

## OTTAWA WORKS DEPARTMENT REPORT

**D**URING 1917, 1.89 miles of permanent pavements were laid in Ottawa, Ont., according to the annual report of Andrew F. Macallum, works commissioner of that city. This report, which has just been published by the city council, states that 26,248 square yards of asphalt were laid, 3,062 sq. yds. of sandstone block, and 3,130 sq. yds. of creosoted wood block. Following are excerpts from the report:—

The following schedule shows the approximate total area of the various classes of pavements laid in Ottawa from 1895 to 1917, inclusive:—

Class of Pavement	Total Miles including Repaving	Existing Mileage 1917	Total Area laid including Repaving curb to curb	Existing Surface Area, 1917, curb to curb
Asphalt .....	31.36	31.36	597,392	597,392
Asphalt and stone block .....	13.68	11.95	357,598	310,663
Asphalt and wood block .....	1.37	1.37	39,183	39,183
Bitulithic .....	0.54	0.54	4,600	4,600
Bitulithic and stone block .....	0.08	0.08	1,700	1,700
Rocmac .....	0.34	0.34	5,377	5,377
Stone block .....	0.53	0.47	11,960	10,346
Tarvia .....	2.91	2.91	47,515	47,515
Tar macadam .....	4.87	4.87	84,835	84,835
Tar macadam and stone block .....	0.08	0.08	1,868	1,868
Wood block .....	1.32	1.32	29,256	29,256
	57.08	55.29	1,181,284	1,132,735

Asphalt and stone block area includes 133,932 square yards stone block.

Asphalt and wood block area includes 15,078 square yards wood block.

Asphalt area and mileage includes asphalt macadam pavements.

## Sewers

The Ottawa South trunk sewer was constructed to Main Street, leaving only a half mile to be completed. The material used during 1917 on this sewer was reinforced interlocking concrete pipe. The contract for the manufacture of the pipe was given to Blair & Co., of Woodstock, Ont., at \$4.33 for 54-inch pipe and \$3.44 for 48-inch pipe delivered along the trench.

The following table shows the lengths laid and cost per lineal foot of local improvement sewers laid from 1908 to 1917, the costs including interest:—

Year	Length in feet	Total cost	Cost per lineal foot	Percentage of average cost per lineal foot 1908-1917
1908 .....	22,454	\$ 65,841.66	2.93	102.3
1909 .....	43,316	127,168.60	2.93	102.2
1910 .....	25,925	51,840.47	1.44	50.2
1911 .....	12,231	22,570.22	1.84	64.1
1912 .....	13,960	39,603.28	2.84	98.9
1913 .....	21,700	63,083.22	2.91	101.4
1914 .....	57,200	84,417.20	3.13	109.1
1915 .....	20,687	97,344.87	4.70	163.8
1916 .....	4,359	19,967.72	4.58	159.9
1917 .....	4,292	7,155.31	1.67	58.2
	236,124	\$678,992.65		

## Street Oiling

During the year, 9.3 miles of macadam pavement were treated with Tarvia at a cost of \$8,260.55, and 33 miles were sprinkled twice with asphaltic oil at a cost of

\$13,898.56. Due to the fact that proper distributors were used on the second application of oil, the cost was \$5,228.39 as compared with \$8,670.17 for the first application.

Two Austin distributors, costing \$300 each, were purchased and attached to the old sprinkling wagons, and besides using less oil they placed the oil in a more even manner. This oiling, besides having a beneficial effect on the roads, also eliminated the dust.

## Street Cleaning

Two Mack-Hvass motor flushers, costing \$7,815 each, were purchased and each operated for two nine-hour shifts throughout the season. These flushers replaced all but three horse-drawn flushers and besides being more economical kept the pavements in better condition. A reduction in street sweepers, due principally to the efficiency of these flushers, was made from 82 to 55 and the streets maintained in good condition.

## Sidewalks

Forty-three sidewalks, having a total length of 2.3 miles, were laid at a total cost of approximately \$20,400.

## Waterworks

The redistribution system of large mains was finished in August and this had the consequent effect of increasing the pressure throughout the city. The new pumping station at Lemieux Island and overland pipes connecting up with this system also went into operation in November, and the Queen Street station used since only as a standby.

The consumption of water is about double what it should be for a city of the size of Ottawa, but it is the intention of the works department to carry out a general Pitometer survey to locate leaks and reduce this waste.

In 1917 the registered population inside the city limits was 101,549. The average number of Imperial gallons of water pumped daily was 20,938,162. The average daily consumption per capita of population was 206.1 gallons. A total of 183.8096 miles of pipe had been laid, an increase of only 1.028 miles during the year. There were 24,805 services, an increase during the year of 136. There are now 1,347 hydrants. The expenditure amounted to \$373,285, or 4.88 cents per 1,000 gallons, while the revenue collected totalled \$399,468.

## Pitometer Survey

Work was commenced with the Pitometer in the latter part of September. The first district which was surveyed was Rockcliffe, and this part of the water distribution system was found to be wasting very little water.

Tests were then made of the water pipes crossing the Rideau River to New Edinburgh. The 15-inch steel main at St. Patrick Street bridge and the 8-inch main at Botelier Street were found to be in the best condition. The 8-inch main crossing at McTaggart Street, was found to have a leak in the river section wasting about 450,000 Imperial gallons a day. This main was completely cut off and will be repaired in the spring. Two of the valves on the 8-inch main at Sussex Street were found to be leaking very badly at the spindle. One valve alone was wasting slightly over 100,000 gallons. These valves are under water and will have to be repaired when the Rideau River water is low. Several leaks were discovered in W. C. Edwards' yards, and one on Sussex Street, which have not yet been repaired.

The apparatus was then moved to the Chaudiere section. The first main tested was the 8-inch Bronson Avenue pipe crossing the tail-race, and it was found to be wasting over 250,000 gallons per day. The leak was