

# ANNUAL REPORT OF THE ENGINEERING AND PUBLIC WORKS DEPARTMENT

## 1948



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January 25, 1949.

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

Gentlemen:

I submit herewith this report which is a statement of the work done in the different City Departments under the direct supervision of the City Engineer, and covers the period of time from the first of December 1947 to the first of December 1948.

This report is written with the purpose of reporting to the Council on the costs of the various Departments for the year. It is also written with the idea of having an accurate record on file of the different activities and costs under these Departments.

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

. The City's population is, I believe, at the present time about 18,000 persons.

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

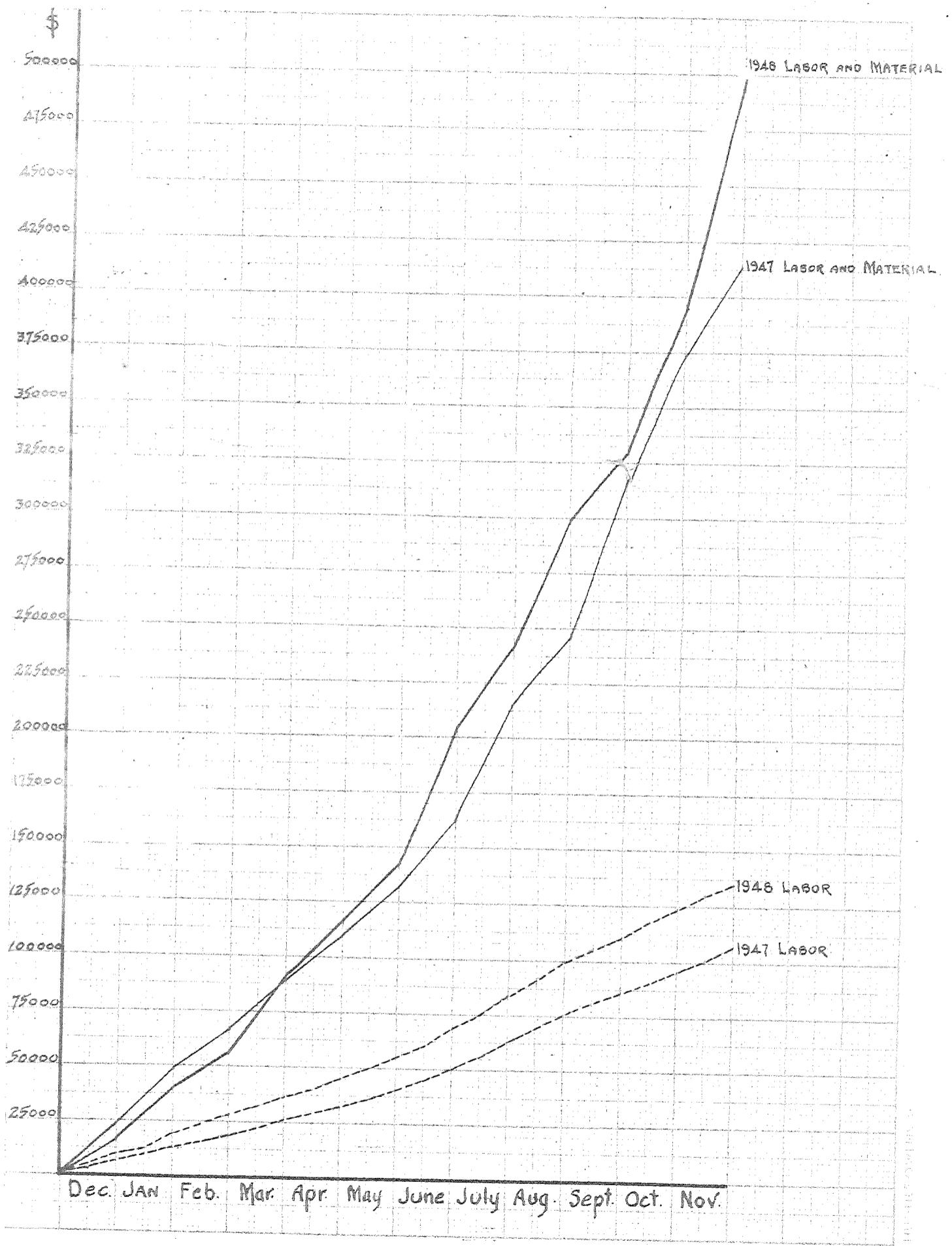
Respectfully submitted,

City Engineer.

### TOTAL YEARLY EXPENDITURE

The Total Yearly Net Expenditure under the direct supervision of the City Engineer this year amounted to \$ 496,849.34. This expenditure will be taken up in detail under the different headings in this report. The Total Gross Expenditure for this period amounted to \$ 656,849.34.

A graphic comparison of expenditure for labour and material for the year 1948 is shown on the following chart.



TOTAL NET EXPENDITURE 1947 AND 1948.

ROADS AND STREETS

This year we had an appropriation for Roads and Streets of \$60,000.00. We have over-expended this appropriation by \$26,141.85.

We have in Fredericton altogether some 56.87 miles of roads and streets.

Our paved and unpaved streets are divided between the Rural and Urban Districts as follows:-

Roads and Streets

|             | <u>Urban</u> | <u>Outlying</u> | <u>Total</u> |
|-------------|--------------|-----------------|--------------|
| Paved.....  | 19.01        | 5.46            | 22.47        |
| Gravel..... | <u>11.19</u> | <u>23.21</u>    | <u>34.40</u> |
| Total.....  | 30.20        | 26.67           | 56.87        |

Roads and Streets Expenditures 1948:-

|                         |               |
|-------------------------|---------------|
| Gross Expenditure.....  | \$ 120,591.35 |
| Credits.....            | 34,449.50     |
| Net Expenditures.....   | 86,141.85     |
| 1948 Appropriation..... | 60,000.00     |
| Dr. Balance.....        | 26,141.85     |

The above credits are made up as follows:-

|   |              |
|---|--------------|
| Fredericton Curling Club (supplying and installing sand, gravel and cinders for artificial ice).....  | \$ 482.05    |
| Fredericton Golf Club (To use of City Road Patrol).....   | 29.00        |
| N.B. Telephone Co. (To patching City of Fredericton due to breaks made by N.B. Telephone Co.).....  | 780.20       |
| N.B. Department of Public Works (Recurbing and repairing portion of St. John St. between King and Queen).....   | 1,468.25     |
| Sandy's Service Station (Paving yard of Service Station) ..   | 125.44       |
| McFarlane Garage. (Labour on island for gasoline pumps)....   | 132.10       |
| Fraser Co. Ltd. (Sale of rough spruce pulp).....  | 210.21       |
| Diamond Construction Co. (Use of Road Patrol, McFarlane Garage).....  | 64.00        |
| Journal Voucher (To proportion for expenses Engineer's Car)   | 300.00       |
| Journal Voucher (To pavement laid by Diamond Construction Co. during summer of 1948 which was charged to Roads and Streets and recharged to Perm. Road Acc.)..... | 30,719.25    |
| Journal Voucher (Wood from City Forest).....  | 135.00       |
| Miscellaneous.....  | 4.00         |
| <br>Total.....  | \$ 34,449.50 |

The Gross Expenditure is divided as follows:-

|  |                  |
|--|------------------|
| Labour.....                                      | \$ 51,042.03     |
| Material charges and Workmen's Compensation..... | <u>69,549.32</u> |

\$120,591.35

I have divided the Labour Charges of \$51,042.03 into the following items. Although these items are made up entirely of labour costs, they give a good idea of the amount and kind of work done by the Roads and Streets Department during the year.

|       |  |                    |
|-------|--|--------------------|
| Item. | 1. <u>Snowploughing Sidewalks:-</u>  | \$ 187.35          |
| 2.    | <u>Snow Control:-</u> Shovelling and hauling snow, ploughing or scraping roads, cleaning gutters of ice and snow and any other means of snow control.....  | 11,281.23          |
| 3.    | <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..... | 6,527.10           |
| 4.    | <u>Surface Sewers:-</u> Cleaning, flushing and repairing surface sewers and building new surface sewers within street limits   | 480.05             |
| 5.    | <u>Sanding Walks:-</u> Storing sand in winter storage piles and spreading same on slippery walks.....  | 1,398.85           |
| 6.    | <u>Yard:-</u> Men working in blacksmith shop and repair work in City Yard, taking summer equipment out and storing winter equipment etc.....   | 1,605.58           |
| 7.    | <u>Gravel:-</u> .....  | 3,105.58           |
| 9.    | <u>St. John Road:-</u> All work done on the River Road from Alexandra St. to eastern city line other than work done by power maintainer and pavement maintenance.....  | 3,853.72           |
| 10.   | <u>Doak and Wilsey Roads:-</u> All work done on these roads other than work done by power maintainer.....  | 2,863.82           |
| 11.   | <u>New Maryland Road:-</u> From C.P.R. Crossing to southern city line. All work done on this road other than that done by power maintainer.....  | 121.48             |
| 12.   | <u>Killarney Road:-</u> .....  | 33.63              |
| 13.   | <u>Outlying Roads:-</u> Hanwell Road, Cross Road lying between Brick Hill and College Hill Road and Forest Hill Road. All work done on these roads other than work done by power maintainer.....               | 581.20             |
| 14.   | <u>Street Cleaning:-</u> All cleaning and removal of dirt, leaves, etc. from streets.....  | 13,948.03          |
| 15.   | <u>Tarvia Repairs:-</u> Patching and repairing asphalt or tar pavements and sidewalks and applying seal coat of light tar or asphalt to pavements.....   | 2,006.41           |
| 16.   | <u>City Road Patrol:-</u> .....  | 836.53             |
| 18.   | <u>City Forest:-</u> .....   | 2,212.27           |
|       | <b>TOTAL.....</b>  | <b>\$51,042.03</b> |

Following is a table comparing Labour Expenditure in these items from 1945 to 1948.

TABLE COMPARING YEARLY COSTS IN ROADS AND STREETS  
LABOUR ITEMS

| Item |                     | <u>1945</u> | <u>1946</u> | <u>1947</u> | <u>1948</u> |
|------|---------------------|-------------|-------------|-------------|-------------|
| 1.   | Snowploughing       |             |             |             |             |
| 1.   | Sidewalks           | 153.75      | 579.20      | 255.51      | 187.55      |
| 2.   | Snow Control        | 6,841.28    | 7,073.15    | 7,932.44    | 11,281.25   |
| 3.   | Streets             | 6,366.49    | 5,450.87    | 7,158.80    | 6,527.10    |
| 4.   | Surface Sewers      | 477.59      | 917.88      | 595.70      | 480.05      |
| 5.   | Sanding Walks       | 586.09      | 591.66      | 1,997.76    | 1,398.85    |
| 6.   | Yard                | 999.44      | 802.16      | 1,006.19    | 1,605.38    |
| 7.   | Gravel              | 2,587.62    | 2,366.11    | 3,677.75    | 5,105.20    |
| 8.   | Street Sprinkling   | 47.50       | —           | —           | —           |
| 9.   | St. John Road       | 187.11      | 176.42      | 398.10      | 3,853.72    |
| 10.  | Doak & Wilsey Roads | 231.47      | 2.56        | 965.68      | 2,863.82    |
| 11.  | New Maryland Road   | 434.91      | 66.46       | —           | 121.48      |
| 12.  | Killarney Road      | —           | —           | 175.84      | 53.63       |
| 13.  | Outlying Roads      | 185.01      | 474.51      | 1,021.68    | 581.20      |
| 14.  | Street Cleaning     | 7,415.71    | 10,213.19   | 12,072.44   | 13,948.05   |
| 15.  | Tarvia Repairs      | 1,784.63    | 728.62      | 1,101.86    | 2,006.41    |
| 16.  | City Road Patrol    | 647.06      | 552.79      | 655.19      | 836.35      |
| 17.  | Dunn's Crossing     | 30.66       | 957.01      | —           | —           |
| 18.  | City Forest         | 2,456.00    | 4,275.20    | 2,493.05    | 2,212.27    |
|      | Total               | 30,232.12   | 35,227.79   | 42,445.99   | 51,042.05   |

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

| Item 2. | <u>Snow Control</u> :-               | <u>1947</u>   | <u>1948</u>   |
|---------|--------------------------------------|---------------|---------------|
|         | Snowploughing roads and streets..... | 763.60        | 786.24        |
|         | Shovelling and hauling snow.....     | 5,442.15      | 8,857.88      |
|         | Catch Basins.....                    | 760.20        | 408.78        |
|         | Snow Fences.....                     | 517.80        | 445.51        |
|         | Keeping drains on hills open.....    | 218.50        | 447.57        |
|         | Thawing culverts.....                | 38.75         | 47.98         |
|         | General Expenses.....                | <u>191.44</u> | <u>289.27</u> |
|         | Total.....                           | \$7,932.44    | 11,281.23     |

Snow Fences:-

In our snow fencing this year we used 10,400 feet of lathmade snow fence.

Item 3. Streets:-

|   |               |
|---|---------------|
| Repairs to plant.....                         | \$ 968.01     |
| Curb and gutter.....                          | 115.39        |
| Painting traffic lines and street signs.....  | 1,392.89      |
| Weather Account (holidays) .....              | 3,085.45      |
| Repairs to bridges.....                       | 464.90        |
| Surveying.....                                | 76.20         |
| Unloading and spreading calcium chloride..... | 244.57        |
| General Expenses.....                         | <u>179.69</u> |
| Total.....                                    | 6,527.10      |

The labour expenditure for Curb and Gutter was made in constructing Curb and Gutter on St. John St. between Queen and King. This charge was billed to and paid by the Provincial Government. The construction was done because of change of grade on this block made necessary by the building of a tunnel by the Provincial Government under St. John St.

The above Weather Account of \$3,085.45 is made up chiefly of wages paid to workmen when they were on their holidays.

Item 4. Surface Sewers:-

All surface sewers in the City were flushed and all catch basins were cleaned and repaired during the summer season at a labour cost of \$480.03.

Item 7. Gravel:-

This year we hauled from our city gravel pit at Barker's Point some 12,939 cubic yards of gravel of which 11,331 cubic yards were used in our regular city maintenance, and 1608 cubic yards used on Wartime Housing, Maryland Heights.

Item 9. St. John Road:-

The river side of the St. John Road from the property of Mr. Boyce, East, using some 4,900 ton of rock. This rock was obtained from quarry owned by Diamond Construction Co. on Killarney Road.

Item 13. Outlying Roads:-

The labour expenditure of \$581.20 is made up of maintenance expenditures incurred in repairs on the Brick Kiln Road, York Street Hill, Hanwell Road, Cross Roads, Forest Hill and College Hill.

The actual maintenance by road patrol on these outlying roads does not appear in this item as it was charged under item headed "City Road Patrol."

**Item 14. Street Cleaning:-**

The labour cost of \$13,948.03 shows an increase of \$1,875.59 over last year's labour expenditure. This increase is partly due to additional pavement laid this year which had to be kept clean, but mostly due to increase in wage rates.

**Item 15. Tarvia Repairs:-**

The labour expenditure of \$2,006.41 is divided as follows:-

|                              |              |
|------------------------------|--------------|
| Patching streets.....        | \$ 1,744.46  |
| N. B. Telephone Co.....      | 130.69       |
| Sandy's Service Station..... | 17.50        |
| McFarlane's Garage.....      | 62.60        |
| General Expenses.....        | <u>51.36</u> |
| Total.....                   | \$ 2,006.41  |

All patching material this year was obtained from Diamond Construction Co. City trucks hauled from plant at Cross Creek 175 tons base @ \$4.25 per ton and 65 tons seal @ \$5.50 per ton.

**Item 18. City Forest:-**

Included in our regular Roads and Streets Costs is a labour expenditure for City Forest of \$2,212.27

This labour item is sub-divided as follows:-

|   |                 |
|---|-----------------|
| Cutting fuel wood in woods.....                   | \$ 400.00       |
| Haying.....                                       | 55.00           |
| Caretaker's wages and miscellaneous expenses..... | <u>1,757.27</u> |
| Total.....  | \$ 2,212.27     |

Besides this labour cost, the City Forest shows an expenditure for material of \$554.36 making a total cost for the year of \$2,566.63.

The roads and trails in the City Forest proper were kept clear from fallen trees and brush.

The merchantable material which was cropped from the City Forest this year would give the following revenue:-

|  |              |
|--|--------------|
| 3000 board ft. Hemlock lumber.....   | \$ 75.00     |
| 8000 board ft. Spruce lumber.....  | 240.00       |
| 125 cds. hardwood (4ft.) cut in woods and hauled to<br>woodyard @ \$14.00..... | 1,750.00     |
| 7 tons of hay in barn @ \$17.00.....   | 119.00       |
| 300 snow fence stakes @ 15¢.....   | <u>45.00</u> |
| Total.....   | \$2,229.00   |

This year the Girl Guides were given permission by the City Council to build a camp on some location in the City Forest that was suitable to them. They built this camp at the edge of the woods south of the Caretaker's house.

Following is a map of the City Forest with locations showing the 1948 cut marked in ~~MARKED~~.

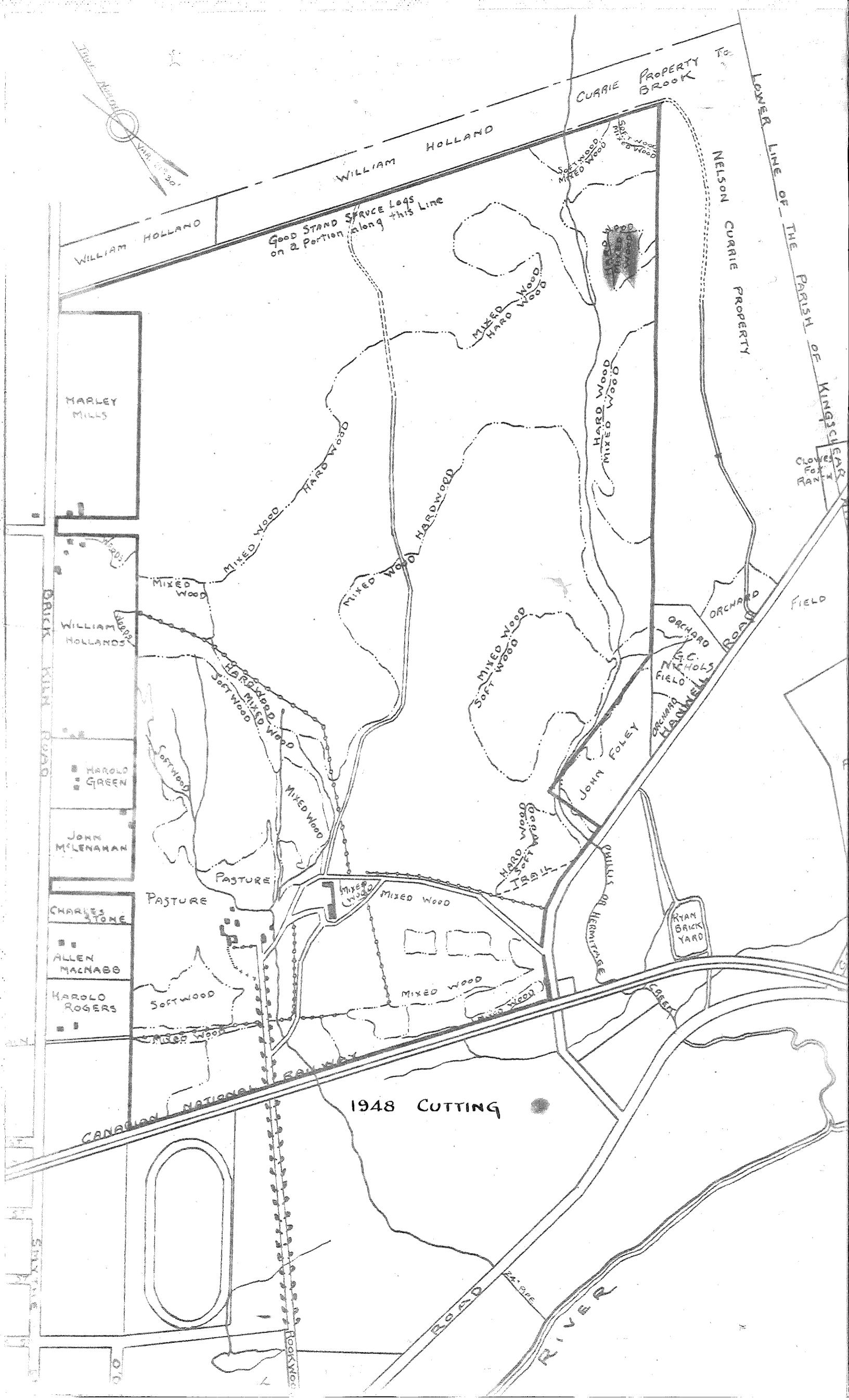
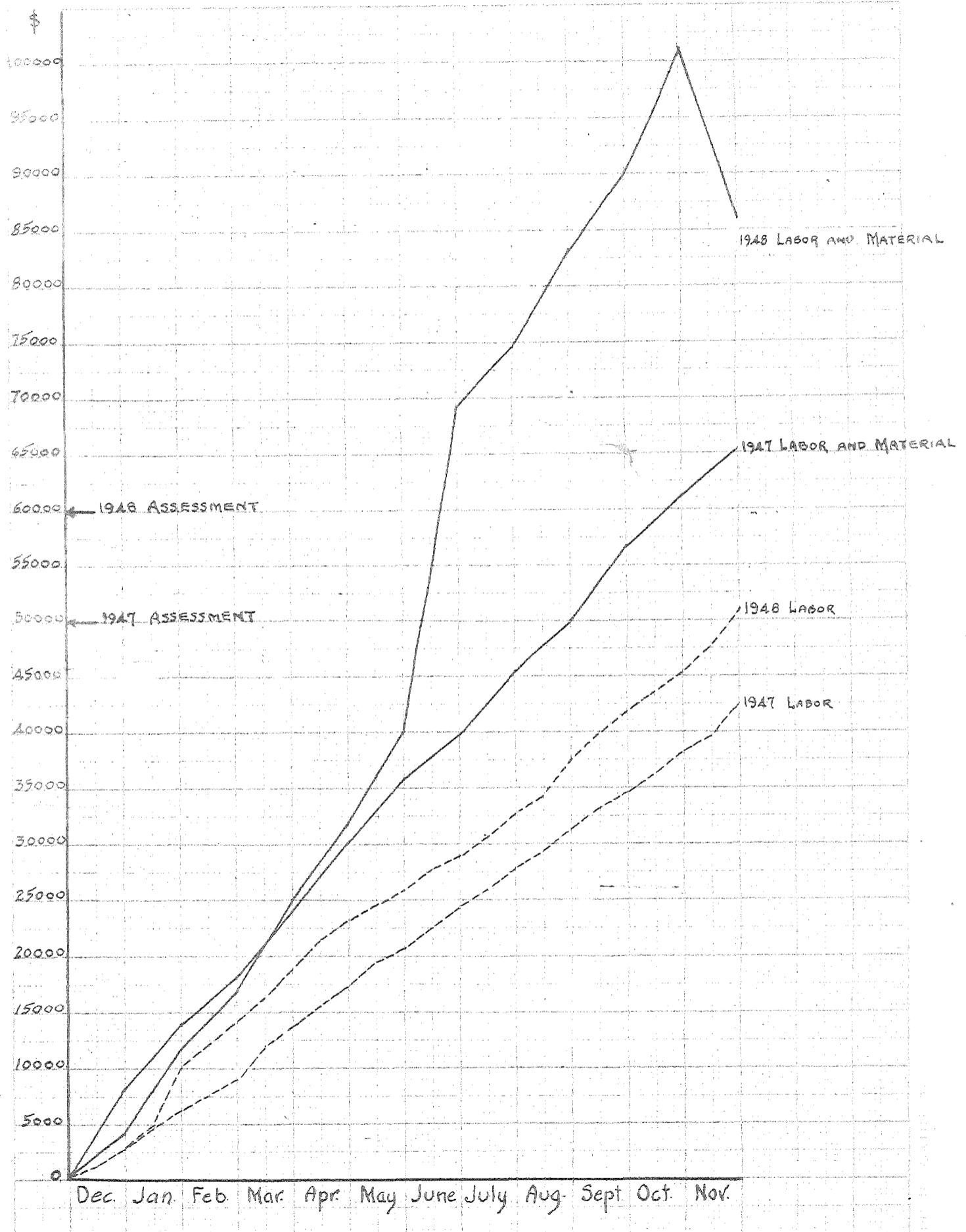


TABLE SHOWING COMPARATIVE COSTS OF ROADS AND STREETS

Years 1931 to 1948

| <u>Year</u> | <u>Expenditure<br/>for Labour</u> | <u>Gross Expend-<br/>iture Labour<br/>and Material</u> | <u>Credits</u> | <u>Net Costs<br/>Labour and<br/>Material</u> | <u>Appropriation</u> |
|-------------|-----------------------------------|--|----------------|--|----------------------|
| 1931        | 26,024.54                         | 50,849.60  | 15,511.97      | 35,337.63                                    | 31,000.00            |
| 1932        | 25,450.96                         | 59,101.62  | 4,822.19       | 54,279.53                                    | 25,000.00            |
| 1933        | 10,607.99                         | 19,161.38  | 553.28         | 18,829.10                                    | 19,000.00            |
| 1934        | 13,532.51                         | 23,665.94  | 2,311.50       | 21,354.36                                    | 20,000.00            |
| 1935        | 25,264.14                         | 46,588.85  | 21,502.51      | 25,086.54                                    | 23,000.00            |
| 1936        | 18,357.05                         | 53,238.01  | 11,059.77      | 22,178.24                                    | 23,000.00            |
| 1937        | 18,060.48                         | 34,931.68  | 12,641.95      | 22,289.73                                    | 20,000.00            |
| 1938        | 15,601.78                         | 24,373.83  | 781.88         | 23,491.95                                    | 22,000.00            |
| 1939        | 16,681.88                         | 52,509.93  | 1,762.67       | 50,747.26                                    | 28,000.00            |
| 1940        | 17,959.36                         | 53,058.59  | 2,190.50       | 50,868.09                                    | 28,000.00            |
| 1941        | 22,816.69                         | 40,283.46  | 3,050.12       | 37,233.34                                    | 28,000.00            |
| 1942        | 22,545.62                         | 39,215.84  | 3,416.91       | 35,798.93                                    | 30,000.00            |
| 1943        | 22,879.44                         | 56,970.80  | 6,597.85       | 50,372.95                                    | 30,000.00            |
| 1944        | 25,299.20                         | 47,285.36  | 4,316.50       | 42,968.86                                    | 30,000.00            |
| 1945        | 50,232.12                         | 56,049.45  | 5,306.15       | 50,743.30                                    | 33,000.00            |
| 1946        | 35,227.79                         | 67,961.39  | 18,649.68      | 49,311.71                                    | 40,000.00            |
| 1947        | 42,445.99                         | 69,518.46  | 1,979.65       | 67,538.81                                    | 50,000.00            |
| 1948        | 51,042.03                         | 120,591.35   | 54,449.50      | 86,141.85                                    | 60,000.00            |

In looking at the above table it will be seen that we have had large over-expenditures in Roads and Streets for the last five years. It seems obvious that the estimated expenditure in this department will have to be raised in the budget or services curtailed.



ROADS AND STREETS COSTS 1947 AND 1948.

CAPITAL ACCOUNT PAVING

|                         |              |
|-------------------------|--------------|
| Material charges.....   | \$ 31,490.07 |
| Labour charges.....     | 965.51       |
| Total Expenditure ..... | \$ 32,455.58 |

All paving material laid this year was done by the Diamond Construction Co. under an agreement with the City. A number of streets where the original pavement had started to deteriorate were covered with a layer of black base and seal making an average total thickness of about  $2\frac{1}{2}$  inches. On the streets where no pavement had previously been laid a coating of black base and seal was laid with a total thickness of  $3\frac{1}{2}$  to 4 inches. The Diamond Construction Co. laid the pavements only, while the City prepared the grade and built necessary curbs and gutters.

The following blocks of old pavement were repaved:-

|  | Lineal Ft. | Sq. Yds. |
|--|------------|----------|
| Queen St. - Northumberland To Westmorland.....         | 660        | 1980     |
| King St. - Westmorland to intersection with Queen..... | 3490       | 10470    |
| Church St. - King to George.....                       | 750        | 2250     |

The following gravel streets were paved:-

|  |            |            |
|--|------------|------------|
| Grey St. - University Ave. to Waterloo Row.....          | 1110       | 3330       |
| Winslow St. - Lansdowne to Alexandra.....                | 1000       | 3000       |
| Queen St. - Driveway in front of Lord Beaverbrook Hotel. | <u>290</u> | <u>805</u> |
| Total.....   | 7300       | 21835      |

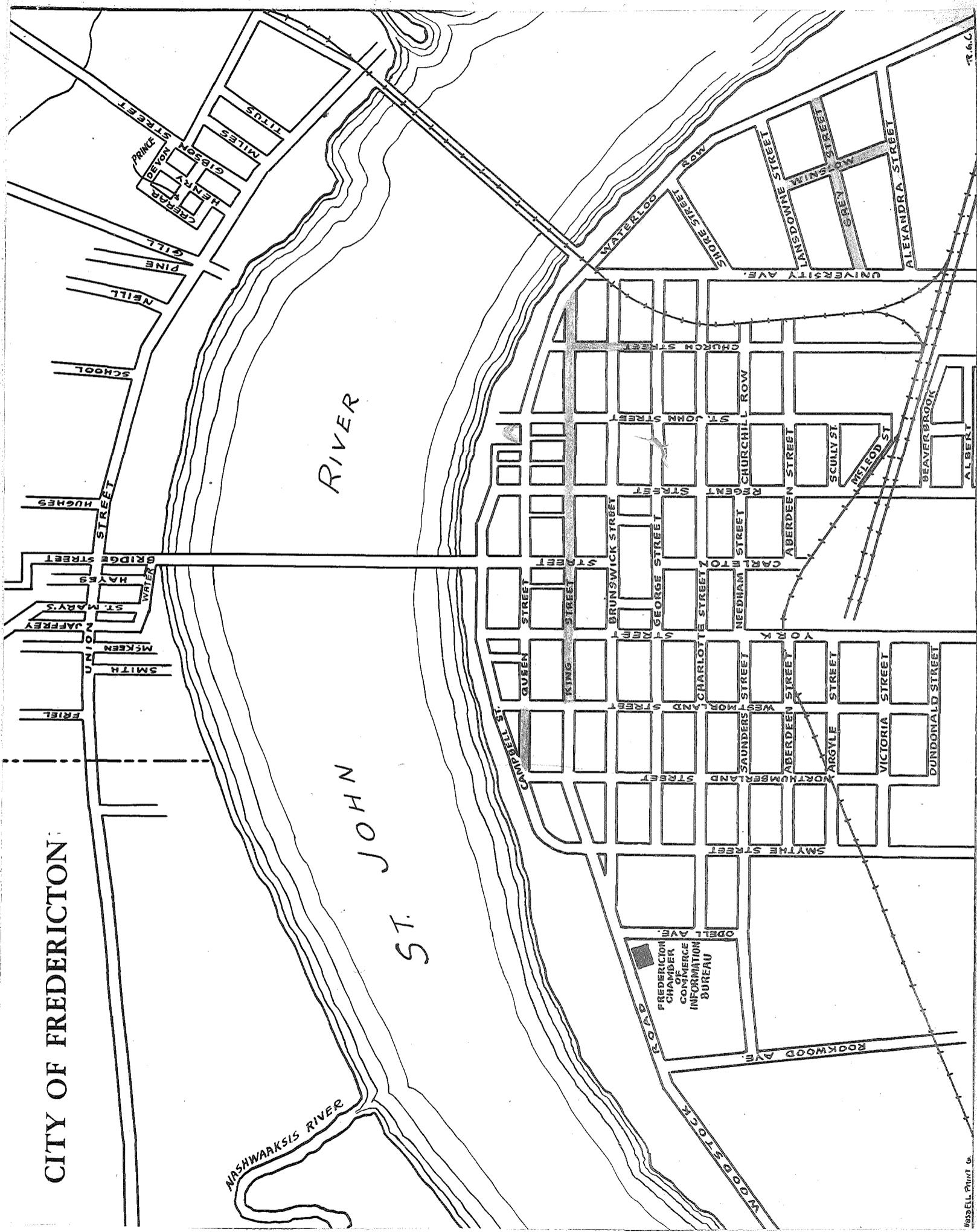
The City crews in preparing the sub-grade for the streets previously not paved laid 970 lineal ft. of curb and gutter on Winslow St. from Lansdowne St. to Grey St.

The cost per square yard for the laying of pavement only, (not including curb and gutter or preparation of sub-grade) may be computed as follows:-

Total cost of asphalt pavement laid by Diamond Construction Co. \$30,719.25  
Total square yards of pavement laid 21,835

Unit cost per square yard for pavement only  $\frac{\$30,719.25}{21,835} = \$1.41$

CITY OF FREDERICTON:



1948 PAVEMENT : —

NEW  
RESURFACED

CAPITAL ACCOUNT SEWERAGE

|                        |                 |
|------------------------|-----------------|
| Gross Expenditure..... | \$ 26,396.75    |
| Credits.....           | <u>1,896.20</u> |
| Net Expenditure.....   | \$ 24,500.55    |

The above Credits of \$1,896.20 are derived from charges made to property owners for installing private sewers to their properties.

This private sewer work was done at the following locations:-

|   |               |
|---|---------------|
| McEvoy Street.....  | \$ 1,290.00   |
| Neill Street.....   | 157.10        |
| Central Mortgage and Housing Corp. Administration Building..... | 88.00         |
| Pine Street.....  | <u>361.10</u> |
| Total.....  | \$ 1,896.20   |

Under this Capital Account Sewerage the following sewers were laid:-

|   | <u>Lineal Ft.</u> | <u>Size of Pipe</u> |
|---|-------------------|---------------------|
| Windsor Street.....                                     | 790               | 8"                  |
| Sunshine Gardens:-                                      |                   |                     |
| Parkhurst Drive-Brookmount Court to Manor Court.....    | 170               | 8"                  |
| Parkhurst Drive-From reserved road to Fairlawn Court... | 115               | 8"                  |
| Parkhurst Drive-Woodbine Court to Riverdale Court.....  | 109               | 8"                  |
| Riverdale Court.....                                    | 215               | 8"                  |
| Fairlawn Court.....                                     | 215               | 8"                  |
| Pine Street.....  | 910               | 8"                  |
| Pine Street (House Connections) .....                   | 616               | 5"                  |
| Grey Street-Waterloo Row to Regent Street.....          | 1503              | 18"                 |
| Grey Street-Waterloo Row to Regent Street.....          | 1772              | 15"                 |
| Winslow Street-Grey St. to Alexandra St.....            | 365               | 8"                  |
| Neill Street.....                                       | 732               | 8"                  |
| Neill Street(House.Connections).....                    | 163               | 5"                  |
| McEvoy Street.....                                      | 1036              | 8"                  |
| McEvoy Street (House Connections).....                  | 1060              | 5"                  |

From the above it is seen that under Capital Account Sewerage the City built this year:-

1503 Lineal ft. of 18" sewer  
1772 Lineal ft. of 15" sewer  
4657 Lineal ft. of 8" sewer  
1839 Lineal ft. of 5" sewer ( House Connections)

Total..... 9771 Lineal ft.

The unit costs of this above installation were about as follows:-

1503 Lineal Ft. of 18" sewer @ \$ 4.00 per ft.  
1772 Lineal Ft. of 15" sewer @ 3.55 per ft.  
4657 Lineal Ft. of 8" sewer @ 2.65 per ft.  
1839 Lineal Ft. of 5" sewer @ .95 per ft.

CAPITAL ACCOUNT WATER.

Expenditure..... \$ 5,858.87

Under this account 2226 ft. of 6" Cast Iron water pipe, 760 ft. of 1 $\frac{1}{4}$ " Galvanized Iron water pipe, and 417 ft. of 1" Galvanized Iron water pipe were laid. These installations were made at the following locations:-

|  | <u>6" C.I.</u> | <u>1<math>\frac{1}{4}</math>" G.I.</u> | <u>1" G.I.</u> |
|--|----------------|--|----------------|
| Windsor Street.....                              |                | 760                                    |                |
| Neill Street.....                                | 870            |  |                |
| McEvoy Street.....                               | 1070           |  |                |
| Sunshine Gardens:                                |                |  |                |
| Parkhurst Drive-Haviland St. to Fairlawn Court.. | 286            |  |                |
| Fairlawn Court.....                              |                | 180                                    |                |
| Ashland Court.....                               |                | 57                                     |                |
| Riverdale Court.....                             |                | 180                                    |                |
| Total.....                                       | 2226           | 760                                    | 417            |

Water on Windsor St. was obtained from the College Reservoir by connecting the 1 $\frac{1}{4}$ " main with the 6" main on Green Road. Of the material used on this water installation a good proportion was taken from stock and also material borrowed from the Town of St. John and Woodstock was used. As some of this material has not as yet been paid for the gross cost under this heading seems too small for the amount of work done which would in reality represent an expenditure of some \$11,000. An actual cost of the 6" water main laid in Sunshine Gardens was kept with following results:-

|   |            |
|---|------------|
| 286 ft. 6" C.I. Pipe @ \$1.84 per ft.....                 | \$ 526.24  |
| 337 pounds of Lead @ 25.5¢.....                           | 85.68      |
| 1 6" Hydrant @ \$125.....                                 | 125.00     |
| 4 6" Gates @ \$36.64.....                                 | 146.56     |
| 2 6"x6"x6" T's @ 11¢ per pound.....                       | 44.66      |
| 4 Man Hole Covers and Frames @ \$30.00.....               | 120.00     |
| 4000 Brick @ \$25.00.....                                 | 100.00     |
| 1 Gate Box @ \$21.31.....                                 | 21.31      |
| Oakum.....  | 10.00      |
| Rental of Shovel and Bulldozer (\$4. & \$2. per hr.)..... | 48.00      |
| Labour.....   | 79.20      |
| Miscellaneous (Tools etc).....                            | 50.00      |
| Total.....  | \$1,336.65 |

This gave us a price for 6" C.I. water pipe in place at this location of \$4.67 per Lineal Ft. This price may be broken up as follows:-

|  |         |
|--|---------|
| Per ft. cost of pipe.....  | \$ 1.84 |
| Per ft. cost of fittings (T's, hydrants, gates, manholes, bricks, etc.).....   | 1.96    |
| Per ft. cost of lead.....  | .30     |
| Per ft. cost of oakum.....   | .03     |
| Per ft. cost of digging, laying, building manholes, etc. and back filling..... | .54     |

Total cost per ft. 6" C.I. water pipe in place ..... \$ 4.67

Using these prices for the work done under this heading would represent the following expenditure:-

|   |              |
|---|--------------|
| 2226 ft. 6" water main in place @ \$4.67 per lineal ft..... | \$ 10,395.42 |
| 760 ft. 1 $\frac{1}{4}$ " G.I. main in place @ 81¢.....     | 665.60       |
| 417 ft. 1" G.I. main @ 75¢.....                             | 304.41       |

Total..... \$ 11,365.43

### WARTIME HOUSING CAPITAL ACCOUNT

Last year (1947) two hundred homes were constructed or partially constructed by Central Mortgage and Housing Corporation under an agreement between the Company and the City. These homes were located in a new sub-division in the City on the north side of the St. John River.

An account of this construction appears in my 1947 report with costs showing an estimated amount for work which it was considered would have to be done in 1948. This necessary work which had to be done during 1948 was enough to permit occupancy of the houses and did not include such items as concrete sidewalks, concrete curbs, or street pavements. The total costs on this job using the actual 1948 cost figures are as follows:-

#### WARTIME HOUSING #1 and #2

200 houses Total \$207,800.79

| Year of Expenditure | Roads and Grading | Water and Sewerage | Land             | Total for Year    |
|---------------------|-------------------|--------------------|------------------|-------------------|
| 1946                | 231.84            | 304.69             | 17950.00         | 18,496.53         |
| 1947                | 38265.84          | 96890.77           | 37926.01         | 173,082.62        |
| 1948                | 2140.27           | 1424.07            | 12657.50         | 16,222.64         |
| <b>Total</b>        | <b>40,637.95</b>  | <b>98,629.53</b>   | <b>68,533.51</b> | <b>207,800.79</b> |

The above land purchases are made up as follows:-

|   |                     |
|---|---------------------|
| Dobie.....  | \$ 17,950.00        |
| James McGill.....                                 | 8,500.00            |
| Mrs. Hanson.....                                  | 8,096.00            |
| A. D. Neill.....                                  | 6,443.30            |
| Leo and Loretta Hayes.....                        | 9,566.38            |
| Marjory Hayes.....                                | 485.25              |
| Wm. B. Hayes.....                                 | 485.25              |
| Mary Ellen Gourley.....                           | 264.50              |
| Jennie McManus.....                               | 242.65              |
| Fredericton School Board.....                     | 5,400.00            |
| Jos. McDonald.....                                | 200.00              |
| P. J. Hughes.....                                 | 1,000.00            |
| Rose Hughes.....                                  | 900.00              |
| Estimate City Cost to move Transmission Line..... | <u>9,000.00</u>     |
| <b>Total.....</b>                                 | <b>\$ 68,533.51</b> |

### MARYLAND HEIGHTS HOUSING PROJECT

This year (1948) the City again entered into an agreement with Central Mortgage and Housing Corporation to construct two hundred houses on land supplied by the City. This project is located south of the C.P.R. tracks and is known as the Maryland Heights Housing Project.

The City purchased the land, laid out the project on the ground and constructed roads and water and sewerage services to each of the two hundred houses by the fifteenth of December, 1948. At this time the company was well along with the construction of the houses. All of them were roofed and the majority of them were well along towards being ready for occupancy.

A considerable amount of the roads in this project were constructed late in the fall after the water and sewerage had been installed and after the fifteenth of December. These roads will no doubt have to be reconditioned next summer. The sidewalks were graded on only about one-half of the project and no coating of any kind was used on these graded sidewalks.

The costs shown below are the costs as shown in the City books up to the first of December, 1948. At the time of writing, 31st of December 1948, I have the costs up to date. These costs which occurred after the first of December I am including along with an estimated cost to put the sub-division in habitable shape next summer. I am placing them in a column marked Estimate. This column I believe I have estimated generously enough so that it will cover all City costs to the job. I consider it correct enough to work out the unit costs which appear below. Like the housing project on the north side of the river these costs do not include construction or estimated costs of construction for such items as cement walks, concrete curbs, street lighting or permanent roads.

#### TABLE OF COSTS

#### MARYLAND HEIGHTS PROJECT

| Year of<br>Expenditure | Roads     | Water and<br>Sewerage | Land      | Totals     |
|------------------------|-----------|-----------------------|-----------|------------|
| 1948                   | 21,771.87 | 105,664.26            | 56,157.50 | 183,593.63 |
| (Estimated) 1949       | 10,671.15 | 11,263.70             | -----     | 21,934.85  |
| Totals                 | 32,443.02 | 116,927.96            | 56,157.50 | 205,528.48 |

This above City cost of 205,528.48 will be lessened according to the agreement entered into by the City and Wartime Housing by the following amounts which are to be paid to the City by Central Mortgage and Housing Corporation because of their agreement with the City.

|   |                 |
|---|-----------------|
| 200 lots @ \$200.00 .....                               | \$ 40,000.00    |
| 200 water and sewerage services @ \$60.00 ....          | 12,000.00       |
| $\frac{1}{2}$ cost of surveying and laying out job..... | <u>1,877.00</u> |

Total..... \$ 53,877.00

Therefore the actual cost to the City will be \$151,651.48.

#### COMPARISON OF COSTS OF MARYLAND HEIGHTS PROJECT WITH THAT OF THE 200 HOUSES BUILT IN 1947 IN CARLETON WARD

Using Table of Costs shown on page 12 and page 13 of this report we find that the expenditures made by the City on these two jobs were as follows:-

| Cost per home for:-                         | Roads  | Water and<br>Sewerage | Land |
|---|--------|-----------------------|------|
| Carleton Ward Project.....                  | \$203. | 493.                  | 345. |
| Maryland Heights Project.....               | 162    | 585                   | 281  |
| * Maryland Hts. Project Actual Cost to City | 153    | 525                   | 82   |

\* This above figure for Carleton Ward Project shows not only the expenditure made by the City but is also the actual cost to the City at this Project. However, for the Maryland Heights Project to get the actual cost to the City the net cost of \$151,651.48 also shown on page 13 of this report must be used giving results as shown in Column Maryland Heights Project Actual Cost to City.

To get the unit cost of construction the sum of \$15,288 must be added to the Water and Sewerage costs, as this amount has been charged to Diamond Construction Co. for cellar drains and does not appear in the costs shown on the table. The figures from which I am going to make out my unit cost are therefore as follows:-

|                         |                  |
|-------------------------|------------------|
| Roads.....              | \$ 32,443.02     |
| Water and Sewerage..... | 132,215.95       |
| Land.....               | <u>56,157.50</u> |

Total..... \$ 220,816.47

The unit costs made from the above figures are as follows:-

|  |                 |
|--|-----------------|
| 1.88 Miles Gravel Roads @ \$17,256.92 .....                    | \$ 32,443.02    |
| Land for 200 lots @ \$280.78 .....                             | 56,157.50       |
| 1997 Lin. ft. 8" water main @ \$7.40 .....                     | 14,748.20       |
| 7705 Lin. ft. 6" water main @ \$5.16 .....                     | 39,757.80       |
| 883 Lin. ft. 18" T.C. Pipe in place @ \$4.91 .....             | 4,335.53        |
| 1465 Lin. ft. 15" T.C. Pipe in place @ \$4.34 .....            | 6,358.10        |
| 3980 Lin. ft. 12" T.C. Pipe in place @ \$3.64 .....            | 14,487.20       |
| 770 Lin. ft. 10" T.C. Pipe in place @ \$3.35 .....             | 2,579.50        |
| 9875 Lin. ft. 8" T.C. Pipe in place @ \$3.07 3/4 .....         | 30,390.31       |
| 11999 Lin. ft. 5" T.C. Pipe in place @ .69 .....               | 8,279.31        |
| 12000 Lin. ft. 4" T.C. Pipe in place @ .54 .....               | 6,480.00        |
| 12000 Lin. ft. 5/8" Copper Tubing in place @ 40¢ per ft. ..... | <u>4,800.00</u> |

Total..... \$ 220,816.47

The land purchases for this Maryland Heights Project were made up as follows:-

|                                |                  |
|--------------------------------|------------------|
| Jos. Fletcher.....             | \$ 4,768.00      |
| Mrs. Susan Squires.....        | 16,000.00        |
| A. A. Colter.....              | 5,740.00         |
| A. F. Baird.....               | 13,000.00        |
| R. L. Prime.....               | 3,500.00         |
| Currie Property.....           | 960.00           |
| Montgomery Campbell Est. ..... | 189.50           |
| J. W. Whittingham.....         | <u>12,000.00</u> |

Total..... \$ 56,157.50

The above list of land purchases do not include John Jewett or Allen Ferris. Land was acquired from both of these persons by expropriation and settlement has not as yet been made. The cost per lot for land as shown above is therefore not final.

In considering the above unit prices it must be understood that costs could not be kept individually on each type and size of pipe laid. The work was all carried along together, and in most cases Water, Surface Sewer, and Domestic Sewer were laid in the same trench, at the same time, by the same crew. The unit costs above are arrived at by taking the prices of materials used, and by setting up prices for excavation, laying, etc. which seem reasonable and which when used with the amounts of pipe of different sizes laid give an overall cost equal to the overall cost of the job.

PUBLIC WORKS

|                         |             |
|-------------------------|-------------|
| Gross Expenditure ..... | \$ 9,249.47 |
| Credits.....            | 7.90        |
| Net Expenditure.....    | 9,242.07    |
| 1948 Appropriation..... | 5,000.00    |
| Debit Balance.....      | 4,242.07    |

The Credits of \$7.90 are made up of labour charges to a private party for cutting limbs from trees on his own property.

The Net Expenditure is made up pf a labour charge of \$6,206.85 and a material charge of \$3,035.22. This labour item is divided as follows:-

|                                      |                 |
|--------------------------------------|-----------------|
| Dump .....                           | \$ 2,482.19     |
| Extending surface sewers under green | 122.56          |
| Back Drain.....                      | 56.35           |
| Trees.....                           | 768.69          |
| Unforeseen Account.....              | <u>2,797.06</u> |
| Total.....                           | \$ 6,206.85     |

Back Drain:-

The small labour cost of \$56.35 was used up in some minor cleaning out of the back drain and some repairs to the drain embankment.

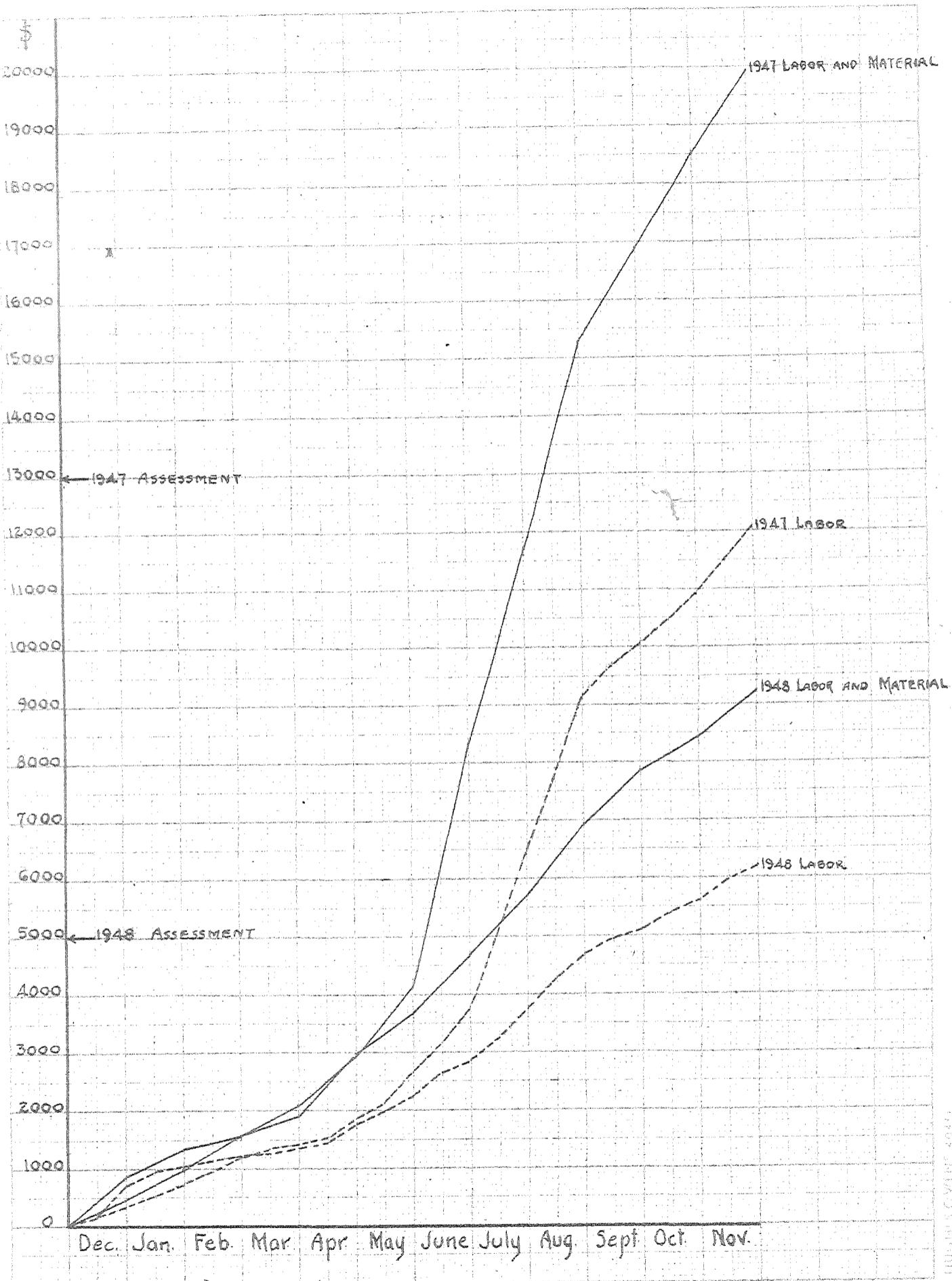
Trees:-

The labour cost of \$768.69 was entirely expended in cutting and pruning City shade trees. No tree spraying was done this year.

Unforeseen Account:-

The labour cost is divided as follows:-

|  |              |
|--|--------------|
| Cutting bushes along river.....                                  | \$ 223.05    |
| Greens (Cutting, raking etc.) .....                              | 1950.15      |
| Forest Hill Fire .....   | 12.50        |
| Tearing down shed Lord Beaverbrook Hotel.....                    | 12.40        |
| Labour at Club House.....  | 16.95        |
| Benches (Repairing, Placing and Storing) .....                   | 87.16        |
| Surveying.....   | 197.82       |
| Replacing posts at Pumping Station and Lord Beaverbrook Hotel... | 50.84        |
| Labour on trench for Maritime Electric Co. (Carleton St.).....   | 21.60        |
| Labour on Transformer base at Pumping Station.....               | 27.90        |
| Miscellaneous Account.....                                       | 153.76       |
| General Expenses.....  | <u>63.15</u> |
| Total.....   | \$2797.06    |



PUBLIC WORKS COSTS 1947 AND 1948 .

TABLE SHOWING COMPARATIVE YEARLY COSTS OF  
PUBLIC WORKS, Years 1931 - 1948

| Year | Expenditure for Labour | Gross Expenditure Labour and Material | Credits  | Net Costs Labour and Material | Appropriation |
|------|------------------------|---------------------------------------|----------|-------------------------------|---------------|
| 1931 | 1,574.17               | 1,982.81                              | 61.95    | 1,920.96                      | 2,500.00      |
| 1932 | 3,979.65               | 4,992.98                              | 522.55   | 4,670.63                      | 2,500.00      |
| 1933 | 3,849.39               | 5,394.06                              | 474.89   | 4,919.17                      | 4,500.00      |
| 1934 | 3,734.85               | 4,929.00                              | 1,302.56 | 3,626.64                      | 4,000.00      |
| 1935 | 2,906.24               | 4,425.84                              | 2,776.96 | 1,648.88                      | 3,000.00      |
| 1936 | 2,867.38               | 4,211.33                              | 2.73     | 4,160.07                      | 3,000.00      |
| 1937 | 3,673.48               | 4,283.52                              | 123.45   | 4,208.60                      | 5,000.00      |
| 1938 | 5,125.07               | 8,631.67                              | 664.00   | 7,967.67                      | 4,000.00      |
| 1939 | 3,937.07               | 4,606.55                              | 255.10   | 4,361.43                      | 4,000.00      |
| 1940 | 5,610.71               | 6,826.22                              | 1,204.89 | 5,621.33                      | 4,000.00      |
| 1941 | 4,751.76               | 7,204.65                              | 204.95   | 6,999.70                      | 4,000.00      |
| 1942 | 6,089.55               | 8,180.32                              | 455.85   | 7,724.47                      | 4,000.00      |
| 1943 | 5,063.23               | 5,890.59                              | 280.43   | 5,609.96                      | 6,500.00      |
| 1944 | 5,546.15               | 8,852.68                              | 1,424.37 | 7,428.31                      | 6,500.00      |
| 1945 | 8,307.69               | 11,843.69                             | 644.61   | 11,199.08                     | 6,500.00      |
| 1946 | 10,787.53              | 17,404.09                             | 34.78    | 17,369.51                     | 7,000.00      |
| 1947 | 12,088.29              | 20,507.34                             | 384.70   | 19,922.64                     | 13,000.00     |
| 1948 | 6,206.85               | 9,249.97                              | 7.90     | 9,242.07                      | 5,000.00      |

#### RECREATION

|                        |             |
|------------------------|-------------|
| Labour .....           | \$ 7,592.25 |
| Material Charges.....  | 5,865.28    |
| Gross Expenditure..... | 15,457.53   |

The above charge of \$15,457.53 is divided as follows:-

|                                    | <u>Super-</u><br><u>vision</u> | <u>City</u><br><u>Labour</u> | <u>Material</u> | <u>Total</u>     |
|------------------------------------|--------------------------------|------------------------------|-----------------|------------------|
| <b>Playgrounds:-</b>               |                                |                              |                 |                  |
| Queens Square, Wilmot Park,        |                                |                              |                 |                  |
| Carleton Ward and Victoria Mills.. | \$2,403.82                     | 1,760.84                     | 5,118.88        | 9,285.54         |
| Bathing Beaches.....               | 1,332.29                       | 592.56                       | 458.30          | 2,383.15         |
| Rinks.....                         |                                | 835.52                       | 70.01           | 905.53           |
| Drill Hall.....                    |                                | 534.71                       | 218.09          | 752.80           |
| General Expenses.....              |                                | 132.51                       |                 | 132.51           |
| <b>Total.....</b>                  | <b>\$3,736.11</b>              | <b>3,856.14</b>              | <b>5,865.28</b> | <b>15,457.53</b> |

The above costs do not include all playground and recreation expenditures, but only those which appeared on the payrolls or costs of material ordered through my office; for instance the salary of the Recreational Director, Mr. Estabrooks, or Assistant Director, Mr MacLeod, is not included.

The expenditure of \$9,283.54 shown on the above table included the cost of building two tennis courts, one in Carleton Ward on the playgrounds there and one in Wilmot Park. The Carleton Ward tennis court was a paved unit made up of three courts and the costs were made up as follows:-

|  |                 |
|--|-----------------|
| Levelling fill by City crews.....          | \$ 120.00       |
| Lumber.....                                | 60.00           |
| Posts.....                                 | 32.00           |
| Painting.....                              | 14.40           |
| Wire.....                                  | 150.00          |
| Gravel fill - Diamond Construction Co..... | 1,081.72        |
| Pavement - Diamond Construction Co. ....   | <u>2,787.00</u> |
| Total.....                                 | \$ 4,245.12     |

or a cost per court of ..... \$ 1,415.00

After the gravel fill had been consolidated at this location a two inch pre-mixed pavement was laid and sealed with a pre-mixed seal. No sub-drainage was used but the courts were raised slightly in the center and drained to the outside edges.

The unit at Wilmot Park contains four individual courts. Here to level the ground it was necessary to haul in a small amount of additional gravelly fill. The whole court was then graded to one side, no sub-drainage being used. Clay was hauled in and puddled on the courts to a thickness of about three inches. The cost per court was made up as follows:-

|  |               |
|--|---------------|
| Labour (grading, filling, painting, etc.)..... | \$ 1,148.95   |
| Lumber.....                                    | 70.00         |
| Posts.....                                     | 35.50         |
| Wire.....                                      | <u>190.80</u> |
| Total.....                                     | \$ 1,445.25   |

or a cost per court of..... \$ 361.00

It may be noted that there was no cost for the purchase of clay as this was obtained from a piece of City property.

OLD BURYING GROUND

|                        |                   |
|------------------------|-------------------|
| Gross Expenditure..... | \$ 1547.02        |
| Credits.....           | 320.50            |
| Net Expenditure.....   | <u>\$1,226.52</u> |

The Credits are derived from trust funds in the hands of the City.

The Gross Expenditure of \$1,547.02 is divided as follows:-

|               |             |
|---------------|-------------|
| Labour.....   | \$ 1,448.59 |
| Material..... | 98.43       |

This above expenditure was used entirely in the Old Burying Ground in the center of the City. The grass was kept clipped, the walks in order, and the tombstones, many of which are old and fragile, were kept in as good a state of repair as possible.

The care of this Old Burying Ground and the supervision of the above expenditure was this year in charge of a committee from the Chamber of Commerce. This committee was headed by Mr. Cedric Cooper.

CITY HALL

|                        |                    |
|------------------------|--------------------|
| Gross Expenditure..... | \$ 5,229.97        |
| Credits.....           | 133.51             |
| Net Expenditure.....   | <u>\$ 5,096.46</u> |

The Net Expenditure is subdivided as follows:-

|  |               |
|--|---------------|
| Wages paid for labour at City Hall - includes winding and repairs to clock; cost of night fireman and extra janitor service; cost of hauling and unloading coal, etc. (but not including regular janitor service)..... | \$ 2,629.33   |
| Water used at City Hall.....   | 100.00        |
| Coal - 191.53 tons burnt at City Hall.....   | 1,684.53      |
| Repairs to City Hall.....  | 609.79        |
| Supplies, etc. .....   | <u>206.32</u> |
| Total.....   | \$ 5,229.97   |

The Credit of \$133.51 is made up entirely of 16.085 tons of coal paid for by City Hall and sold to other City Departments.

MUNICIPAL HOME

On my accounts the following expenditure appears charged against Municipal Home:-

|  |               |
|--|---------------|
| 24.635 tons of coal delivered to Municipal Home.....   | \$ 207.47     |
| City water supplied to Municipal Home.....   | 25.00         |
| Labour:- sawing, splitting and delivering wood to needy families in City along with some minor repairs to Municipal Home Bldg... | 2,784.57      |
| Cost of 9 cds. of wood supplied to needy families from City Forest ( 9 cds. @ \$15.00 = \$135.00 ) .....                         | 135.00        |
| James S. Neill .....   | 51.17         |
| People's Hardware .....  | <u>151.75</u> |
| Total.....   | \$ 3554.94    |

The above costs are, of course, only part of the Municipal Home expenditure for the year but they are the only expenditures made under the supervision of the City Engineer and therefore are shown in this report.

INCINERATOR

|                        |              |
|------------------------|--------------|
| Gross Expenditure..... | \$ 15,014.38 |
| Credits.....           | 127.40       |
| Net Expenditure.....   | \$ 14,886.98 |

The above Credits are made up of labour costs for unloading two cars of material for the Francis Hankin Co. and a bill the City paid for cartage of incinerator material.

In 1947 the City made an expenditure of \$8,065.45 under this heading. At the time of writing, 31st of December 1948, this incinerator is practically completed. We expect to have a test on it sometime in January and if the test turns out satisfactory the City will take over the incinerator from the Francis Hankin Co.

This incinerator was installed by the Francis Hankin Co. at a contract price of \$38,000.00. The gross cost will run a little above the contract as some \$2,000.00 of expenditure was made on a site which afterwards was changed by the City. This expenditure is over and above the contract price of \$38,000.00. The balance due on this incinerator will have to be paid by the City in 1949.

This plant sold to and constructed for the City by the Francis Hankin Co. is a three cell, top feed type with pre-heated forced draft and is designed and constructed to burn without nuisance and in a sanitary manner twenty tons of garbage in a consecutive period of eight hours.

### RIVERFRONT IMPROVEMENT

During 1947 a plan to improve the riverfront from Regent Street to the Canadian National Railway Bridge was submitted by the Town Planning Commission to the City Council and also to the Provincial Government. This consisted chiefly of widening out and filling up irregularities in the river bank in this section.

The Provincial Government agreed to join with the City in this project and to share half the expenses up to a total of \$20,000.00; that is, that the Provincial Government's share would not exceed \$10,000.00. The City Council and the Provincial Government authorized a committee consisting of Mr. Malloy of the Provincial Government Bridge Department, Mr. Black of the Town Planning Commission, and Alderman Vail of the City Council to proceed with this work. This committee called for tenders for fill in place, according to the plan, on that portion of the riverfront lying at the rear of the Court House and at the rear of the new hotel and extending down river below the A&B Clubhouse. The Diamond Construction Co. was given the contract to place fill on this location which they did during the spring of 1948. Later in the summer the City put top soil on this fill and seeded it.

The total expenditure made on this portion of the riverfront during 1948 was \$12,858.55 of which the Provincial Government repaid the City the amount of \$6,377.22. The City made a small expenditure during October of \$103.91, half of which was not billed to the Government in 1948.

At the time of writing, 31st of December 1948, further work has been done on this riverfront improvement project the cost of which, however, does not appear in my 1948 costs and will have to be taken up in next year's report.

## 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 St. John River.
2. A multiple lighting system on Queen Street.
3. A multiple lighting system in C.N.R. Subway.
4. A series lighting system in Carleton Ward.

System No. 1, the series lighting system, consists of some 18.2 miles of line and 385 lamps. This system is divided into four circuits two of which are controlled each by a 25 K.W. Constant Current Transformer, the other two of which are each controlled by a 15 K.W. Constant Current Transformer. These transformers along with the main switchboard, are housed in a transformer room in the old street lighting building on Carleton Street.

The four circuits are made up as follows:-

### Lower Front Circuit:-

|  |                    | Transformer<br>Size |
|--|--------------------|---------------------|
| 2124-600 C.P. Lamps at .350 K.W. demand..... | <u>7.35</u>        |                     |
| 3084-250 C.P. Lamps at .159 K.W. demand..... | <u>4.77</u>        |                     |
| 9-100 C.P. Lamps at .068 K.W. demand.....    | <u>.612</u>        |                     |
|  | <u>12.732</u> K.W. | 15 K.V.             |

### Lower Rear Circuit:-

|  |                   |         |
|--|-------------------|---------|
| 98-600 C.P. Lamps at .350 K.W. demand.....     | <u>3.15</u>       |         |
| 142148-250 C.P. Lamps at .159 K.W. demand..... | <u>22.58</u>      |         |
|  | <u>25.73</u> K.W. | 25 K.V. |

### Upper Front Circuit:-

|  |                   |         |
|--|-------------------|---------|
| 2019-600 C.P. Lamps at .350 K.W. demand..... | <u>7.00</u>       |         |
| 3556-250 C.P. Lamps at .159 K.W. demand..... | <u>5.51</u>       |         |
|  | <u>12.51</u> K.W. | 15 K.V. |

### Upper Rear Circuit:-

|  |                   |         |
|--|-------------------|---------|
| 34-600 C.P. Lamps at .350 K.W. demand.....     | <u>1.05</u>       |         |
| 116121-250 C.P. Lamps at .159 K.W. demand..... | <u>18.44</u>      |         |
|  | <u>19.49</u> K.W. | 25 K.V. |

System No. 2, the multiple lighting system on Queen Street, consists of 26 units located on Queen Street between Westmorland and St. John Streets. Each unit consists of a 500 W. 115 Volt lamp set in a novalex luminar 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. This system was installed and is owned, maintained, and energized by the Maritime Electric Co., the City paying the Company \$75.00 per year for each unit.

System No. 3 consists of six multiple lights, each of 250 W. strength, located in the C.N.R. Subway. This system is also controlled by a control switch/is energized by the series street lighting system. which

System No. 4 is a series lighting system which had formerly been installed in the former Town of Devon and consists of 4.6 miles of line and 94 lamps. This system is all on one circuit and is controlled by a 15 K.W. Constant Current Transformer located on a pâle at the corner of Union and St. Marys Streets. The circuit consists of:-

**109 Lamps (about 2/3 of which are 250 C.P.; the rest 100 C.P.)  
at .068 demand..... 10.35 K.W.**

The power for Systems 1,3 and 4 is purchased from the Maritime Electric Co. at a contract price as agreed upon in a contract between the Maritime Electric Co. and the City made in 1927. This contract also covers the maintenance cost of \$20.00 a year per mile of pole line which is paid by the City to the Company.

All material such as wire, poles, pole fixtures, lamps, lamp fixtures, transformers, etc. is paid for by the City but installed by the Company under their contract price for maintenance. Any new installation which requires an enlargement of circuits must be paid for by the City both labour and material.

The street lighting costs for the year 1948 were as follows:-

|                         |                  |
|-------------------------|------------------|
| Gross Expenditure.....  | \$ 15,269.12     |
| 1948 Appropriation..... | <u>15,000.00</u> |
| Debit Balance.....      | \$ 269.12        |

The Expenditure is made up as follows:-

|   |              |
|---|--------------|
| 168-600 C.P. Lamps.....   | \$ 256.84    |
| 348-250 C.P. Lamps.....   | 280.31       |
| 14-150 C.P. Lamps @ 30¢ .....   | 4.20         |
| 6-100 C.P. Lamps @ 20¢ .....  | 1.20         |
| 5-60 C.P. Lamps @ 15¢ .....   | .75          |
| 1-40 C.P. Lamp @ 15¢ .....  | .15          |
| Current on Subway lighting and series lighting from<br>Nov. 29/47 to Nov. 30/48 (506,306 K.W. hrs.).....  | 8,175.56     |
| Charges on multiple fixtures installed on Queen Street at the<br>contract price of \$75.00 per light per year.....  | 1,831.25     |
| Maintenance, labour as per contract price.....  | 412.92       |
| Material purchased for new installations and maintenance of lamp<br>fixtures (including only such articles as lamp standards, lamp<br>brackets, heads, sockets, shades, time switches, etc.)..... | 2,497.40     |
| Material supplied and extra labour supplied by Maritime Electric<br>Co. in line maintenance and extension.....  | 1,643.76     |
| Miscellaneous Charges.....  | 155.65       |
| Telephone in transformer room.....  | <u>9.15</u>  |
| Total... .....  | \$ 15,269.12 |

The total per capita charge for street lighting 1948 population  
of 17,000 persons 15269.12 = 89¢  
15000

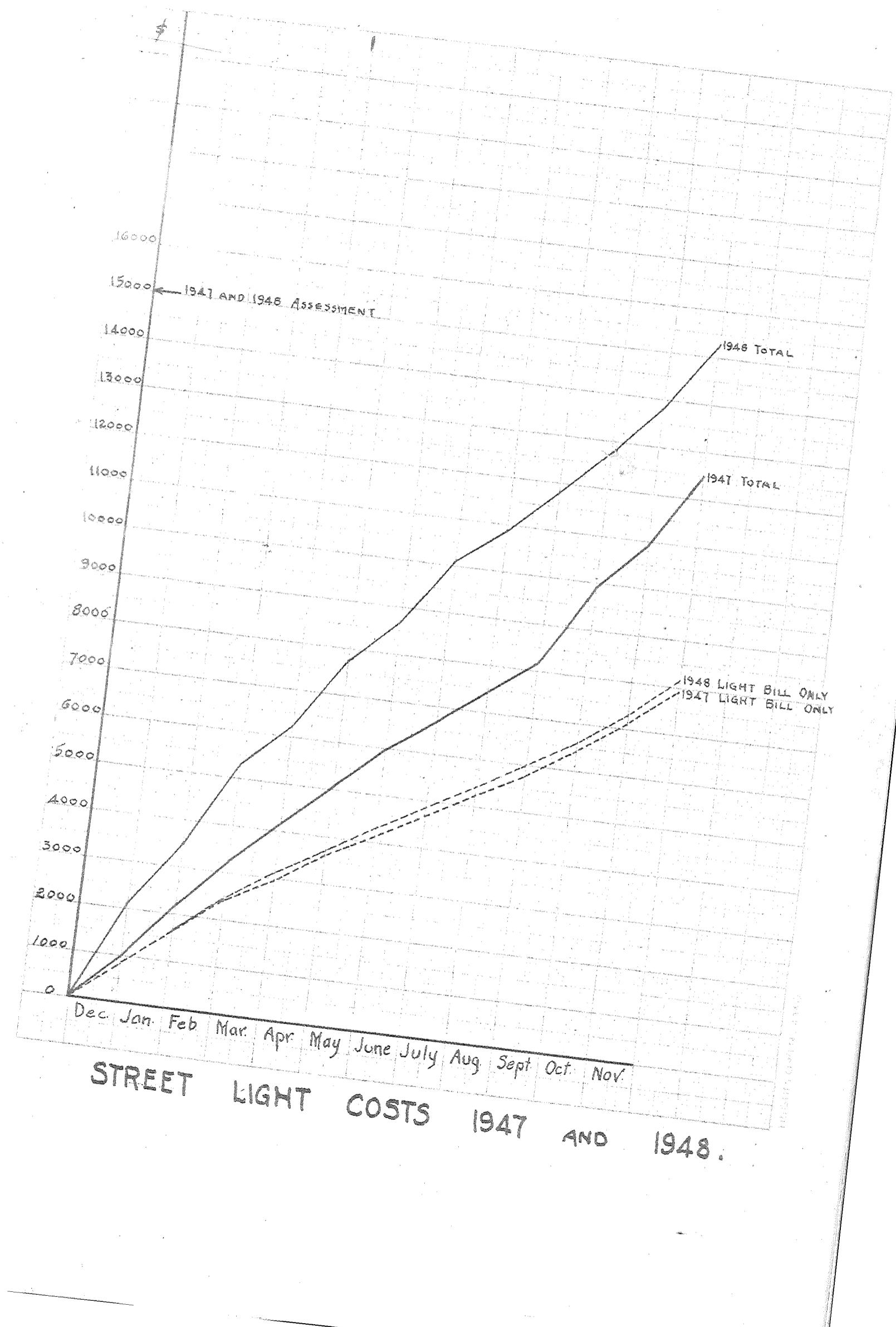
No street light extensions were made this year.

**TABLE SHOWING CURRENT CHARGES FOR 1948  
ON SERIES STREET LIGHTING**

| Date of Bill                | K. W. H. | Demand in K.W. | Average No. of Burning Hrs. per Night | Bill per Month   |
|-----------------------------|----------|----------------|---------------------------------------|------------------|
| Nov. 29/47 to Dec. 30/47    | 32,357   | 76.5           | 14½                                   | \$ 815.31        |
| Dec. 30/47 to Jan. 27/48    | 35,001   | 76.5           | 14½                                   | 828.13           |
| Jan. 27/48 to Feb. 27/48    | 31,050   | 85.8           | 15                                    | 806.40           |
| Feb. 27/48 to March 27/48   | 25,525   | 75.1           | 11½                                   | 675.47           |
| March 27/48 to April 27/48  | 23,762   | 75.1           | 9½                                    | 638.92           |
| April 27/48 to May 27/48    | 20,002   | 76.5           | 12                                    | 567.58           |
| May 27/48 to June 28/48     | 19,585   | 78.5           | 7 3/4                                 | 563.53           |
| June 28/48 to July 29/48    | 17,742   | 78.5           | 7½                                    | 526.55           |
| July 29/48 to August 31/48  | 21,107   | 78.5           | 8 3/4                                 | 594.00           |
| August 31/48 to Sept. 27/48 | 22,427   | 78.5           | 10½                                   | 620.91           |
| Sept. 27/48 to Oct. 29/48   | 26,235   | 79.2           | 12                                    | 698.09           |
| Oct. 29/48 to Nov. 30/48    | 33,535   | 76.5           | 13½                                   | 842.87           |
| <b>306,306</b>              |          |                |                                       | <b>\$8175.56</b> |

**TABLE SHOWING COMPARATIVE YEARLY COSTS IN STREET LIGHTING**

| Year | Total Yearly Cost | Yearly Appropriation |
|------|-------------------|----------------------|
| 1931 | \$ 6,672.25       | \$ 10,000.00         |
| 1932 | 6,532.51          | 6,000.00             |
| 1933 | 6,425.87          | 6,000.00             |
| 1934 | 6,165.28          | 6,000.00             |
| 1935 | 6,632.55          | 6,000.00             |
| 1936 | 6,957.72          | 7,000.00             |
| 1937 | 9,688.52          | 7,000.00             |
| 1938 | 8,314.06          | 9,000.00             |
| 1939 | 8,645.97          | 7,500.00             |
| 1940 | 8,172.25          | 7,500.00             |
| 1941 | 9,888.78          | 8,500.00             |
| 1942 | 9,803.27          | 10,000.00            |
| 1943 | 11,053.89         | 10,000.00            |
| 1944 | 10,675.80         | 10,000.00            |
| 1945 | 10,682.22         | 10,000.00            |
| 1946 | 11,611.43         | 12,000.00            |
| 1947 | 12,520.94         | 15,000.00            |
| 1948 | 15,269.12         | 15,000.00            |



### SEWERAGE-DOMESTIC

|                        |                    |
|------------------------|--------------------|
| Gross Expenditure..... | \$ 9,013.58        |
| Credits.....           | <u>4,639.48</u>    |
| Net Expenditure.....   | <u>\$ 4,374.10</u> |

The above Credits of \$4,639.48 are made up as follows:-

|  |               |
|--|---------------|
| Work done on Domestic Sewerage System for private parties,<br>mostly house connections.....  | \$ 4,147.53   |
| Journal Voucher to Capital Account Water for work done for<br>this Department which had been mistakenly charged to Domestic<br>Sewerage..... | <u>491.95</u> |
| Total.....   | \$ 4,639.48   |

Number of new customers connected with City sewerage system this year... 90  
Old Sewerage connections dug out and relaid..... 5

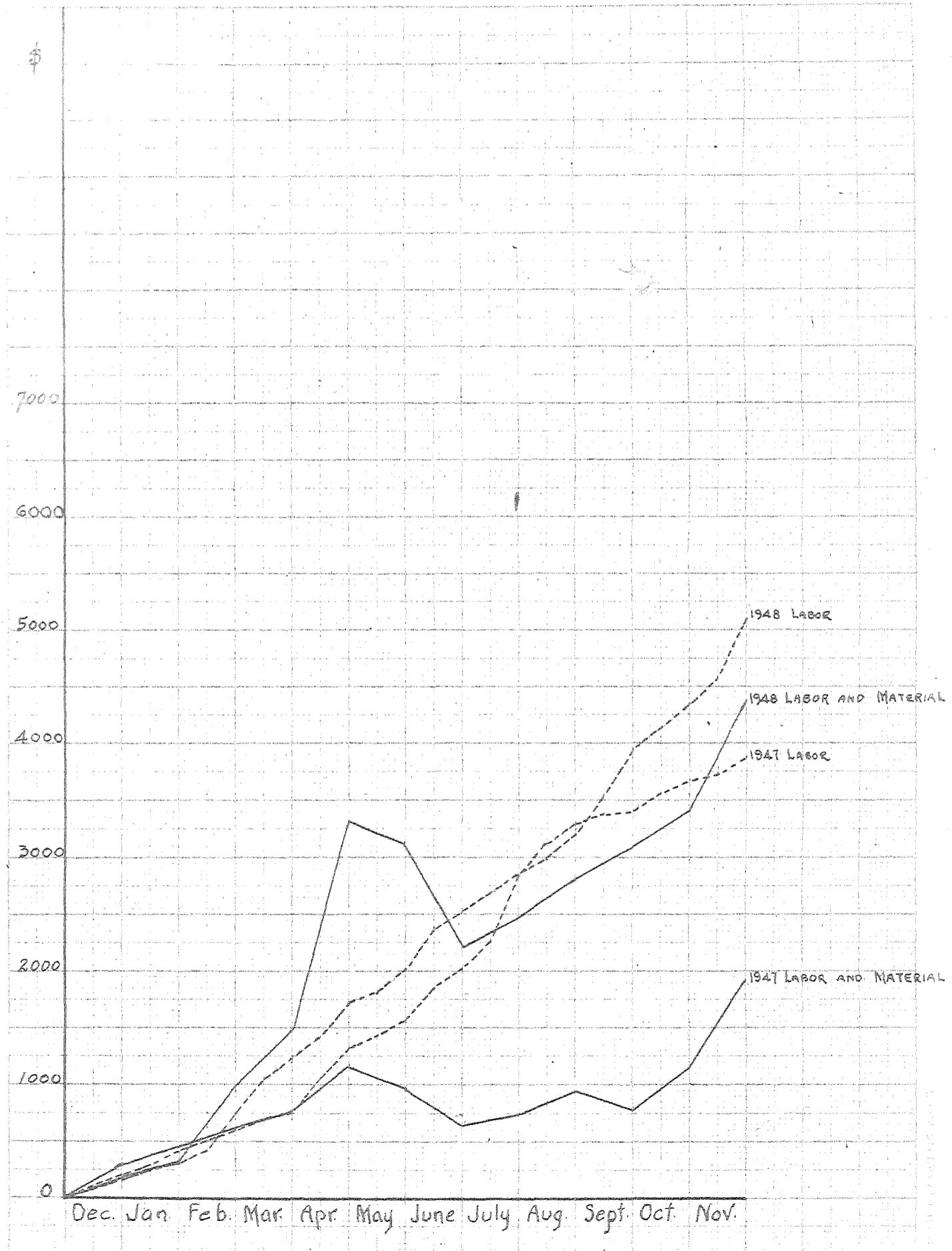
No Domestic Sewerage extensions were made under this heading this year. All extensions were charged to Capital Account Domestic Sewerage and will be found under that heading on page no. 10.

### CAPITAL ACCOUNT SURFACE SEWER

Gross Expenditure..... \$ 6,510.89

The following surface sewers were laid under this heading:-

|   | 24"  | 21"  | 12"   |
|---|------|------|-------|
| Woodstock Road-Phyllis Creek to Manwell Road..... |      |      | 630'  |
| Windsor Street, Beaverbrook St. running East..... |      |      | 900'  |
| Tweedsmuir St.-Beaverbrook St. to Albert St.....  |      | 400' |       |
| Regent St.-Albert St. to back drain.....          | 710' |      |       |
| Totals.....                                       | 710' | 400' | 1550' |



SEWERAGE DOMESTIC COSTS 1947 AND 1948.

CEMENT WALKS

Gross Expenditure..... \$ 5,919.04

This above expenditure covers the construction of 1441 ft. of 5 ft. concrete sidewalk laid by the O'Dell Construction Co. in Sunshine Gardens. This Company laid this concrete at a contract price of \$1.10 per ft.

The above gross Expenditure also covers all the concrete work done by the City around the Lord Beaverbrook Hotel. This concrete work included 379 ft. of 6 ft. sidewalk laid in front of and over the upper side of the hotel. It also includes the concrete curb laid in the Hotel driveway and on the north side of Queen St. in front of the hotel and extending along the north side of Queen St. to Secretary Lane, totalling in all some 1550 ft. of concrete curb and gutter.

The pavement laid on the driveway in front of the hotel is not included in this above cost but was paid for under our Permanent Road Capital Account.

CAPITAL ACCOUNT WATER - FOREST HILL

The Gross Expenditure of \$3453.75 is made up as follows:-

|   |                |
|---|----------------|
| Fraser Hazlett - printing.....            | \$ 3.75        |
| Captain Woodbridge - option on land ..... | 50.00          |
| Pius Sullivan - drilling well.....        | <u>3400.00</u> |
| Total.....                                | \$ 3453.75     |

Note:- Although considerable work was done by City surveying crews in preparing the plan and discovering a possible drilling site no cost for this surveying work is shown under this heading.

It was decided to provide the residents of Forest Hill with water and sewerage services. The plan decided upon was to, if possible, procure water from a well at an elevation high enough to service this area. A suitable location was found on the property of Captain Woodbridge and arrangements were made with the owner of the property to proceed with drilling operations. The plan was, when water had been assured, to construct a reservoir at this location and to supply the Forest Hill area with water from this reservoir. The sewerage system was designed to be installed at the same time as the water system and empty directly into the St. John River.

Pius Sullivan was engaged to do our well drilling. He started operations on the 31st day of July 1948. A log of the well drilling is on file in the City Engineer's office. The well was drilled to a depth of 350 ft. at a contract price of \$8. per ft. From tests made during drilling operations only a very small amount of water was found in the well. The contractor wished to continue drilling rather than abandon the hole and agreed to continue drilling at a price of \$4. per ft. The well was carried down some 75 ft. farther giving us a hole of 425 ft. in all. Tests were again made and it was found we had not more than three or four gallons per minute. Drilling operations were discontinued and the top of the hole plugged.

It appears that the plan to supply water from deep wells is not feasible in this location and that some other plan will have to be laid out in order to give this section a proper water supply.

## WATER

We have now two separate and distinct water systems in the City of Fredericton.

1. The system which supplies the City of Fredericton taking its water from the St. John River and which serves that urban part of the City of Fredericton lying south of the St. John River.
2. The system which derives its water from two drilled wells and is situated on the north side of the St. John River and serves that urban part of the City of Fredericton known as Carleton Ward. A description of this system may be found in my Yearly Report for 1946.

System No. 1, on the south side of the St. John River, has been discussed from time to time in my reports and I will not go into it at the present time except to say that it is a direct pumping system and working about to its capacity.

The water costs which follow in this report include the water costs of both the systems or the total Fredericton water costs. The water costs are divided into two headings, namely, Water Ordinary and Water Pumping Station.

### Water - Ordinary

This account takes in all expenditure for water outside the pumping station and pumping station grounds and includes all water expenditure in Carleton Ward. The expenditure under this heading is made up as follows:-

|                        |                     |
|------------------------|---------------------|
| Gross Expenditure..... | \$ 50,496.20        |
| Credits.....           | <u>8,117.82</u>     |
| Net Expenditure.....   | <u>\$ 22,378.58</u> |

The Credits are made up as follows:-

|   |                 |
|---|-----------------|
| Work done for and material 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 systems which do not belong to the City..... | \$ 3,597.82     |
| Rental on 226 hydrants @ \$20.00 .....  | <u>4,520.00</u> |
| Total.....  | \$ 8,117.82     |

The Gross Expenditure is made up as follows:-

|                                      |                  |
|--------------------------------------|------------------|
| City Payroll for hydrants.....       | \$ 1,243.57      |
| City Payroll for meters.....         | 2,374.50         |
| City Payroll for Water Ordinary..... | 9,209.88         |
| Total Payrolls.....                  | <u>12,827.95</u> |
| Material and other charges.....      | 17,668.25        |
| Gross Expenditure.....               | \$ 30,496.20     |

No water extensions were laid under this heading. All extensions are under Capital Account Water on page no. 11.

Hydrants:-

We have in the City 250 hydrants - 167 in the City proper, 6 on University of New Brunswick property, 7 in military areas, and 70 in Carleton Ward. The credit for rental of these hydrants, appears under credits of Water Ordinary.

The labour costs show an average cost per hydrant of \$4.97.

Meters:-

Of all our water services in the City, 1288 are charged under flat rate and 1326 on meter, giving us altogether 2614 services.

All meters are read twice a year and bills are sent out twice a year. We have 97 customers whose meters are read once a month although they also are billed only twice a year. These are such customers who ordinarily have large consumptions and where a stopped meter or a meter turned over without being noticed would mean considerable loss of revenue to the City. All meters on military buildings are included in this group of monthly read meters.

The labour cost this year per meter for installation, reading, repairing, etc. is \$1.79.

Meters in store room January 1st, 1949:-

|  |     |
|--|-----|
| 5/8 meters repaired and fit for service.....                 | 8   |
| New 5/8 meters.....  | 165 |
| 3/4 meters fit for service.....                              | 3   |
| 1-in. meters that can be repaired.....                       | 2   |
| New 1-in. meters with 1 $\frac{1}{4}$ " connections.....     | 0   |
| New 1-in. meters.....  | 0   |
| Compound meters fit for service.....                         | 0   |
| Compound meters not fit but which can be repaired.....       | 1   |
| 1 1/2 Crest meters.....                                      | 0   |
| 1/2 meters that can be repaired and made fit for service.... | 2   |

Distribution System:-

|   |   |
|---|---|
| New services installed this year.....       | 92 (plus 200 at Maryland Heights<br>which were charged to Wartime<br>Housing) |
| Old services relaid this year.....          | 49  |
| Frozen services which had to be thawed..... | 72  |
| Services discontinued.....                  | 2   |

We had in the City on the 30th day of November 1948, 2614 water services.

The Fredericton Distribution System consists of 28.7 miles of water main made up of the following sizes:-

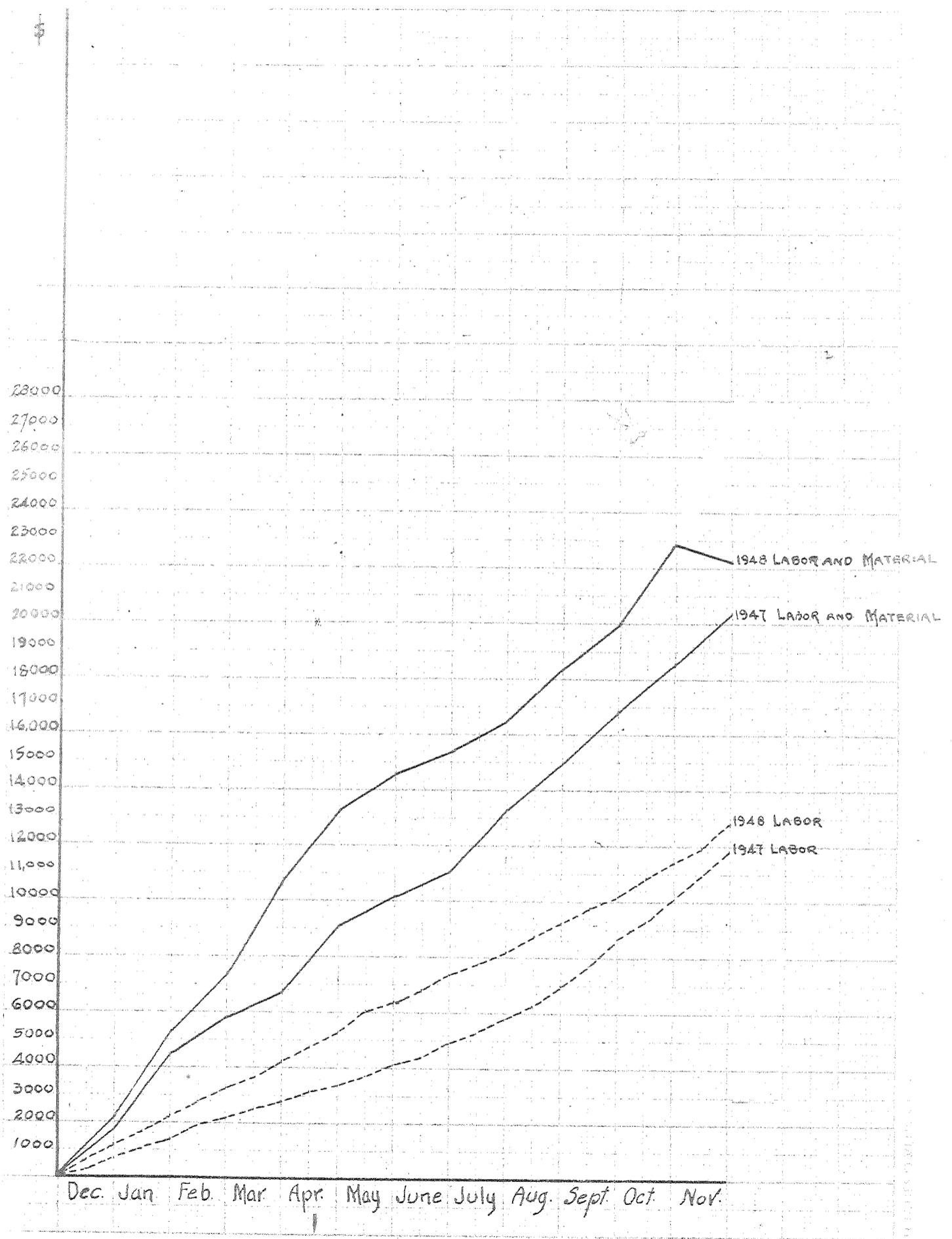
|                   |             |
|-------------------|-------------|
| 10 inch main..... | 1.53 miles  |
| 8 inch main.....  | 6.23 miles  |
| 6 inch main.....  | 16.33 miles |
| 4 inch main.....  | 4.33 miles  |
| 3 inch main.....  | .28 miles   |

This does not include the water mains installed by the Department of National Defence at Military Training Centre No. 70, Military Depot No. 7 or the Military Hospital.

TABLE SHOWING COMPARATIVE YEARLY COSTS

WATER ORDINARY

| Year | Labour    | Material  | Gross Expenditure | Credits  | Net Expenditure |
|------|-----------|-----------|-------------------|----------|-----------------|
| 1932 | 2,666.30  | 1,854.06  | 4,520.36          | 122.47   | 4,397.89        |
| 1933 | 2,333.25  | 1,604.17  | 3,937.42          | 30.27    | 3,907.15        |
| 1934 | 3,247.51  | 4,112.34  | 7,359.85          | 391.25   | 6,468.62        |
| 1935 | 5,372.83  | 5,897.23  | 11,270.06         | 398.42   | 10,871.64       |
| 1936 | 4,303.14  | 3,725.91  | 8,029.05          | 392.35   | 7,626.70        |
| 1937 | 5,718.86  | 5,938.81  | 7,657.67          | 265.46   | 7,401.21        |
| 1938 | 4,797.47  | 2,254.68  | 7,052.15          | 153.11   | 6,899.04        |
| 1939 | 4,201.24  | 3,248.61  | 7,449.85          | 570.44   | 6,879.41        |
| 1940 | 4,231.75  | 2,708.22  | 6,939.97          | 808.42   | 6,131.49        |
| 1941 | 2,908.57  | 2,446.27  | 6,354.64          | 459.08   | 4,895.56        |
| 1942 | 3,407.91  | 1,989.02  | 5,396.93          | 411.44   | 4,895.49        |
| 1943 | 5,559.39  | 14,670.96 | 20,230.35         | 5,020.06 | 15,210.29       |
| 1944 | 7,713.27  | 5,772.85  | 13,486.12         | 3,501.14 | 9,984.98        |
| 1945 | 8,011.12  | 5,577.55  | 13,588.67         | 574.57   | 13,014.10       |
| 1946 | 9,873.28  | 14,044.55 | 23,917.83         | 6,351.37 | 17,566.46       |
| 1947 | 11,822.81 | 11,733.64 | 23,556.45         | 3,106.51 | 20,449.94       |
| 1948 | 12,827.95 | 17,668.25 | 30,496.20         | 8,117.82 | 22,378.38       |



WATER ORDINARY COSTS 1947 AND 1948.

### WATER PUMPING STATION

#### Water Pumping Station Costs 1948:-

|                        |                     |
|------------------------|---------------------|
| Gross Expenditure..... | \$ 31,050.97        |
| Credits.....           | 415.85              |
| Net Expenditure.....   | <u>\$ 30,635.12</u> |

This Credit of \$415.85 is made up as follows:-

|  |                  |
|--|------------------|
| 26.005 tons of coal charged to Pumping Station and sold to other City Departments..... | \$ 215.85        |
| Water used in City Hall Building.....  | 100.00           |
| Water used in Old Street Lighting Building on Carleton Street...                       | 25.00            |
| Water used in City Alms House .....  | 25.00            |
| Water used in City Parks.....  | <u>50.00</u>     |
| Total.....   | <u>\$ 415.85</u> |

The Gross Expenditure is divided as follows:-

|   |                     |
|---|---------------------|
| City Payroll for salaries of engineer at Pumping Station.....     | \$ 8,040.00         |
| Work done by other city employees in and around Pumping Station.. | 487.36              |
| Total City Payrolls.....  | <u>\$ 8,527.36</u>  |
| Material and Workmen's Compensation Charge.....                   | 22,523.61           |
| Gross Expenditure.....  | <u>\$ 31,050.97</u> |

The material cost of \$22,523.61 is itemized as follows:-

|  |              |
|--|--------------|
| Item # 1 Light supplied and power supplied by the Maritime Electric Co. (452,500 K.W. hrs.)..... | \$ 10,687.70 |
| Item # 2 Transformer Charges.....  | 151.92       |
| Item # 3 Lime, 19,500 lbs. ....  | 1,157.38     |
| Item # 4 Alum, 158,170 lbs. ....   | 2,402.55     |
| Item # 5 Coal, 19488 tons .....  | 1,792.33     |
| Item # 6 Fuel oil, 725 gals. ....  | 140.93       |
| Item # 7 Engine oil, 88 gals. D.B. Oil .....   | 60.31        |
| Item # 8 Motor oil, 110 gals. ....   | 149.70       |
| Item # 9 Gasoline, 585 gals. ....  | 140.48       |
| Item # 10 Maintenance and repairs of the building and machinery.                                 | 551.25       |
| Item # 11 New installations.....   | 4,189.24     |
| Item # 12 Supplies, packing, rags, etc. ....   | 131.25       |
| Item # 13 Stationery, forms, charts, etc. ....   | 13.56        |
| Item # 14 Workmen's Compensation Board.....  | ---          |
| Item # 15 Mr. E. W. Hagerman's salary.....   | 900.00       |
| Item # 16 Miscellaneous.....   | <u>75.01</u> |
| Total.....   | \$ 22,523.61 |

**COMPARISON OF WATER PUMPED AND COSTS  
FOR LAST SIXTEEN YEARS**

| Year | I.G.<br>Water Pumped | Yearly<br>Gross Expend-<br>iture at<br>Pumping<br>Station | Pumping<br>Station<br>Cost per<br>1000 gals.<br>Using Gross<br>Expenditures | Total Yearly<br>Water Costs<br>(Net Expend-<br>iture Water<br>Ordinary and<br>Gross Expend-<br>iture Water<br>Pumping<br>Station) | Total<br>Yearly<br>Cost<br>per 1000<br>Gallons |
|------|----------------------|---|---|---|--|
| 1933 | 175,050,000          | \$16,483.67   | 9.5 cents   | \$20,390.82   | 11.6 cents                                     |
| 1934 | 202,720,000          | 15,999.50   | 7.9 "   | 22,468.12   | 11.1 "   |
| 1935 | 197,641,000          | 16,251.61   | 8.1 "   | 27,123.25   | 12.6 "   |
| 1936 | 193,450,000          | 17,189.21   | 8.8 "   | 24,725.91   | 12.6 "   |
| 1937 | 187,008,000          | 19,678.21   | 10.5 "  | 27,079.42   | 14.5 "   |
| 1938 | 181,558,000          | 19,289.49   | 10.6 "  | 26,158.53   | 14.4 "   |
| 1939 | 199,662,000          | 18,144.43   | 9.1 "   | 25,023.84   | 12.5 "   |
| 1940 | 203,975,000          | 22,503.55   | 11.3 "  | 28,634.84   | 14.0 "   |
| 1941 | 222,255,000          | 19,474.56   | 8.8 "   | 24,370.12   | 11.0 "   |
| 1942 | 257,205,000          | 23,400.09   | 9.1 "   | 28,585.58   | 11.0 "   |
| 1943 | 280,115,000          | 26,538.50   | 9.4 "   | 41,548.79   | 14.0 "   |
| 1944 | 295,945,000          | 22,926.61   | 7.7 "   | 32,911.59   | 11.1 "   |
| 1945 | 321,355,000          | 24,990.14   | 7.7 "   | 58,004.24   | 11.8 "   |
| 1946 | 338,979,000          | 25,640.43   | 7.5 "   | 45,206.89   | 12.7 "   |
| 1947 | 319,243,000          | 57,125.42   | 11.6 "  |   |  |
| 1948 | 322,339,000          | 31,050.97   | 9.6 "   |   |  |

Column showing I.G., water pumped does not include water used from wells in Carleton Ward.

By taking our average daily consumption of Carleton Ward as 121,000 g.p.d. arrived at from a number of test runs I estimate the yearly water pumpage from our wells there to be for 1948 some 45,000,000 I.G.D.

The total amount of water pumped during 1948 for the whole city is therefore 367,339,000 I.G.

Our total net water expenditure for the city for 1948 = \$53,013.50

Therefore our net cost to pump and deliver to the customer 1000 I.G. of water in 1948 is  $\frac{53,013.50}{367,339}$  = 14.4 cents

All these 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 charges included in the City Government costs, nor do they include bond payments or Sinking Fund Charges.

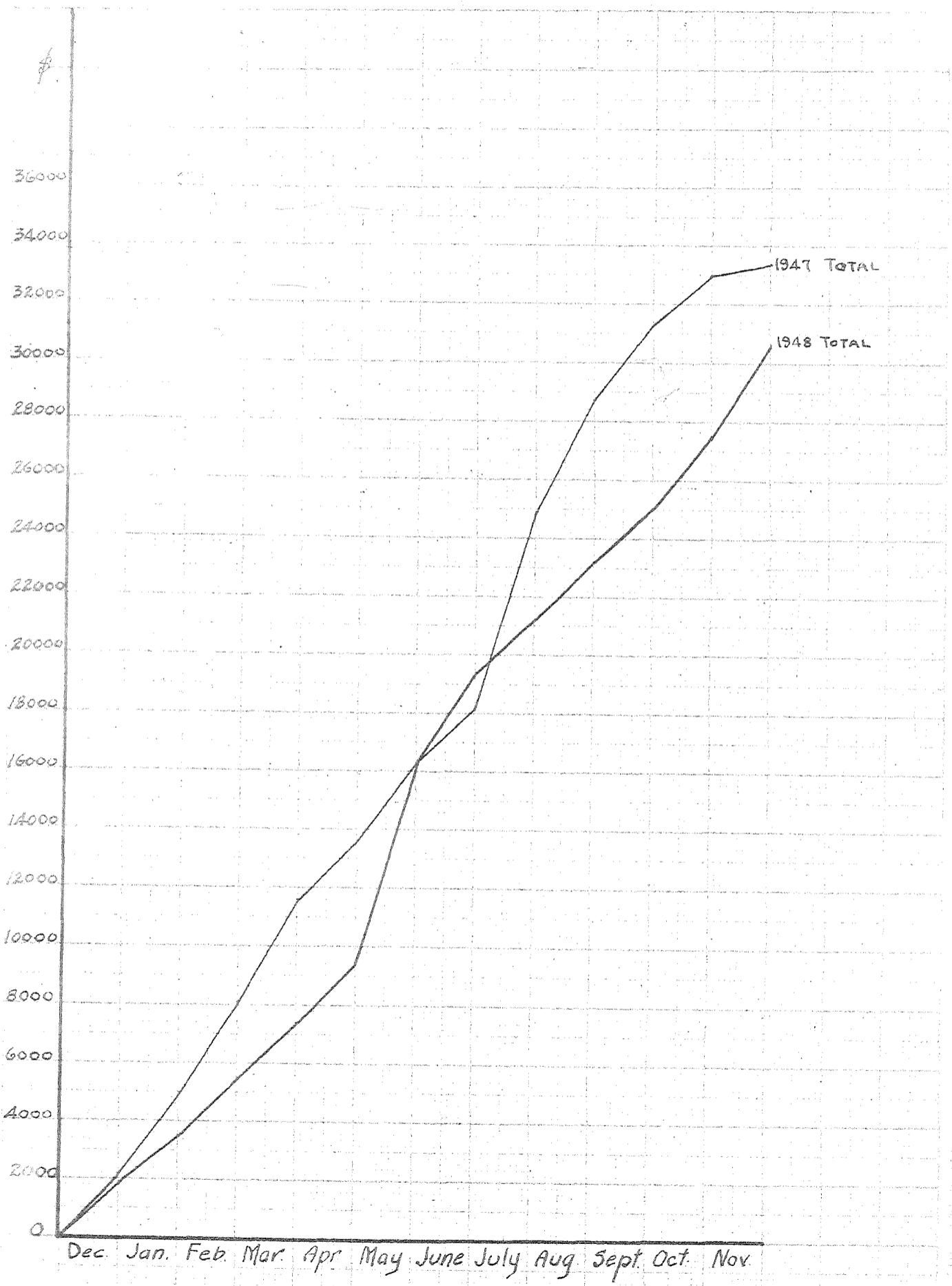
The water pumping station was as usual under the supervision of the plant superintendent and chief engineer, Mr. John Malloy.

Item # 11 - new installation, with a total cost of \$4,189.24 included an amount of \$3,561.04 which was a final payment made to Francis Hankin Co. who installed the complete mechanical equipment for one new filter and made all necessary repairs to our four old filters. We are now equipped with five filters in good condition at the pumping station.

Respectfully submitted,

---

City Engineer.



WATER PUMPING STATION COSTS 1947 AND 1948.

M A T E R I A L

TABLE SHOWING PRINCIPAL PURCHASES - 1948

| Material                      | Amount Purchased          | Average Price F.O.B. Fredericton   |
|-------------------------------|---------------------------|--|
| 4" Iron Soil Pipe             | 225 ft.                   | 85.2¢ per ft.  |
| 4" Terra Cotta Pipe           | 9000 ft.                  | 27 - 28½¢ per ft.  |
| 4" Terra Cotta Elbows (90°)   | 162                       | \$1.07 - 1.14 each   |
| 4" Concrete Pipe              | 4600 ft.                  | 19.35 - 26¢ per ft.  |
| 4" Concrete Bends (90°)       | 12                        | 85¢ each   |
| 4" Concrete Tees              | 6                         | 90¢ each   |
| 5" Terra Cotta Pipe           | 22446 ft.                 | 57½ - 45¢ per ft.  |
| 5" Terra Cotta Bends (45°)    | 30                        | \$1.60 each  |
| 6" Terra Cotta Pipe           | 60 ft.                    | 51¢ per ft.  |
| 8" Terra Cotta Pipe           | 19420 ft.                 | 55½ - 60¢ per ft.  |
| 8" Terra Cotta Pipe 5" Branch | 280                       | \$2.73 each  |
| 10" Terra Cotta Pipe          | 400 ft.                   | 82¢ per ft.  |
| 12" Terra Cotta Pipe          | 5062½ ft.                 | \$1.00 - \$1.07 per ft.  |
| 12" Concrete Pipe             | 600 ft.                   | \$67.05 per 100 ft.  |
| 15" Terra Cotta Pipe          | 3987½ ft.                 | \$1.44 - \$1.53 per ft.  |
| 15" Concrete Pipe             | 1700 ft.                  | \$105.50 per 100 ft.   |
| 18" Terra Cotta Pipe          | 1700 ft.                  | \$1.92 per ft.   |
| 21" Concrete Pipe             | 500 ft.                   | \$2.00 per ft.   |
| 24" Concrete Pipe             | 400 ft.                   | \$2.25 per ft.   |
| Portland Cement               | 1311 bags<br>1000 barrels | 87¢ - \$1.60 per bag<br>\$3.18 per bbl.  |
| Brick                         | 242345                    | \$20.00 - \$25.00 per thousand   |
| Dynamite                      | 500 lbs.                  | 30¢ per lb.  |
| Fill                          | 40 loads<br>19258 yds.    | \$1.50 per load<br>65¢ per cu. yd.   |
| Gravel                        | 1126½ yds<br>315.4 yds.   | 65¢ per cu. yd.<br>1.04¢ per cu. yd.   |
| Sand                          | 175.13 yds                | 2.05¢ per cu. yd.  |
| Calcium Chloride              | 80 tons<br>45 bags        | \$34.84 - \$36.84 per ton<br>\$2.35 per bag  |
| Rock                          | 701 loads                 | \$5.55 per load based on 80¢ per ton.  |
| Road Machine Blades           | 50<br>6<br>6              | \$16.40 - \$18.00 per pair<br>\$29.40 per pair (Serrated Grader Blades)<br>\$9.95-\$14.75 per blade (Sawtooth) |

| Material                              | Amount Purchased  | Average Price F.O.B. Fredericton  |
|---------------------------------------|---|---|
| Lime                                  | 19500 lbs.  | \$4.63 - \$6.42 per 100 lbs.  |
| Alum                                  | 158170 lbs.   | \$1.47 - \$1.57 per 100 lbs.  |
| Coal                                  | (Springhill) 17.98 tons<br>(Sydney) 14.19 tons<br>(Run of Mine) 383.02 tons | \$15.50 per ton<br>\$16.00 - \$17.20 per ton<br>\$7.40 - \$8.50 per ton |
| RC - 3                                | 445.2 gals.   | 23½¢ per gal  |
| RC - 2                                | 540 gals.   | 22½¢ per gal  |
| MG - 2                                | 446.3 gals  | 22½¢ per gal.   |
| Asphalt Base Seal                     | 4076.196 tons<br>788.60 tons  | \$4.25 - \$7.50 per ton<br>\$5.50 - \$9.00 per ton                      |
| 5/8" Copper Tubing                    | 20064 ft.   | \$18.84 - \$23.85 per 100 ft.   |
| 3/4" Copper Tubing                    | 858 ft.   | \$32.60 - \$34.22 per 100 ft.   |
| 6" Cast Iron Pipe                     | (700 lengths) 152.145 tons  | \$107.00 - \$111.60 per ton   |
| 6" Cast Iron Elbows                   |   |   |
| 8"x8"x6" Tees (B)                     | 11 = 3520 lbs.  | \$11.79 per 100 lbs.  |
| 6 in. ½" Bends                        | 4 = 470 lbs.  | \$10.18 per 100 lbs.  |
| 6 in. Offsets (B)                     | 11 = 2504 lbs.  | \$11.75 - \$11.79 per 100 lbs.  |
| 6"x6"x6" Tees (B)                     | 7 = 1345 lbs.   | \$11.79 - \$12.06 per 100 lbs   |
| Split Sleeves 4"<br>6"<br>8"          | 2<br>3<br>2   | \$17.90 each<br>\$24.70 each<br>\$33.20 each                            |
| 8" Cast Iron Pipe (B)                 | 110480 lbs. (175 lengths)   | \$106.20 per ton  |
| Oakum                                 | 6629 lbs.   | 22 - 25¢ per lb.  |
| Lead                                  | 12417 lbs.  | 21 - 35¢ per lb.  |
| 5/8"x5/4" Trident Cold Water Meters   | 50  | \$17.88 and Freight   |
| 1½" " " "                             | 1   | \$75.50 and Freight   |
| 3" " " "                              | 1   | \$279.68 and Freight  |
| Asbestos Galvanized Pipe 15"x14 Guage | 120 ft.   | \$2.97 per ft.  |
| " " " 12"x16 Guage                    | 200 ft.   | \$2.06 per ft.  |
| " " " 10"x16 Guage                    | 200 ft.   | \$1.95 per ft.  |
| Galvanized Pipe 1½"                   | 1058'-10"   | \$30.45 per 100 ft.   |
| " " 1"                                | 1211'-8"  | \$20.53 - \$21.25 per 100 ft.   |
| " " 3/4"                              | 2041'-8"  | \$14.47 - \$15.95 per 100 ft.   |
| Catch Basin (Cover and Frame)         | 111   | \$30.24 - \$35.64 each  |
| Manhole (Cover and Frame)             | 146   | \$30.24 - \$35.64 each  |

| Material  | Amount Purchased | Average Price F.O.B. Fredericton |
|---|------------------|----------------------------------|
| Hydrant   |                  |                                  |
| #2-9651 McAvity Hydrant 6' Bury<br>6" Hub connection with 2-2- $\frac{1}{2}$ "<br>hose nozzles                          | 23               | \$138.75 - \$145.00 per hydrant  |
| #1-9651 McAvity Hydrant 6' Bury<br>4" Hub connection with 2-2- $\frac{1}{2}$ "<br>hose nozzle                           | 2                | \$126.00 each                    |
| #1-9651 McAvity Hydrant 6' Bury<br>6" Hub Connection with 2-2- $\frac{1}{2}$ "<br>hose nozzle & one steamer nozzle hose | 3                | \$139.25 each                    |
| Sliding Type Gate Valve Boxes   | 75               | \$18.50 - \$21.51 each           |
| Gate Valves 8"  | 7                | \$59.672 - \$60.89 ea.&ft.       |
| 6"  | 55               | \$36.64 - \$42.41 ea. & ft.      |
| 4"  | 4                | \$24.86 ea. & ft.                |
| 3"  | 1                | \$18.00 each                     |
| 1 - #5 U Torch Type Burner Unit   |                  | \$115.66                         |
| 12 - Rolls 14 Guage 1 $\frac{1}{2}$ x96" chain link fence   |                  | \$28.40 per roll                 |
| 1 - Jaeger 2PAF Pump Serial No. P 106546<br>(Complete with suction and discharge hose)                                  |                  | \$328.80                         |
| 1 - 1948 Ford Deluxe Fordor Serial 051H48-18645   |                  | \$1775.00                        |
| 1 - Motor for Chevrolet 2 $\frac{1}{2}$ ton 1945 model truck  |                  | \$165.00                         |
| 1 - 1948 Fargo 3/4 - 1 ton truck serial No. 91500507  |                  | \$1700.00                        |
| 4 - Lawn Mowers   |                  | \$17.60 each                     |
| 2084 ft. #6 B.S. Guage Single Flamenol Insulation   |                  | \$156.16 per 1000 ft.            |
| 4 - Street Light Standards  |                  | \$93.56 each                     |
| 1 - 15 K.W. Constant Current Transformer  |                  | \$735.00                         |
| 1 - 40 ft. extension ladder   |                  | \$28.60                          |
| 1 - 35 ft. extension ladder   |                  | \$35.50                          |
| 36 gals Prestone antifreeze   |                  | \$5.42 - \$3.75 per gal.         |
| 150 ft. Ferret Sewer Rods   |                  | \$159.00                         |
| 1 - sewer cleaning nozzle   |                  | \$78.50                          |
| 200 ft. Malacca Cane Sewer Rods   |                  | \$206.00                         |
| 90 ft. coiled steel rods  |                  | \$95.00                          |
| 2 - rubber tired street cleaning carts  |                  | \$113.51 each                    |
| 1 yd snow bucket  |                  | \$325.00                         |
| 1 - #9300 Gurley Transit complete   |                  | \$515.00                         |
| 1 - Mueller Taping Machine  |                  | \$184.50                         |
| 1 - AN-2-120 R.C.O.C. Double Pole Oil Switch  |                  | \$238.00                         |
| 1 - VSW 2-21 Sangamo Time Switch with Astronomical Dial   |                  | \$65.00                          |
| 1 - 75 CMC Concrete Mixer Serial No 4151  |                  | \$1995.00                        |
| 1 - Bronze Impeller complete  |                  | \$625.00                         |
| 1 - Fairbanks Morse Centrifugal Pump  |                  | \$196.50                         |
| 317 Cedar Posts   |                  | 30¢ - 55¢ each                   |