

## COST OF OILING HAMILTON'S STREETS

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THE accompanying expense sheet shows the suggested cost of the different operations in connection with the oiling of streets at Hamilton, Ont., during the past season.

The practice in Hamilton is to first carefully sweep all macadam roads with horse brooms, irregular portions being broomed out by hand. This operation, however, has not been charged against road oiling, as twice a year, in the spring and autumn, this work is done and quite properly charged to street cleaning account. Advantage is merely taken of this opportunity of putting the oil on a clean road.

After the street has been properly cleaned the oil is distributed by gravity from an ordinary water cart fitted with spray properly drilled for oil distribution. Following this operation, screenings and stone dust from the city quarry is spread over the oiled road by hand by two men working from a wagon.

In previous years the screenings and labor of distribution have been charged against roadway repairs. It is felt, however, that inasmuch as the screenings are made necessary by reason of the application of oil and since the oil rather than the screenings really forms the wearing surface, it is scarcely fair to charge it against roadway repairs any more than the cost of the whole operation of road oiling.

Funds to provide for the cost of road oiling, flushing and watering are raised by special assessment based on foot frontage. Properties on streets not so treated are not taxed.

Table "A" is based on the total area treated. This includes macadam and dirt roads. No screenings, however, are used on the dirt roads, the oil only being applied. The records were kept in this way in order to obtain a general statement.

Table "B" analyzes the screenings and oiling as applied only to macadam roads. The statement shows accurately the amount of screenings applied to the roads covered. Table "B 2" is a summary of this information.

In working up these data some speculation arose as to just what area should rightfully be considered as oiled.

It is understood, of course, that it is not practical (at least in Hamilton it was not so) to oil nearer than 18 or

20 inches of the curb in order to avoid the possibility of pouring oil on the sidewalk.

It was found, however, that the oil easily ran over this portion of the road to the curb, thus affectively oiling the road from curb to curb. It was therefore considered fair to measure that part of the street affectively treated as the portion oiled.

## Cost Summary.

## Oiling.

Direct labor cost .....	\$ .00056
45 per cent. overhead .....	.00018
Material cost .....	.01394

Cost of oiling, per square yard ..... \$ .01468

## Screening.

Direct labor cost .....	\$ .00125
45 per cent. overhead .....	.00039
Material cost .....	.00098

Cost of screening, per square yard ..... \$ .00262

Total cost per square yard ..... \$ .01730

Total cost per 100 square yards ..... \$1.73

## Recapitulation.

Non-productive repairs (estimated) .....	\$152.51
Non-productive depreciation .....	182.42
Non-productive insurance .....	25.65
Engineer's expense (area of streets) .....	119.42

Total non-productive ..... \$480.00

Per cent. non-productive of direct labor, \$480 ÷  
1,510.37 = 31.

Total labor and material cost, as above .....	\$13,960.58
Non-productive cost, as above .....	480.00

Total cost ..... \$14,440.58

\$14,440.58 ÷ 834,395 square yards = \$.01730 as above summary.

Cost of teams per hour .....	\$ .75
Cost of labor per hour .....	.35
Cost of oil per gallon .....	.096
Cost of screenings per ton .....	.85

Table A.—Statement of Cost of Street Oiling, 1917.

District No.	Area, sq. yd.	Labor cost, \$	— Oiling —		Labor cost, \$	— Placing Screenings —			Total material cost, \$	Total cost, \$	Flat cost per sq. yd., \$
			Material cost, \$	Gallons oil.		Material cost, \$	Tons screenings.	Total labor cost, \$			
1 ...	38,672	36.21	591.61	6,098	83.98	48.15	58	120.19	639.96	760.15	.0197
2 ...	153,659	77.50	1,923.01	19,537	167.00	104.06	145	244.50	2,027.07	2,271.57	.0148
3 ...	163,995	95.21	1,907.40	19,392	195.69	155.77	185	290.90	2,063.17	2,354.07	.0144
4 ...	150,838	76.25	1,849.78	18,895	169.36	133.07	166	245.61	1,982.85	2,228.46	.0148
5 ...	186,574	81.75	2,949.48	30,116	205.08	173.07	212	286.83	3,122.55	3,409.38	.0183
6 ...	81,382	51.75	1,294.56	13,140	114.50	91.68	112	166.25	1,386.24	1,552.49	.0191
7 ...	35,502	21.55	574.57	5,836	60.11	53.06	62	81.66	627.63	709.29	.0200
8 ...	23,773	23.65	545.49	5,561	50.78	55.25	65	74.43	600.74	675.17	.0284
Totals	834,395	463.87	11,636.10	118,575	1,046.50	814.11	1,005	1,510.37	12,450.21	13,960.58	
Averages per sq. yd. ....		.00056	.01394	.1421	.00125	.00098	2.4	.00181	.0.492	.01673	
Averages per 100 sq. yds. ....		.056	1.394	14.21	.12500	.09800	240	.18100	1.492	1.67300	