

# ANNUAL REPORT OF THE ENGINEERING AND PUBLIC WORKS DEPARTMENT

## 1972



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TO HIS WORSHIP THE MAYOR & COUNCILLORS  
OF THE CITY OF FREDERICTON.

Gentlemen:

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

This report covers the period January 1, 1972 to December 31, 1972 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 works:

Concrete Curb and Gutter.....	3.61 miles
Concrete Sidewalk.....	0.98 miles
New Street Construction.....	1.73 miles
Street Re-construction.....	0.38 miles
New Pavement.....	2.66 miles
Recap (1/2" Minus).....	1.66 miles
Sealing City Streets (3/8" Minus)....	7.84 miles
Armour Coating (3/4"-1/2"-3/8").....	1.04 miles
Resealing (3/8" Chips).....	1.08 miles
6" Force Main-Domestic Sewer.....	0.18 miles
8"-10"-12" Gravity Domestic Sewer....	2.12 miles
10"-12"-15"-18"-24"-30"-36"-42"-60"	
Storm Sewer.....	2.32 miles
4"-6"-8"-10"-12" Water Mains.....	2.02 miles

ALSO

204 Water Services Installed
205 Domestic Sewer Services Installed
3 Sprinklers Installed
43 Services Relayed (Water)
2 Services Relayed (Domestic Sewer)
245 Water Meters Installed

Contractors under contract with the Public Works Department of the City of Fredericton in 1972 constructed, completed construction or began construction on the following projects:

Fredericton Housing & Construction Ltd.	-	To installation of services for the Land Assembly Project, New Brunswick Housing Corporation, Southwood Park (Commenced in 1971).
John Kilburn & Sons Ltd.	-	To installation of services on Princess Anne Court.
Forbes & Sloat Ltd.	-	To installation of services on Ashfield Street.
Harry C. Smith	-	To supply and delivery of Pipe Bedding Sand.
Gordon's Ready-Mix Ltd.	-	To supply and delivery of Ready-Mix Concrete.

Gorman Construction Co. Ltd.	-	To supply and delivery of gravel.
Harry C. Smith	-	To supply and delivery of topsoil.
Petrofina Canada Ltd.	-	To supply and delivery of gasoline and diesel fuel.
Diamond Construction (1961) Ltd.	-	To supply and placement of Asphalt.
John Kilburn & Sons Limited	-	To installation of Domestic Sewer Main on Lincoln Road.
John Kilburn & Sons	-	To installation of Water Main on MacLaren Avenue.
Atlas Construction Maritimes Ltd.	-	To installation of Storm Sewer on Regent Street.
Stan Cassidy Ltd.	-	To supply and installation of Traffic Lights on Waggoner's Lane & Smythe St., Prospect St. & Smythe St. and Prospect St. & Regent St.
John Kilburn & Sons Limited	-	To installation of services for the Maritime Rangers School.
Flintkote Co. of Canada Limited	-	To supply and application of materials for Armour Coat and Chip Seal.
Wendall Thomas	-	To supply and delivery of sand for sanding streets and sidewalks.
Thomas Industrial Sales Ltd.	-	To supply and delivery of Pumping Equipment for Smythe St. Booster Station.
Fredericton Housing & Construction Ltd.	-	To installation of services on Parkside Drive and Proposed Court.
Domtar Ltd.	-	To supply and delivery of Highway Coarse Bulk Salt.

The current expenditures for the twelve-month period January 1, 1972 to December 31, 1972 appear as follows:

	Appropriation	Net Expenditures	Debit	Credit
Street Lights	\$105,000.00	\$107,108.55	\$ 2,108.55	-
Public Works	53,700.00	63,603.68	9,903.68	-
Roads & Streets	397,700.00	443,556.09	45,856.09	-
Garbage Collect.	69,952.00	69,957.17	5.17	-
Garbage Disposal	36,340.00	36,647.33	307.33	-
Wilmot Park	8,006.00	8,283.68	277.68	-
Odell Park	11,450.00	10,343.41	-	1,106.59
Carleton Park	5,500.00	4,917.21	-	582.79
Old Bur. Ground	3,124.00	3,668.65	544.65	-
Loyalist Burial Ground	102.00	104.60	2.60	-
Street Cleaning	85,900.00	87,136.56	1,236.56	-
Development of Park Areas	5,100.00	4,227.99	-	872.01
Storm Sewer	18,000.00	14,424.67	-	3,575.33
<b>TOTALS.....</b>	<b>\$799,874.00</b>	<b>\$853,979.59</b>	<b>\$60,242.31</b>	<b>\$6,136.72</b>

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

The 1971 census shows that the City's population was 24,254.

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 may be found by referring to the index.

Respectfully submitted,

CITY ENGINEER.

### TOTAL YEARLY EXPENDITURE

The total yearly net expenditure under the direct supervision of the City Engineer in 1972 amounted to \$1,995,674.15.

A graphic comparison of expenditures for labor, labor and hired machinery and total expenditure (including labor & hired machinery) and materials are shown on the following graph.

The locations of new construction completed or commenced in 1972 are shown on maps inserted after Page #4 of this report.

Following the maps is a graph showing the distribution of the City of Fredericton Tax Dollars in 1972.

### ROADS AND STREETS

In 1972, the appropriation for Roads and Streets was \$397,000.00.

There are in Fredericton 78.83 miles of Roads and Streets; 12.87 miles being located on the north side of the Saint John River and 65.96 miles on the south side. In addition there are 62.84 miles of concrete and asphalt sidewalks; 9.66 miles on the north side of the Saint John River and 53.18 miles on the south side of the Saint John River.

#### ROADS AND STREETS

	<u>Urban</u>	<u>Rural</u>	<u>Total (Miles)</u>
Paved	63.66	5.31	68.97
Gravel	1.93	6.27	8.20
Chip Seal	1.25	0.41	1.66
<b>TOTALS.....</b>	<b>66.84</b>	<b>11.99</b>	<b>78.83</b>

Includes only the first 450 ft. of Parkside Drive

### ROADS AND STREETS EXPENDITURES---1972

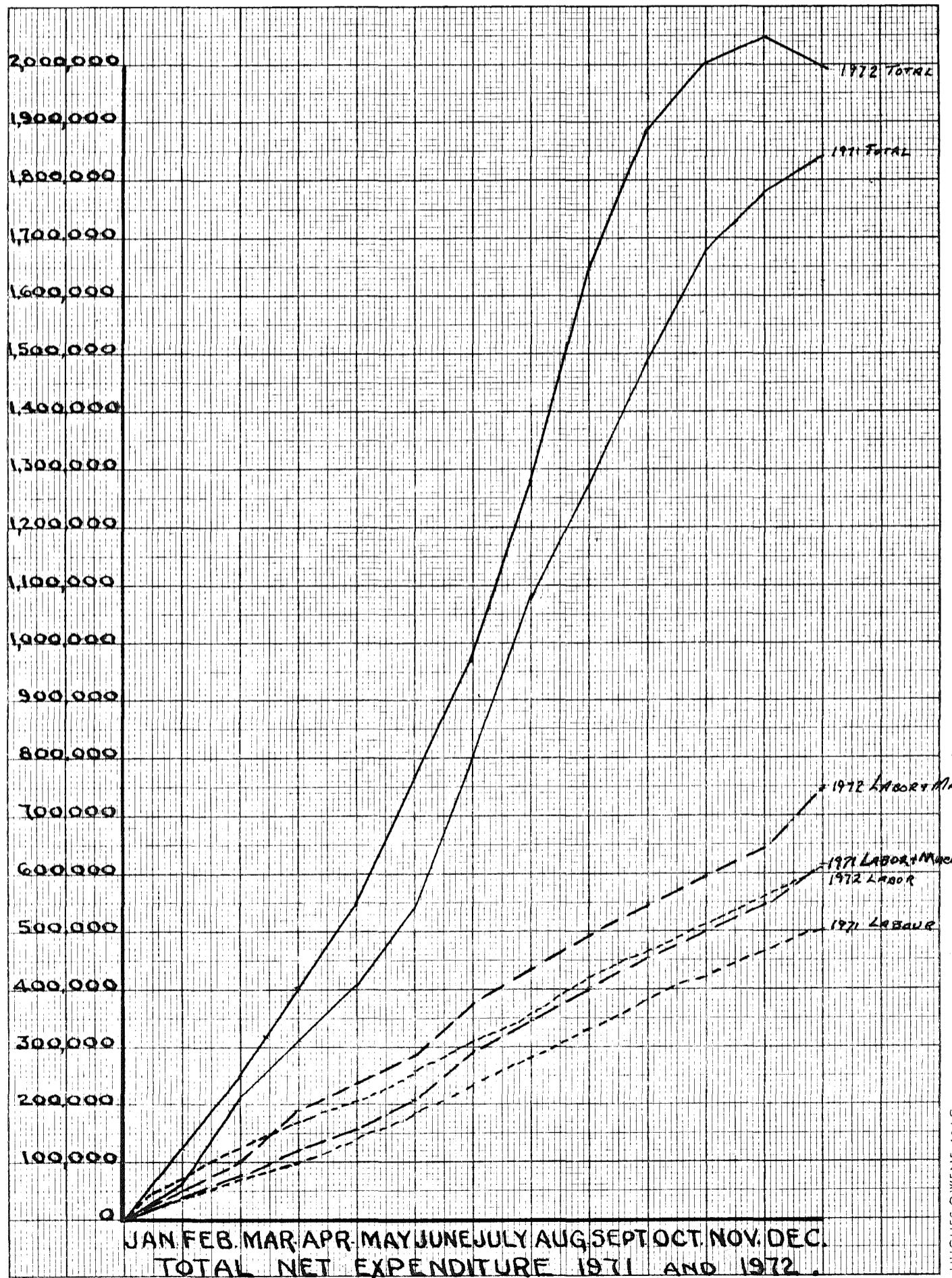
Gross Expenditures.....	\$587,721.41
Credits.....	144,165.32
Net Expenditure.....	443,556.09
1972 Appropriation.....	\$397,700.00

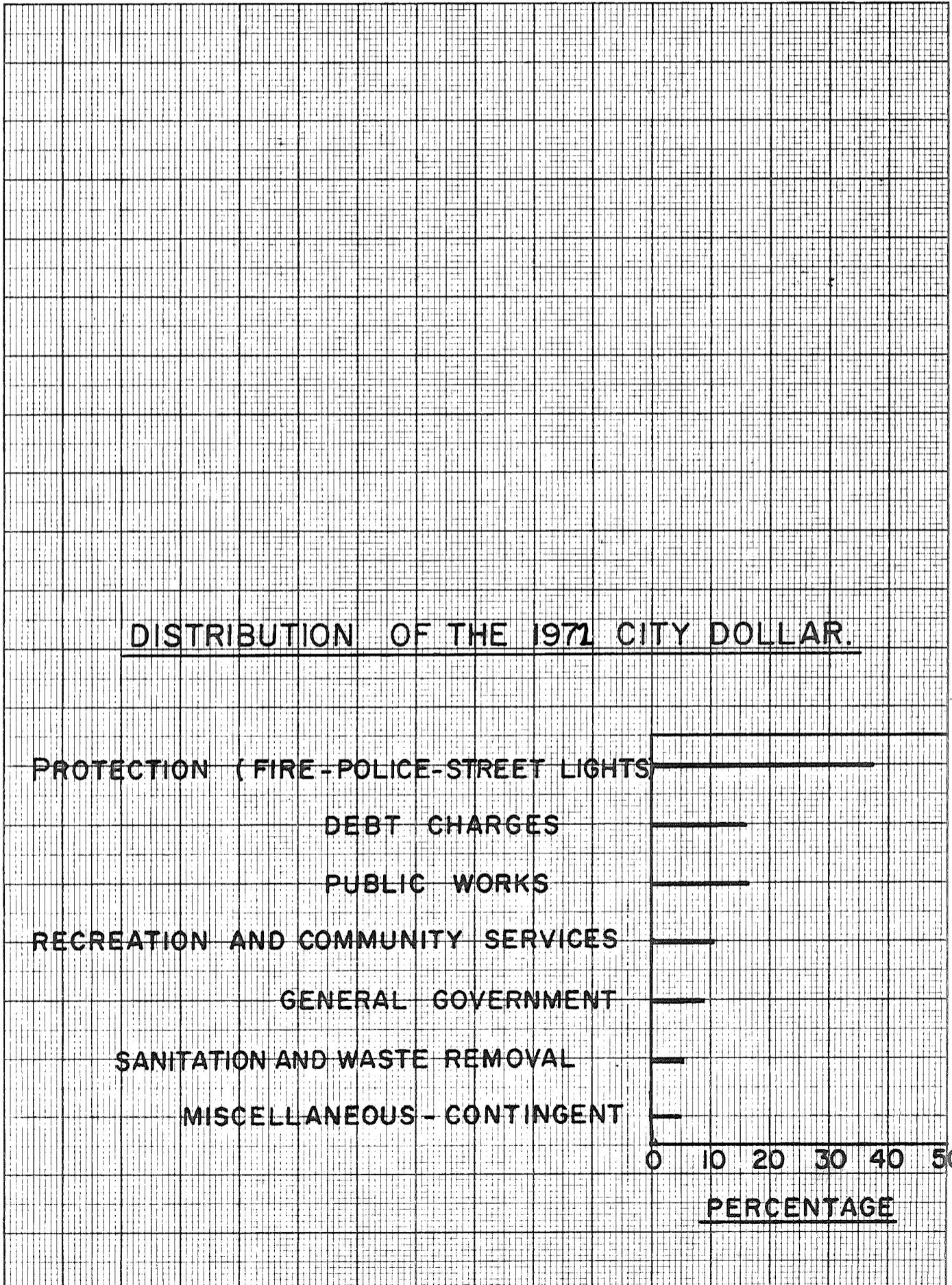
DEFICIT...\$ 45,856.09

The above credit of \$144,165.32 is made up of Labor and Material charged to private parties, materials such as Gas, Oil, etc. used by other City Departments, credit on City Pension and Canada Pension, materials such as sand, salt, rock dust, etc. to other City Departments, Workmen's Compensation and machinery rental on other accounts.

### The Gross Expenditure is divided as follows:

Labor-the total of Roads & Streets Payrolls....	\$203,376.86
Hired trucks and machinery.....	103,289.75
Material charges-which includes Workmen's Compensation, Unemployment Insurance and all materials including purchase and repairs to City owned equipment.....	281,054.80
<b>TOTAL.....</b>	<b><u>\$587,721.41</u></b>





The Net Expenditure of \$443,556.09 is divided into the following items. These items give an account of the amount and kind of work done by the Roads and Streets Department.

ITEM #1

Salting and Sanding Streets & Sanding Sidewalks

Storing sand in Winter Storage Pile and spreading same on slippery streets and sidewalks.

Labor.....	\$ 21,471.45
Hired trucks & machinery.....	867.00
City machinery charges.....	8,779.00
Materials.....	<u>35,826.97</u>
Total Expenditure.....	<u>\$66,944.42</u>

6,088 cubic yards of sand was purchased during the Fall of 1972. The sand was supplied by W. W. Thomas at a price of \$1.30 per cubic yard, delivered to the City Stock Pile.

In 1972, 1,713.40 tons of salt was used for ice control. The cost and distribution charges are included under the above heading. The City purchased 1,563.40 tons of salt in 1972. In Stock as of December 31, 1972 - 150 tons.

ITEM #2

Snowplowing Sidewalks

62.84 miles of sidewalk were plowed during the winter months in 1972.

Total Expenditure under this heading amounted to \$13,936.40 and was made up as follows:-

Labor.....	\$10,945.46
Hired machinery.....	-
City Machinery charges.....	<u>2,991.00</u>
TOTAL.....	<u>\$13,936.46</u>

In 1972 the unit cost of plowing and sanding one mile of sidewalk was approximately \$346.00 and was made up as follows:-

Labor.....	\$15,239.75
Hired trucks and machinery.....	173.40
City machinery charges.....	4,746.80
Material (Sand).....	<u>1,582.88</u>
TOTAL.....	<u>\$21,742.83 - (1)</u>

The overall cost, including Compensation, Pension Fund, and Sick Leave was approximately \$390.00 per mile.

ITEM #3

Snow Control (Streets)

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.

The total cost of Snow Control (Streets) amounted to \$208,206.81 and was made up as follows:

Labor.....	\$ 55,580.28
Hired trucks and machinery.....	99,506.75
City machinery charges (bulldozers, Graders, etc.)....	42,885.50
Expendable materials (Grader blades, chains, etc.)....	3,423.06
Maintenance of Snow Equipment (Repairs to blowers, etc.).	5,208.61
Miscellaneous materials (Shovels, picks, etc.).....	1,602.61
TOTAL.....	<u>\$208,206.81</u>

The following table shows comparative labor (including hired trucks and machinery) costs of Snow Control for the year 1970 to 1972 inclusive:-

	1970	1971	1972
Snowplowing Roads & Sts.	\$33,861.18	\$ 54,674.72	\$ 77,008.88
Blowing, Hauling & Shovelling	36,112.41	56,238.00	59,366.00
Catch Basins	2,438.37	9,416.04	14,216.38
Snow Fences	882.44	1,189.53	1,182.76
Plowing Parking Lots	137.79	272.32	610.73
Repairs	-	765.51	2,702.28
TOTALS.....	\$73,432.19	\$122,556.12	\$155,087.03

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

The unit cost per mile of plowing, salting and sanding City Roads and Streets was approximately \$3,390.00 and was calculated as follows:-

Labor.....	\$ 72,757.44
Hired trucks and machinery.....	100,200.35
City machinery charges (Grader, Bull- dozers, etc.)..	49,908.70
Materials (Sand and Salt).....	33,139.63
Repairs to Snow Blowers & Boilers.....	5,261.48
Expendable materials (Grader blades, chains, etc.)....	3,423.06
Miscellaneous materials (Lumber, wire, shovels, etc.)....	1,602.61
TOTAL.....	<u>\$266,293.27 - (2)</u>

The overall cost including Workmen's Compensation, Pension Fund and Sick Leave was approximately \$3,580.00 per mile.

TOTAL COST OF SNOW CONTROL - Add (1) and (2).....\$288,036.10

Net Cost of Snow Control (Less City Machinery Charges \$54,655.50).....\$233,380.60

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

January 1, 1968 to December 31, 1968..... 86.8 inches  
January 1, 1969 to December 31, 1969..... 77.0 inches  
January 1, 1970 to December 31, 1970..... 121.2 inches  
January 1, 1971 to December 31, 1971..... 107.6 inches  
January 1, 1972 to December 31, 1972..... 184.6 inches

#### Snow Fences

12,000 feet of lath and wire snow fencing was erected under Snow Control to prevent drifting snow from building up on outlying roads.

#### ITEM #4

#### Streets

General work of maintenance of Roads and Streets and any other items such as installing culverts, curbs and gutters or pavement which are not mentioned under some particular heading.

Total Expenditure under Streets Account (labor, hired trucks and machinery and materials) amounted to \$60,261.70 and was made up as follows:-

Item	Labor, Hired Trucks & Machinery	City Machinery Charges	Mater- ials	Credits	Totals
Maintaining Driveways	520.58	238.25	-	-	758.83
Culverts	1,228.79	334.00	874.96	18.12	2,419.63
Ditching	109.72	2.00	-	-	111.72
Erection of Guard Posts	673.77	113.00	150.04	205.00	731.81
Repairing Curbs & Gutters	2,940.05	556.00	892.72	1,378.50	3,020.27
Sodding & Seeding	3,877.55	499.00	672.00	286.20	4,762.35
Rip-Rapping	1,519.09	209.00	509.06	-	2,237.15
Cutting Grass	3,602.14	297.00	279.91	-	4,179.05
Repairing Sidewalks	8,344.30	980.25	5,085.64	5,217.05	9,193.14
Holiday, Sick Leave, Fringe Benefits	31,989.25	-	1,118.95	790.33	32,317.87
Making & Repairing Barricades	521.88	8.00	-	-	529.88
TOTALS.....	\$55,327.12	3,246.50	9,583.28	7,895.20	60,261.70

ITEM #5Equipment Repairs

The expenditure under this heading amounted to \$44,599.02 and was made up as follows:

Labor.....	\$12,479.84
Hired trucks and machinery, (floats, etc.).....	405.00
City Machinery charges.....	874.00
Materials. ....	527.70
Outside Repairs & Parts for Machines..	28,820.28
Expendable Accessories.....	<u>1,492.20</u>
TOTAL....	<u>\$44,599.02</u>

The above expenditure includes all City vehicles with the exception of those used in Street Cleaning, Snow Control and Water, which are charged under their respective headings.

ITEM #6Grading & Gravelling

Grading and application of Gravel on City Roads and Streets.

Labor.....	\$ 248.28
Hired Trucks and machinery.....	-
City Machinery charges.....	454.00
Materials (Crushed Rock, Class "A" Gravel, Dust).....	<u>3,027.70</u>
TOTAL....	<u>\$ 3,729.98</u>

610.35 tons of Class "A" crushed gravel was used in the maintenance and repairs to Gravel Roads under Roads and Streets.

The gravel was purchased from Gorman Construction at a contract price of \$2.00 per ton for Class "A" (1½") crushed gravel.

722.80 tons of dust was purchased from Diamond Construction (1961) Ltd. at \$2.50 per ton.

ITEM #7Rural Roads (Unserviced)

Road	Labor	Hired Machinery	City Machinery	Total Expenditures
Lincoln Road	567.57	60.00	20.00	647.57
Wilsey Road	290.32	326.00	200.00	816.32
Doak & Flanagan Roads	192.66	73.00	284.00	594.66
Maryland Road	257.02	75.00	58.50	390.52
Corbett Road (From existing pavement on Forest Hill Road to the Vanier Hwy. & Tower Rd)	208.14	58.50	170.00	436.64
TOTALS.....	\$1,515.71	\$592.50	\$732.50	\$2,840.71

Includes: All work done other than that done by the Motor Graders.

ITEM #8

Asphaltic Concrete Repairs & Paving Driveway Entrances

Patching and repairing pavement, applying seal coat, light tar or asphalt to pavement and applying asphalt to driveway entrances.

Labor.....	\$22,842.12
Hired trucks and machinery.....	215.50
City machinery charges.....	9,670.75
Materials.....	<u>23,845.32</u>
TOTAL.....	<u>\$56,573.69</u>

When local contractors have a plant set-up, patching material can be obtained more economically. Patching material when available was obtained from Gorman Construction Ltd. and Diamond Construction (1961) Limited.

The total expenditure for Pavement Repairs and Driveways for 1972 under the above heading, including Workmen's Compensation, Pension Fund, Holiday and Sick Leave amounted to \$58,091.45 and was computed as follows:

ASPHALT

Stock from 1971

180 Gallons RS2.....	\$ 81.00
2,054 Gallons RC3.....	<u>719.00</u> \$ 800.00

Plus Stock Purchased in 1972

5,400 Gallons (RS1 & RS2).....	<u>\$2,398.06</u>
--------------------------------	-------------------

TOTAL STOCK...\$3,198.06

Less Stock for 1973

450 Gallons RS2.....	\$ 210.65
945 Gallons RC3.....	<u>330.75</u> \$ 541.40

NET COST OF LIQUID ASPHALT....\$2,656.66

Cost of Hot Mix Asphalt in Repairing Streets and Paving Driveway entrances obtained from Gorman Construction Ltd. and Diamond Construction (1961) Ltd.....\$16,019.95

Total Hot Mix Asphalt Cost -----	\$16,019.95
Asphalt from Flintkote Co. (Cold Patch) ...	2,504.04
Liquid Asphalt.....	2,656.66
Crusher Dust (309 Tons).....	773.00
Crushed Rock (1,556 Tons).....	3,889.89
Sand (8 yds.).....	8.80
Repairs to plant equipment.....	428.40
Propane Gas.....	212.13
City Labor (City Employees, including Pension Fund, Workmen's Compensation, Sick Leave and Holiday Account).....	26,953.70
Hired trucks and machinery.....	215.50
City machinery.....	9,670.75
Miscellaneous (pick axes, water cans, wtc.).....	<u>204.87</u>

TOTAL GROSS EXPENDITURE.....\$60,943.87

LESS CREDITS:

Work done & materials used for private parties.....	\$ 1,288.72
Journal Vouchers (Materials sold to other City Depts.)	<u>1,305.10</u>

TOTAL.....\$ 2,593.82

TOTAL NET COST...\$58,350.05

Materials in Stock, December 31, 1972:-

Emulsified Asphalt for Tack Coat RS2 - 10 Barrels .....	\$ 210.65
Liquid Asphalt RC3 - 21 Barrels.....	330.75
0-1" Minus Crushed Rock - 100 Tons...	250.00
Crusher Dust - 50 Tons.....	<u>125.00</u>
TOTAL....	<u>\$ 916.40</u>

ITEM #9

City Motor Graders: -

Operator's Wages.....	\$ 1,036.45
Machinery charges.....	<u>1,688.00</u>
	\$ 2,724.45

LESS CREDITS:

Canadian National Railway (Grading Yard).....	\$ 131.34
N.B.E.P.C. (Grading Yard).....	24.35
Kitchen Bros. Ltd. (Grading Yard)...	17.01
Venus Apartments (Grading Yard).....	11.34
Hartt Shoes (Grading Yard).....	<u>20.00</u>
	\$ 204.04
	<u>TOTAL....\$ 2,520.41</u>

ITEM #10

Off Street Parking:-

The expenditure under this heading amounted to \$140.39 and was made up as follows:

Labor.....	\$ 8.49
City Machinery charges.....	24.00
Materials.....	<u>107.90</u>
TOTAL.... <u>\$140.39</u>	

The above heading includes the Brunswick Street Parking Area, situated between York and Carleton and the Campbell Street Parking Area, between Phoenix Square and Westmorland Street

ITEM #11

Clearing along Right-of-Way:

There was no expenditure under this heading in 1972.

ITEM #12

Chip Seal and Surface Seal

In 1972 Flintkote Company of Canada Ltd. was contracted to Chip Seal (3/8" Chips) and Armour Coat (1/2" - 3/4" - 3/8") various City Streets. In addition, various City Streets were Surface Sealed (3/8" Minus) by Diamond Construction (1961) Ltd.

(1) Chip Seal with 3/8" Chips

Expenditure.....\$7,286.20

Under this heading the following Roads and Streets were resurfaced with 3/8" Chips:-

<u>Location</u>	<u>Lineal Feet</u>
Forest Hill (Crossing to Forest Hill Cemetery)	2,700
Prospect St. (Curbed-City Limits)	<u>3,000</u>
TOTAL.....5,700	
5,700 Lineal Feet = 1.08 miles	

The above expenditure was obtained as follows:

Materials.....	\$6,945.88
City labor.....	232.32
City machinery.....	<u>108.00</u>
TOTAL... <u>\$7,286.20</u>	

(2) Surface Seal 3/8" Minus Asphalt

Expenditure.....\$47,580.87

Under this heading the following streets were surface sealed with 3/8" Minus Asphalt by Diamond Construction (1961) Ltd.

<u>Location</u>	<u>Lineal Feet</u>
Woodstock Road-Hanwell Road to Golf Club Road.....	1,550
Needham St. - York to Regent.....	1,250
Aberdeen St.-Carleton to C. N. R. Rt.-of Way.....	2,300
Churchill Row-Regent to C.N.R. Rt.-of- Way.....	1,650
Argyle St.-York St. to Smythe St.....	1,950
Victoria St.-York St. to Smythe St.....	1,950
Queen St.-Subway to Church St.....	800
Queen St. - Subway.....	400
Waterloo Row - Elmcroft to No. 523.....	1,100
Carleton St.-King St. to Campbell St....	750
Union St.-Gill St. to St. Mary's St.....	3,450
St. Mary's St.-Union St. to Water St....	300
Water St.-St. Mary's St. to Bridge St...	550
Clark St.-Union St. to C.P.R.....	400
Clark St.-MacLaren Ave. to Hillcrest Dr.	<u>550</u>

TOTAL.....18,950

18,950 Lineal Feet = 3.59 miles

Following is the expenditure for materials and labor for the Surface Sealing of the above Streets:-

Materials.....	\$42,896.96
Hired machinery.....	100.00
City machinery.....	1,344.25
Labor.....	<u>3,239.66</u>

TOTAL.....\$47,580.87

Street preparatory work for Chip Seal and Surface Seal was done by City Crews. Total expenditure for Chip Sealing and Surface Sealing under Roads and Streets.....\$54,867.07

ITEM #13

Administration

Expenditure.....\$5,031.16

The above amount represents overhead costs on time-keeping and accounting.

ITEM #14

City Yard and Maintenance Depot

Gross Expenditure.....\$23,405.74  
Credit.....8,703.98

NET EXPENDITURE.....\$14,701.76

City Yard

Caretaker at City Yard, repair work on City  
Yard, Heat, Power, etc.

Gross Expenditure .....\$10,230.47  
Credit.....8,600.00

NET EXPENDITURE.....\$ 1,630.47

The above credit was for space rental to other  
City Departments.

The above expenditure is made up as follows:

Labor.....	\$ 6,722.10
Hired machinery.....	5.00
City Machinery charges.....	419.00
Light, power, telephone.....	881.28
Furnace Oil (8,861 Gallons).....	1,457.65
Repairs to City Yard.....	421.53
Miscellaneous (Tools, soap, towels, etc.)....	<u>323.47</u>

TOTAL.....\$10,230.47

Less CREDIT.....\$ 8,600.00

NET EXPENDITURE.....\$ 1,630.47

The City Yard situated on Dundonald Street is being used  
by the following Departments:-

"Water and Sewer"  
"Parks and Trees"  
"Street Cleaning"

Maintenance Depot

Expenditure.....\$13,071.29

The above expenditure of \$13,071.29 is made up as follows:

Labor.....	\$ 6,993.04
City Machinery charges.....	254.00
Light, Power, telephone.....	2,031.83
Furnace Oil (11,982 Gallons).....	1,867.87
Repairs.....	1,309.05
Miscellaneous (Tools, soap, towels, etc.)....	<u>615.50</u>
TOTAL.....	<u>\$13,071.29</u>

ITEM #15

Street Signs

Purchasing, repairing and installing Street Signs on City Streets.

The expenditure under this heading amounted to \$4,747.15 and was made up as follows:-

Labor.....	\$ 1,301.38
City Machinery.....	14.00
Materials.....	<u>3,536.77</u>
Less CREDITS....\$ 105.00	
TOTAL..... <u>\$ 4,747.15</u>	

In addition to the listed expenditures, there is included under "Roads and Streets" an expenditure of \$38,547.43 which does not show in any of the previous accounts and is made up as follows:-

City Machinery (Barricades).....	\$ 8.00
City of Fredericton (City Pension)...	19,009.80
Canada Pension.....	8,324.65
Fuels and Lubricants.....	19,793.41
*Miscellaneous (Roads & Streets).....	<u>15,603.95</u>
TOTAL.....\$62,739.81	

\*Includes such things as Workmen's Compensation, Licenses, Safety Supplies, Tender Calls, Paint, Lumber and First Aid Supplies.

LESS CREDITS:-

Journal Voucher (Inter Department Pensions for City Pensions).....	\$11,534.23
Journal Voucher (Inter Department Pensions for Canada Pension).....	5,597.96
Journal Voucher (Gas, Diesel, Oil, Varsol, Antifreeze, Bulk Oil).....	6,651.51
Petrofina Canada Ltd. (Credit on Drums).....	91.00
Journal Voucher.....	100.08
R. Dorcas (Long Distance Calls).....	17.60
Gorman Construction (Lawn and Post Damages).....	<u>200.00 \$24,192.38</u>

NET EXPENDITURE.....\$38,547.43

TABLE COMPARING YEARLY COSTS OF LABOR AND HIRED  
MACHINERY ON ROADS AND STREETS ITEMS

ITEM	1969	1970	1971	1972
1. Sanding Streets	18,919.25	13,707.47	16,930.94	22,338.45
2. Snowplowing				
Sidewalks	6,075.34	4,492.84	7,077.38	10,945.46
3. Snow Control	69,070.15	73,432.19	122,556.12	155,087.03
4. Streets Account	43,927.08	38,724.30	54,650.07	55,327.12
5. Equipment Repair	-	16,031.85	16,123.43	12,884.84
6. Grading &				
Gravelling	1,129.04	571.87	340.93	248.28
7. Lincoln Road	590.15	465.37	59.93	627.57
8. Wilsey Road	454.09	2,351.64	483.01	616.32
9. Doak & Flanagan				
Roads	564.87	1,394.38	66.62	265.66
10. Maryland Road	833.93	2,219.72	2,190.18	332.02
11. Rural Roads	87.32	55.25	103.03	266.64
12. Asphalt Repairs	18,653.57	39,016.15	30,963.01	23,057.62
13. Motor Graders	848.13	1,597.02	2,050.49	1,036.45
14. Parking Lots	1,129.95	892.31	352.28	8.49
15. Clearing Along				
Rts.-of-Way	1,520.85	169.95	-	-
16. Chip Seal	631.63	559.44	153.88	232.32
Surface Seal	911.67	1,716.21	1,192.70	3,339.66
17. Administration	-	2,168.96	5,637.60	5,031.16
18. Maintenance Depot	-	-	7,363.87	6,993.04
City Yard	-	9,365.52	6,066.73	6,727.10
19. Street Signs	-	1,722.52	1,290.96	1,301.38
 TOTALS.....	\$165,347.02	\$210,654.96	\$275,653.16	\$306,666.61

The following items of machinery were purchased in 1972 and charged to Roads and Streets:-

1 - 1972 Ford Custom Fordor, color Dk. Green,  
Serial No. 2E51F249124, Automatic Shift,  
V-8 Engine, Heater & Defroster, oil filter,  
5 nylon tires 4 ply, 2 sunvisors, signal  
lights, to be undercoated.  
Wheel base 119"  
Wheel size 7.75 x 15.....\$4,210.00  
Less Trade-in allowance (1969 Ford  
Two-door Sedan, Serial No.  
91350FL82472.....\$1,973.00 \$2,237.00

Plus Provincial Sales Tax.. \$ 178.96

Total.....\$2,415.96

License.....\$ 41.59

TOTAL.....\$2,457.55

1 - Galion Motor Grader Model T-400,  
Serial No. T400A-HC-01034,  
Motor No. UD407-CLQ-140A-633000 1U000629

1 - New Craig Wing Model 630-12  
Serial No. 68303.....\$35,821.00

Less Trade-in 1961 Used Galion Model 118  
Serial No. C118-6-01035  
Allowance.....\$16,821.00

\$19,000.00  
Plus 8% N.B. S. S. & E Tax ..... \$ 1,520.00

TOTAL.....\$20,520.00

1 - 1972 International Scout,  
Serial No. G505299.....\$ 4,281.50

Less Trade-in 1968 Willys Jeep.....\$ 1,281.50

\$ 3,000.00  
Plus Provincial Sales Tax.....\$ 240.00

\$ 3,240.00  
License..... 6.00  
TOTAL.....\$ 3,246.00

1 - F600 Ford Truck, Serial No. F61BCPO9641..\$ 6,460.00

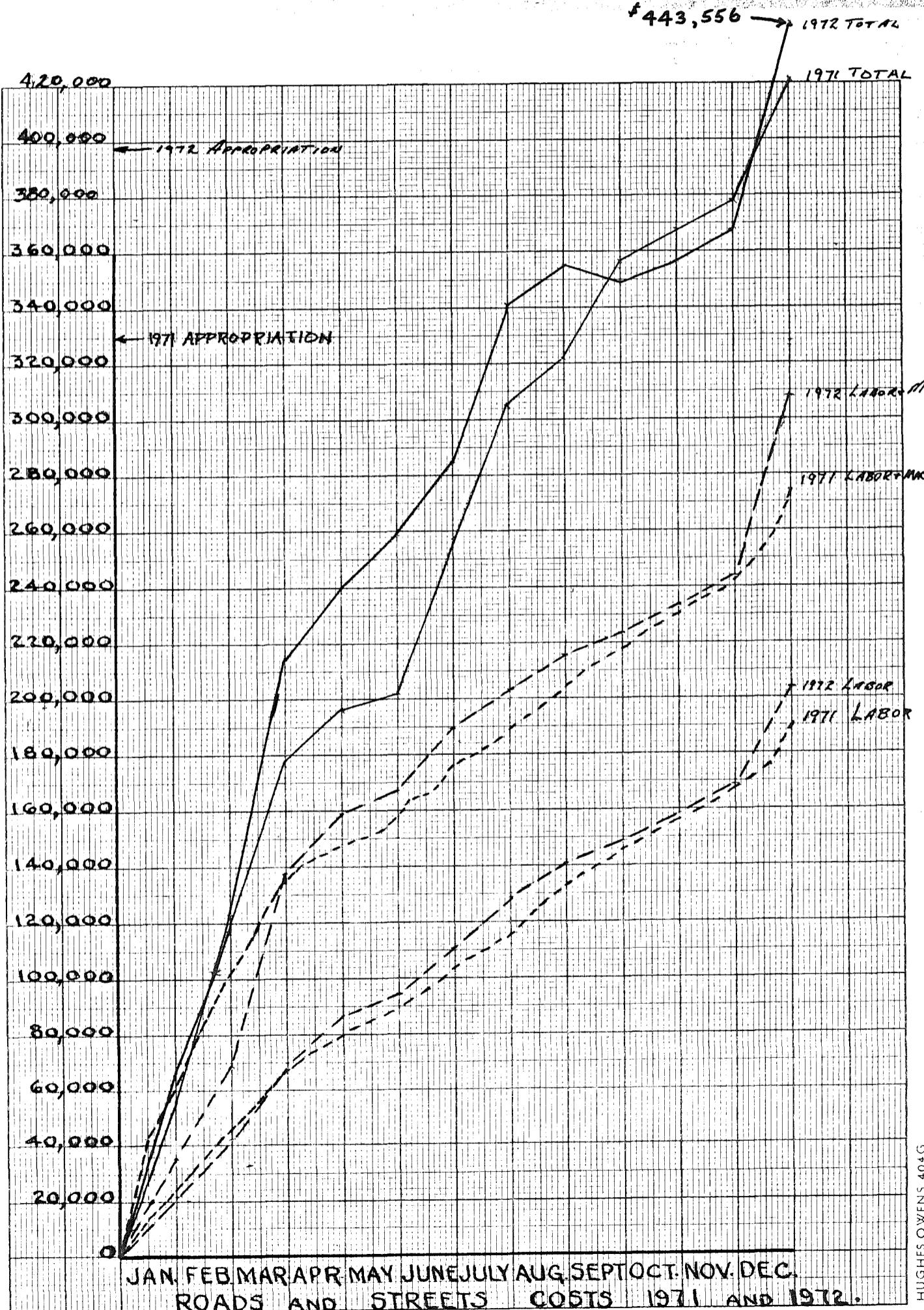
Plus 8% S. S. & E Tax.....\$ 516.80

TOTAL.....\$ 6,976.80

1 - 1968 Mercury 1/2 Ton Pickup, Serial  
No. F-10ACD02920, From City Police  
Department  
Purchase Price.....\$ 500.00

The following is a list of vehicles and machinery used in the Roads and Streets Department, together with the repair costs for 1971 and 1972, including tires and tubes.

Name of Vehicle	Year Purchased	Repairs 1971	Repairs 1972
Austin Western Grader (300 Pacer) #15	1962	1,156.32	3,560.78
Galion Grader Model T-400 #38	1972	-	484.96
Galion Grader Model 118 #36	1966	3,249.32	3,118.20
Caterpillar D-5 Bulldozer #27	1969	3,737.63	414.80
International TD-8 #26	1971	30.38	587.63
Galion Grader (Traded 1972)	1961	3,788.73	8.78
Case 750D Bulldozer #50	1965	505.53	225.22
Case 850 Bulldozer #48	1968	3,646.31	3,370.95
Dodge Vacall #42	1971	65.53	657.55
HyHoe 3/8 Yd. Backhoe	1964	2,853.70	5,672.12
Unit 3/4 Yd. Backhoe	1957	1,391.70	335.87
Case W9 Frontend Loader #25	1967	1,812.18	4,294.65
Allis Chalmers Loader #46	1970	1,026.47	2,660.63
Arpic Compressor #22	1953	82.95	-
Ingersol Rand Compressor #23	1957	449.12	-
Copco Compressor #68	1964	52.80	156.89
Ingersol Rand Compressor #58	1969	9.91	3.66
Tarvia Roller Model #157	1955	98.00	-
Essick Roller #60	1970	387.12	310.56
Willys Jeep #12	1971	33.97	723.04
Willys Jeep #40	1968	670.63	413.61
Ford Bronco #28	1969	731.15	557.36
Ford 3 Ton #43	1970	210.26	385.98
Dodge 3 Ton	1969	631.67	581.93
Dodge 3 Ton	1967	226.77	913.47
International 3 Ton #55	1968	154.27	440.37
Dodge $\frac{1}{2}$ Ton #3	1970	150.31	174.01
Dodge $\frac{1}{2}$ Ton #51	1967	337.49	182.13
G.M.C. Panel #4	1968	325.31	255.85
Chevrolet 3 Ton	1971	158.10	172.81
Dodge $\frac{1}{2}$ Ton #6	1971	61.40	133.57
Miller Welder #65	1959	736.04	107.61
International Scout #29	1972	-	38.00
Ford Custom	1969	120.11	123.44
Ford Custom Fordor #1	1972	-	54.19
Vibras Compactor #59	1969	-	29.27
Ford 3 Ton #21	1972	-	18.42
1968 Mercury $\frac{1}{2}$ Ton	1972	-	19.74
Willys Jeep #11	1970	400.71	823.66
Essick Roller #64	1971	-	58.81
Expendable Accessories (Grader blades, bolts, nuts, bulldozer blades & tools, etc.)		586.90	1,492.20
TOTAL COST.....		\$29,878.79	\$33,562.72



The following equipment is used on Snow Control and the repair and maintenance cost for this equipment is shown as follows:-

Name of Vehicle	Year Purchased	Repairs 1971	Repairs 1972
Sicard Snow Blower #30	1949	\$ 1,247.19	\$ 141.80
Sicard Snow Blower #39 (1952 Model)	1959	922.75	1,825.79
Sicard Snow Blower #47	1963	2,240.45	1,554.10
Ford Sand Spreader #61	1960	2,048.29	1,266.57
International Sand Spreader #62	1951	488.05	225.93
Chevrolet Sand Spreader #10	1960	405.64	240.87
Oil-Fired Boiler		330.88	113.48
Bombardier #54	1968	686.11	1,605.23
<b>TOTAL COST.....</b>		<b>\$8,369.36</b>	<b>\$6,973.77</b>

The above costs include City labor, outside labor and parts for the equipment shown.

#### CAPITAL ACCOUNT CURB AND GUTTER

The net expenditure under this heading amounted to \$52,677.53.

For the above expenditure, concrete curb and gutter was constructed at the following locations:-

<u>Location</u>	<u>Lineal Feet</u>
Surrey Cres. (Canterbury Drive "N" to Canterbury Drive "S") - Both Sides.....	2,759
Limerick Road (Hearne St. to McNair Dr.)-	
North side.....	936
Ayres Street (McNair Drive to Flemming Rd)-	
Both Sides.....	1,465
Cameron Court.....	2,384
Colonial Heights (Golf Club Road to Residence #225).....	3,337
Parksid Drive (Smythe St. to Residence #65)..	992
Wright St. (Edinburgh St. to Edinburgh St.)...	<u>3,105</u>
<b>TOTAL.....</b>	<b><u>14,978</u></b>

All the above listed Curb and Gutter was constructed by City Crews.

All the concrete poured was purchased ready-mixed from Gordon's Ready-Mix Limited at a price of \$19.80 per cubic yard.

The unit cost of one lineal foot of curb and gutter, found by dividing the total length laid, which equal 14,978 lineal feet into the total cost of \$52,677.53 is \$3.51 per lineal foot. The topsoiling of boulevards is included in this cost.

The unit cost of one lineal foot of curb and gutter minus topsoiling was \$2.96 per lineal foot and was calculated as follows:

Topsoiling costs

Labor.....	\$ 5,182.98
Hired trucks and machinery.....	117.90
City machinery.....	723.00
Materials (1,702 yds. topsoil).....	<u>2,403.00</u>

TOTAL....\$ 8,426.88

Total cost for Curbing, including Topsoiling.....\$52,677.53

Cost of Topsoiling.....\$ 8,426.88

TOTAL COST OF CURBING.....\$44,251.00

$\frac{\$44,251}{14,978 \text{ ft.}}$  = \$2.96 per lineal foot

Cost per lineal foot of Topsoiling....\$8,426.88 = \$0.56 per  
14,978 ft. lineal  
foot

Labor cost of constructing 1 lineal foot  
of Curb and Gutter, minus Topsoiling was

.....\$20,973.26 = \$1.40 per lineal foot  
14,978 ft.

CAPITAL ACCOUNT PAVING

In 1972 Diamond Construction (1961) Limited was awarded a contract to lay pavement and resurface a number of City Streets. The material cost amounted to \$113,109.05 and was made up as follows:

Diamond Construction (1961) Ltd.

2,955.60 tons 3/4" Hot Mix Asphalt @ \$10.00 per ton...	\$ 29,556.00
3,427.00 tons 3/8" Minus Asphalt @ \$12.00 per ton...	41,124.00
2,898.75 tons 1/2" Seal @ \$11.00 per ton...	31,886.25
7,670 Gallons Tack Coat @ \$0.05 per gal....	383.50
6,582 Gallons Primer @ \$0.05 per gal....	329.10

Gorman Construction Ltd.

53.70 tons 3/4" Hot Mix Asphalt @ \$ 9.00 per ton...	\$ 483.30
194.00 tons Seal @ \$10.00 per ton...	1,940.00

Bond Discount (1971 Program) .....\$ 465.30

Bond Discount (1972 Program) .....\$ 4,139.34

Miscellaneous (Advertisement, paint, pension fund, contribution & portion of staff salaries).....\$ 2,802.26

TOTAL....\$113,109.05

The Street preparatory work, other than the laying in place of the pre-mixed material, was done by regular City Crews at an expenditure of \$13,995.28 made up as follows:

City Labor.....	\$ 8,714.78
Hired trucks and machinery.....	1,326.50
City Machinery.....	<u>3,954.00</u>
TOTAL.....	<u>\$13,995.28</u>

The total expenditure under this heading amounted to \$127,104.33 and was made up as follows:

<b>City Labor.....</b>	\$ 8,714.78
Gorman Construction Ltd.....	2,423.30
Hired trucks and machinery.....	1,326.50
City machinery charges.....	3,954.00
Diamond Construction (1961) Ltd.....	103,278.85
Bond Discounts (1972 & 1971).....	4,604.64
Miscellaneous.....	<u>2,802.26</u>
<b>TOTAL....</b>	<b>\$127,104.33</b>

The paving program required the supply and placement of the following grades of materials:-

- 1). Pavement 3/4" Dense Mix
  - 2). Recap 1/2" Minus
  - 3). Surface Seal 3/8" Minus

1). NEW PAVEMENT

The following Streets were paved with 3/4" Hot Mix by  
Diamond Construction (1961) Limited:-

<u>Location</u>	<u>Lineal Feet</u>
Surrey Crescent.....	1,380
Limerick Road.....	940
Ayres Street .....	730
Cameron Court.....	1,200
Colonial Heights.....	1,670
Parkside Drive.....	500
TOTAL.....	6,420

6,420 lineal feet = 1.22 miles

For the above, the following materials were used:

6,582 gallons Prime @ \$0.05 per gal.....\$ 329.10  
2,955.60 tons 3/4" Hot Mix Asphalt  
                  @ \$10.00 per ton..... 29,556.00  
53.70 tons 3/4" Hot Mix Asphalt  
                  @ \$9.00 per ton..... 483.30

**TOTAL.....\$30,368.40**

The Street grading and preparatory work was done by regular City Crews. The pre-mixed material was supplied by Diamond Construction (1961) Ltd. from its plant situated at Springhill on Route #2, Woodstock Road. The Company charged the City of Fredericton \$10.00 per ton in place.

2). RECAP 1/2" MINUS

The following Streets were recapped by Diamond Construction (1961) Ltd. in 1972:-

<u>Location</u>	<u>Lineal Feet</u>
Connaught Street (York St. to Smythe St.....)	1,950
Albert St. (Connaught St. to York). Smythe St. (Dundonald St. to Edinburgh St.).....	1,200 930
MacLaren Avenue (Hughes St. to Gibson St.).....	4,700
TOTAL....	<u>8,780</u>

8,780 lineal feet = 1.66 miles

The following material was used for the above streets:

2,898.75 tons 1/2" Seal @ \$11.00 per ton... \$31,886.25

The Company charged the City of Fredericton \$11.00 per Ton in place.

3). SURFACE SEAL 3/8" MINUS

The following City Streets were surface sealed under "Capital Account" with 3/8" Minus Hot Mix:-

<u>Location</u>	<u>Lineal Feet</u>
Pederson Crescent .....	550
Mansfield Street.....	650
Lorne Street.....	600
Bessborough Street.....	1,100
Massey Street.....	1,750
Oxford St. (York St. to Eglinton St.	950
Simcoe Court.....	700
Pembroke Crescent.....	950
Gregg Court.....	500
Jones Street. (REMOVED).....	600
College Hill Road.....	1,800
Colter Court.....	250
Essex Street.....	200
Manchester Court.....	500
Coventry Crescent.....	1,450
Canterbury Dr. (Liverpool St. to Cambridge Crescent).....	350
Folkestone Court.....	250

<u>Location</u>	<u>Lineal Feet</u>
Rochester Street.....	850
Leeds Drive.....	1,600
Southampton Drive.....	2,650
McEvoy St. (MacLaren Ave. to Neill St.)	2,000
Bailey Drive (Noble St. to Kennedy Court).....	650
Perley Court (B...)	200
Kennedy Court.....	200
Hillcrest Drive (Clark St. to Forbes St.).....	400
Windsor St. (Beaverbrook St. to Albert St.).....	300
Beaverbrook St. (Windsor St. to Tweedsmuir St.).....	500
<b>TOTAL....</b>	<b><u>22,500</u></b>

22,500 lineal feet = 4.27 miles

For the above Streets, the following materials were used:

3,427 tons 3/8" Minus Asphalt @ \$12.00 per ton..	\$41,124.00
194 tons 3/8" Minus Asphalt @ \$10.00 per ton..	1,940.00
7,670 gals. Tack Coat @ \$0.05 per gal...	383.50
<b>TOTAL.....</b>	<b><u>\$43,447.50</u></b>

The Company charged the City of Fredericton \$12.00 per ton in place.

#### CAPITAL ACCOUNT DOMESTIC SEWER

N. B. H. C. 1971 Expenditure.....	\$ 5,544.36
Gross Expenditure and Stocked Material..	<u>133,077.00</u>
	\$138,621.36
Less Inventory December 31, 1972.....	<u>13,411.59</u>
	\$125,209.77
CREDIT.....	<u>99,654.22</u>
<b>NET EXPENDITURE.....</b>	<b><u>\$ 25,555.55</u></b>

Included in the Net Expenditure of \$25,555.55 is the amount of \$1,079.63 holdback from jobs completed in 1971 and showing in 1972 accounts.

The above credit is made up as follows:-

Journal Vouchers (materials paid for by Capital Account Domestic Sewer and charged to other City Departments).....	\$ 9,297.78
Work done & materials sold to Private Parties.....	399.69

Greendale Ltd. )		\$ 1,612.58
N.B. Housing Corporation )		32,324.12
Hill Bros. Ltd. )	Local	9,216.91
Fredericton Housing Ltd. )	Improvement	7,580.42
Parkside Development )	Charges	18,333.94
Central Trust Company )		<u>348.42</u>
	SUB TOTAL..	\$ 79,113.86

PLUS CREDITS ON SHARED COST PROJECTS:

Canada Department of Agriculture (Sewer-Lincoln Road).....	\$ 10,000.00
Maritime Forest Ranger School.....	<u>10,540.36</u>
	\$ 20,540.36

TOTAL CREDITS..\$ 99,654.22

Domestic Sewer Mains were constructed at the following locations:-

LOCATION	12"	10"	8"	LINEAL FEET 6" Ductile F.M.
N.B. Housing Corp. Land Assembly-Southwood Park (Installed by F'ton. Housing & Const. Co. Ltd.)			3,427	
Princess Anne Court (Installed by John Kilburn & Sons Ltd.)			124	
Ashfield St. (Installed by Forbes & Sloat Ltd.)			1,620	
Skyline Acres (1972) (Installed by F'ton. Housing & Const. Co. Ltd.)			2,526	
Lincoln Road (Installed by John Kilburn & Sons Ltd.)	1,631			
McLeod Ave. (Installed by City Crews)			250	
Regent St. (Installed by City Crews)			400	
Forest Ranger School (Installed by John Kilburn & Sons Ltd.)				950
Parkside Development (Installed by F'ton. Housing & Const. Co. Ltd.)	718		740	
TOTALS	2,349		8,907	950

Total lineal feet installed in 1972....12,206

The actual cost of installing the above listed Domestic Sewer Mains was as follows:-

Location	Payment To Contractors Including Reserve for Holdback	City Labour and Machinery	Materials	Total
N. B. Housing Corp. Land Assembly-Southwood Park	17,383.88	573.80	8,822.08	26,779.76
Maritime Forest Ranger School	12,492.50	513.97	3,997.77	17,004.24
Princess Anne Ct.	1,006.50	113.25	492.83	1,612.58
Ashfield St.	4,525.00	628.85	4,063.06	9,216.91
*Skyline Acres (1972)	--	685.48	6,894.94	7,580.42
Lincoln Road	11,797.50	3,478.27	9,240.56	24,516.33
McLeod Ave.-Regent St.	--	3,513.62	2,125.92	5,639.54
Parkside Develop.	13,282.00	814.05	4,237.89	18,333.94
TOTALS.....	\$60,487.38	\$10,321.29	\$39,875.05	\$110,683.72

\* Labor and Machinery supplied by Fredericton Housing and Construction Co. Ltd. and does not appear on City Accounts.

The above costs include any holdback payments thus showing the actual cost of construction greater than the net expenditure.

Following is the cost of laying various sizes of pipe including manholes by Contractors and City Workmen and Machinery.

Cost by Contractor per Lineal Foot:

Location	12"	10"	8"	A.C.D.S. 6" Duct. F.M.
N.B. Housing Corp. Land Assembly, Southwood Pk. (F'ton. Housing & Const. Co. Ltd.)		8.15 (1971)	7.74	
Princess Anne Ct. (John Kilburn & Sons Ltd.)			13.00	
Ashfield St. (Forbes & Sloat Ltd.)			5.69	
**Skyline Acres 1972 (F'ton. Housing & Const. Co. Ltd.).			3.00	
Lincoln Road (John Kilburn & Sons Ltd.)		15.03		
Forest Ranger School (John Kilburn & Sons Ltd.)				18.18
Parkside Development (F'ton. Housing & Const. Co. Ltd.)	17.74		12.26	

\*\* - Does Not Include Installation of Pipe

Cost of City Crews & Machinery:-

Location	8" A.C.D.S.
McLeod Avenue	\$9.02

All the above Domestic Sewer lines were laid in a common trench with the water main.

Materials in Stock as of December 31, 1972:-

2,241 lineal feet of 8" Asbestos Cement Pipe @ \$1.56 per ft.....	\$ 3,495.96
1,301 lineal feet of 10" Asbestos Cement Pipe @ \$2.04 per ft.....	2,654.04
770 lineal feet of 12" Asbestos Cement Pipe @ \$2.54 per ft.....	1,955.80
2-10" straight thru Special "B" Sections @ \$145.05 ea.....	290.10
5-8 " straight thru Special "B" Sections @ \$133.71 ea.....	668.55
7-8 " 3-Way-Right Special "B" Sections @ \$150.72 ea.....	1,055.04
7-8 " 3-Way-Left Special "B" Sections @ \$150.72 ea.....	1,055.04
29 "A" Sections @ \$20.70 ea.....	600.30
16 Plain "B" Sections @ \$41.40 ea.....	662.40
4 "C" Sections @ \$72.71 ea.....	290.84
6 "DX" Sections @ \$9.04 ea.....	54.24
3 C.I. Frames @ \$34.71 ea.....	208.26
3 C.I. Covers @ \$26.78 ea.....	80.34
10 42" x 12" Precast Sumps @ \$20.70 ea.....	207.00
6 Covers @ \$22.28 ea.....	133.68
TOTAL.....	<u>\$13,411.59</u>

Summary of Costs - Maritime Forest Ranger School

1971 - \$ 4,076.47
1972 - <u>17,004.24</u>
TOTAL COST.... <u>\$21,080.71</u>
Less Shared Cost by
Maritime Forest Ranger
School..... <u>\$10,540.36</u>
NET COST TO CITY..... <u>\$10,540.35</u>

CAPITAL ACCOUNT SURFACE SEWER

N. B. H. C. 1971 Expenditure.....	\$ 38,644.68
Gross Expenditure and Stocked Material.....	<u>120,420.89</u>
	159,065.57
Less Inventory December 31, 1972.....	<u>5,339.83</u>
	153,725.74
Credit.....	<u>\$126,402.07</u>
NET EXPENDITURE.. . . . . \$ 27,323.67	

The above credit is made up as follows:

Journal Vouchers (Materials paid for  
by Capital Account Surface Sewer and  
charged to other City Departments) ..\$ 15,365.82

Work done & materials sold to  
Private Parties.....\$ 1,566.75

Central Trust Co. )		\$ 375.22
Greendale Ltd. )	Local	3,263.42
N. B. Housing Corp. )	Improvement	54,751.81
Hill Bros. Ltd. )	Charges	15,027.50
F'ton. Housing Ltd. )		10,403.39
Parkside Development)		<u>25,648.16</u>

TOTAL.....\$126,402.07

Under this heading Surface Sewer Mains and Laterals  
were constructed at the following locations:

Location	Lineal Feet					
	10"	12"	15"	18"	24"	30"
N. B. Housing Corp.- Land Assembly, Southwood Park (Installed by F'ton. Housing & Const. Co. Ltd.)	90 (1971)	800 (1971)	576 (1971)	1888 (1971)	392 (1971)	
Princess Anne Ct. (Installed by John Kilburn & Sons Ltd.)	318	412				
Ashfield St. (Installed by Forbes & Sloat Ltd.)	116	60				
Skyline Acres 1972 (Installed by F'ton. Housing & Const. Co. Ltd.)	180	1400	460			
Parkside Develop. (Installed by F'ton. Housing & Const. Co. Ltd.)	240	1776	860	40	400	
	124	294	444	717		

Location	Lineal Feet					
	10"	12"	15"	18"	24"	30"
Wilsey Rd. (Installed by City Crews)		504	180			
Hanson St. (Installed by City Crews)		144				
Smythe St. @ Beechwood Cres. (Installed by City Crews)	220					
Northumberland St. (Installed by City Crews)	184					
Neill St. (Installed by City Crews)			186			
Atkinson Bldg. (Installed by City Crews) Chg. to Owner	122					
TOTALS.....	1,504	4,680	2,130	757	400	

ALSO:

Backdrain (University Ave. to Waterloo Row) -  
140 ft. of 72" Galv. Pipe

Canterbury Drive - 20' Offtake

Colonial Heights - 142' of 42" Galv. Pipe

Total lineal feet installed under this heading in 1972 was ..... 9,773

An itemized account was kept for the installing of the above Sewers at the following locations:

Location	Payment to Contractors Including Reserve for Holdbacks	City Labour and Machinery	Material	Total
N.B. Housing Corp. Land Assembly, Southwood Park (1972)	10,284.72	265.29	5,557.12	16,107.13
Princess Anne Ct.	2,235.00	225.52	752.90	3,263.42
Canterbury Dr.	-	257.22	166.16	423.38
Ashfield St.	7,820.00	1,036.28	6,171.22	15,027.50
Colonial Heights	-	2,064.89	2,292.70	4,357.59

	Payments to Contractors Including Reserve for Holdbacks	City Labour and Machinery	Material	Total
Skyline Acres (1972)	-	606.41	9,796.98	10,403.39
Parkside Development	18,534.00	994.56	6,210.40	25,738.96
Back Drain (University Ave to Waterloo Row)	-	4,794.88	4,574.57	9,369.45
Wilsey Road	-	4,262.61	3,334.73	7,597.34
Hanson Street	-	871.81	295.10	1,166.91
Smythe St. @ Beechwood Crescent	-	1,266.55	580.37	1,846.92
Northumberland St.	-	496.61	479.71	976.32
Neill Street	-	499.38	405.48	904.86
Ayres St.	-	248.53	166.57	415.10
<b>TOTALS.....</b>	<b>\$38,923.72</b>	<b>\$17,890.54</b>	<b>\$40,784.01</b>	<b>\$97,598.27</b>

Following is the cost of laying various sizes of pipe including Catch Basins in place by Contractors and City Workmen and Machinery:-

Cost by Contractor-per lineal foot

Location	CONCRETE PIPE				
	10"	12"	15"	18"	24"
Parkside Dev. (F'ton. Housing & Const. Co. Ltd.)	15.19	15.41	16.08	16.78	
N.B. Housing Corp. Land Assembly, Southwood Park (F'ton. Housing & Const. Co. Ltd.)	10.91	11.14			
Princess Anne Ct. (John Kilburn & Sons Ltd.)	18.47	18.69			
Ashfield St. (Forbes & Sloat Ltd.)	7.01	7.23	7.90		
**Skyline Acres 1972 (F'ton. Housing & Const. Co. Ltd.).	2.14	2.36	3.03	3.73	7.43

\*\* Does not include Installation of Pipe

Cost by City Crews and Machinery-per lineal foot

LOCATION	CONCRETE PIPE					
	10"	12"	15"	18"	24"	30"
Smythe St. @ Beechwood Cres.	\$8.40					
Wilsey Road		\$9.64	\$10.31			
Neill St.				\$ 4.86		
Hanson Street			\$8.09			
Northumberland St.	\$5.30					

Stock on hand December 31, 1972:-

156 lineal feet of 10" Concrete pipe @ \$1.29 per foot...\$ 201.24
1,122 lineal feet of 12" Concrete Pipe @ \$1.51 per foot... 1,694.22
390 lineal feet of 15" Concrete pipe @ \$2.18 per foot... 850.20
40 lineal feet of 18" Concrete pipe @ \$2.88 per foot... 115.20
96 lineal feet of 24" Concrete pipe @ \$6.58 per foot... 631.68
7 Catch Basin (Covers & Frames) @ \$64.52 ea..... 451.64
5 Catch Basin Frames @ \$36.94 ea..... 184.70
17 Manhole (Covers & Frames) @ \$61.49 ea..... 1,045.33
1 Manhole Cover @ \$26.78 ea..... 26.78
4 Manhole Frames @ \$34.71 ea..... 138.84
TOTAL..... <u>\$5,339.83</u>

CAPITAL ACCOUNT WATER

N. B. Housing 1971 Expenditure.....\$ 5,502.93	
Gross Expenditure & Stocked Material... <u>322,883.34</u>	
	\$328,386.27
Less Inventory December 31, 1972..... <u>39,706.68</u>	
	288,679.59
LESS CREDITS.... <u>128,745.24</u>	

NET EXPENDITURE... \$159,934.35

The above credit is made up as follows:

Journal Vouchers (Materials paid for  
by Capital Account Water & sold to  
other City Departments).....\$ 6,461.93

Work done and materials sold to  
Private Parties.....\$ 3,465.50

Greendale Ltd. )	\$ 2,268.72
N. B. Housing Corp. )	51,998.44
Hill Bros. Ltd. ) Local	19,707.81
Fredericton Housing Ltd.) Improvement	15,886.40
Parkside Development ) Charges	20,662.63
Central Trust Co. )	<u>284.09</u>

Plus Shared Cost Project..... SUB TOTAL...\$120,735.52

Maritime Forest Ranger School,..... 8,009.72

TOTAL CREDITS. \$128,745.24

Water Main installations were made at the following locations:-

LOCATION	LINEAL FEET							
	4" C.I.	6" C.I.	8" C.I.	10" C.I.	4" Duct	6" Duct	10" Duct	12" Duct
N.B. Housing Corp. Land Assembly (Installed by F'ton. Housing & Const. Co. Ltd.)		586	1471	1495				
Princess Anne Ct. (Installed by John Kilburn & Sons Ltd.)	140	5						
Ashfield St. (Installed by Forbes & Sloat Ltd.)		42	1896					
Skyline Acres 1972 (Installed by F'ton. Housing & Const. Co. Ltd.)		2366	666					
MacLaren Ave. (Installed by John Kilburn & Sons Ltd Ltd.)		37	4					5127
Forest Ranger School (Installed by John Kilburn & Sons Ltd.)							502	
Parkside Dev. (Installed by F'ton. Housing & Const. Co. Ltd.)		98		810	246			
<b>TOTALS....</b>	<b>140</b>	<b>3134</b>	<b>4037</b>	<b>2305</b>	<b>246</b>	<b>-</b>	<b>502</b>	<b>5127</b>

Total Lineal Feet Laid in 1972----15,491

An itemized account was kept of installing Water Mains at the following locations and expenditures were made up as follows:

Location	Payments to Contractors Including Reserve for Holdbacks	City Labour And Machinery	Materials	Total
N.B. Housing Corp., Land Assembly, Southwood Park	19,455.75	596.57	26,443.19	46,495.51
Princess Anne Ct.	1,712.50	43.65	512.57	2,268.72
Ashfield St.	7,114.00	499.08	12,094.73	19,707.81
*Skyline Acres 1972	-	493.30	15,393.10	15,886.40
MacLaren Ave.	55,428.00	8,573.76	64,720.77	128,722.53

Location	Payments to Contractors Including Reserve for Holdbacks	City Labour and Machinery	Materials	Total
Forest Ranger School	6,574.00	688.78	4,146.57	11,409.35
Parkside Development	10,665.20	1,074.43	8,923.00	20,662.63
TOTALS.....	\$100,949.45	\$11,969.57	\$132,233.93	\$245,152.95

\*Labour and Machinery supplied by Fredericton Housing & Construction Co. Ltd. and does not appear in City Accounts.

All the above costs include any holdback payments which will appear in 1973 Accounts.

The following shows the cost per foot for laying various sizes of pipe by Contractors and includes gates and manholes, but does not include fire hydrants.

LOCATION	SIZE OF PIPE							
	4" C.I.	6" C.I.	8" C.I.	10" C.I.	4" Duct.	6" Duct.	10" Duct.	12" Duct.
Princess Anne Ct. (John Kilburn & Sons Ltd.)	15.61							
N.B. Housing Corp., Land Assembly (F'ton. Housing & Const. Co. Ltd.)		10.93	12.34	13.95				
Ashfield St. (Forbes & Sloat Ltd.)		8.69	10.20					
**Skyline Acres 1972 (F'ton. Housing & Const. Co. Ltd.)		4.95	6.36					
MacLaren Ave. (John Kilburn & Sons Ltd.)							24.80	
Forest Ranger School (John Kilburn & Sons Ltd.)							24.20	
Parkside Develop. (F'ton. Housing & Const. Co. Ltd.)		16.00		19.02	14.89			

\*\* Does Not Include Installation of Pipe

Summary of Costs - Maritime Forest Ranger School

1971-----\$ 4,610.09  
1972-----11,409.35

TOTAL COST.....\$16,019.44  
Less Shared Cost  
by Maritime  
Forest School.....\$ 8,009.72  
  
NET COST TO CITY....\$ 8,009.72

Total Inventory as of December 31, 1972.....\$39,706.68

In addition to the laying of the above listed Water Mains  
the following is included under this heading:-

- 1). Water - Forest Hill Reservoir, Canterbury Drive.
- 2). Water - High Level Reservoir.
- 3). Water - Maple Street Well.
- 4). Water - Lincoln Road.

1). Water - Forest Hill Reservoir, Canterbury Drive.

Expenditure-----\$6,164.41

The Expenditure of \$6,164.41 was made up as follows:

MacLaren Atlantic Associates (Engineering  
and Inspection Services).....\$ 239.91

Fredericton Housing & Construction  
Company Limited.....\$ 5,924.50

TOTAL.....\$ 6,164.41

Total Expenditures to Date:

Previous Expenditures.....\$73,874.14  
1972 Expenditure.....\$ 6,164.41

TOTAL.....\$ 80,038.55

2). Water - High Level Reservoir

Expenditure -----\$ 4,233.17

The expenditure of \$4,233.17 was made up as follows:-

Journal Vouchers (Payroll, Machinery,  
Pension Funds).....\$ 491.87  
MacLaren Atlantic Associates  
(Payments for Engineering &  
Inspection Services).....\$ 3,741.30

TOTAL.....\$ 4,233.17

TOTAL EXPENDITURES TO DATE:

Previous Expenditures.....\$175,608.02  
1972 Expenditure.....\$ 4,233.17  
TOTAL.....\$ 179,841.19

3). Water - Maple Street Well

Expenditure-----\$5,587.29

The expenditure of \$5,587.29 was made up as follows:

Labour (Includes Horsnell's, Melanson's, Diamond Canapower's).....	\$ 637.12
Crane Supplies Ltd. (Fittings, Valves, etc.).....	46.68
Phillips & Pringle (Fittings, Bolts, Nuts, etc.)..	53.76
Horsnell's Ltd. (Tie Rods & Clamps, Steel Door, Chlorinator Repair).....	133.38
Smith Transport (Parts from Diamond Canapower)....	11.00
Int-Water Supply (Holdback on Layne Pump).....	1,014.38
Diamond Canapower (Telemetering Equipment).....	3,070.00
Melanson Electric (Wiring Telemetering Equipment, Grounding Transformer).....	267.75
Consolidated Supply (Fuses).....	2.27
Sherwin Williams Co. (Paint).....	13.50
Wallace & Tiernan (Chlorinator Parts).....	132.13
Minister of Finance (Tax on Chlorinator Parts)....	10.57
J. L. Simms & Sons (Materials) .....	5.50
Atlas Building Supplies (Pine).....	3.00
L. E Shaw (Brick).....	41.16
H. S. Gill & Sons Ltd. (Lumber).....	106.48
J. W Bird & Co. Ltd. (Masonry Cement).....	22.75
Miscellaneous Materials (Cement, Rock Dust).....	<u>15.86</u>
	\$ 5,587.29

Total Expenditures to Date:

Previous Expenditures.....\$34,244.24  
1972 Expenditures.....5,587.29

TOTAL.....\$39,831.53

4). Water - Lincoln Road - Survey, Study & Report

Expenditure-----\$7,988.48

Seaboard Surveys Ltd.....\$5,180.48  
MacLaren Atlantic Associates.....2,808.00

TOTAL.....\$7,988.48

Cost of Well Water Supply to Date (South Side)

1953 Test Hole Program.....	\$ 7,500.00
1954 Supply Line and Partial Development of #1 Well	42,271.16
1955 Develop, House & Connecting of #1 Well.....	22,883.05
1956 Remote Control and Landscaping.....	3,048.33
1957 Develop, House & Connecting of #2 Well.....	44,217.72
1958 Holdbacks, etc.....	7,641.01
1958-1959 Test Hole Program.....	24,294.40
1960-1961 Develop, House & Connecting of #3 Well...	46,554.32
1961 Develop, House & Connecting of #4 Well.....	42,834.45
1962 Remote Control and Landscaping of #4 Well....	1,011.41
1965 Test Hole Program (Water Exploration).....	13,597.08
1966-1967 Develop, House & Connecting of Cameron Ct. Well.....	26,642.17

1966 Test Hole Program (Continuation of 1965 Program)...	\$ 5,143.07
1966-1967 Drilling and Testing Well, St. Anne's Point, Woodstock Road, together with a report on future supply.....	6,788.70
1968 Developing and Testing Well #5, St. Anne's Point, Woodstock Road.....	43,233.90
1969 Housing, Installing Pumping Equipment, Connecting #5 Well, St. Anne's Point, Woodstock Road to City supply line in Wilmot Park and landscaping.....	<u>26,272.48</u>
<b>TOTAL....</b> <u><b>\$363,933.25</b></u>	

Capacity available in 1972-----3,300 I.G.P.M.

Present average demand-----1,735 I.G.P.M.

Maximum demand-----2,102 I.G.P.M.

CARLETON WARD WATER SUPPLY 1956-1972 -  
INCLUDING FEEDER LINES, WELLS, RESERVOIR & PUMP HOUSE

1956-1957 Bridge Street

Drilling well, construction of building, installation of pumps and connecting to City Water Main.....	\$ 25,997.25
---	--------------

1957-1958-1959 Highland Avenue Reservoir (1,000,000 I.G.)

Expenditure 1957.....	\$ 23,440.28
Expenditure 1958.....	60,432.95
Expenditure 1959.....	<u>17,267.72</u>
	\$ 101,140.95

1957-1958 Feeder Main to Highland Avenue Reservoir

Expenditure.....	\$ 30,231.00
Expenditure.....	<u>2,353.97</u>
	\$ 32,584.97

1961 Killarney Road Well-Changes in Piping  
to Distribution System.....**\$ 1,375.98**

1963-1964 Highland Avenue Well -

Drilling near Reservoir constructed in 1959, erection of building to house equipment and electrical 1963..	\$ 13,781.74
--	--------------

Installing of Pumping Equipment, connecting from Well to Reservoir, installation of meters and completion of electrical equipment 1964	<u>\$ 5,427.08</u>
	\$ 19,208.82

1970 - Total Cost of Water Exploration & Development Program

Maple Street.....	\$ 11,720.00
Noble Street.....	3,600.00
Forbes Street.....	1,008.00
Setting, Testing & Pumping, 28 hrs.	
@ \$20.00 per hour.....	560.00
City labor, machinery charges and materials.....	<u>491.62</u>
	\$ 17,379.62

1971 - Development of Maple Street Well  
 Including laying of Water Main from  
 Pump House to Well, Constructing Pump  
 House and installing and connecting  
 Pump to Well.....\$ 22,524.24

TOTAL.....\$ 220,211.83

CAPITAL ACCOUNT GRAVEL ROADS

Gross Expenditure.....\$ 116,033.04  
 Credits.....90,229.99

NET EXPENDITURE...\$ 25,803.05

The above credits are made up as follows:

Journal Vouchers (Materials).....	\$ 277.39
John Kilburn & Sons Ltd. (Repairs to Boyne St. Main).....	33.86
Greendale Ltd. )	3,860.47
N.B. Housing Corp. )	47,727.10
Hill Bros. Ltd. ) Local	17,777.39
F'ton. Housing Ltd. ) Improvement	15,306.99
Parkside Development) Charges	4,925.18
Central Trust Co. )	<u>321.61</u>

TOTAL.....\$ 90,229.99

Included in the above expenditures are:-

- 1). Grading and Gravelling Curbed Streets
- 2). Gravel Road Construction

1). Grading and Gravelling Curbed Streets

The list of Streets under this heading will be found under "Capital Curb and Gutter", which is contained in the body of this Report on Page 18. The expenditure for gravelling Curbed Streets amounted to \$19,414.87.

2). Gravel Road Construction.

The cost of constructing and gravelling the following Streets under this heading was as follows:

Location	Lineal Feet	Expenditure
Ashfield Street	1,800	\$ 17,777.39
Princess Anne Court	190	\$ 3,860.47
Southwood Park	3,750	\$ 47,727.10
Skyline Acres 1972	2,930	\$ 15,306.99
* Parkside Development (Incomplete)	450	\$ 4,925.18
<b>TOTALS.....</b>	<b>9,120</b>	<b>\$ 89,597.13</b>

\* Parkside Drive only partially gravelled up to first Court.  
Gravelled portion not up to finish grade.

Total Mileage for new Street Construction for 1972 = 1.73

#### CAPITAL MAINTENANCE DEPOT

Expenditure-----\$4,912.19

The above expenditure is made up as follows:-

Journal Vouchers (Payroll, Pension Funds, Machinery).....	\$ 507.31
Gorman Construction Ltd. (Gravel).....	1,902.22
Diamond Construction Ltd. (Crusher Dust).....	2,421.26
Harry Smith (Pipe Sand).....	<u>81.40</u>

**TOTAL...\$4,912.19**

#### Total Expenditures To Date:

Previous Expenditures.....	\$ 249,886.98
1972 Expenditure.....	<u>4,912.19</u>
<b>TOTAL....</b>	<b><u>\$254,799.17</u></b>

#### CAPITAL TRAFFIC LIGHTS 1972

Gross Expenditure.....	\$ 17,305.09
Credit.....	<u>8,912.93</u>

**NET EXPENDITURE.....\$ 8,392.16**

The above gross expenditure was made up as follows:

Stan Cassidy Ltd. - Final Payment on Supply & Installation of Traffic Control System-Business Section..	\$ 3,500.00
Stan Cassidy Ltd. - Traffic Light Installation-Waggoner's Lane.....	7,450.00
Stan Cassidy Ltd.-Modifications to walk lights at various intersections.....	572.40

Stan Cassidy Ltd. - Spare parts for Traffic Lights....\$	475.20
Canadian General Electric Co. - 2-Flashing 4-Way	
Beacons - Kings College and York	
Kings College and Regent.....	474.70
W. G. Whetstone - Supplying Signal Specs.....	925.00
Stan Cassidy Ltd. - Installation of Lights @ York &	
Kings College and Regent & Kings College.....	248.00
Stan Cassidy Ltd. - Supply and installation of new	
Controller for Subway Traffic Lights.....	1,450.00
City Machinery, Payroll, N. B. Tel, etc.....	1,377.39
Bond Discount.....	<u>832.40</u>
	\$17,305.09

LESS CREDIT:-

National Leaseholds Ltd. (Traffic Light Installation-Waggoner's Lane & Smythe St.).....\$	<u>8,912.93</u>
--	-----------------

NET EXPENDITURE..\$ 8,392.16

CAPITAL ACCOUNT - INDUSTRIAL PARK A. D. B.

Gross Expenditure.....	\$113,796.84
Credit.....	<u>123.67</u>

NET EXPENDITURE....\$113,673.17

The above credit is for corrections to Journal Vouchers.

In 1972, under the above heading the Wilsey and Doak Roads were paved and the Hubbard Road, Hilton Road and Vanier Highway Service Road were armour coated.

(1). NEW PAVEMENT

The following roads were paved with 3/4" Hot Mix by Diamond Construction (1961) Ltd. and then sealed with 1/2" Asphalt.

<u>Location</u>	<u>Lineal Feet</u>
Wilsey Road (from Lincoln Rd. to the intersection of Doak Road)	5,700
Doak Road (from the Wilsey Road to the entrance of Atlas Construction Co. property just south of the Vanier Highway)	<u>1,900</u>
TOTAL .....	<u>7,600</u>

7,600 lineal feet = 1.44 miles

For the above the following materials were used:-

Gorman Construction Ltd. - 39 Tons Base & Seal Asphalt @ \$9.65 per ton.....\$ 376.50
Diamond Construction (1961) Ltd. - 2,919.35 Tons 3/4" Base Seal @ \$10.00 per ton..... 29,193.50
Diamond Construction (1961) Ltd. - 1,144.70 Tons 1/2" Asphalt @ \$11.00 per ton..... 12,591.70

The above listed Streets were laid to a thickness of 3". The Street Grading and preparatory work was done by regular City Crews. The pre-mixed material was supplied by Dimaond Construction (1961) Ltd. from its plant situated at Springhill, Route #2, Woodstock Road.

(2). ARMOUR COATING (1/2" - 3/8" - 3/4") MINUS

Under this heading, the following locations were Armour Coated by Flintkote Company of Canada Ltd.

<u>Location</u>	<u>Lineal Feet</u>
Hubbard Road	950
Hilton Road	1,650
Vanier Highway Service Road	<u>2,300</u>
TOTAL.....	<u>4,900</u>

4,900 lineal feet = 0.93 miles

For the above, the total expenditure amounted to \$19,319.98.

Also under this heading "Capital Account-Industrial Park A. D. B." Surface Sewer was constructed on the Doak Road. This construction was carried out by City Crews at an expenditure of \$3,348.05.

The expenditure was made up as follows:-

Labour.....\$ 740.06
City Machinery..... 594.00
Hired Machinery..... 50.00
Journal Voucher (Pension Fund).... 31.18
Materials..... 1,772.25
Holdback (E.E. McCoy Co. Ltd.).... <u>160.56</u>
TOTAL..... <u>\$3,348.05</u>

Following is the cost per foot of installing this section of Surface Sewer on the Doak Road.

Surface Sewer - 16'-18" Concrete Pipe @ \$11.76 per ft.  
8'-24" Concrete Pipe @ \$15.46 per ft.  
164'-30" Concrete Pipe @ \$17.32 per ft.

CAPITAL ACCOUNT - INDUSTRIAL PARK A. D. B. -  
WATER & FLEMMING ROAD RESERVOIR

Water - Holdback (E.E. McCoy Co. Ltd.).....\$ 978.60  
From Doak Road

Flemming Road Reservoir -

Journal Vouchers (Payroll, Pension Funds)....\$	38.66
Labour.....	121.12
MacLaren Atlantic Associates (Engineering & Inspection).....	1,806.22
Horton Steel Works Ltd.....	31,442.48
E. M. Young (Lag Bolts).....	3.95
Diamond Canapower (Instrumentation).....	1,849.00
Minister of Finance (Tax on Diamond Canapower's Order).....	147.92
C. P. Express (Parts from Diamond Canapower)._____	7.90

TOTAL.....\$35,417.65

Total Expenditures To Date:

Previous Expenditures.....	\$124,170.98
1972 Expenditure.....	<u>35,417.65</u>

TOTAL.....\$159,588.63

CAPITAL INDUSTRIAL A. D. B. - DOMESTIC SEWER

Expenditure.....\$2,363.73

The above expenditure is made up as follows:

J. L. Simms & Sons (Plywood).....\$	9.70
Stan Cassidy Ltd. (Meter Base).....	45.00
Richards Electric (Fan Type Heater)....	29.65
Richards Electric (Work @ Lift Station)	1,146.18
E. E. McCoy (Holdback).....	<u>1,133.20</u>

TOTAL....\$2,363.73

CAPITAL INDUSTRIAL - A. D. B. - CLEARING INDUSTRIAL PARK

Expenditure.....\$ 505.71

The above expenditure is made up as follows:  
(Drainage Area - Doak Road)

Labour.....	\$ 367.36
City Machinery.....	124.00
Journal Voucher (Pension Funds).....	<u>14.35</u>

TOTAL....\$ 505.71

CAPITAL INDUSTRIAL - A. D. B. - ROADS

Expenditure-----\$1,236.36

The above expenditure is made up as follows:

Labour.....	\$ 288.05
City Machinery.....	130.00
Hired Machinery.....	174.00
Journal Voucher (Pension Funds).....	18.25
Gorman Construction Co. Ltd. (Gravel)....	42.30
Diamond Construction Co. Ltd. (Base Asphalt). ....	221.00
Materials (Concrete pipe, gravel).....	<u>362.76</u>
TOTAL.....	<u>\$1,236.36</u>

LOCAL IMPROVEMENT 1972

The following summary of Local Improvement Projects undertaken or continued from 1971 show the actual cost of construction (including holdback payments) which was paid for by the subdivider.

<u>Location</u>	<u>Service</u>	<u>Cost</u>	<u>No. of Lots</u>
<u>New Brunswick Housing Corp.</u>	Water	\$ \$ 51,998.44	77
Limerick Rd., Flemming Rd.	Dom. Sewer	32,324.12	Single
Wetmore Rd., Tilley Drive	Storm Sewer	54,751.81	+2
Hazen Ct.-Land Assembly	Gravel Rd.	47,727.10	Multiple
	Sidewalk	<u>9,183.00</u>	
	TOTAL .....	\$195,984.47	
<u>Hill Bros. Ltd.</u>	Water	19,707.81	
Ashfield St.	Dom. Sewer	9,216.91	
	Storm Sewer	15,027.50	
	Gravel Rd.	17,777.39	42
	Sidewalk	<u>6,212.00</u>	Single
	TOTAL.....	\$ 67,941.61	
<u>Greendale Ltd.</u>	Water	2,268.72	
Princess Anne Court	Dom. Sewer	1,612.58	
	Storm Sewer	3,263.42	4
	Gravel Road	3,860.47	Single
	Sidewalk	<u>Not Required</u>	
	TOTAL.....	\$ 11,005.19	
<u>*Fredericton Housing &amp; Construction Ltd.</u>	Water	\$ 15,886.40	
Bradford St., Bristol St. &	Dom. Sewer	7,580.42	
Nottingham St.-Bradford to	Storm Sewer	10,403.39	
Bristol	Gravel Rd.	15,306.99	46
	Sidewalk	<u>8,771.00</u>	Single
	TOTAL.....	\$ 57,948.20	

<u>Location</u>	<u>Service</u>	<u>Cost</u>	<u>No. of Lots</u>
Parkside Development Ltd. Extension of Parkside Dr. & Proposed Court (Incomplete)	Water Dom. Sewer Storm Sewer Gravel Rd. Sidewalk	\$ 20,662.63 18,333.94 25,648.16 4,925.18 2,884.00	15 Single 4 Duplex 2  Multiple
		TOTAL.....\$ 72,543.91	453

\* Constructed by own forces under City supervision.

#### SUMMARY OF COSTS TO SUBDIVIDERS FOR SERVICES - 1972

Water	\$110,524.00
Dom. Sewer	\$ 69,067.97
Storm Sewer	\$109,094.28
Gravel Road	\$ 89,597.13
Sidewalk	<u>\$ 27,050.00</u>
TOTAL.....	<u>\$405,333.38</u>

#### CAPITAL ACCOUNT SHARED COST PROJECT

Route # 101 - Brunswick St. to McLeod Ave.

In 1972 the City of Fredericton and the Province of New Brunswick began a cost sharing project for the reconstruction of Regent Street. This reconstruction included the laying of a new surface sewer line, new curb and gutter construction and new paving.

##### (1). Surface Sewer:

Under this heading Atlas Construction Maritimes Ltd. constructed the following:-

354 lineal feet of 12" Concrete sewer  
822 lineal feet of 15" Concrete sewer  
770 lineal feet of 18" Concrete sewer

All laterals for this project were constructed by City of Fredericton Crews.

The size and amount of pipe laid by City Crews was as follows:-

504 lineal feet of 10" Concrete sewer  
112 lineal feet of 12" Concrete sewer

##### (2). Curb and Gutter:

All work for this phase of the project was done by City Crews. Also included in this phase was the topsoiling of boulevards.

Under this heading, 4,061 lineal feet of concrete curb and gutter was constructed along Regent Street.

All the concrete poured was purchased ready-mixed from Gordon's Ready-Mix Limited at a price of \$19.80 per cubic yard.

(3). Paving - 3/4" Dense Mix:

Diamond Construction (1961) Ltd. was awarded the contract for the paving phase of the project. Under this contract 2,000 lineal feet of asphalt was placed. (Street Width of 35 feet gutter to gutter).

The Street preparatory work, other than the laying in place of the pre-mixed materials, was done by regular City Crews.

SUMMARY OF OVERALL EXPENDITURES  
FOR THIS SHARED COST PROJECT:-

Gross Expenditure.....\$172,720.88

Credits.....88,700.69

NET EXPENDITURE..\$ 84,020.19

The gross expenditure was made up as follows:-

Atlas Const. Co. Ltd.....	\$ 70,156.73
Holdback to Pay in 1973.....	7,795.19
Labour.....	27,979.12
Hired Machinery.....	7,526.55
City Machinery.....	7,588.25
Materials.....	<u>51,675.04</u>

TOTAL....\$172,720.88

LESS CREDITS:

Provincial Government's Share, Plus \$2,000	
Engineering Cost .....	\$ 86,020.19
Journal Voucher Corrections (Tree Cutting, Pensions & Labor).....	2,094.40
Journal Voucher (Materials returned).....	52.50
Corrections Re Horsnell's Ltd.	183.60
Journal Voucher (Correction of Tree Cutting Machinery)...	<u>350.00</u>

TOTAL....\$ 88,700.69

NET EXPENDITURE..\$ 84,020.19

CAPITAL ACCOUNT  
REGENT STREET RECONSTRUCTION - NON-SHARABLE

The overall payments of expenditures for the reconstruction of Regent Street were not completely shared with the Provincial Government. The gross expenditure of this non-sharable section of expenditures was \$20,219.35 and was made up as follows:

Journal Voucher (Payrolls).....	\$ 8,051.68
Journal Voucher (Pension Funds).....	266.23
Journal Voucher (Machinery).....	1,154.00
Journal Voucher (Materials).....	1,504.31
Gordon's Ready-Mix Ltd. (Concrete).....	1,069.20
Gorman Construction Ltd. (Asphalt).....	424.80
Journal Voucher (Sidewalk Replacement Costs)...	3,561.55
Bond Discount.....	3,921.48
Horsnell's Ltd.....	183.60
Diamond Construction Ltd. (Asphalt).....	<u>82.50</u>
TOTAL.....	\$20,219.35

LESS CREDITS:

Corrections-Payroll.....	\$ 1,196.78
Pension Funds.....	65.33
Machinery Charges.....	65.00
Materials.....	<u>300.00</u>
	\$ 1,627.11

NET EXPENDITURE.....\$18,592.24

PUBLIC WORKS

Gross Expenditure.....	\$75,982.02
Credits.....	<u>12,945.12</u>
Net Expenditure.....	\$63,036.90
1972 Appropriation.....	<u>53,700.00</u>
DEBIT.....	<u>\$ 9,336.90</u>

The credits of \$12,945.12 are made up as follows:

Lockhart's Ltd. (City Maps).....	\$ 15.00
Q.E.D. Services (Payment for Prints).....	16.20
Canada Permanent Trust (Opening Graves).....	136.97
Journal (4 Leaf Rakes, Inter. Dept.).....	23.04
John Pringle (Removal of Stump).....	6.78
James Manchip (Removal of Stump).....	6.78
Journal Voucher (Correction-Machinery Journal) ..	336.00
Journal Voucher (Inter. Dept. Use of Stumper)...	219.00
Journal Voucher (Mix Oil out).....	17.92
Journal Voucher (Rental of Saws for L.I.P. Projects).....	200.00
Journal Voucher (Regular Gasoline Out).....	300.00
Journal Voucher (Two Bulb Planters).....	12.16
John Gibson & Son Ltd. (Credit for 1 Ton Lime) ..	8.00
Journal Voucher (Inter. Dept. Use of Ford Tractor).....	1,183.00

Journal Voucher (Inter. Dept. Use of Machinery)....\$	427.00
Journal Voucher (Land Lime Out).....	192.00
Cash Sale (City Map).....	0.90
Journal Voucher (Mobile Radios).....	9,836.87
N. B. Telephone (Long Distance Calls).....	<u>7.50</u>
TOTAL.....	<u>\$12,945.12</u>

The labour, hired trucks and City Machinery charges under Public Works expenditure were incurred as follows:-

Item	Labor & Supervision	Hired Trucks	City Machinery
Trees	\$21,511.22	\$4,371.17	\$3,678.00
Back Drain Diversion	8.32	13.00	-
Back Drain	30.51	10.00	-
Seminars	87.20	-	-
Unforseen	6,885.84	20.00	1,167.50
Casuals'			
Vacation Pay	10,424.38	-	-
Survey	191.76	-	20.00
TOTALS....	<u>\$39,139.23</u>	<u>\$4,414.17</u>	<u>\$4,865.50</u>

Trees:

Total Expenditure-----\$37,786.62

The above expenditure of \$37,786.62 is made up as follows:

Labor & supervision.....	\$21,511.22
Hired Trucks & Machinery.....	4,371.17
City Machinery Charges.....	3,678.00
Materials & Space Rental.....	7,626.23
Mr. Charles Smith (Honorarium for services rendered).....	<u>600.00</u>
	\$37,786.62
Less Credits....\$	<u>799.44</u>

NET EXPENDITURES....\$36,987.18

The above credits were as follows:

Journal Voucher (4 Leaf Rakes, Inter. Dept.).....\$	23.04
John Pringle & James Manchip (Removal of Stumps).....	13.56
Journal Voucher (Correction to Machinery Journal)....	336.00
Journal Voucher (Inter. Dept. Use of Stumper).....	219.00
Journal Voucher (Mix Oil out).....	7.84
Journal Voucher (Rental of Saws for L.I.P. Projects). <u>200.00</u>	
TOTAL...\$	<u>799.44</u>

In 1972, 175 trees were removed upon the recommendation of the Fredericton Tree Commission. The condemned trees were either in a decadent condition, a menace to public safety or possible breeding places for the Elm Bark Beetle.

Following is a list of trees removed in 1972:

<u>Species</u>	<u>Number Removed</u>
Elm	145
Maple	18
Spruce	9
Pine	1
Ash	<u>2</u>
TOTAL.... <u>175</u>	

The procedure followed at present time is as follows:

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

Trees on private property which are condemned as possible breeding places for the Dutch Elm Disease, are also removed by City Crews.

In 1972, 61 trees were removed with Dutch Elm Disease at various locations within the City Limits.

Following is a list of trees (Elms) removed from 1962 to 1972 with Dutch Elm Disease:-

<u>Year</u>	<u>No. Lost To Dutch Elm Disease</u>	<u>Percent Lost To Dutch Elm Disease</u>	<u>Other Causes</u>	<u>Total</u>
1962	2	5%	35	37
1963	1	3%	28	29
1964	14	29%	34	48
1965	8	24%	25	33
1966	12	21%	44	56
1967	18	20%	73	91
1968	33	16%	174	207
1969	30	21%	108	138
1970	49	39%	78	127
1971	57	42%	77	134
1972	61	42%	84	145
<b>TOTALS.....</b>	<b>285</b>	<b>27%</b>	<b>760</b>	<b>1,045</b>

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

Trees were planted at the following locations in 1972:

<u>Location</u>	<u>Number of Trees</u>
Prospect St.	53
Priestman St.	2
Dufferin St.	22
Willingdon St.	2

<u>Location</u>	<u>Number of Trees</u>
Lorne St.	3
Montgomery St.	1
Lynhaven St.	5
Kings College Road	2
Dundonald St.	7
Beaverbrook St.	2
Westmorland St.	7
Aberdeen St.	4
George St.	10
Brunswick St.	1
King St.	4
Queen Green & Waterloo Row	10
Waterloo Row	3
University Avenue	2
Church St.	4
Topcliffe Crescent	3
Rankine St.	17
Chippin Court	9
Tims Court	9
Golf Club Road	4
Waggoner's Lane	17
Odell Park	10
Wilmet Park	5
Medley St.	2
Walker St.	3
Dobie St. Corner of Pine St.	2
Irvine St.	1
	<hr/>

TOTAL PLANTED ..... 226

114 Trees were planted at various locations to replace losses due to dry weather and vandalism.

Under the above heading the following trees were purchased in 1972 from Lansdowne Nursery:-

62 Norway Maples 8'-10' @ \$6.00 ea.....	\$ 372.00
71 Crimson King Maples 8'-10' @ \$7.00 ea...	497.00
44 Schwedler Maples 8'-10' @ \$7.00 ea.....	308.00
47 Little Leaf Lindens 8'-10' @ \$6.25 ea...	293.75
46 Emperors Lindens 8'-10' @ \$6.25 ea.....	287.50
10 Toba Hawthornes 7'-8' @ \$6.00 ea.....	60.00
10 Sugar Maples 6'-8' @ \$6.75 ea.....	67.50
10 Red Maples 6'8' @ \$6.50 ea.....	65.00
19 Red Maples 8'-10' @ \$7.25 ea.....	137.75
11 Red Oaks 6'-8' @ \$6.25 ea.....	<hr/> 68.75
	<hr/> <u>TOTAL.....\$2,157.25</u>

A number of trees were also trimmed in 1972. The number and class of these trees are as follows:-

- (a). Large Trees (45' and over)
  - Approximately 150 mixed species
- (b). Medium Trees (20' - 45')
  - Approximately 175 mixed species
- (c). Small Trees (6' - 20')
  - Approximately 2,000 mixed species

A number of stumps were also removed along City Streets.

Stumps Removed and Topsoiled.....	114
Stumps Removed (Regent St.).....	<u>39</u>

TOTAL.....153

Back Drain:-

Expenditure.....	\$41.51
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Labor.....	\$ 30.51
Hired Machinery.....	10.00
Journal Voucher (Pensions).....	<u>1.00</u>
TOTAL....	<u>\$ 41.51</u>

The above expenditure was for general maintenance.

Back Drain Diversion:-

Expenditure.....	\$21.91
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Labor.....	\$ 8.32
Hired Machinery.....	13.00
Journal Voucher (Pensions).....	<u>0.59</u>

TOTAL...\$ 21.91

The above expenditure was for general maintenance.

Survey:-

Expenditure.....	\$1,601.34
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The above expenditure is made up as follows:

Labor.....	\$ 191.76
City Machinery.....	20.00
Materials.....	428.14
Norman Wade (100' Tapes, Tape Refills, Level Repairs).....	263.58
C. N. Express (Level to and from Norman Wade Co. Ltd.)..	8.00
Eastward Industries (Level & Tripod)..	475.20
Journal Vouchers (Payroll, Pension Funds, Machinery)....	<u>214.66</u>
TOTAL....	<u>\$1,601.34</u>

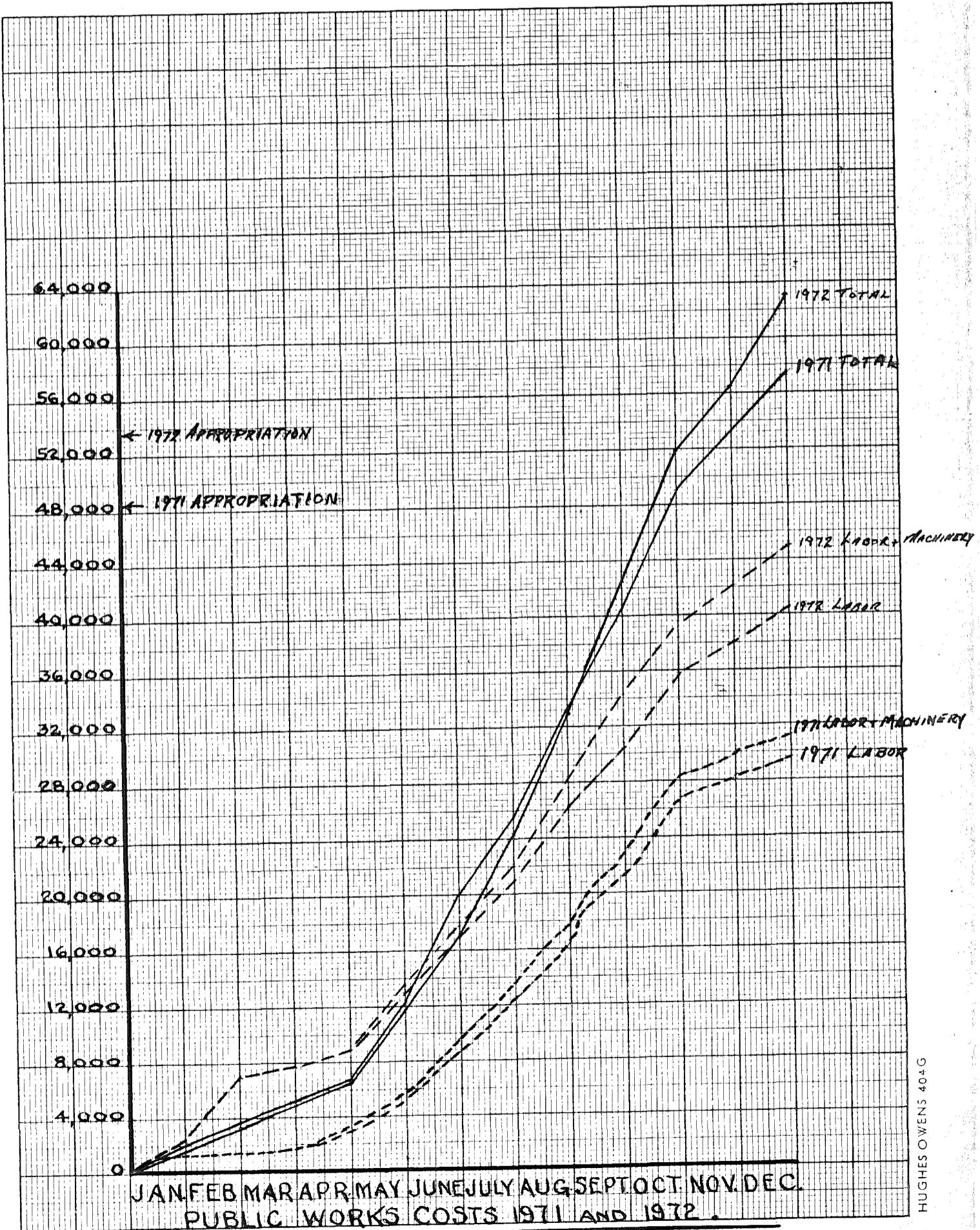
Seminars:-

Expenditure.....	\$ 87.20
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The above expenditure was for City employees attending Safety Conference.

Casuals' Vacation Pay:-

The total expenditure under this heading amounted to \$10,424.38 for casual labour vacation pay.



Unforseen Account - Labour and Hired Trucks:-

Removal of Christmas Trees from City Streets.....	\$ 996.06
Greens (Cutting, raking, seeding, topsoiling, etc.)	4,088.56
Benches (Painting and Repairs).....	643.37
Cenotaph Stand.....	125.24
Sir James Dunn Fountain.....	97.13
Rotary Auction.....	8.10
Taking of Inventory.....	305.82
Opening Graves.....	33.26
Promotion Days.....	339.55
City Hall and Library.....	33.75
City Engineer's Report.....	<u>235.00</u>

**TOTAL.....\$6,905.84**

The total expenditure amounted to \$26,019.06 and was made up as follows:-

Labour.....	\$ 6,885.84
Hired Trucks.....	20.00
City Machinery Charges.....	1,167.50
Other Materials.....	<u>17,945.72</u>
<b>TOTAL.....\$26,019.06</b>	

LESS CREDIT:-

Long Distance Calls, Mobile Phones, Gas, Oil, Machinery, Labour).....	<u>\$12,145.68</u>
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**NET EXPENDITURE.....\$13,873.38**

LOCAL INCENTIVES PROGRAMS-1972

In 1972 a number of local incentive programs were undertaken in the City of Fredericton on a cost sharing basis with the Federal Government.

Local incentives programs undertaken were as follows:

- 1). L.I.P. #142-67 - Future Industrial Area Land Clearing;
- 2). L.I.P. #142-65 - Tree Removal;
- 3). L.I.P. #142-64 - Riverfront Cleanup;
- 4). L.I.P. #E1179 - Clearing Future Industrial Area  
(Incomplete);
- 5). L.I.P. #E1200 - Clearing Serviced Industrial Area  
(Incomplete).

1). L.I.P. #142-67 - Future Industrial Area Land Clearing

This project consisted of the clearing of approximately 20 acres of future Industrial Land.

The expenditure for this project was as follows:

Labour.....	\$17,377.11
Hired Machinery.....	70.00
City Machinery.....	1,056.00
Workmen's Compensation, Unemployment Insurance, Vacation Pay.....	577.63
Pension Funds.....	386.85
Materials (Fuel, Repair Parts, etc.)..	<u>1,635.22</u>
	\$21,102.81

Less Government of Canada Payments.....\$21,102.81

NET COST TO CITY.....-0-

2). L.I.P. #142-65 - Tree Removal

This project consisted of the removal of approximately 300 decadent and diseased elm trees in Phyllis Creek Area, Corbett Brook Area and various locations in the downtown area of the City.

The expenditure for this project was as follows:

Labour.....	\$ 3,761.42
Hired Machinery.....	93.98
City Machinery.....	984.00
Pension Funds.....	117.94
Receiver General (Rebate of Overpayment).....	4,409.29
Materials (Fuel, Repairs, etc.).....	<u>3,017.23</u>
	\$12,383.86
Less Government of Canada Payments.....	<u>\$11,461.32</u>
	NET COST TO CITY.....\$ <u>922.54</u>

3). L.I.P. #142-64 - Riverfront Cleanup

Under this project approximately two (2) miles of Riverfront was underbrushed and cleaned up. Work had to be suspended during heavy snow cover.

The expenditure for this project was as follows:-

Labour.....	\$ 5,814.71
City Machinery.....	340.00
Pension Funds.....	159.11
Workmen's Compensation, Unemployment Insurance, Vacation Pay.....	355.76
Receiver General (Return of Over payment)....	4,195.28
Materials (Axes, Files, Chain Saw Repairs, etc.).....	<u>120.63</u>
	\$10,985.49

Less Government of Canada Payments.....\$10,985.49

NET COST TO CITY.....-0-

4). L.I.P. #E1179 - Clearing Future Industrial Area  
(Incomplete in 1972).

This project consists of the clearing of approximately 20 acres of Forested Lands in the Wilsey Road Area. This project is to continue into 1973.

The expenditure for this project in 1972 was as follows:-

Labour.....	\$ 3,104.11
City Machinery.....	316.00
Pension Funds.....	36.51
Materials (Fuel, Axes, etc.).....	175.42
Workmen's Compensation, Unemployment Insurance, Vacation Pay.....	<u>5,023.96</u>
	\$ 8,656.00
Less Government of Canada Payments.....	<u>\$ 8,656.00</u>
NET COST TO CITY (1972).....	<u>\$ -0-</u>

5). L.I.P. #E1200 - Clearing Serviced Industrial Area  
(Incomplete in 1972)

This project consists of the clearing of approximately 30 acres of forested area for future industrial use.

The expenditure for this project in 1972 was as follows:-

Labour.....	\$ 3,028.22
City Machinery.....	288.00
Pension Funds.....	36.62
Materials (Fuel, Axes, etc.).....	162.61
Workmen's Compensation, Unemployment Insurance, Vacation Pay.....	<u>7,602.55</u>
	\$11,128.00
Less Government of Canada Payments.....	<u>\$11,128.00</u>
NET COST TO CITY (1972).....	<u>\$ -0-</u>

ODELL PARK

Included in the above heading are the following:

- 1). Odell Park Maintenance;
- 2). Odell Park Development.

1). Odell Park Maintenance:

Gross Expenditure.....	\$ 9,872.94
Credits.....	<u>52.06</u>
NET EXPENDITURE.....	<u>\$ 9,820.88</u>

The above expenditure was made up as follows:

Journal Voucher (Payroll).....	\$ 7,727.37
Journal Voucher (Diesel Fuel, Gas, Oil, etc.).....	75.99

Journal Voucher (Materials).....\$	88.10
Journal Voucher (Pension Funds).....	386.67
N. B. Telephone (Telephone).....	115.26
Minister of Finance (License).....	6.00
City of Fredericton (Water & Sewer Rates).	43.00
Workmen's Compensation Board (1972 Assessment)....	148.55
John Gibson & Sons Ltd. (Feed, etc.).....	168.72
Atlas Building Supplies (Materials).....	19.64
Richards Electric (Outside Receptacle Repairs).....	10.73
J. W. Bird (Couplings, Clamps).....	4.50
Scott's Nursery (Bedding Plants).....	104.00
Hawkins Equipment Ltd. (Mower & Mower Repairs).....	172.50
Sherwin Williams (Paint).....	60.63
Auto Machinery (Bolts).....	3.11
E. M. Young Ltd. (Shears, Twine, etc.)....	8.05
Frank A. Blaney (Repairs to mower).....	144.75
Co-op Hardware (Scythe Blade).....	6.97
Harvey Studios Ltd. (Photographic Work)...	18.14
Royal Mills Ltd. (Feed).....	9.55
Maritime Accessories (Parts for Mower)....	15.14
Battery & Electric Ltd. (Blades for Mower)	13.93
Horsnell's Ltd. (Spacer for Mower).....	9.18
Jim Lawrence Ltd. (Mower Repairs & Parts).	39.66
Fred C. Morrison (Bearings & Seals).....	13.38
City Tire Services (Tire Repairs).....	7.71
J. L. Simms & Son (Enamel).....	3.55
Journal Voucher (Use of Ford Tractor)....	126.00
Journal Voucher (Machinery).....	308.00
Hagerman's Ltd. (Parts to Repair Sign)....	4.09
Bearings & Equipment Ltd. (Mott Mower Parts).....	<u>10.07</u>
TOTAL.....\$	<u>9,872.94</u>

Less Credits:

Long Distance Calls.....\$	17.06
Journal Voucher (Inter. Dept. Use of Massey Ferguson).....	<u>35.00\$</u> <u>52.06</u>

NET EXPENDITURE. \$ 9,820.88

2). Odell Park Development:

Gross Expenditure.....\$ 522.53

The Gross Expenditure was made up as follows:-

Journal Voucher (14 Picnic Tables @ \$34.50 ea.).....\$	479.50
H. S. Gill & Sons Ltd. (Cull Lumber).....	24.00
Journal Voucher (Cement).....	<u>19.03</u>
TOTAL....\$	<u>522.53</u>

CARLETON PARK

Expenditure.....\$4,917.21

The above expenditure was made up as follows:

Journal Voucher (Payroll).....	\$2,737.27
Journal Voucher (Gas, Oil).....	10.68
Journal Voucher (Pension Funds).....	145.20
Journal Voucher (Machinery).....	310.00
Journal Voucher (Use of Ford Tractor).....	339.50
Co-op Hardware (Peat Moss).....	5.85
John Gibson & Sons Ltd. (Grass seed, Rose Dust, Emperor Bulbs).....	122.18
Harry Smith (Topsoil).....	36.00
Sherwin Williams Co. (Enamel, Linsolene, Paint, etc.).....	36.28
Scott's Nursery (Bedding Plants, Peat Moss)	115.54
McConnell Nursery Co. Ltd. (Plants).....	31.46
Marathon Realty Co. Ltd. (Rent for Park Lease)	700.00
Journal Voucher (picnic tables, cedar posts, lime).....	<u>327.25</u>

TOTAL.....\$4,917.21

WILMOT PARK

Expenditure.....\$8,283.68

The above expenditure is made up as follows:-

Journal Voucher (Park Lights).....	\$ 840.00
Journal Voucher (Payroll).....	5,410.67
Journal Voucher (Machinery).....	685.00
Journal Voucher (Use of Ford Tractor).....	518.00
Journal Voucher (Pensions).....	218.97
Journal Voucher (Gas, Oil, etc.).....	23.98
Irving Oil Co. Ltd. (Tank Gauge, Humidifier).....	18.60
City of Fredericton (Water & Sewer Rates).	105.81
Atlas Building Supplies (Polyethelene)....	10.47
John Gibson & Sons Ltd. (Grass Seed, Peat Moss, Rose Dust).....	77.88
Harry Smith (Topsoil).....	12.00
Sheridan Nurseries (Roses).....	7.20
C. N Express (Parcel from Sheridan Nurseries).....	5.15
Hawkins Equipment Ltd. (Super Commercial Mower).....	166.05
Sherwin Williams Co. (Paint).....	17.75
E. M. Young Ltd. (Dutch Hoe).....	3.62
Dominion Seed House (Assortment of Seeds).	46.28
Journal Voucher (Other Materials).....	94.10
Jim Lawrence Ltd. (Lawn Mower Gasket Installed).....	7.70
Battery & Electric Co. (Lawn mower Pulley & Repair Parts).....	<u>14.45</u>

TOTAL.....\$8,283.68

Development of Park Areas:

Gross Expenditure.....\$5,691.07  
Credits.....1,463.08

NET EXPENDITURE.....\$4,227.99

The gross expenditure was made up as follows:

Sherwin Williams Co. (Wood Preserver & Linsolene).....	\$ 62.92
Journal Voucher (Payroll & Hired Machinery).....	1,532.24
Journal Voucher (Machinery).....	1,413.00
Journal Voucher (Pensions).....	65.85
H. S. Gill & Sons Ltd. (174 F.B.M. Lumber for Fence Repair)	40.02
Percy E. Jones (29 pieces 5"x5"x8' Squared Cedar).....	59.16
Flintkote Co. of Canada Ltd. (Armour coating of 600 ft. of Park Road in Carleton Ward).....	2,199.53
Gordon King (200 Round Cedar Posts)....	130.00
J. R. Savage (Padlock & Keys).....	6.43
Percy Jones (91 pieces 5"x5"x8' Cedar)...	<u>181.92</u>

\$ 5,691.07

Less Credits:

Journal Voucher (Picnic Tables)...	\$1,237.50
Journal Voucher (Cedar Posts)....	<u>225.58</u>

\$ 1,463.08

NET EXPENDITURE.....\$ 4,227.99

RECREATION

Expenditure.....\$1,757.20

The above expenditure does not include all playground expenditures, but only those which appear on departmental payrolls 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 are not in the above costs, nor does the cost of equipment on the playgrounds appear here.

The above expenditure is made up as follows:-

Journal Voucher (Coliseum Lights).....	\$ 429.60
Journal Voucher (Gasoline, Diesel Fuel, Varsol).....	497.51
Journal Voucher (Payroll).....	296.15
Journal Voucher (Machinery).....	138.00
Journal Voucher (Use of Ford Tractor).....	42.00
Journal Voucher (Use of Street Cleaning Machine).....	10.00
Journal Voucher (Pension Funds).....	9.32
Journal Voucher (Use of St. Flusher).....	5.00
Journal Voucher (Picnic tables, cement, water boxes & rods, cedar posts, land lime, grade stakes).....	<u>329.61</u>

TOTAL.....\$1,757.20

#### CITY HALL

Expenditure.....\$362.18

The above expenditure is only the expenditure for the City Hall made through the office of the City Engineer and is not the total expenditure on City Hall.

The above expenditure is made up as follows:

Journal Voucher (Payroll).....	\$261.75
Journal Voucher (Pension Funds).....	10.92
Journal Voucher (Machinery).....	8.00
J. L. Simms & Son (Material for Fountain Repair).....	23.77
J. W. Bird & Co. Ltd. (Paint for Fountain Repair).....	34.75
Scott's Nursery (Geraniums).....	6.00
E. M. Young Ltd. (Parts for Hot Water Tank).....	2.21
E. M. Young Ltd. (Christmas Tree Bulbs).....	12.44
Atlas Building Supplies (Bolts for Warning Signs).....	<u>2.34</u>

TOTAL....\$362.18

#### SURFACE SEWERS

Gross Expenditure.....\$15,050.52  
Credits.....625.85

NET EXPENDITURE.....\$14,424.67

The above credits are made up as follows:

Craig Electric Ltd. (Cleaning Storm Drain)....\$	9.51
Dr. Uno Paim (Storm Sewer Installation).....	60.76
Province of New Brunswick (Cleaning Storm Sewers).....	43.08
Wulastook Industries Ltd. (Storm Sewer Installation).....	<u>512.50</u>
TOTAL.....	<u>\$625.85</u>

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 required for the sewer outfalls, amounting to \$14,424.67, made up as follows:-

Labour.....	\$ 7,071.66
Hired Machinery.....	559.50
City Machinery.....	3,945.75
Pension Funds.....	308.86
Materials Less Credits.....	<u>2,538.90</u>
TOTAL.....	<u>\$14,424.67</u>

#### DOMESTIC SEWER

Labour.....	\$ 30,795.03
Hired trucks and machinery.....	716.60
City Machinery Costs.....	11,835.00
Material Cost.....	28,461.21
F.A.P.C. Sewerage Treatment.....	<u>170,330.82</u>

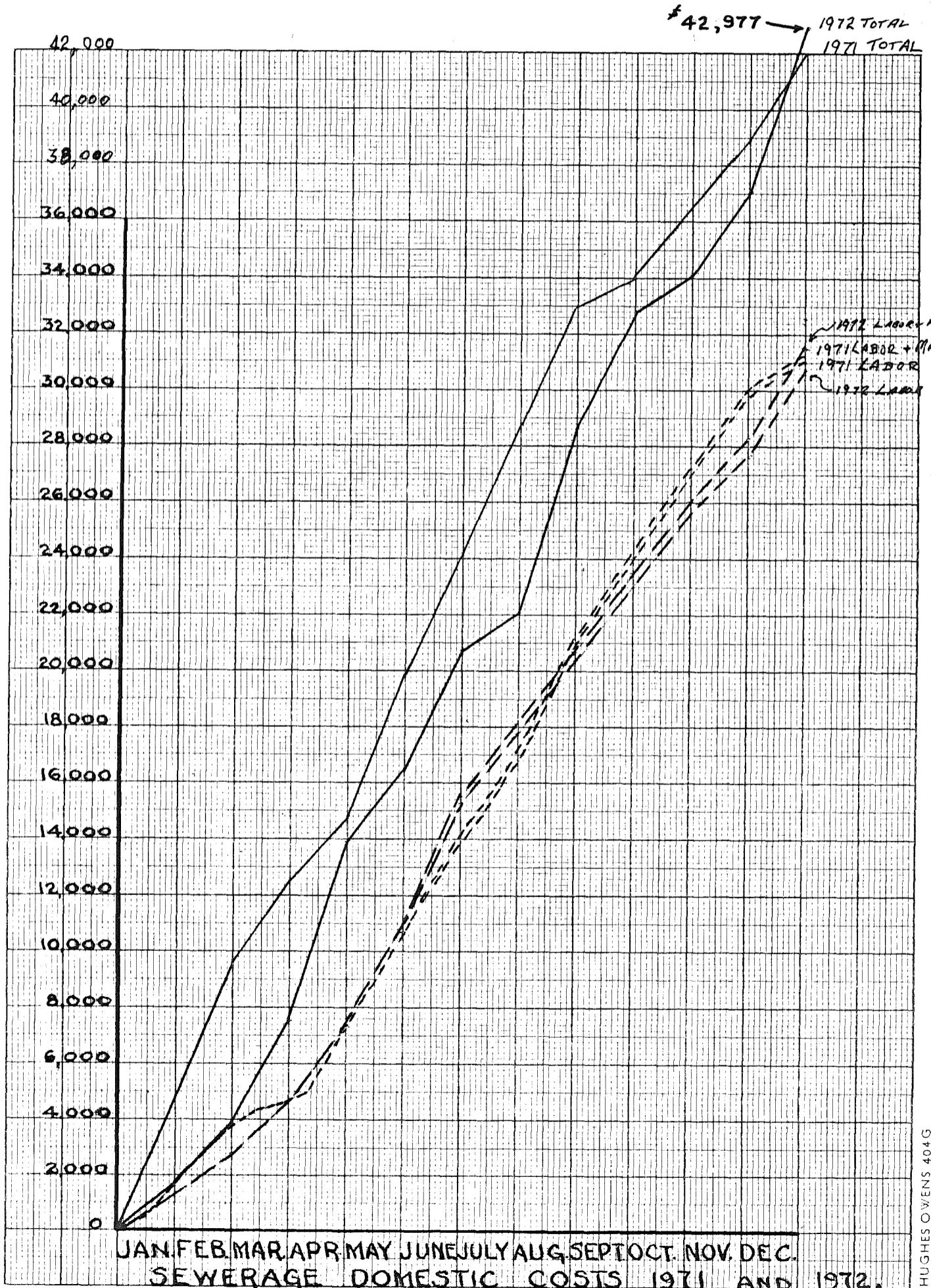
GROSS EXPENDITURE.....	\$242,138.66
CREDITS.....	<u>\$ 28,850.17</u>
NET EXPENDITURE.....	<u>\$213,288.49</u>

The Credit of \$28,850.17 was made up as follows:

Material, labour and supplies for house connections.....	\$ 28,410.16
Work done for private parties.....	369.35
Jos. A. Likely Ltd. (Credit for S.S. & E Tax).....	19.88
Journal Voucher (Material out).....	38.78
Journal Voucher (Inter. Dept. use of Machinery).....	<u>12.00</u>
TOTAL.....	<u>\$ 28,850.17</u>

New Customers connected to the City Sewer System in 1972,  
205.

Dead End Sewer Mains were cleaned and flushed in 1972.



The Fredericton Area Pollution Control Commission was formed in 1968 and work commenced on Pollution Control of Sewerage for the Fredericton Area, including Nashwaaksis, Marysville, Fredericton and Barkers Point. This system was put in operation October 10th, 1970.

The Fredericton Domestic Sewer System consists of 71.27 miles (12.90 in Carleton Ward and 58.37 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
18" Concrete Pipe-----	0.32 miles
24" Terra Cotta Pipe-----	0.54 miles
18" Terra Cotta Pipe-----	1.29 miles
15" Terra Cotta Pipe-----	1.63 miles
12" Terra Cotta Pipe-----	6.27 miles
10" Terra Cotta Pipe-----	0.92 miles
8" Terra Cotta Pipe-----	35.30 miles
12" Transite Pipe-----	0.74 miles
12" Corrugated Pipe-----	0.07 miles
10" Transite Pipe-----	2.91 miles
8" Transite Pipe-----	19.28 miles
8" Cast Iron Pipe-----	0.04 miles
6" Transite Pipe-----	0.02 miles
6" Cast Iron Force Main-----	<u>0.85 miles</u>

TOTAL....71.27 miles

This does not include the sewer mains installed by the National Defence at the Exhibition Grounds, University of New Brunswick, St. Anne's Point on Woodstock Road and the Low Rental Housing Development in Carleton Ward.

The Fredericton Area Pollution Control Commission Collector Sewer System constructed in 1969 and 1970 is not included in the above mileage.

#### OLD BURIAL GROUND

Gross Expenditure.....	\$3,802.65
Credits.....	<u>134.00</u>
NET EXPENDITURE.....	<u>\$3,668.65</u>

The above expenditure was made up as follows:

Journal Voucher (8 Picnic Tables @ \$34.25 each)....	\$ 274.00
Journal Voucher (Lights).....	552.00
Journal Voucher (Payroll).....	2,440.48
Journal Voucher (Pension Funds).....	42.90
Journal Voucher (Gasoline, Oil, Land Lime).....	23.96
Journal Voucher (Machinery).....	233.00
Chipman Chemicals Ltd. (Grass Retardent)...	56.50
Minister of Finance (S. S. & E. Tax-Chipman Chemical).....	4.52
Hawkins Equip. Ltd. (Repairs to Power Mower)	19.42

Jim Lawrence Ltd. (Repairs to Mower Carburator).....	\$ 5.00
E. M. Young Ltd. (Grass Shears & Lawn Edger).....	7.94
Chipman Chemicals Ltd. (Freight & Price Adjustment).....	102.50
Auto Machinery (Copper & Fittings).....	4.71
J. W. Bird & Co. Ltd. (Thipoxy Cement).....	29.30
Horsnell's Ltd. (Flat Steel).....	1.94
E. M. Young (Drills, Bits & Bolts).....	<u>4.48</u>
TOTAL.....\$3,802.65	

Less Credits:-

Central Trust-Trust Fund Credit.\$ 18.25	
Central Trust-Interest Re Investments.....	<u>115.75</u> <u>134.00</u>
NET EXPENDITURE..... <u>\$3,668.65</u>	

FIRE DEPARTMENT

Expenditure.....\$84,301.57

The above expenditure was made up as follows:-

Journal Voucher (Mobile Radios).....	\$ 3,761.85
Journal Voucher (Hydrant & Sprinkler Rental).....	79,440.00
Journal Voucher (Gasoline).....	1,034.42
Journal Voucher (Payroll).....	20.16
Journal Voucher (Machinery).....	12.00
Journal Voucher (City Decals).....	29.00
Journal Voucher (Cedar Posts).....	<u>4.14</u>
TOTAL..... <u>\$84,301.57</u>	

CEMENT WALKS

Expenditure.....\$20,738.67

For the above expenditure, concrete sidewalks were laid at the following locations:-

<u>Location</u>	<u>Lineal Feet</u>
Surrey Crescent	1,304
Ayres Street	761
Churchill Row-House No. 820 to No. 836	72
Colonial Heights	1,662
Parkside Drive	469
Wright Street	<u>895</u>
TOTAL LINEAL FEET.... <u>5,163</u>	

The above expenditure is made up as follows:-

Bond Discount.....	\$ 374.58
Journal Voucher (Payroll).....	8,880.91
Journal Voucher (Pensions).....	229.48
Journal Voucher (Machinery).....	1,328.50
Gordon's Ready-Mix Concrete.....	6,970.95
Harry Smith (Sand).....	762.30
J. W. Bird & Co. Ltd. (Polyethelene, Fibreen Paper, etc.).....	804.67
Journal Voucher (Rock & Concrete & Diesel Fuel).....	337.71
Co-op Hardware (Sidewalk Edgers).....	4.05
Provincial Artisans Inc. (Stakes).....	62.43
Sansom Equipment Ltd. (Rental on Vibras Roller, Timing Belt for Tamper).....	672.68
N. B. Tel. (Relocating Poles-Forest Hill)..	157.00
Bond Discount re 1971 Programme.....	75.20
Minister of Finance (Tax Audit re 1971 Purchases).....	<u>78.21</u>
TOTAL.... <u>\$20,738.67</u>	

The cost of the above sidewalk is apportioned one half to the City and one half to the property owner, except where Local Improvement Agreements are in effect with the Subdivider.

The concrete for the above construction of sidewalks was obtained from Gordon's Ready-Mix Ltd. at \$19.80 per cubic yard.

The actual cost for laying one lineal foot of sidewalk was \$4.33 which includes Compensation, Pension and Holiday Fund.

#### SANITATION

Gross Expenditure.....	\$195,245.52
Credits.....	<u>1,504.46</u>

NET EXPENDITURE.....\$193,741.06

The above credits are made up as follows:-

Mr. J. Edwards (Payments re Cardboard Salvage).....	\$ 805.62
Journal Voucher (Inter. Dept. Use of Machinery).....	165.00
Victoria Public Hospital (Cleaning Parking Lot).....	47.10
C. N. Railway (Grading & Oiling Freight Yard).....	16.74
Journal Voucher (Correction to Machinery).....	<u>470.00</u>
TOTAL.....\$ <u>1,504.46</u>	

Under the heading "Sanitation" the following items are included:-

- 1). Garbage Collection;
- 2). Sanitary Landfill;
- 3). Street Cleaning (Including Dust Control).

1). Garbage Collection:-

The Garbage Collection was operated by Blizzard's Trucking Service Ltd. The amount paid for the above operation was \$69,957.17 in 1972.

2). Sanitary Landfill:-

Expenditure.....	\$37,452.95
Credit.....	<u>805.62</u>
NET EXPENDITURE..... <u>\$36,647.33</u>	

The above credit was payment by Mr. J. F. Edwards for cardboard salvage.

The above expenditure is made up as follows:

Gerard Burns (Sanitary Landfill).....	\$31,640.00
Journal Voucher (Payroll).....	1,429.60
Journal Voucher (Machinery).....	854.00
Journal Voucher (Pension Funds).....	76.09
Gorman Construction (Gravel).....	<u>3,453.26</u>
TOTAL.... <u>\$37,452.95</u>	

In March 1971, Gerard Burns, was awarded the contract for bulldozing services at the Sanitary Landfill.

3). Street Cleaning:-

Gross Expenditure.....	\$87,348.66
Credits.....	<u>\$ 698.84</u>
NET EXPENDITURE.... <u>\$86,649.82</u>	

The gross expenditure is made up as follows:

Labour.....	\$52,555.91
Hired Trucks & Machinery.....	4,791.45
City Machinery.....	14,104.00
Materials.....	<u>15,897.30</u>

TOTAL.....\$87,348.66

The above credits were for the following:-

Victoria Public Hospital (Cleaning Parking Lot).....	\$ 47.10
Journal Voucher (Inter Dept. Use of Machinery).....	165.00
C. N. Railway (Grading & oiling freight yards).....	16.74
Journal Voucher (To correct Machinery Voucher).....	<u>470.00</u>
TOTAL.....\$ <u>698.84</u>	

City Machinery and Material charges amounted to \$30,001.30 and are made up as follows:-

Journal Voucher (Pension Funds).....	\$ 1,979.95
Journal Voucher (City Machinery).....	14,104.00
Journal Voucher (Gas, Oil, Antifreeze) ..	947.86
Purchase of cans, paint, hand brooms, forks, shovels.....	803.56
Minister of Finance (Vehicle Registrations, Audit for 1971 Purchases, S. S. & E. Tax, Canadian Wire Brush).....	571.38
City Tire Services (Tire for Street Cart)	11.88
Sumner Tire Ltd. (Tire Repair).....	1.00
Allison Shell Service (Tire repair).....	2.00
Carleton Safety Supplies (Filters).....	1.46
C. N. Express (Cartage).....	166.75
Auto Machinery (Filters, goggles, bolts)	27.71
Petrofina Canada Ltd. (Case of Grease) ..	21.38
Sansom Equipment Ltd. (100' Snakeskin Hose).....	143.75
M. J. T. Sales (12-H-Z Litter Baskets) ..	335.40
M & D Transfer (Cartage).....	2.50
Canadian Wire Brush (Brooms, Broom Refills).....	2,563.46
Journal Voucher (Space Rental @ City Yard).....	2,400.00
Miscellaneous (Car Allowance, Daily Gleaner Ads).....	122.04
J. W. Bird & Co. Ltd. (20 Bags CaCl)....	127.01
Labour and Repairs to Sicard Flusher (not including Shop Labour).....	1,763.99
Labour and Repairs to Wayne Sweeper (not including Shop Labour).....	3,901.07
Labour and Repairs charged to Ford Oil Truck).....	<u>3.15</u>
TOTAL.....\$ <u>30,001.30</u>	

The Wayne Sweeper (purchased in 1968) worked 1,262 hours. The cost for cleaning streets with this machine was \$13,394.64 and was calculated as follows:-

Labour and Repairs on Sweeper (Including  
 (Shop Labour).....\$ 4,324.00  
 Maint & Gutter Wire Brooms..... 2,956.24  
 Gasoline (2,061.20 gallons)..... 515.29  
 Oil (49.25 quarts)..... 28.85  
 Antifreeze (3 gallons)..... 7.20  
 Water (429,080 gallons)..... 207.84  
 Insurance on 1968 Sweeper..... 50.00  
 Labour (including Workmen's Compensation,  
 Holiday and Pension Fund - Operators)... 5,305.22

TOTAL....\$13,394.64

The operating dates for the above machine (Sweeper)  
 were from April 1, 1972 to Nov. 30, 1972.

In 1955 the City of Fredericton purchased a Sicard Master  
 Flusher with a capacity of 2,250 Imperial Gallons. The  
 price of this machine was \$19,435.00 and was paid for in 1956.  
 The operating dates for this machine (Flusher) were from  
 April 1, 1972 to Oct. 31, 1972.

The Flusher worked 376 hours. The cost of flushing  
 streets with this machine was \$4,629.86 and was computed  
 as follows:-

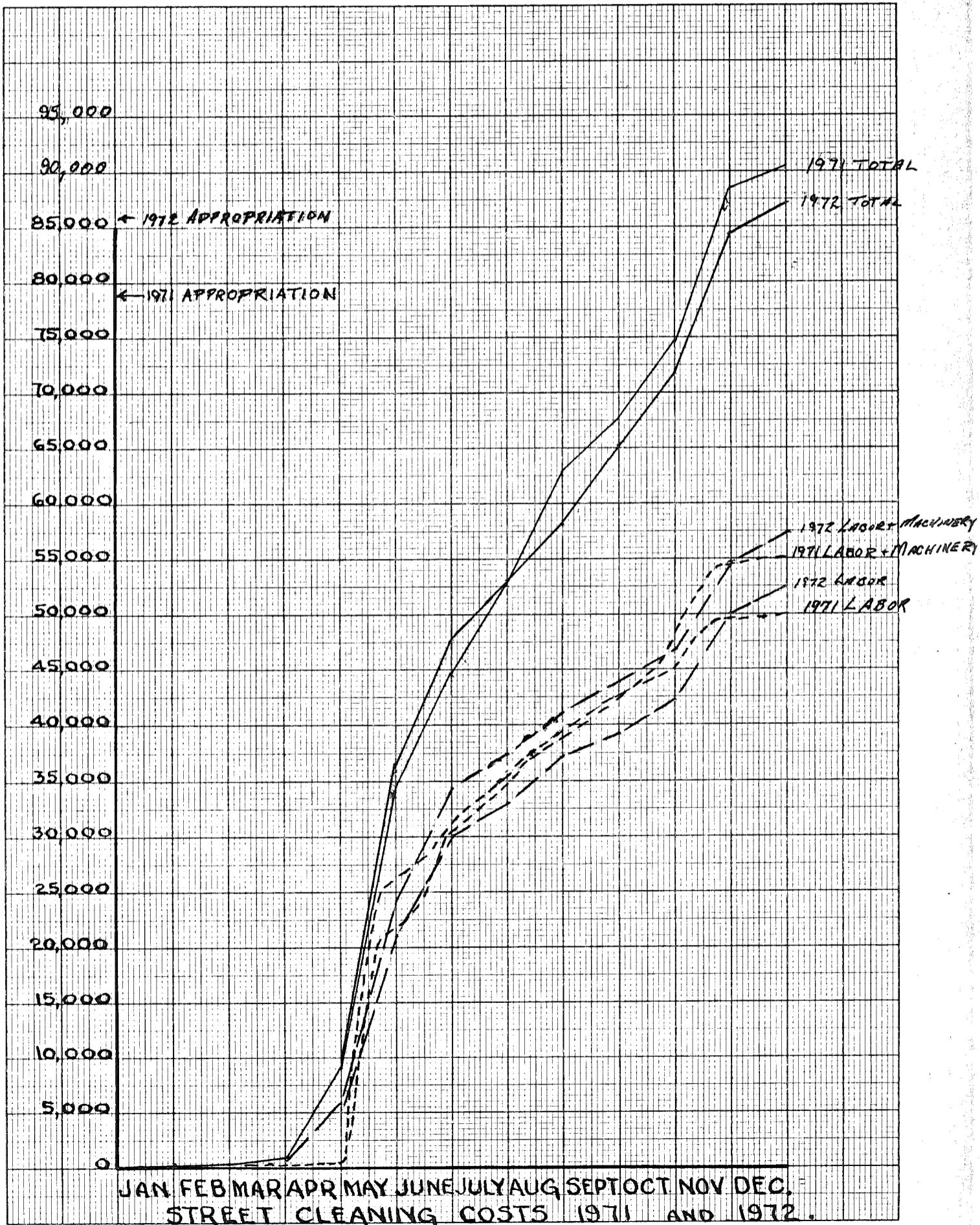
Labour and Repairs to Flusher (including  
 Shop Labour).....\$ 2,013.62  
 Gasoline (1,177.70 gallons)..... 294.42  
 Oil (50 Quarts)..... 23.00  
 Water (1,710,000 gallons)..... 784.25  
 Insurance on Flusher..... 77.00  
 Labour (Including Workmen's Compensation,  
 Holiday and Pension Fund - Operators)... 1,437.57

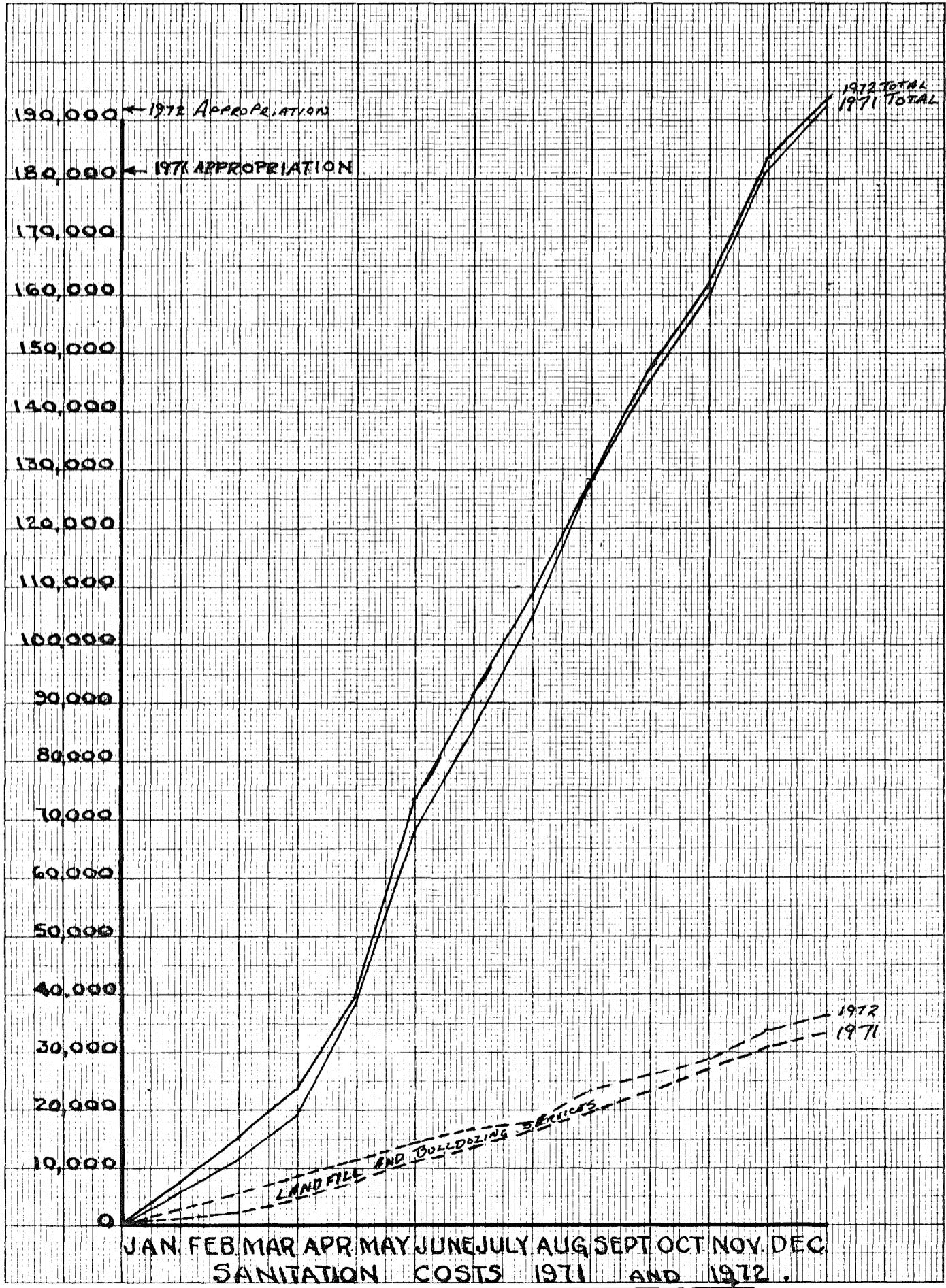
TOTAL....\$ 4,629.86

The following is a list of machinery used in the  
 Sanitation Department together with the repair costs for  
 1971 and 1972, including tires and tubes.

Name of Machine	Year Purchased	1971 Repairs	1972 Repairs
Wayne St. Sweeper	1968	\$4,541.93	\$4,324.00
Sicard Flusher	1955	2,792.16	2,013.62
Ford (1947) Oil Truck	--	<u>180.17</u>	<u>54.70</u>
		<u>TOTALS....\$7,514.26</u>	<u>\$6,392.32</u>

HUGHES OWNERS & CO.





### LOYALIST BURIAL GROUND

In 1972, the upkeep expenditure amounted to \$104.60, made up as follows:

Labour.....	\$103.20
Journal Voucher (Pensions).....	<u>1.40</u>
TOTAL....	<u>\$104.60</u>

### ADMINISTRATION OF JUSTICE

Gross Expenditure.....	\$6,636.56
Credit.....	<u>500.00</u>
NET EXPENDITURE..	<u>\$6,136.56</u>

The above expenditure of \$6,636.56 is made up as follows:

Journal Voucher (Mobile Radios)...	\$3,615.03
Journal Voucher (Gasoline, Oil, Diesel).....	2,264.67
Journal Voucher (Payroll).....	50.27
Journal Voucher (Pension Funds)...	1.00
Journal Voucher (Machinery).....	14.00
Journal Voucher (City Decals & Cedar Posts)....	62.14
Journal Voucher (Cement & Rock Dust).....	29.45
Journal Voucher (Rental Space- Paint Dept.)....	<u>600.00</u>
TOTAL....	\$6,636.56

#### Less Credit: -

Journal Voucher (1968 Mercury $\frac{1}{2}$ Ton).....	<u>\$ 500.00</u>
NET EXPENDITURE....	<u>\$6,136.56</u>

### MUNICIPAL PARKING LOTS-CAMPBELL STREET

In 1966 the City Council authorized the changing of the free Parking Area at the rear of the City Hall in order to give better parking facilities to the shopping public.

In 1972 the expenditure for the above, amounted to \$4,582.53 and was made up as follows:-

Stan Cassidy (Maintenance & Repairs)...	\$ 453.96
Horsnell's Ltd. (Coin Box Lock).....	39.92
C. N. Express (Parcels to Auto Car Park)	7.00
Auto-Mated Car Park Controls (Crystal & Transistor).....	43.85
Minister of Finance (S.S. & E. Tax on Crystal & transistor).....	3.51

Auto-Mated Car Park Controls	
(Accumulative Repairs; 1 Coin Box...\$	80.40
Minister of Finance (S.S. & E. Tax	
-Auto Car Park Controls).....	6.43
J. Raymond Savage (Keys).....	6.21
Maritime Accessories (Paint).....	19.20
C. N. Express (Express on Coin Box Mechanism).....	3.25
C. N. Express (Parts to Auto-Mated Car Park Controls).....	7.50
J. L. Simms & Sons Ltd. (Paint & Lumber).....	37.42
H. S. Gill & Sons Ltd. (Lumber)....	40.54
Auto-Mated Car Park Controls	
(Repairs to Detector).....	17.40
C. N. Express (Loop Detector to Auto- Mated Car Park Controls).....	3.75
Journal Voucher (Payroll).....	923.43
Journal Voucher (Machinery).....	314.00
Journal Voucher (Pensions).....	13.91
Journal Voucher (Cedar Posts).....	18.85
Minister of Finance (1972 Taxes)....	2,555.00
Minister of Finance (S. S. & E. Tax Re 1971 Purchases).....	<u>32.00</u>
TOTAL.....	\$4,627.53

Less Credits:-

J. Clark & Sons Ltd. (Gate Replacement).....	\$15.00
Owen Stairs (Gate Replace.)...10.00	
Peter Fenwick (" " )...10.00	
James Little (" " )...10.00	\$ 45.00

NET EXPENDITURE....\$4,582.53

In addition, a new Parking Area on Campbell Street,  
east of Westmorland Street was constructed in 1970.

The 1972 expenditure amounted to \$2,937.31 and was  
made up as follows:

Sherwin Williams (Paint).....\$	13.50
Minister of Finance (S. S. & E. Tax Re 1971 Purchases).....	30.71
Minister of Finance (1972 Taxes)...	2,080.00
Journal Voucher (Payroll).....	336.76
Journal Voucher (Machinery).....	455.50
Journal Voucher (Pensions).....	11.84
Journal Voucher (Cedar Posts).....	<u>9.00</u>

TOTAL....\$2,937.31

### BRUNSWICK STREET PARKING LOT

In 1958 the City of Fredericton constructed a Parking Area on the North side of Brunswick Street, between York Street and Carleton Street, just east of J. Clark & Sons property. This area was enlarged in 1970 by the development of the area formerly occupied by the "Eaton" building.

The 1972 expenditure for the above Parking Lot was \$1,717.66 and was made up as follows:-

J. L. Simms & Son Ltd. (Plywood).....\$	10.71
Sherwin Williams Co. (Paint).....	15.48
Journal Voucher (Payroll).....	1,012.36
Journal Voucher (Machinery).....	644.50
Journal Voucher (Pensions).....	17.61
Journal Voucher (Cedar Posts).....	9.00
Journal Voucher (Use of St. Sweeper)...	<u>8.00</u>

TOTAL.....\$1,717.66

### ARCTIC RINK SITE PARKING LOT

In 1969, the free Parking Area situated on the south side of Campbell Street, just east of Carleton Street was changed to a metered parking site.

The 1972 expenditure was \$3,553.65 and is made up as follows:

J. J. MacKay Canada Ltd. (12 each Housing Bodies & Coin Cans).....\$	969.12
Minister of Finance (S. S. & E. Tax re 1971 Audit).....	258.65
Minister of Finance (1972 Taxes).....	1,577.95
C. N. Express (Cartage on 15 Meters)...	34.00
Journal Voucher (Payroll).....	639.90
Journal Voucher (Machinery).....	68.50
Journal Voucher (Pensions).....	1.03
Journal Voucher (Cedar Posts).....	<u>4.50</u>

TOTAL....\$3,553.65

### TOURIST AND INDUSTRY

Expenditure.....\$1,609.87

The above expenditure was for maintenance and service regarding signs supplied by the Tourist and Industrial Committee for the junction of Woodstock Road and Golf Club Road, the Lincoln Road, the Maryland Road and Carleton Park.

The expenditure is made up as follows:

New Brunswick Electric Power Comm.	
(Light Bill).....	\$ 188.00
Stan Cassidy Ltd. (Service &	
Maintenance).....	13.22
Seaboard Surveys Ltd. (Paper).....	14.40
Maritime Engineering Ltd. (Refurbish-	
ing Signs).....	1,182.00
Richards Electric (Service and	
maintenance).....	155.87
Journal Voucher (Payroll).....	28.38
Journal Voucher (Use of Massey	
Ferguson Tractor).....	28.00
TOTAL.... <u>\$1,609.87</u>	

#### YORK ARENA

The expenditure under this heading was \$9.70 and is made up as follows:-

Journal Voucher (Gasoline).....	\$ 4.90
Journal Voucher (Varsol).....	<u>4.80</u>
TOTAL.... <u>\$ 9.70</u>	

#### INDUSTRIAL DEVELOPMENT

The expenditure under this heading was \$792.70 and is made up as follows:-

E. J. Bliss (Travel Expenses to	
Saint John).....	\$ 14.00
Seaboard Surveys Ltd. (Prints &	
Surveys).....	<u>778.70</u>
TOTAL.... <u>\$792.70</u>	

#### URBAN RENEWAL

The expenditure under this heading was \$1,686.65 and is made up as follows:

Journal Voucher (Payroll).....	\$ 91.59
Journal Voucher (Pensions).....	4.06
Seaboard Surveys Ltd. (Prints).....	12.00
A. D. I. Ltd. (Military Compound,	
Campbell St. Survey).....	<u>1,579.00</u>
TOTAL.... <u>\$1,686.65</u>	

## STREET LIGHTS

Previous to 1960 the City of Fredericton obtained its electric power from the Maritime Electric Company. On January 1st, 1960 the Maritime Electric Company was taken over by the New Brunswick Electric Power Commission.

In 1970 all Series Street Lights on both sides of the Saint John River were converted to a multiple lighting system using Mercury Vapor Lamps. By the end of 1973, the conversion of all Incandescent Lights to Mercury Vapor Lights, should be complete.

The Multiple lighting system as of December 31, 1972, was as follows:-

The Standard Lighter Gasoline, 50-1000. 6-11

Gross Expenditure.....\$108,840.15  
Gross Income.....1,281.60

NET EXPENDITURE \$102,018.55

The above expenditure is made up as follows:-

N.B.E.P.C. (Waterloo Row Subway Lights).....	\$	32.40
N.B.E.P.C. (Cenotaph Lights).....		107.70
N.B.E.P.C. (Multiples and Mercurys).....		106,543.80
Richards Electric (Repairs to Cenotaph & Subway Lights).....		142.78
Stan Cassidy Ltd. (Bulbs for Cenotaph).....		12.96
N.B.E.P.C. (Poles Supplied in 1972).....		1,920.00
Journal Voucher (Payroll).....		58.46
Journal Voucher (Pensions).....		2.05
Journal Voucher (Machinery).....		<u>20.00</u>
<b>TOTAL.....</b>		<b>\$108,840.15</b>

LESS CREDITS:

N.B.E.P.C. (Lights-Old Burial Ground, Coliseum,  
Wilmot Park).....\$ 1,821.60  
NET EXPENDITURE...\$107,018.55

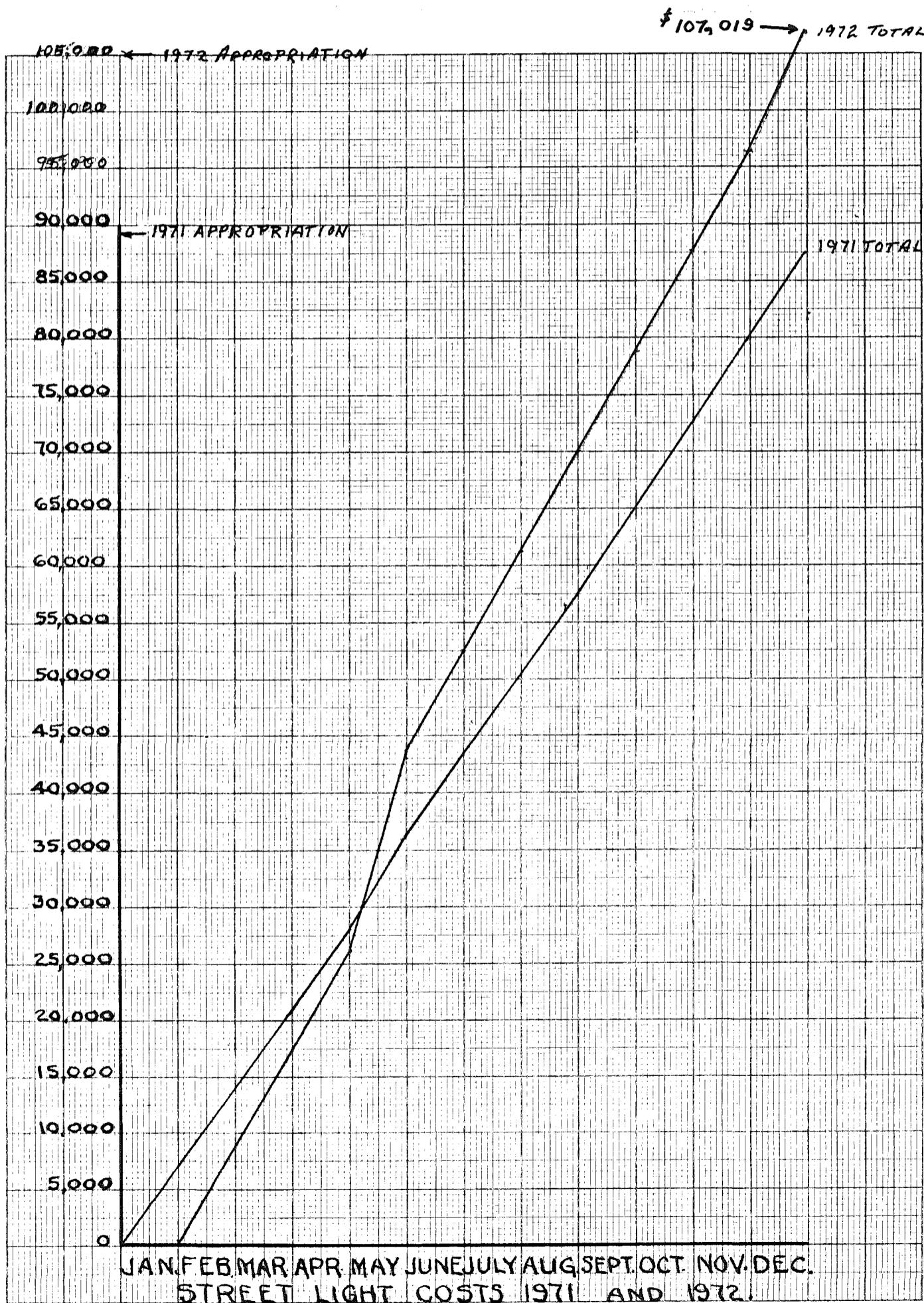


TABLE SHOWING COMPARATIVE YEARLY COST IN STREET LIGHTING

<u>YEAR</u>	<u>TOTAL YEARLY COST</u>	<u>YEARLY APPROPRIATION</u>
1957	\$ 33,101.56	\$ 29,000.00
1958	36,038.79	33,500.00
1959	39,907.64	37,500.00
1960	44,481.71	44,010.00
1961	46,835.74	46,965.00
1962	46,989.38	47,875.00
1963	52,400.10	51,975.00
1964	57,682.43	56,930.00
1965	63,526.25	62,874.00
1966	72,083.35	70,180.00
1967	74,017.50	73,010.00
1968	80,012.18	76,915.00
1969	72,591.54	82,305.00
1970	78,928.31	78,000.00
1971	87,714.60	89,400.00
1972	107,018.55	105,000.00

WATER

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

1). During 1972 the south side of the Saint John River derived its water from Four Gravel Wall Wells and a Rock Wall Well. Three of these Gravel Wall Wells, namely #1, #3, and #4 are situated in Wilmot Park and #5 on Woodstock Road on the south bank of the Saint John River, west of the Royal Canadian Mounted Police property. This property was acquired from the Province of New Brunswick in 1968. The Rock Wall Well is situated in Cameron Court and supplies approximately three-quarters of the residences on Hanwell Road.

2). The water supply on the north side of the Saint John River is derived from three Wells; two of these Wells are outside the City Limits and pump directly into the system and a 1,000,000 Gallon Reservoir. The Third Well is located on Bridge Street. The Bridge Street Well is a standby service only due to marginal chemical characteristics. In 1972 a new Well drilled in 1971 on Maple Street was worked on in preparation for pumping directly into the system in 1973.

Chlorine has been added to the water in Carleton Ward since the Reports from the City Analyst showed objectionable Coliform in the water. A liquid solution (HTH) is added at the Killarney Well.

The Water costs for the City of Fredericton are divided as follows:-

- 1). Water Ordinary;
- 2). Water Administration (Salaries of Office Staff and Office Equipment);
- 3). Hydrant Revenue;
- 4). Water Pumping Station

Gross Expenditure.....\$358,509.19  
Credits.....38,334.42

NET EXPENDITURE.....\$320,174.77

This account includes all expenditures, other than Capital Expenditure for Water, expenditures for the main Pumping Station, cost of supply from Wells and Salaries and Office Equipment. These items will appear later under their various headings. Also included are all current Water Expenditures in Carleton Ward.

1). WATER ORDINARY

The expenditure under this heading is as follows:

Gross Expenditure.....\$123,429.80  
Credits.....25,952.95

NET EXPENDITURE.....\$ 97,476.85

The credits are made up as follows:-

Material, labour and supplies for House Connections (including relays).....	\$ 23,841.02
Thawing Services.....	78.72
John Kilburn & Sons Ltd. (Repairs to Boyne St. Main)..	169.99
Canada Department of Agriculture.....	10.00
Journal Voucher (Lead, Water Boxes, Rods).....	38.12
Maritime Engineering Ltd. (Installing T.S. & V).....	132.87
Journal Voucher (Material Out).....	268.56
John Kilburn & Sons Ltd. (1 6" x 15" Clamp).....	50.18
Journal Voucher (Corporation Stock; Copper).....	14.55
F'ton. Exhibition Ltd. (Thawing Sprinkler Service)....	186.60
Journal Voucher (Inter. Dept. Use of Machinery).....	12.00
Province of New Brunswick (Hooking up Water Service) ..	42.36
Hagerman's Plumbing (Tapping Water Main).....	15.59
W. J. Beairsto Co. Ltd. (Sprinkler Installation).....	351.85
Viking Fire Protection (Sprinkler Installation).....	524.92
S. C. R. Construction (Repairs to Water Box).....	12.98
E. B. Billings (Labour - Cutting Pipe).....	6.48
Horizon Development (Repairs to Water Box).....	8.48
Donald Barrett (Repairs to Water Service).....	26.67
F'ton. Housing Ltd. (Materials used on T.S. & V. Job) ..	3.00
Maritime Engineering Ltd. (Repairs to Water Service) ..	22.54
Mrs. Roxborough (Repairs to Water Service).....	25.88
Town of Marysville (Materials on T.S. & V).....	22.50
W. J. Beairsto (Installation of T.S. & V).....	51.02
Maritime Engineering Ltd. (Repairs to Water Service) ..	13.53
Anchor Construction Ltd. (Filling Tanks for Ballast) ..	22.54

TOTAL.....\$25,952.95

The Gross Expenditure is made up as follows:-

City Payrolls for Hydrants (Labour).....	\$ 6,260.95
City Payrolls for Hydrants (Maintenance).....	3,603.48
City Payrolls for Meters (Repairs).....	3,959.06
City Payrolls for Meters (Reading).....	5,788.77
City Payrolls for Meters (Installation).....	4,984.57
City Payrolls for Water (Installation).....	12,291.08
City Payrolls for Lincoln Road Pumping Station.....	1,267.93
City Payrolls for Smythe St. (Booster Station).....	1,176.16
City Payrolls for Montgomery St. (Booster Station)..	1,156.94
City Payrolls for Forest Hill (Booster Station).....	1,095.80
City Payrolls for Water (Maintenance).....	<u>25,258.93</u>
Total Payrolls...\$	66,843.67
Hired Machinery Charges....	1,319.70
City Machinery Charges....	15,437.50
Materials....	<u>39,828.93</u>

GROSS EXPENDITURE...\$123,429.80

The following Sprinklers were installed in 1972:-

- 1). Thermofoam Manufacturing Ltd. (Doak Road);
- 2). Federal Dept. of Public Works (Waggoner's Lane);
- 3). J. Clark & Sons Ltd. (Prospect Street).

There are at present (December 31, 1972), 87 Sprinkler Systems in the City. The City rate for Sprinkler connection demand is \$120.00 per year, charged to "Fire Protection".

There are in the City as of December 31, 1972, 597 hydrants, 120 on the north side of the Saint John River and 477 on the south side of the Saint John River.

The Hydrant Rental for 1972 amounted to \$69,240 which will appear in this report later and is not included in credits to "Water Ordinary".

Hydrants were installed at the following locations:-

<u>Location</u>	<u>Number</u>
N. B. Housing Corp.-Southwood Park	9
Nottingham, Bristol & Bradford Sts.	4
Ashfield Street	2
Princess Anne Court	1
Parkside Drive	3
MacLaren Avenue	<u>1</u>
TOTAL.....	<u>20</u>

METERS:

On December 31, 1972 there were 5,603 water services on meter and 262 on Flat Rate, making a total of 5,865.

The labour cost per meter for installing, reading, etc. was \$2.63 for 1972.

245 meters were installed in 1972, and 55 regular meters changed to ARB.

In 1972, 33 discontinued services were excavated and shut off at the main.

In 1972, all meters were read quarterly and billed quarterly during the year.

Meters in Stock December 31, 1972:-

Size	A.R.B.	Regular	<u>To Be Repaired</u>		Total
			A.R.B.	Regular	
1/2"	4	2	1	1	8
5/8"	29	6	7	17	59
3/4"	1	2	0	0	3
1"	1	1	1	1	4
1 1/4"	2	1	0	0	3
1 1/2"	5	2	0	1	8
2"	2	2	0	1	5
<b>TOTAL METERS.....</b>	<b>44</b>	<b>16</b>	<b>9</b>	<b>21</b>	<b>90</b>

DISTRIBUTION SYSTEM:-

New Services Installed in 1972..... 205  
Old Services Relayed in 1972..... 43  
Frozen Services That Had to be Thawed.... 42

The Fredericton Distribution System Consists of 74.44 miles of Water Main, made up as follows:-

18" Main.....	0.98 miles
14" Main.....	0.33 miles
12" Main.....	8.18 miles
10" Main.....	8.34 miles
8" Main.....	17.75 miles
6" Main.....	32.38 miles
4" Main.....	6.21 miles
3" Main.....	<u>0.27 miles</u>
<b>TOTAL.....</b>	<b><u>74.44 miles</u></b>

This does not include the water mains installed by the National Defence at the Exhibition Grounds, University of New Brunswick, St. Anne's Point Barracks on the Woodstock Road, and the low rental housing development in Carleton Ward.

The supply system consists of 0.36 miles of 14" Cast Iron Pipe, extending from the Well Site at Wilmot Park to the Pumping Station; 0.16 miles of 12" Cast Iron Pipe extending from the Well on the South bank of the Saint John River on Woodstock Road to the Well Site of #1 Well at Wilmot Park; and 0.10 miles of 15" Steel Pipe extending from the Intake Pier in the Saint John River to the Pumping Station. This latter supply has not been used for Domestic consumption since 1957.

In 1972, the City of Fredericton purchased a 1972 G.M.C. Stepside Pick-up charged to "Water Ordinary" from Lawson Motors Fredericton Limited. The expenditure for this vehicle is as follows:-

Sale Price.....	\$3,804.00
Municipal License....	4.00
Provincial Sales Tax	<u>237.52</u>

TOTAL COST.....	\$4,045.52
Less Discount.....	<u>835.00</u>

COST TO CITY OF FREDERICTON...\$3,210.52

Following is a list of vehicles used and charged to "Water Ordinary" showing a comparison of repair charges for 1971 and 1972, including tires and tubes:-

NAME OF VEHICLE	YEAR PURCHASED	1971	1972
		REPAIRS	REPAIRS
Chev. 1/2 Ton #2	1969	\$231.21	\$ 383.49
Ford Van #5	1971	237.79	292.76
Ford 1/2 Ton #32	1966	165.81	859.42
G.M.C. Van #35	1971	65.07	87.79
G.M.C. 1/2 Ton #7	1972	-	<u>119.32</u>
		<u>TOTALS.....\$699.88</u>	<u>\$1,742.78</u>

## 2). WATER ADMINISTRATION

Gross Expenditure.....	\$80,155.90
Credits.....	<u>11,000.00</u>

NET EXPENDITURE.....\$69,155.90

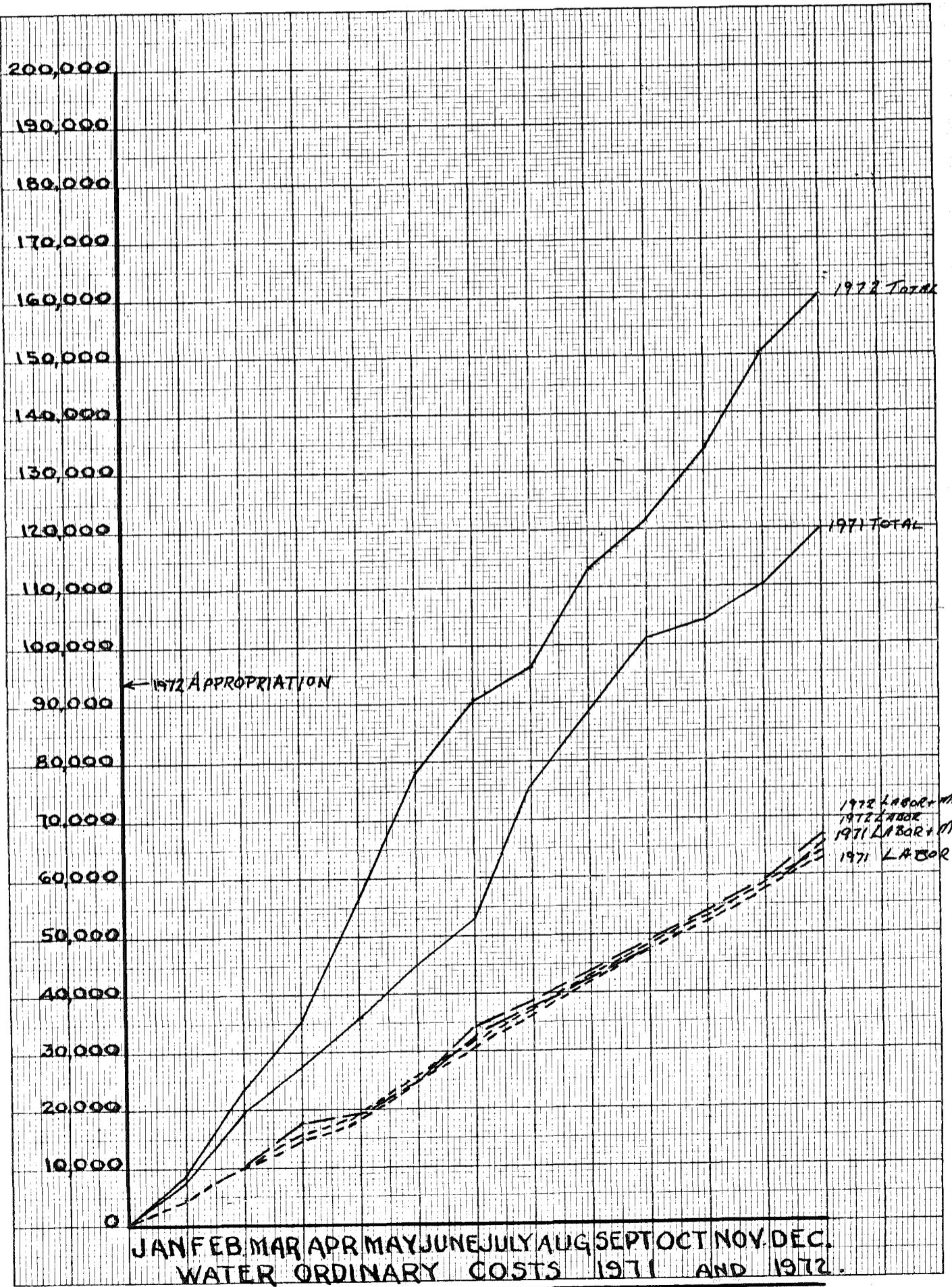
The above credit is made up as follows:

Journal Voucher (L. P. McNeill, portion of salary, Engineering Dept. Staff).....	\$ 5,000.00
Journal Voucher (E. L. Coy, portion of salary, Engineering Dept. Staff).....	<u>6,000.00</u>
	\$11,000.00

The expenditure for Billing and Collecting was \$50,157.30 and is made up as follows:-

Journal Voucher (Payroll).....	\$ 5,790.88
Journal Voucher (Pensions).....	298.84
City of Fredericton (City Pension-Payrolls).....	1,170.10
Unemployment Insurance Commission.....	168.07
Capital Free Press (Meter Cards).....	84.54
Receiver General of Canada (Meter Post Cards, Postage, Canada Pension-Payrolls).....	2,486.53
National Cash Register Co. (Jur-na-rols, Ribbons, File Dividers, Water Bills).....	1,499.26
C. N. Express (Cartage).....	20.25

HUGHES OWENS 404G



Kenney's Refrigeration (Air Conditioner Repair)....\$	34.90
Industrial Acceptance Corp. (Payments re NCR 400)..	5,671.42
Salaries.....	25,952.85
Rental of Office Space.....	3,831.96
Pitney Bowes (Service on Machine).....	301.42
Workmen's Compensation Board (1972 Assessment)....	135.18
Might Directories (1 Copy-1972 Directory).....	55.64
C. A. Ferguson (Maintenance for typewriters).....	70.50
Paul Burden Ltd. (Secretarial Chairs & Typewriter repairs).....	159.56
Annual Service on Olivetti Machines.....	178.50
C. W. Hall Co. Ltd. (Office Supplies).....	18.48
E. M. Young Ltd. (Extension Cord, Chair Castors)...	6.27
W. L. Barrett (Expenses to A.W.W.A. Convention)....	449.43
Centennial Print & Litho Ltd. (Printing Notices) ..	93.86
Covey The Stationer (Office Supplies).....	4.05
W. L. Barrett (Expenses-Newfoundland Conference)...	262.99
Burroughs Ltd. (Service on Validating Machine)....	67.92
Unipress Ltd. (Printing Notices).....	123.38
A. W. W. A. (W.L. Barrett-Dues).....	25.00
R. L. Crain Ltd. (Printing Water Bills).....	558.35
P.B.X. Charges for 1972.....	627.00
Miscellaneous (Petty Cash, Tape, Staples).....	4.52
C. P. Express.....	5.65

TOTAL.....\$50,157.30

### 3). HYDRANT REVENUE

Hydrant and Sprinkler Revenue amounted to \$79,440.00 (Hydrants \$69,240 and Sprinklers \$10,200.00). Rental on Hydrants and Sprinklers in the City of Fredericton is charged to the Fire Department at \$120.00 per hydrant per year.

### 4). WATER PUMPING STATIONS

Gross Expenditure.....	\$91,244.19
Credits.....	<u>300.00</u>

NET EXPENDITURE.....\$90,944.19

The above credit is made up as follows:

Canadian Industries Ltd. (Return of Cylinders)...\$300.00

The above expenditure is divided up as follows:

City Payrolls for salaries of employees at Pumping Station.....	\$38,318.12
Work done by City Employees at Cameron Court Pump and Well.....	1,115.20
Work done by City Employees at Carleton Ward Pumps.....	2,661.29
Work done by City Employees in and around the Pumping Station.....	293.35
Material Charges.....	<u>48,556.23</u>

TOTAL.....\$90,944.19

The material cost of \$48,555.59 is made up as follows:

Item #1 - Light and Power supplied by New Brunswick Electric Power Commission.....	\$17,413.57
Item #2 - Light and Power supplied by New Brunswick Electric Power Commission at Wells.....	\$10,674.59
Item #3 - Heating (5,547 gallons furnace oil).....	913.02
Item #4 - Diesel Fuel (3,000 gallons).....	538.50
Item #5 - Liquid Chlorine (3,600 lbs.).....	966.90
Item #6 - Oil 2 Cases HDX30.....	\$22.01
4 Cases HDX10.....	56.78
45 Gallons HD40.....	69.50
5 Gallons NUTO H44.....	<u>7.34</u> .....
	155.63
Item #7 - E. W. Hagerman (City Analyst Salary).....	2,604.64
Item #8 - Stationery Forms, Charts, Chemicals, Ink, etc.....	290.76
Item #9 - Workmen's Compensation.....	551.78
Item #10- New Brunswick Telephone.....	848.40
Item #11- Unemployment Insurance Commission.....	12.65
Item #12- Receiver General (Canada Pension).....	48.06
Item #13- Minister of Finance (S. S. & E. Tax).....	106.48
Item #14- Minister of Finance (Taxes on Wells and Booster Stations).....	142.99
Item #15- Carleton Ward Pumping Station (Materials) ..	627.81
Item #16- Minister of Finance (Taxes on Water Pumping Station).....	1,556.95
Item #17- MacLaren Atlantic (Manganese Study).....	6,855.25
Item #18- Gunter's Plumbing (Installing Fans).....	366.00
Item #19- Horsnell's Ltd. (Making Coupling Guards)...	259.20
Item #20- Diamond Canapower (Repairs to Power Module)	63.52
Item #21- Stan Cassidy Ltd. (Repairs).....	205.02
Item #22- Harrisons & Crosfields Ltd. (300 #HTH Crystals).....	148.95
Journal Voucher (Gas & Oil).....	12.96
Journal Voucher (Machinery).....	30.00
Journal Voucher (Pensions).....	2,528.05
Miscellaneous (Uniforms, Dues, Keys, Light Bulbs, etc.....	<u>934.55</u>

TOTAL.....\$48,856.23  
Less Credit Previously shown.. 300.00

NET EXPENDITURE.....\$48,556.23

HEATING:-

Following is the yearly consumption and costs of heating at the Fredericton Pumping Station Plant for the last ten years:

YEAR	GALLONS FURNACE OIL	COST
1963	5,592.8	\$822.48
1964	5,355.4	762.55
1965	5,067.2	707.75
1966	5,583.1	769.80
1967	3,961.7	539.84
1968	6,121.5	837.63
1969	6,032.6	869.90
1970	5,829.6	840.79
1971	5,125.0	810.45
1972	5,547.0	913.02

COMPARISON OF WATER PUMPED AND COSTS  
FOR SOUTH SIDE OF RIVER FOR LAST NINETEEN YEARS

YEAR	IMP. GALLONS PRODUCED	PRODUCTION EXPENDITURES	PRODUCTION COST PER 1,000 GALLONS
1954	388,540,000	\$40,403.81	10.4 cents
1955	376,591,000	48,063.07	12.7 cents
1956	448,096,000 (13 months)	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
1959	487,704,000	47,923.19	9.8 cents
1960	520,081,000	50,280.09	9.6 cents
1961	510,250,000	45,081.88	8.8 cents
1962	499,880,000	48,298.53	9.7 cents
1963	519,168,000	48,441.10	9.3 cents
1964	544,650,000	52,431.23	9.6 cents
1965	605,170,000	50,915.76	8.4 cents
1966	634,501,000	50,519.49	8.0 cents
1967	688,514,000	52,749.40	7.9 cents
1968	735,296,000	64,617.14	8.8 cents
1969	730,089,200	69,831.20	9.5 cents
1970	796,421,300	72,282.38	9.1 cents
1971	841,712,300	76,827.46	9.1 cents
1972	921,309,300	81,585.18	8.9 cents

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

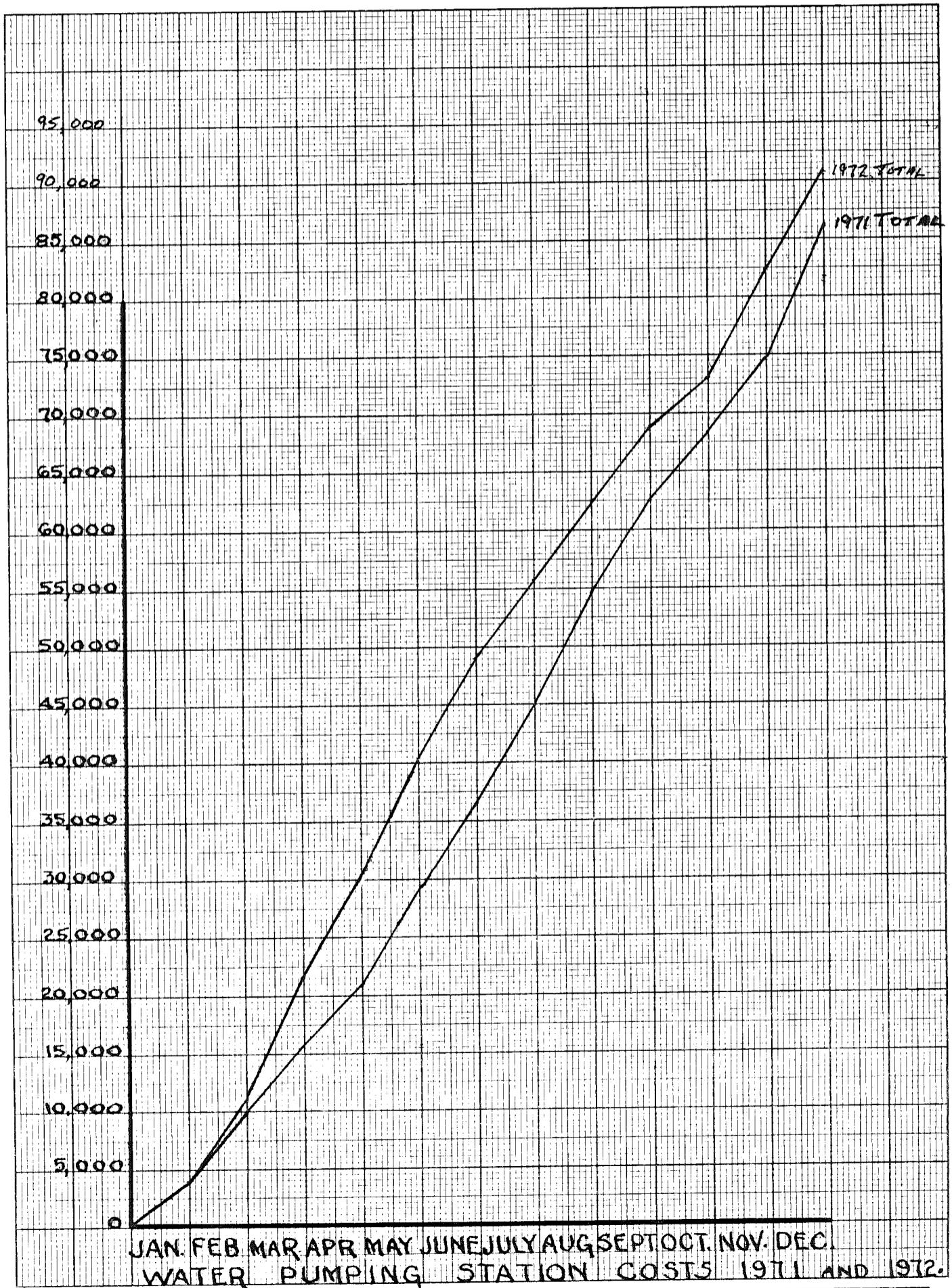
The total consumption from Wells in Carleton Ward for 1972 was 123,448,080 gallons.

The total amount of water pumped from January 1, 1972 to December 31, 1972, therefore, for the whole City is 1,045,857,380 Imperial Gallons.

The total net water expenditure (operating) for the City from January 1, 1972 to December 31, 1972 is \$251,138.19.

Therefore, the net cost to pump and deliver to the customer 1,000 Imperial Gallons of Water from January 1, 1972 to December 31, 1972 is -----

$$\frac{\$251,138.19}{1,045,857.38} = 24.0 \text{ cents}$$



All the preceding costs shown under "Water Pumping Station" and Water Ordinary" does not include bond payments or sinking fund charges.

The cost of 1,000 gallons of water delivered including principal and interest is as follows:-

Total cost of Water Per Thousand Gallons:-

$$\frac{\$511,408.73}{1,045,857.38} = 48.9 \text{ cents}$$

Principal and Interest Costs:-

$$\frac{\$191,114.00}{1,045,857.38} = 18.3 \text{ cents}$$

Administration and Operating Costs:-

$$\frac{\$320,294.73}{1,045,857.38} = 30.6 \text{ cents}$$

The Water Pumping Station is under the supervision of Plant Superintendent, Mr. George Parker.

#### WATER AND SEWER REVENUE - 1972

##### WATER:

	REVENUE	NET EXPENDITURE	DEFICIT
Water Pumping Station		\$ 90,944.19	
Water Ordinary (Including Vehicles)	\$418,463.10	99,284.48	
Hydrants	69,240.00	21,019.87	
Sprinklers	10,200.00		
Meters	27,014.17	39,890.29	\$12,876.12
Water Office Admin.		50,157.30	
Salaries		18,998.60	
Principal & Interest		<u>191,114.00</u>	
TOTALS (WATER)	\$524,917.27	\$511,408.73	

##### DOMESTIC SEWER:

Sewerage Domestic	\$232,454.19	\$ 42,977.41
F'ton. Area Pollution Control Comm. Sewage Treatment		170,330.82
Principal & Interest		<u>51,331.00</u>
TOTALS.....	<u>\$232,454.19</u>	<u>\$264,639.23</u>
		<u>\$32,185.04</u>

Accompanying this Report is the Report of Mr. E. W. Hagerman, City Analyst, on the Fredericton Water Supply from January 1, 1972 to December 31, 1972.

Respectfully submitted,

*W.L. Ballew*

CITY ENGINEER.

## FREDERICTON WATER SUPPLY

YEAR 1972 ..... JANUARY 1st TO DECEMBER 31st.

Fredericton, south of the Saint John river, has been pumping water, of excellent quality, from gravel walled wells, numbers 1, 3, and 4 since 1955, 1960 and 1961 respectively. There have been no significant changes in these waters to date.

Number 5 well, also gravel wall type, went on line in 1969. Its effluent was satisfactory at that time but the Manganese content of the water has risen from 0.17 ppm, when first developed, to 0.7 ppm at the present time. This well is free of undesirable bacteria.

The waters from these four wells are mixed, as described, at the pumping station. Although all four are almost sterile, as pumped, chlorine is added to produce a residual of 0.15 to 0.2 parts per million, before discharge into the system.

The fifth well, Hanwell, is drilled in rock. It was put in service in 1967 and is now supplying 40 or 50 houses. It pumps a water of good chemical quality to a high level reservoir of 100,000 gallon capacity.

The raw water from this well, unlike our four gravel walled wells, gives positive coliform tests after periods of heavy rain. During dry spells these coliforms disappear.

A chemical feeder forces a hypochlorite solution into the water of the Hanwell pump discharge. Different amounts of chlorine have been tried. Since September 27th the residual, ten feet from the pump discharge, has been maintained at 0.35 ppm. With this residual there have been no positive coliform tests in the system.

In the system the chlorine residual soon drops from the initial 0.35 ppm. On the attached schematic of the Hanwell system, the average residual is 0.03 ppm. A later measurement gave a zero residual at house number 738 Hanwell Road. This sample gave a negative test for coliforms.

It appears that the initial contact with the 0.35 ppm. residual at the pump, kills the bacteria.

The low chlorine residuals in the system are probably due to the loss of chlorine during storage in the reservoir. The reverse flow from the reservoir, which must occur during the two or three days when the pump is off, returns stored water of low or zero chlorine content, back into the pipe system.

No complaints of chlorinous tastes have been received with the chlorine residual of 0.35 ppm. but one house found the water stale tasting.

Carleton Ward's three operating wells are drilled in rock. Killarney has been producing since 1914, Bridge Street since 1958 and Carleton since 1963. All produce good waters chemically and are practically bacteria free.

Two or three positive tests were found in 1965 in Killarney well and so continuous chlorination was installed. A chlorine residual of 0.3 to 0.5 is the dose used in this well. Some of this chlorine carries over into Carleton reservoir.

One positive portion was found at 277 Gibson Street on September 27. A new well on Maple Street, not yet in production, will be equipped with a chlorinator. This well does produce positive results in coliform tests and so chlorination must be continuous.

Attached are copies of coliform tests for the year, Chemical tests, a schematic representation of the Hanwell system and some notes on the Flemming reservoir.

(Sgd.) E. W. HAGEMAN,  
CITY ANALYST.

EXTRACTS FROM UNITED STATES TREASURY STANDARDS  
APPLICABLE TO FREDERICTON WATER SUPPLY

- (1). A minimum sample of 100 milliliters is collected.
- (2). Five 10 milliliter portions of the 100 milliliter sample are tested.
- (3). Primary plantings are made in Lactose Broth.
- (4). Portions forming gas in Lactose Broth are confirmed in 2% Brilliant Green Bile.

APPLICATION OF TEST

- (1). Of all the 10 milliliter portions examined per month, not more than 10% shall show positive (i.e. make gas).
- (2). When less than 20 samples per month are examined, one sample may show three positive portions.
- (3). Using a standard sample of five 10 milliliter portions, provides for an estimation of the MOST PROBABLE NUMBER (M.P.N.) of Coliform bacteria per 100 milliliter of sample as shown in the table below.

Negative	Positive	When five 10 milliliter portions are tested
5	0	Less than 2.2 organisms per 100 is the MPN
4	1	2.2 organisms per 100 is the MPN
3	2	5.1 organisms per 100 is the MPN
2	3	9.2 organisms per 100 is the MPN
1	4	16 organisms per 100 is the MPN
0	5	More than 16 organisms per 100 is the MPN

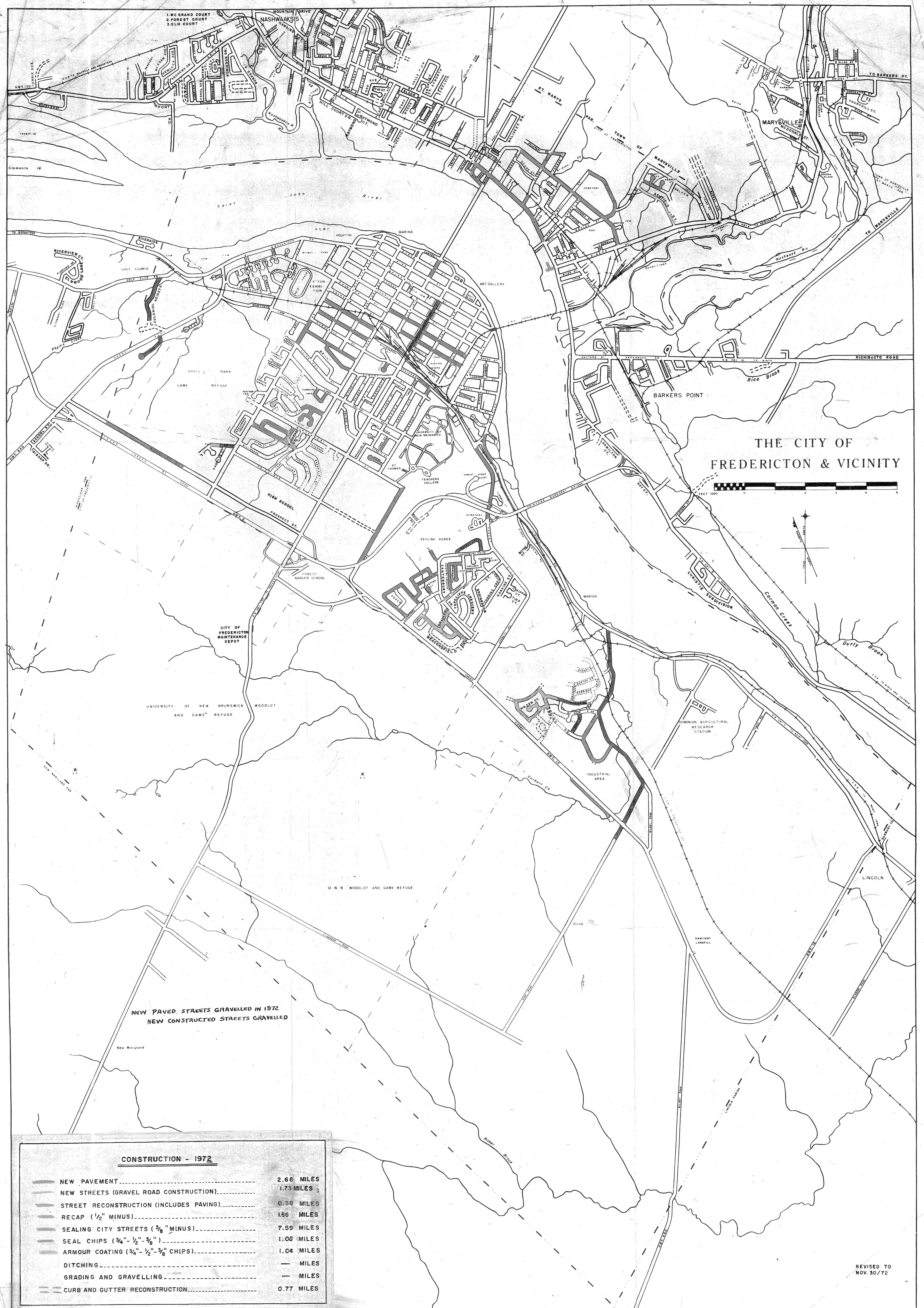
TEST FOR COLIFORM BACTERIA-1972

The test divides the 5 portions into plus or minus results. These results used with the attached table gives the M.P.N. (Most probable number) of coliform organisms per 100 milliliters of sample.

Date of Sample	Origin of Sample	No. Of		MPN per 100	Notes
		-	+		
Jan.					
Thur. 6	Centennial Bldg.	5	0	-2.2	Note-2.2 Means
Mon. 10	U.N.B. Engineering Bldg.	5	0	-2.2	less than 2.2
Wed. 19	377 Gibson St. Greer- Lawson	5	0	-2.2	organisms per
Sun. 30	260 University Ave.	5	0	-2.2	100 milliliters of Sample.

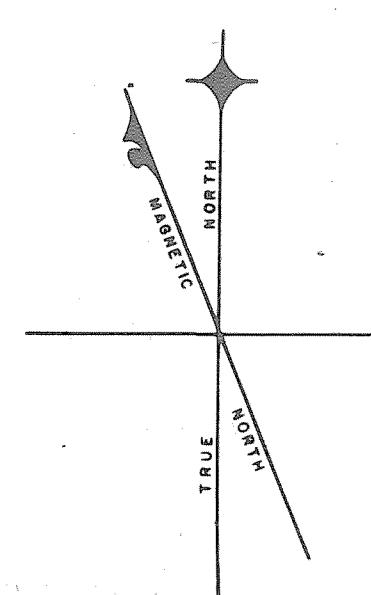
Date of Sample	Origin of Sample	No. Of -	No. Of +	MFN per 100	Notes
Feb.					
Thur. 3	510 Hanwell Rd.	5	0	-2.2	
Sat. 19	U.N.B. Eng. Drinking Fountain	5	0	-2.2	
Mon. 21	City Hall	5	0	-2.2	
Mon. 28	Odell Park	5	0	-2.2	
March					
Sat. 11	510 Hanwell Rd.	5	0	-2.2	
Mon. 13	Hanwell-Raw	5	0	-2.2	No Mould
Thur. 23	530 Gibson	5	0	-2.2	
Fri. 24	70 Bridge	5	0	-2.2	Some Mould-Black Specks-from kettle
April					
Thur. 6	377 Gibson	5	0	-2.2	
Tue. 11	569 Woodstock Rd.	5	0	-2.2	
Wed. 12	963 Union	5	0	-2.2	
Thur. 20	Maple St. Well	5	0	-2.2	
Thur. 20	371 Kings College Rd.	5	0	-2.2	
Thur. 27	Maple St. Well	3	2	5.1	Not in Service
May					
Tue. 2	Maple St. Well (Raw)	3	2	5.1	Not In Service
Tue. 2	Brook near Maple Well	0	5	16+	Testing Surface Water
Fri. 12	Maple St. Well	3	2	5.1	Not In Service
Fri. 12	#3 Nashwaaksis Well	5	0	-2.2	Treating Well.
Mon. 15	Sobey-Mall	5	0	-2.2	
Tue. 23	127 Charlotte	5	0	-2.2	
Thur. 25	Maple St. Well	4	1	16	No. Cl shows in Sample
Wed. 31	MacLaren Fire Sta.	5	0	-2.2	
June					
Fri. 2	377 Gibson, Greer & Law.	5	0	-2.2	
Wed. 7	Bridge St. Well	5	0	-2.2	
Wed. 7	F'ton. Pony Club	5	0	-2.2	
Mon. 12	Bridge St. Well	5	0	-2.2	
Mon. 19	99 Smith St., H. Bailey	5	0	-2.2	
Tue. 27	Centennial Bldg.	5	0	-2.2	
July					
Mon. 3	MacLaren Ave. Fire Sta.	5	0	-2.2	
Tue. 11	127 Charlotte St.	5	0	-2.2	
Wed. 12	Raw Wells 1, 3, 5	5	0	-2.2	No Chlorine (No Cloud in medium)
Mon. 17	Shell-Wilsey Rd.	5	0	-2.2	
Wed. 19	99 Smith St.	5	0	-2.2	
Aug.					
Wed. 2	Coliseum Ex. Bldg.	5	0	-2.2	Dressing Rooms
Thur. 10	377 Gibson	5	0	-2.2	Growth, Moulds Non-
Fri. 18	Hanwell Well Raw	5	0	-2.2	Coliform organisms
Fri. 18	484 Hanwell Rd.	5	0	-2.2	Mould Persists
Mon. 28	484 Hanwell Rd.	5	0	-2.2	

Date of Sample	Origin of Sample	No. of -	No. of +	MPN per 100	Notes
Sept.					
Mon. 11	662 Hanwell Rd.	5	0	-2.2	Chlorine Residual 0.12 at time of collection, 0.5 at test
Thur. 14	Hanwell Well (Raw)	4	1	2.2	
Sun. 17	#1, #3, #4 Wells (Raw)	5	0	-2.2	
Tue. 26	510 Hanwell Rd.	5	0	-2.2	
Wed. 27	277 Gibson St.	4	1	2.2	
October					
Fri. 6	510 Hanwell Rd.	5	0	-2.2	.09 PPM free Cl. residual at pump is 0.35 ppm
Fri. 6	277 Gibson St.	5	0	-2.2	No. Cl. residual Collected 3 mins. after pump start.
Thur. 12	Hanwell Well (Raw)	4	1	2.2	
Thur. 12	Hanwell Well (Raw)	5	0	-2.2	
Mon. 16	UNB Engineering Bldg.	5	0	-2.2	
Tue. 24	Garage, Wilsey Rd.	5	0	-2.2	
Mon. 30	479 Union, Union Motors	5	0	-2.2	
Nov.					
Wed. 1	99 Smith St.	5	0	-2.2	
Mon. 6	Regent Reservoir	5	0	-2.2	
Wed. 8	1169 Regent-Irving Service Sta.	5	0	-2.2	
Thur. 9	UNB Engineering	5	0	-2.2	
Fri. 17	Union-Motors-479 Union	5	0	-2.2	
Dec.					
Sat. 2	120 Carleton-City Sales	5	0	-2.2	
Wed. 6	377 Gibson, Greer & Lawson	5	0	-2.2	
Sat. 16	F'ton. Pony Club	5	0	-2.2	
Sat. 23	127 Charlotte St.	5	0	-2.2	



**THE CITY OF  
FREDERICTON & VICINITY**

FEET 1000 0 1 2 3 4 5



**CONSTRUCTION-1972**

**SURFACE SEWER —**

**DOMESTIC SEWER —**

**WATER —**

SURFACE SEWER								DOMESTIC SEWER				WATER			
60"	36"	30"	24"	18"	15"	12"	10"	12"	10"	8"	12"	10"	8"	6"	4"
—	—	164'	592'	1527'	2952'	5034'	2008'	—	2349'	8907'	—	2305'	4037'	3134'	140'

FORCemain - 6" Ductile Domestic Sewer - 950'

4" Ductile Water - 246'

10" Ductile Water - 502'

12" Ductile Water - 5127'

42" Galv Surface Sewer - 142'

UNIVERSITY OF NEW BRUNSWICK WOODLOT  
AND GAME REFUGE

CITY OF FREDERICTON  
MAINTENANCE DEPOT

WATER - 6" DOMESTIC SEWER - 8"

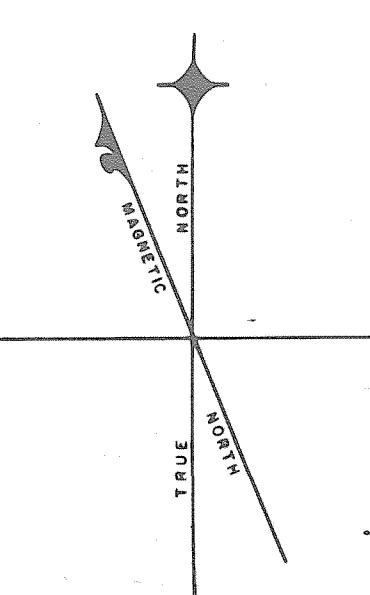
INDUSTRIAL AREA

DOMINION AGRICULTURAL  
RESEARCH STATION

REVISED NOV. 1972

# THE CITY OF FREDERICTON & VICINITY

FEET 1000 0 1 2 3 4 5



CONSTRUCTION - 1972

— Curb & Gutter 2.84 Miles  
— Concrete Walks 0.98 Miles

UNIVERSITY OF NEW BRUNSWICK WOODLOT  
AND GAME REFUGE

CITY OF  
FREDERICTON  
MAINTENANCE  
DEPOT

DOMINION AGRICULTURAL  
RESEARCH  
STATION

REVISED NOV. 1972