

MUNICIPAL DEPARTMENT

A MUNICIPAL ASPHALT PLANT.

(Continued from last week.)

It appears from the second foot-note to the table that the item entered under 1900 as maintenance should be charged, in part, to capital. Likewise, it is probable that a portion of the outlay for tools in each year should be so charged. In making up the figures presented below we have charged half of each of these three items to capital. Another charge against capital is the new steam roller. This cost \$3,500, but we are informed that it is used more on macadam than on asphalt work, and that only one-third should be charged to the asphalt capital account. The teaming having been done by the hour it may be assumed that all the charges under that head are included in the 40 cents per hour, already mentioned.

We may now attempt to determine at least some of the items that should be added to the figures already given as the cost of material and labor for asphalt paving in 1899 and 1900, in order to compare municipal and contract costs. The true capital account is first given, then the various items of current expense, as follows:

Capital Account—	
1899—Original cost.....	\$12,322
1/2 cost of road roller.....	1,200
1/2 cost of tools.....	131
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	\$13,653
Depreciation at 5 p. c.....	682
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	\$12,971
Maintenance, operation and capital charges	
Maintenance.....	\$ 568
1/2 tools.....	131
Interest at 4 p. c. on	
\$13,653.....	546
Depreciation at 5 p. c.	
on \$13,653.....	682
Lost taxes.....	100
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	\$ 2,027
Capital Account—	
1900—To balance.....	\$12,971
New sheds, etc.....	733
1/2 tools.....	61
1/2 old maintenance	
charge.....	524
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	\$14,289
Depreciation at 5 p. c.....	714
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	\$13,575
Maintenance, operation and capital charges	
1/2 old maintenance	
charge.....	524
1/2 tools.....	61
Interest at 4 p. c. on	
\$14,289.....	572

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Depreciation at 5 p. c.	
on \$14,289.....	714
Lost taxes.....	100

\$1,970

Summary and Averages—	
1899—48,843 sq. yds. labor and material.....	\$2,000
48,843 sq. yds. capital, maintenance, etc.....	42
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Total per sq. yd., 1899.....	\$2,042
1900—22,064 sq. yds. labor and material.....	\$2,064
22,064 sq. yds. capital, maintenance, etc.....	39
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Total per sq. yd., 1900.....	\$2,153

The item of \$100 for lost taxes is the approximate amount paid to the city on the plant before its purchase from the former owners. A small rental fee for the land on which the plant stands is included under maintenance. Possibly insurance, if any is carried, is also included under that head. As to the rates of interest and depreciation, we are informed by the city engineer that the city pays 3 1/2 to 4 per cent on its loans and that depreciation may be reckoned at "between 5 and 10 per cent; probably not much exceeding the former." Had we taken the highest instead of the lowest figure for depreciation it would have added only some 3 cents per square yard to the final result of our calculations.

To the revised figures of \$2.04 per square yard in 1899 and \$2.15 in 1900 our readers may add such items as they think proper for contractor's guarantee and profits and for any contingencies not already considered or for which proper allowance has not been made.

It is interesting to note that two of the same contractors offered to lay \$2.715 per square yard, respectively for 16,800 sq. yds. of the pavement laid by the city in 1899, and that one of the same contractors offered to lay 28,300 sq. yds. of asphalt, on another street, for \$2.47, after the city had decided to buy the asphalt plant.

In our issue of Feb. 21, 1901, we published a table by Mr. F. V. E. Bardol of Buffalo, N.Y., showing the average cost of asphalt pavements in forty-seven cities, for the year 1900. In that table the cost for Winnipeg was given as \$1.79, instead of the \$2.064 cited at the beginning of the article, or the revised figure of \$2.15. The discrepancy is explained by the fact that Bardol's figures for Winnipeg excluded grading and the cost of 3 inches of gravel beneath the concrete foundation, besides some other small charges.

The average reported cost of asphalt paving in the forty-seven cities was \$2.29. On making various corrections for differences in local conditions a new average of \$2.41 was secured, but the new figure for Winnipeg was reduced from \$1.79 to \$1.76, owing to higher local prices for concrete which more than offset the lesser thickness of concrete foundation and wearing surface at Winnipeg and also Mr. Bardol's addition of 18 cents to the Winnipeg figures to make up for the lack of the contractor's guarantee for maintenance. The standard for the latter was ten years, which Mr. Bardol valued at 18 cents per square yard of pavement. It may be added that the concrete in place at Winnipeg cost \$5.7482 per cubic yard, or \$6.7403 per square yard for a depth of 4 1/2 inches. Also that the length of the working day was nine hours.

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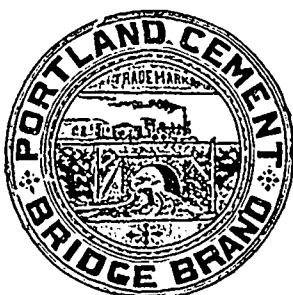
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