent Street 10, Barker House Alley 1, Carleton Street 6, Wilmot Alley 1, Parking Lot Brunswick Street 5, Westmorland Street 4, Northumberland Street 3, Smythe Street 1, Queen Street 3, King Street 24, Brunswick Street 19, Woodstock Road 22, Rookwood Avenue 11, Woodfield Court 4, Elmwood Court 2, Wilmot Apartments 3, Bridge Street 4, and Campbell Street 9.

The 138 Units of 200 Watts are located as follows:-

Woodbridge Street 4, Forest Hill Road 15, Dunn's Crossing Road 8, Wilsey Road 4, Waterloo Row, Lincoln Road to City limits 56, University Avenue 2, Beaverbrook Street 4, Hanson Street 3, Edinburgh Street 8, Smythe Street 4, Priestman Street 2, Connaught Street 8, Westmorland Street 1, Woodstock Road 8,

Golf Club Road 3, Bridge Street 3, Dedham Street 3, and Irvine Street 3.

The 58 units of 400 Mercury Vapor Lamps are located as follows:-

Campbell Street 11, Queen Street 31, Regent Street 7, Carleton Street 4, York Street 3 and Westmorland Street 2.

Each of the above units consists of either a 500, 400 mercury or 200 Watt, ~~150~~ volt lamp set in a novaulex luminas fixture and hung on a bracket attached to the pole, these units being controlled by a control switch which is energized by our series lighting system. The system was installed and is owned and maintained by the Maritime Electric Company, the City paying the Company \$60.00 per year for each 500 Watt Unit, \$40.00 per year for each 200 Watt unit and \$90.00 per year for each 400 Mercury Vapor Lamp.

#### SYSTEM NO. 3

System No. 3 consists of 4 multiple lights, each of 150 Watt strength, located in the C.N.R. subway. This system is also controlled by a control switch which is energized by the series lighting system.

#### SYSTEM NO. 4

System No. 4 is a series lighting system which had formerly been installed in the Town of Devon and consists of 8.59 miles of line and 179 lamps. The system is composed of three circuits which are controlled by three 15 K.W. constant current transformers located on a pole platform on Pine Street.

##### Carleton Ward (Up)

##### Transformer Size

2-600 C.P. Lamps @ .350 demand  
37-250 C.P. Lamps @ .160 demand  
15 - Fluorscent Lamps @ .50 demand

.70 K.W.  
5.92 K.W.  
7.50 K.W.  
14.12 K.W.      15 K.W.

##### Carleton Ward (Central)

60-250 C.P. Lamps @ .160 demand  
11 - Fluorscent Lamps @ .50 demand

9.60 K.W.  
5.50 K.W.  
15.10 K.W.      15 K.W.

##### Carleton Ward (Down)

2-600 C.P. Lamps @ .350 demand  
47-250 C.P. Lamps @ .160 demand  
5 - Fluorscent Lamps @ .50 demand

.70 K.W.  
7.52 K.W.  
2.50 K.W.  
10.72 K.W.      15 K.W.

The power for system 1, 3 and 4 is purchased from the Maritime Electric Company at a contract price as agreed upon in a contract between the Maritime Electric Company and the City of Fredericton made in 1957. This contract also covers the maintenance cost of \$20.00 per year per mile of pole line which is paid by the City to the Company.

All materials such as wire, poles, pole fixtures, lamps, lamp fixtures, transformers, etc. are paid for by the City, installed by the Company under their contract price for maintenance. Any new installations that require an enlargement of circuits must be paid for by the City, both labor and material.

The Street Lighting costs for the year 1958 are as follows:-

Net Expenditure .....	\$ 36,038.79
1958 Appropriation .....	<u>33,500.00</u>
Debit Balance .....	<u>\$ 2,538.79</u>

The Street Lighting Expenditure of \$36,038.79 is made up as follows:-

12 - F 48 T 12/CW/HO Fluorscent Lamps .....	\$ 22.28
120 - 600 C.P.Series Lamps .....	130.43
4 - 500 C.P.Lamps .....	4.94
744 - 250 C.P.Lamps .....	491.28
Current in Subways and Series Lighting Jan. 1, 1958 to December 31, 1958 (437650 K.W. Hrs.).....	11,058.63
Charges on Multiple fixtures owned and operated by the Maritime Electric Co. @ \$40.00, \$60.00 and \$90.00 per light per year .....	21,645.84
Maintenance and contract of pole line .....	621.36
Maintenance of lamp fixtures, including only such articles as lamp standards, lamp brackets, heads, sockets, shades, cut-outs, time switches, etc.....	188.85
Material and Labor used in major repairs and new installations .....	933.76
Light Bill, Fredericton Highway Bridge (8 months) .....	443.52
Cenotaph Light Bill .....	149.49
Miscellaneous (Use of City Machine, labor, etc.) .....	<u>348.41</u>
TOTAL .....	<u>\$ 36,038.79</u>

During month of May 1958, the lighting on the Fredericton Highway Bridge was changed and 12-400 Watt mercury lamps were installed and paid for by the Provincial Government. The light charges and maintenance of this line will be paid for by the City of Fredericton.

The total per capita charge for Street Lighting for 1958, population of 18,303 as per the 1956 census is:-  
36,038.79 = \$ 1.96.  
18,303

HUGHES OWENS 404 C

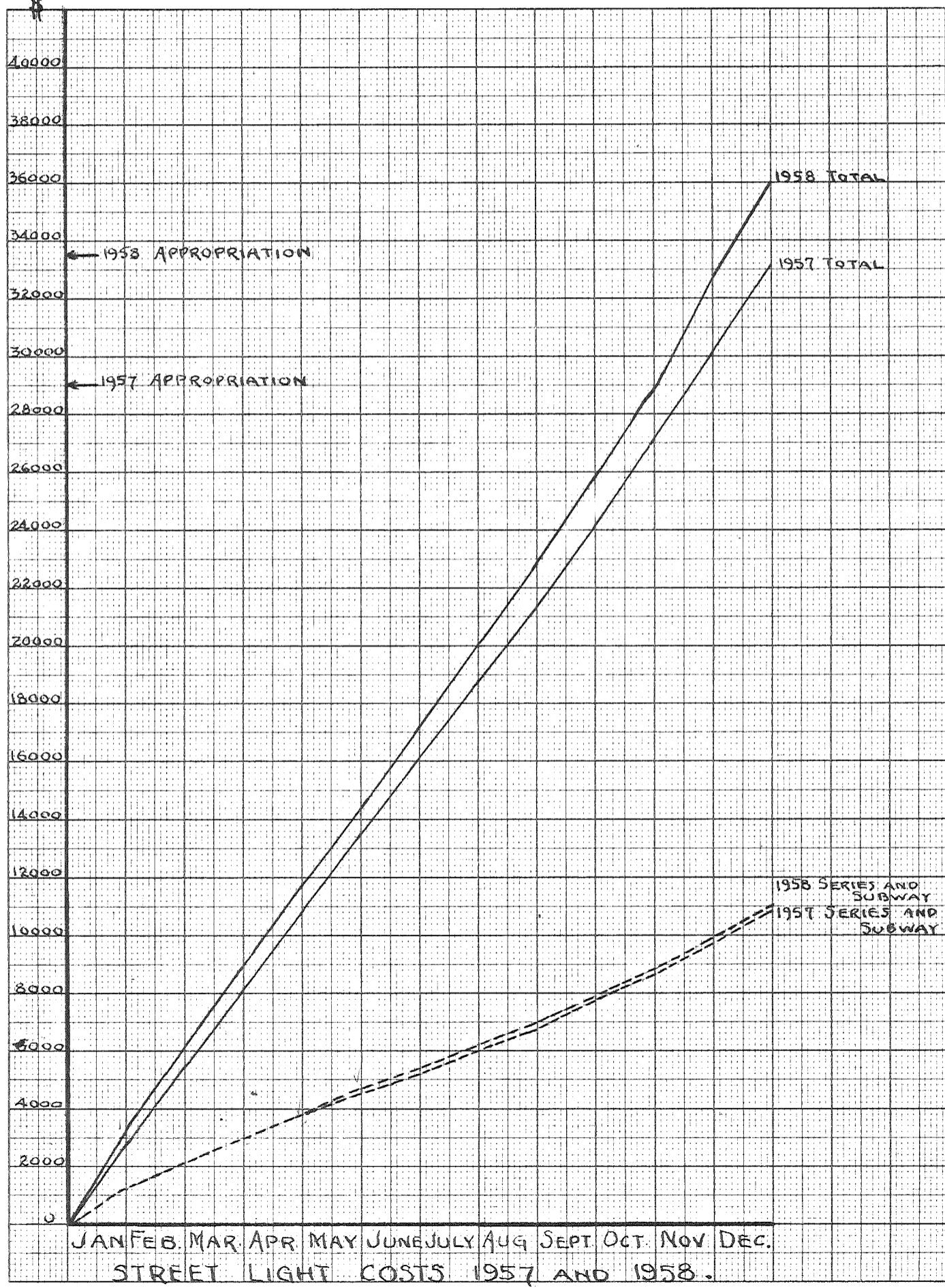


TABLE SHOWING COMPARATIVE YEARLY COST IN  
STREET LIGHTING

<u>Year</u>	<u>Total Yearly Cost</u>	<u>Yearly Appropriation</u>
1944	10,675.80	10,000.00
1945	10,682.22	10,000.00
1946	11,611.45	12,000.00
1947	12,530.94	15,000.00
1948	15,269.12	15,000.00
1949	15,720.93	16,000.00
1950	25,300.30	20,000.00
1951	23,848.42	20,000.00
1952	25,211.39	25,000.00
1953	25,487.71	27,000.00
1954	23,812.54	27,000.00
1955	28,542.77	27,000.00
1956	31,877.10	27,700.00
1957	33,101.56	29,000.00
1958	36,038.79	33,500.00

CEMENT WALKS

Expenditure ..... \$ 13,012.67

For the above expenditure of \$13,012.67 concrete sidewalks were laid at the following locations:-

<u>Location</u>	<u>Lineal Feet</u>
Dundonald Street, Northumberland Street to Smythe Street (North side) .....	645.1
Dundonald Street, Northumberland Street to Smythe Street (South side) .....	644.2
Northumberland Street, Dundonald Street to Connaught Street (East side) .....	361.6
Northumberland Street, Dundonald Street to Connaught Street (West side) .....	374.0
Sewell Street, MacLaren Avenue to Park Street (West side) .....	551.0
MacLaren Avenue, Medley Street to Sewell St. (south side) .....	779.5
Gibson Street, Alta Ashfield's east property line to City of Fredericton limits .....	1,734.3
Queen Street (A. J. Folkins and Sobey Stores Ltd.) ....	56.7
MacLaren Avenue (Bridge Street to Hughes St., north side) .....	
Bridge Street (Dedham St. to MacLaren Ave., north side)	642.3
Victoria Street, Maritime Accessories Ltd. to York Street (South side) .....	317.6
Campbell Street, Regent Street to property line between Canadian Legion and Fredericton Post Office, (South side) .....	323.7
Dedham Street, Bridge St. to St. Marys St. (South side)	652.4
Miscellaneous (Northumberland St., Medley St. and Union Street) .....	85.0
TOTAL LINEAL FEET .....	<u>7,167.4</u>

The cost of the above sidewalks were paid, one-half by the City and one-half by the property owner with the exception of the miscellaneous locations and a portion of MacLaren Avenue from Medley Street to Sewell Street, as this property is owned by Central Mortgage and Housing Ltd. The cost of this portion of the sidewalk is paid for by the City due to an agreement entered into with the Central Mortgage and Housing Corporation in 1946.

The concrete for the above construction of sidewalks was obtained from Blakely Concrete Products Ltd. at a cost of \$14.50 per cubic yard less 1 per cent.

The total cost for laying the above lineal feet of concrete sidewalk was \$1.82 which was obtained by dividing the total lineal feet 7,167.4 into the total cost which was \$13,012.67.

#### CITY SCALES

Expenditure ..... \$ 509.70

Maritime Electric Co. (Light Bill) .....	\$ 40.19
James S. Neill and Sons .....	2.35
Phillips and Pringle .....	.21
Unemployment Insurance Commission .....	5.46
Journal Voucher (City Labor) .....	440.99
Journal Voucher (City Machinery) .....	<u>20.50</u>
TOTAL .....	<u>\$ 509.70</u>

The wages of the weigh scale operator do not appear in the above expenditure. The expenditure is not made through the office of the City Engineer and is therefore not shown in this report.

WILMOT PARK

Expenditure ..... \$ 3,446.21

The above expenditure is made up as follows:-

Labor and Trucking at Wilmot Park .....	\$ 2,297.57
Material used on Lawns and Flower Beds .....	108.28
Supplies and Repairs to Lawn Mowers, etc. ....	20.44
Material used on Grounds (Rock Dust, Cedar Posts, Paint, etc.) .....	185.20
Miscellaneous (tools, etc.) .....	2.73
Telephone .....	49.43
Journal Voucher (City Machinery) .....	632.50
Journal Voucher (Holidays) .....	<u>150.06</u>
TOTAL .....	<u>\$ 3,446.21</u>

Included in the above expenditure is the cost of grading and levelling the area formerly occupied by the Alexandra College Buildings.

Excess fill from other City construction was hauled to the site and the Bulldozer and Operator were charged to Wilmot Park.

Posts were installed on Rookwood Avenue to prevent motor vehicles from destroying the lawn.

CHILDREN'S HOME

Expenditure ..... \$ 70.81

The above expenditure is made up as follows:-

Federal Hardware Ltd. (glass, putty, points, hinges, etc.) ..	\$ 9.66
J. S. Neill & Sons Ltd. (1 Screen Door and Door pull) .....	8.23
Journal Voucher (City Labor) .....	<u>52.92</u>

TOTAL ..... \$ 70.81

FIRE DEPARTMENT

Expenditure ..... \$ 8,754.25

Journal Voucher (1813 Gallons Gasoline) .....	\$ 572.25
Journal Voucher (339 Hydrants rental) .....	8,136.00
Journal Voucher (Digging trench in rear of MacLaren Avenue Fire Station) .....	<u>46.00</u>
TOTAL .....	<u>\$ 8,754.25</u>

ADMINISTRATION OF JUSTICE

Expenditure ..... \$ 2,806.71

The above expenditure is made up as follows:-

Journal Voucher (8380.75 Gallons Gasoline and 9 Quarts Oil) .....	\$ 2,645.91
Journal Voucher (City Labor) .....	<u>160.80</u>
TOTAL .....	<u>\$ 2,806.71</u>

Included in the above expenditure was the construction of a Boat Rack, for a boat donated to the City of Fredericton Police Department by the Fredericton Foundation Incorporated, painting the traffic light standards and the painting of parking meter posts.

AIRPORT

The expenditure of \$17.81 for the Airport which was made through the office of the City Engineer included two invoices of Mussens Limited, charged to Roads and Streets in error.

### ROYAL VISIT

On August 7, 8 and 9, 1958 the City of Fredericton was visited by Princess Margaret and the following expenditures were made for this occasion.

Expenditure .....\$ 1,377.08

The above expenditure was made up as follows:-

H. S. Gill and Sons Ltd. (Lumber) .....	\$ 130.90
J. L. Simms and Sons Ltd. (Plywood) .....	24.93
James S. Neill and Sons Ltd. (Paint) .....	10.73
J. C. Risteen Co. (Flag Sticks) .....	4.94
E. M. Young Ltd. (Paint) .....	17.10
Horsnell's Machine & Iron Works (Standards) .....	463.50
Journal Voucher (City Labor) .....	563.98
Journal Voucher (Machinery, flusher and sweeper) .....	<u>161.00</u>
TOTAL .....	<u>\$ 1,377.08</u>

### LADY BEAVERBROOK RINK

The expenditure of \$7.60 was made up of labor and trucking charges to removing refuse at the Lady Beaverbrook Rink.

### PAINT DEPARTMENT

Gross Expenditure .....	\$ 9,795.94
Credits .....	<u>21.00</u>
Net Expenditure .....	\$ 9,774.94
1958 Appropriation .....	<u>9,750.00</u>
Debit .....	<u>\$ 24.94</u>

The above credit of \$21.00 is made up as follows:-

Town of Oromocto (6 only "No Parking" signs @ \$1.50 each) ..	\$ 9.00
R. L. Kilburn Ltd. (Rental of Paint Machine) .....	<u>12.00</u>
TOTAL .....	<u>\$ 21.00</u>

*9,795.94*

The above expenditure of \$9,774.94 is made up as follows:-

Freeman C. Hirtle (Repairing silk screens) .....	\$ 30.00
J. L. Simms and Sons Ltd. (Plywood, etc.) .....	443.48
James S. Neill and Sons Ltd. (Pipe, bolts, nails, paint, sandpaper, etc.) .....	361.47
Minnesota Mining and Manufacturing Co. (Scotchlite)...	1,142.95
Department Public Works (Paint Route signs) .....	36.20
Provincial Secretary-Treasurer (3% Sales Tax).....	61.32
Canadian Pacific Express Co. .....	4.05
Federal Hardware (Paint, Brooms, etc.) .....	62.00
H. W. Wilson Printing Co. (Sign cards) .....	39.07
H. S. Gill and Sons Ltd. (Lumber) .....	62.94
Horsnell's Machine and Iron Works (Welding, drilling, etc.) .....	56.89
Auto Machinery and General Supply Co. (Hose, etc.) ..	10.14
E. M. Young Ltd. (Colored wipers, paint, lamps, etc.).	137.78
Lean Bros. Ltd. (Paint) .....	496.97
York Structural Steel (Piping and Tubing for standards)	772.50
C. J. Toner (Trucking) .....	3.00
Canadian Paint and Varnish Corporation .....	127.46
Rosco Metal Products (Street name signs) .....	1,035.00
Radiator Specialty Co. (Safe T-Cones) .....	33.00
Canadian National Railway .....	18.14
B. H. Boone (Thinner) .....	10.30
Journal Voucher (City Labor) .....	4,355.43
Journal Voucher (387.74 Gallons Gas and 30 Quarts Oil)	133.91
Journal Voucher (Holiday and Sick Leave) .....	<u>361.94</u>
TOTAL .....	<u>\$ 9,795.94</u>

The Street name signs and standards purchased  
in 1958 will be installed early in 1959.

## W A T E R

There are two separate water systems in the City of Fredericton.

1. The sources, which supply the City of Fredericton on the south side of the Saint John River are Gravel Wall Wells. No. 1 in Wilmot Park and No. 2 on Saunders Street near the Fredericton Exhibition Raceway.

No. 1 Well was constructed during 1954-1955 and was put into operation on July 30, 1955.

No. 2 Well was constructed in 1957-1958 and was put into operation in February 1958. This Well, however, has a high content of Manganese resulting in "Red Water," which is very objectionable in a Municipal Supply.

The treatment for Manganese is very expensive and from articles that have been written on Manganese removal, it would appear that methods of treatment vary a great deal depending on the Manganese content.

It was therefore, recommended that a source that is free of Manganese be found, if possible, so that treatment would not be necessary. A test Well was drilled at the rear of the Children's Home in November of 1958 and on test pumping was found to have an objectionably high content of Iron and Manganese. This test Well has been abandoned.

The International Water Supply Co. Ltd. advised the test pumping of test holes drilled in 1953 to determine the best location for a large capacity test hole, which would be free of Iron and Manganese.

The test holes were pumped and chemical analysis made of the water and sent forward to the Company for study and recommendation.

The International Water Supply Co. Ltd. advised that a test hole be drilled near the Filtration Plant, where connecting costs would be at a minimum, if the water had to be treated.

Upon informing the Public Works Committee of this, a decision was made to construct a test Well at the Filtration Plant.

In the meantime, the International Water Supply Co. Ltd. is lending the City, a Pilot Plant, with which tests can be carried out to determine the most efficient and economical method of manganese removal. These tests will be carried out as soon as the Pilot Plant arrives and further recommendations will be made to Council, both on the Pilot Plant and the test hole at the Filtration Plant.

Tests carried out on the water from No. 1 Well show that a trace of iron or manganese is present, but have not reached the concentrations where they would be objectionable.

In 1959, results from test drilling, etc., should indicate from what source Fredericton will derive its future water supply.

During periods of low water level in the Saint John River, the No. 1 Well pumps at the rate of 850 I.G.P.M., maximum capacity. When the demand exceeds this rate, water is added from No. 2 Well at a very low pumping rate (50-100 I.G.P.M.) so that the resulting blend will not exceed a recommended maximum manganese content of 0.25 P.P.M.

The filtration plant can be used as a standby in case of emergency, such as a burned-out motor or some other breakdown that could put No. 1 Well out of service for a period of time.

2. The system on the north side of the Saint John River has as its source three drilled Wells. Two of these Wells are outside the City limits and pump into open reservoirs at the rate of 150 I.G.P.M. on Killarney Road and 175 I.G.P.M. at the Rifle Range Reservoir.

In 1956, a third Well was drilled on Bridge Street and in 1957 a contract was entered into with Maritime Engineering Ltd., for the construction of a 1,000,000 I.G.Reservoir and with Forbes and Sloat for the construction of a 12" C. I. Pipe line from the new Well to the 1,000,000 I. G. Reservoir.

The Well has been equipped and the reservoir has reached a stage of construction, where it can be used in an emergency, until the frost is out of the ground, before being put into permanent service. It is not advisable to put the reservoir into use at this time, because of the possibility of breaks in the distribution system, which would be costly to repair at this time of the year.

The new reservoir is at a higher elevation than the open type reservoirs - (190.0' vs. 179.0') top water elevation. The reason for this was, that in future it may become necessary to interconnect the two systems, so that both sides of the Saint John River can be served from either side.

The system on the north side will be greatly improved, both for fire protection and the purity of the water, which in the past has had to be chlorinated due to contamination of the open type reservoirs and the Well on Killarney Road, which has been contaminated from time to time by the built-up area above the reservoir.

The water costs for the City of Fredericton are divided into two headings:- "Water Ordinary" and "Water Pumping Station."

#### WATER ORDINARY:-

This account takes in all expenditures, other than Capital Expenditure for water outside the Pumping Station and Pumping Station grounds and includes all current water expenditures in Carleton Ward. The expenditure under this heading is made up as follows:-

Gross Expenditure .....	\$ 61,939.70
Credits .....	<u>14,601.65</u>
Net Expenditure .....	<u>\$ 47,338.05</u>

The Credits are made up as follows:-

Work done for and materials sold to private parties when installing a water service over ground other than City property or when the material is to be used on parts of the system which do not belong to the City ..... \$ 6,107.81

Area Engineer H.Q.N.B. Area (Repairs to pump in H. Q. Building) .....	10.00
York Structural Steel (7920 lbs. scrap iron) .....	35.36
Fredericton Housing Ltd. (12-5/8 Cu to $\frac{3}{4}$ Iron Fittings, 1 - 4" Gate Valve) .....	55.00
Mr. E. Wells (2 - 5/8 Cu to $\frac{3}{4}$ Iron Fittings) .....	2.50
Ashfield Construction Co. (6 - 5/8 Cu to $\frac{3}{4}$ Iron Fittings) .....	9.00
R. Chaisson (1 - 5/8 Cu to $\frac{3}{4}$ Iron Fitting) .....	1.25
Ashfield Construction Co. (4 - $\frac{3}{4}$ Cu to $\frac{3}{4}$ Cu Fittings) .....	7.60
N.B. Electric Power Commission (1 - $\frac{3}{4}$ " Copper Curb Cock) .....	6.97
Edison Billings (1 - $\frac{3}{4}$ " Copper Corporation Cock) .....	3.53
University of N.B. (Relocating hydrant near Arts Bldg.) .....	102.12
Ashfield Construction Co. (12 - 5/8 Cu to 5/8 Cu Unions) .....	18.00
Maritime Bricklayers Ltd. (Labor at Lemont Property) .....	4.32
Moncton Plumbing and Supply Co. (Fittings and Copper Pipe) .....	13.25
Baptist Church, Oromocto (30' Copper Tubing) .....	15.00
International Water Supply Co. (Unloading Equipment) .....	17.76
Chas. W. McLenahan (2 Water Boxes, Copper Pipe & Fittings) .....	56.18
Journal Voucher (Rental on Hydrants) .....	<u>8,136.00</u>
TOTAL .....	\$ <u>14,601.65</u>

The Gross Expenditure is made up as follows:-

City Pay Roll for Hydrants .....	\$ 3,955.13
City Pay Roll for Meters .....	3,240.99
City Pay Roll for Water Ordinary .....	<u>11,256.58</u>
Total Pay Rolls .....	\$ 18,452.70
Material & Other Charges .....	<u>43,487.00</u>
Gross Expenditure .....	<u>\$ 61,939.70</u>

No water extensions were laid under this heading but they appear under "Capital Account Water."

2 - 6" Sprinkler systems were installed this year, one at the New Way Furniture Building on Queen Street and one at the new R.C.M.P. Garage on Woodstock Road.

There are at present, 52 Sprinkler Systems in the City. The City charge for water supplied for Sprinkler Systems is \$25.00 per year.

HYDRANTS :-

There are in the City, 346 hydrants, 250 hydrants on the south side of the Saint John River and 96 on the north side. The credit for rental charge on these hydrants appear under credits of Water Ordinary.

New Hydrants this year were installed at the following locations:-

<u>Number</u>	<u>Location</u>
1	Waterloo Row, east of Kent Inn
4	Lincoln Road, from Princess Margaret Bridge to Wilsey Road
2	Montgomery Street, between York and Regent Streets
1	Sherwood Court
1	Windsor Street, between Green Road and Fenety Street.

Two hydrants this year were removed, one on Smythe Street near intersection of Smythe Street and Green Road on the west side of Smythe Street and the other on Waterloo Row, west of Kent Inn.

In addition a number of old hydrants were this year, replaced with new McAvity hydrants. The location of these changes are as follows:-

Gill Street, near the intersection of Prince and Gill Streets.  
Highland Avenue, 1st hydrant on Highland Avenue from St. Mary's St.  
Beaverbrook Street, near the intersection of Windsor and Beaverbrook.  
Gibson Street, between Union and Barker Streets.  
Barker Street, near intersection Miles and Barker Streets.  
Barker Street, near entrance to York Arena.  
Union Street, near intersection Union and Gibson Streets.  
Charlotte Street, near intersection Charlotte and Northumberland Sts.  
Neill Street, between Union Street and C. P. R. tracks.  
Union Street, near intersection of Miles and Union Streets.  
George Street, near intersection Northumberland and George Streets.  
Brunswick Street, near intersection of Westmorland & Brunswick Streets.  
Union Street, opposite Catholic Church, Union Street  
Union Street, near intersection McKeen and Union Streets  
Union Street, near intersection of Smith and Union Streets  
Union Street, near intersection of Jaffrey and Union Streets  
Union Street, in front of Residence #315 Union Street  
Union Street, near intersection of Friel and Union Streets  
Union Street, near intersection of Neill and Union Streets  
Union Street, in front of Residence #645 Union Street  
George Street, near Fredericton High School.  
Churchill Row, near intersection of St. John St. and Churchill Row  
Churchill Row, near intersection of Church St. and Churchill Row  
St. John St., near intersection of Brunswick and St. John Streets  
Union Street, near intersection of Titus and Union Streets

All above hydrants have gates excepting Union Street, in front of #315 and hydrant corner Union and Titus Streets.

All hydrants in the City were inspected and repairs were made where necessary and winterized.

METERS:-

Of all the Water services in the City, 886 are charged under flat rate and 2805 on meter rate, making a total of 3691 services.

The labor cost this year, per meter for installing, reading, repairing, etc. is \$1.15.

This year 25 old water services were dug out and shut off at the main.

All meters are read twice a year and bills are sent out twice a year. The meters of 131 customers are read once a month although they are billed twice a year. Those are such customers who ordinarily have large consumptions and where a stopped meter or meter digits turned over without being noticed, would mean considerable loss of revenue to the City. All meters on Military Buildings are included in the group of monthly meter readings.

Meters in Store Room, December 31, 1958 are:-

5/8" meters, repaired and fit for service .....	18
New 5/8" meters .....	45
5/8" meters to be repaired .....	16
$\frac{3}{4}$ " meters fit for service .....	--
New $\frac{3}{4}$ " meters .....	--
1" new meters .....	3
1" meters repaired and fit for service .....	2
$\frac{11}{16}$ " meters repaired and fit for service .....	3
$\frac{11}{16}$ " new meters .....	10
$\frac{11}{16}$ " new meters .....	5
2" new meters .....	--

Distribution System:-

New Services installed this year .....	123
Old Services relayed this year .....	25
Old Services repaired this year.....	2
Frozen services that had to be thawed....	1

The Fredericton distribution system consists of 45.51 miles of Water Main made up of the following sizes:-

18 inch main .....	0.98 miles
14 inch main .....	.33 miles
12 inch main .....	3.57 miles
10 inch main .....	2.64 miles
8 inch main .....	8.72 miles
6 inch main .....	24.24 miles
4 inch main .....	4.76 miles
3 inch main .....	.27 miles

This does not include the water main installed by the National Defence at Exhibition Grounds, Military Depot #7, (Woodstock Road) and Army Garage situated on Wagoner's Lane.

The supply system consists of .47 miles of 14" Cast Iron Pipe, extending from the Well sites at Wilmot Park and Saunders Street to the Pumping Station and .10 miles of 15" Steel Pipe extending from the Intake Pier in the Saint John River to the Pumping Station.

Also included in the above expenditure was the purchase of the following meters from the Neptune Meters Ltd.: -

- 250 - 5/8" x  $\frac{3}{4}$ " Trident C.I.B. Cold Water meter straight reading, Imp. Gallons complete with couplings included.
- 1 - 6" Trident Protectus Cold water meter, flanged, straight reading, Imp. Gallons less flanges, \$1566.18, plus freight and sales tax, \$1,613.17.
- 6 - 1" Trident C.I.B. Cold water meters, straight reading, Imp. Gallons complete with couplings included.

The number of meters installed in 1958 was 175.

This year, 2 new trucks were purchased and charged to Water Ordinary.

- 1 - 1958 Dodge, 1 Ton Express, 700 x 17, 6 T C T, Tract H.M. Nylon, 700 x 17, 6 T & T Tract H M Nylon, frt - wheels 17 x 6.0, 6 Stud Rear wheels 17 x 6.0, 6 Stud front wheels, 1000 lbs. rear springs, 1950 lbs. front axle, 2800 lbs. rear axle, 1 speed 4.10 trans., 4 speed, heater and defroster, oil filter replaceable element, turn signals, glycol \$2987.65 less trade in 1952 Ford  $\frac{1}{2}$  Ton, \$298.76, plus 3% Sales Tax, \$2769.55, Serial No. 1145, Motor No. L6D312891C.
- 1 - 1958 International Model A100, Serial No. 333 OC, motor number 8867C - \$2554.75 less trade in allowance on 1950 Dodge, \$350.00, plus 3% Sales Tax, \$2,270.88.

\$  
56000  
52000  
48000  
44000  
40000  
36000  
32000  
28000  
24000  
20000  
16000  
12000  
8000  
4000  
0

JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC

WATER ORDINARY COSTS 1957 AND 1958.

1958 LABOR AND MATERIAL

1957 LABOR AND MATERIAL

1958 LABOR

1957 LABOR

WATER PUMPING STATION

Gross Expenditure .....	\$ 42,888.56
Credits .....	<u>38.42</u>
Net Expenditure .....	<u>\$ 42,850.14</u>

The credits of \$38.42 are made up as follows:-

York Structural Steel (Sale of Scrap) .....	\$ 35.36
Journal Voucher (To Canadian National Railways Freight Invoice, charged to Water Pumping Station in error) .....	<u>3.06</u>
TOTAL .....	<u>\$ 38.42</u>

The above expenditure is divided as follows:-

City Pay-Rolls for Salaries of employees at Pumping Station .....	\$ 16,211.76
Work done by other City employees in and around the Pumping Station .....	<u>3,099.56</u>
TOTAL CITY PAY ROLLS .....	\$ 19,311.32
Material and Workmen's Compensation Charges .....	<u>23,577.24</u>
TOTAL .....	<u>\$ 42,888.56</u>

The material cost of \$23,577.24 is itemized as follows:-

Item #1 Light and Power supplied by Maritime Electric Co. (587,800 K.W. hours) .....	\$ 13,080.99
Item 2 Light and Power supplied by Maritime Electric Co. at Wells in Park .....	4,733.29
Item 3 Heating (4513.4 Furnace Oil) .....	766.10
Item 4 Gasoline (150 Gallons) .....	45.15
Item 5 Liquid Chlorine (2740 lbs.) .....	158.94
Item 6 Oil (24 Qts. - 6 Gallons Essolube HDX #10) ..	15.08
7 Maintenance and Repairs to buildings, machinery and intake pier .....	874.58
8 New Installations .....	348.06
9 Supplies, Packing, Rags, Lamps, etc. ....	317.79
10 Stationery, Forms, Charts, etc. ....	423.74
11 Workmen's Compensation .....	502.85
12 E. W. Hagerman .....	1,210.08
13 Lime - 35 Bags) .....	26.25
14 Snowflake Air-Floated Spray hydrate (700 Bags) .....	590.28
Miscellaneous - telephone, trucking, expressage, machinery, material from other City Departments .....	<u>484.06</u>
TOTAL .....	<u>\$ 23,577.24</u>

All improvements to Pumping Station are included under "Capital Account Water" such as installation of a new pump, new panel switch, rewiring the Pumping Station and the rewinding and regrouping of existing motors to change the voltage to 550 volts from 2300 volts.

*CAN*  
The Pumping Station plant will be set up to operated automatically on the ground water supply and manually on the Saint John River supply which must pass through the Filter Plant for purification and which will only be used in an emergency; that is, when the Wells are not operating due to failure, etc. or when the demand for water is higher than the Wells can produce or during a prolonged electrical interruption, probably longer than 24 hours.

During a 24-hour interruption the 2,000,000 Gallon Reservoir will supply the system unless there is a serious break or a fire where a high consumption of water is required.

The Coagulation Basin was cleaned this year.

COMPARISON OF WATER PUMPED & COSTS  
For South Side of River  
for last nineteen years

<u>Year</u>	<u>Water Pumped Imperial Gallons</u>	<u>Yearly Gross Expenditure at Pumping Station</u>	<u>Pumping Station cost per 1,000 Gallons used Gross Expenditure</u>
1940	203,975,000	22,503.35	11.3 cents
1941	222,255,000	19,474.56	8.8 cents
1942	257,205,000	23,400.09	9.1 cents
1943	280,115,000	26,338.50	9.4 cents
1944	295,945,000	22,926.61	7.7 cents
1945	321,355,000	23,900.14	7.7 cents
1946	338,979,000	25,640.43	7.5 cents
1947	319,243,000	37,123.42	11.6 cents
1948	322,339,000	31,050.97	9.6 cents
1949	345,320,000	30,513.39	9.8 cents
1950	372,412,000	44,548.09	11.9 cents
1951	367,130,000	35,058.57	9.5 cents
1952	339,330,000	40,476.10	11.9 cents
1953	351,310,000	36,179.74	10.3 cents
1954	388,540,000	40,403.81	10.4 cents
1955	376,591,000	48,063.07	12.7 cents
1956 (13 MOS.)	448,096,000	41,351.18	9.2 cents
1957	469,185,000	42,465.50	9.0 cents
1958	454,765,000	42,888.56	9.4 cents

The column in the preceding comparison, showing Imperial Gallons pumped, does not include water used from Wells in Carleton Ward.

By taking the average consumption of Carleton Ward as 180,000 Gallons per day, arrived at from a number of test runs, the estimated water pumped for twelve months from these Wells was 65,700,000 Imperial Gallons.

The total amount of water pumped from January 1, 1958 to December 31, 1958 therefore, for the whole City, is 520,465,000 Imperial Gallons.

The total Net Water Expenditure for the City from January 1, 1958 to December 31, 1958 is \$90,188.19.

Therefore the net cost to pump and deliver to the customer, 1,000 Imperial Gallons of Water from January 1, 1958 to December 31, 1958 is \$90,188.19 = 17.3 cents.  
520,465

All the preceding costs shown under "Water Pumping Station," and "Water Ordinary" do not include the cost of billing and collecting water bills or any other overhead charge included in the City Government cost, nor do they include bond payment or sinking fund charges.

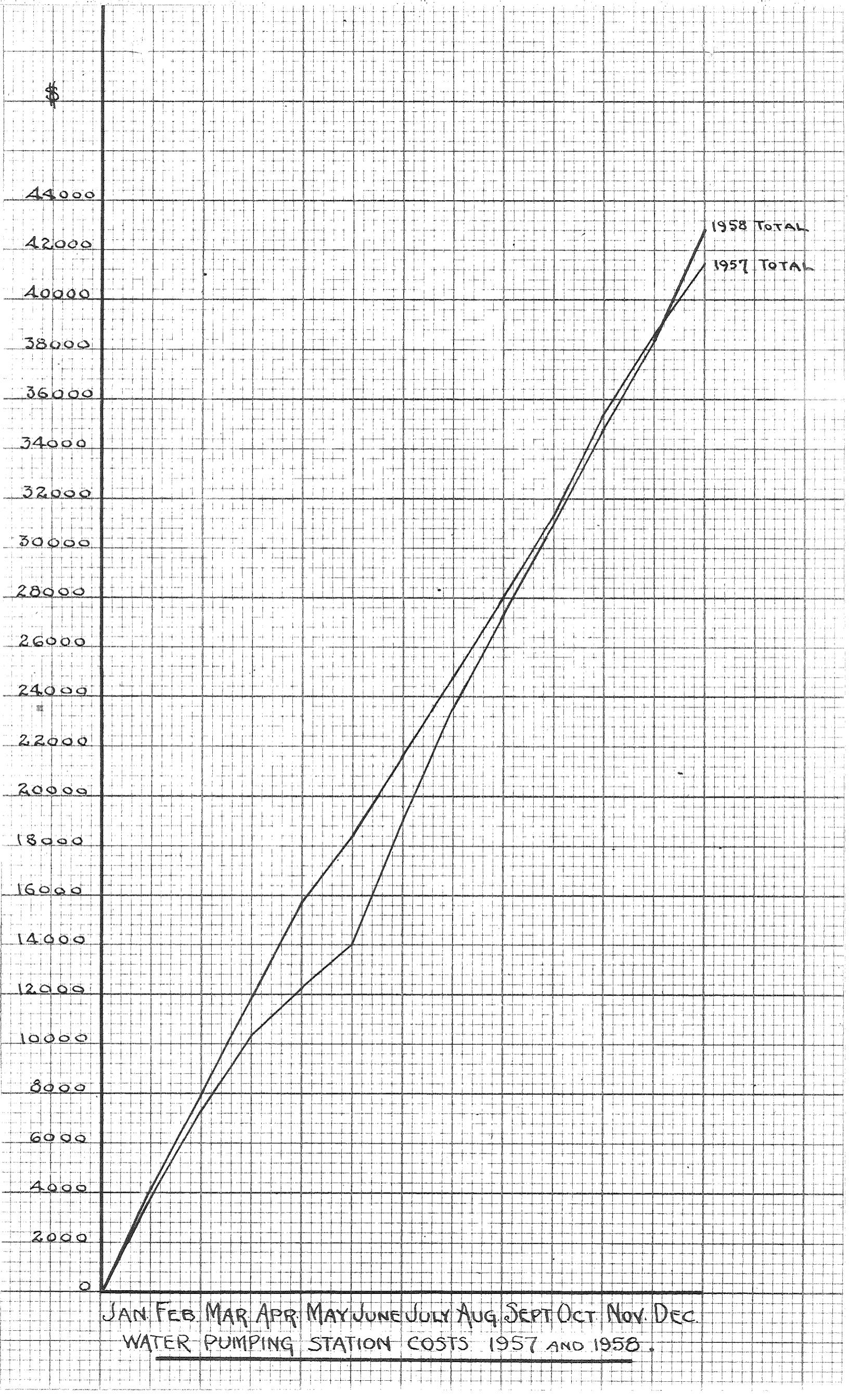
The Water Pumping Station was as usual under the supervision of the Plant Superintendent, Mr. Fred Nason.

Accompanying this report is the report of Mr. E. W. Hagerman, City Analyst on the Fredericton Water Supply from January 1, 1958 to December 31, 1958.

Respectfully submitted,

*W. L. Barrett.*

City Engineer.



FREDERICTON WATER SUPPLY

1958

Few words are necessary to describe the water supply South of the Saint John River. For the past season from the bacteriological point of view the results of this report could be briefly summarized in the word excellent.

The water as it comes from the Well has always given negative tests indicating that members of the Coliform group are not present.

A small Chlorine residual of from 0.1 to 0.15 parts per million is carried to prevent infection, should a break occur in the distribution system.

Spot tests made throughout the year in different parts of the system gave all negative results.

The water supply for Carleton Ward, on the North side of the River was generally good. However about August 21st, positive results began to appear in the westerly section served by the Killarney Reservoir. An occasional positive result occurring in an open reservoir is not of great significance but when another positive occurred on the 25th, chlorine was added to the supply in an amount to give a 0.15 to 0.2 residual at the reservoir outlet. Chlorination was continued until mid December when it was discontinued. Tests continued to show negative up to the present time. Apparently the freezing weather has some connection with clearing up the source of contamination.

The Engineer's report covers the chemical qualities of the waters found while test drilling for new Well sites so nothing will be included here on the matter.

Attached will be found a list of tests made showing the locations and results.

Fredericton, N. B.  
February 2, 1959.

(Signed) E. W. Hagerman

Each sample listed below is made up of five 10 millilitre portions. The number of Positive for a sample may vary from 1 to 5. This gives a very rough indication of the intensity of the pollution.

A sample is to be considered negative unless followed by the word Plus which indicates a Positive result indicating the presence of the Coliform group which in turn indicates a possibility of undesirable pollution.

The number of positive portions in the Sample will be indicated by Plus 1, Plus 2, etc. up to a maximum of Plus 5.

January	1	127 Charlotte Street
	10	North Devon Station
	16	127 Charlotte Street
	27	Union Motors, Union Street
February	2	U. N. B. Engineering Building
	5	Wilmot Park Well #1
	15	# 2 Well
	23	Union Motors, Union Street
March	6	127 Charlotte Street
	12	U. N. B. Engineering Building
	18	Union Motors, Union Street
	24	202 St. John Street
April	3	Union Motors, Union Street
	10	U. N. B. Engineering Building
	17	Union Motors, Union Street
	23	Wilmot Park Well #1
May	3	Union Motors, Union Street
	12	277 Gibson Street
	19	North Devon Station
	28	Union Motors, Union Street
June	5	Union Motors, Union Street
	11	Fire Station, MacLaren Avenue
	16	Union Motors, Union Street
	19	127 Charlotte Street
	24	Union Motors, Union Street
July	1	U. N. B. Engineering Building
	8	Ashfield's, Union Street
	24	Ashfield's, Union Street
August	3	127 Charlotte Street
	16	Union Motors, Union Street
	21	Union Motors, Union Street
	25	Union Motors, Union Street
		Added Chlorine
	27	Union Motors, Union Street

1 Plus  
2 Plus

September	2	City Hall	
	5	Union Motors, Union Street	
	12	Ashfield's, Union Street	
	16	Ceased chlorination 13th	
	19	Ashfield's, Union Street	2 Plus
	23	Union Motors, Union Street	1 Plus
	27	Added Chlorine	
		Killarney Reservoir	
		Union Garage	
October	2	127 Charlotte Street	
	4	Union Motors, Union Street	
	10	Union Motors, Union Street	1 Plus
	14	Union Motors, Union Street	(Doubtful)
		Increased the Chlorine	
	20	Union Motors, Union Street	
	28	Union Motors, Union Street	
	28	Fire Station, MacLaren Avenue	
November	5	Union Motors, Union Street	
	10	#1 Well plus 10% #2 Well	
	17	127 Charlotte Street	
	24	Union Motors, Union Street	
December	1	Union Motors, Union Street	
	7	127 Charlotte Street	
	12	U. N. B. Engineering Building	
	24	Union Garage, Union Street	

(Signed) E. W. Hagerman.

