

MUNICIPAL DEPARTMENT

A MUNICIPAL ASPHALT PLANT.

The following article on Winnipeg's municipal asphalt plant appears in the Engineering News of New York:

There has been not a little agitation in some cities, of late, for the construction of a municipal asphalt plant. In Winnipeg, Man., such a plant has been owned and operated by the city for about two years. Late in 1900 the city of Detroit awarded a contract for the construction of the second municipal asphalt plant in North America, and the first one in the United States, to Hetherington & Berner, of Indianapolis, Ind.

The first asphalt pavement in Winnipeg was laid by contract about four years ago. Before the beginning of paving work in 1899, the city bought the stationary asphalt plant erected there by one of the contractors for work previously done. The cost was about \$12,000, but this included a five ton steam road roller. The old roller proved to be too light for finishing the asphalt, so a ten-ton roller has been bought. The asphalt plant was moved to a new site, where additions and improvements were made. It has been used since for the work of 1899 and 1900. It appears that the chief difficulty encountered has been the securing of asphalt. It has been necessary to use several kinds, which, in turn, has called for much laboratory and experimental work.

The first asphalt used came from Ventura, Cal. The next was also a California asphalt, bought of J. A. Dubbs, of Pittsburg, Pa., and named by him "Obispo." A portion of the latter was crude, the maltha flux being added in Winnipeg, and a part of it was refined. After this, more Ventura and some Alcatraz asphalt was used. During 1900, Dundonald Trinidad asphalt was used, obtained from

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The plant includes two asphalt melting tanks, a sand drum, cold and hot sand elevators, mill-stone for grinding limestone, a storage tank for hot asphalt, storage bins for ground limestone and hot sand, a mixer of 7 cu. ft. capacity, a 60 h.p. boiler, 30 h.p. engine, air compressor and receiver and various accessories.

The regular force employed to operate the plant numbers an average of twelve men as follows: One superintendent, one engineer, two firemen, two asphalt melters, one asphalt dipper and mixer, one measurer of sand and carbonate of lime, one record keeper, one man for odd jobs, and an average of two sand and limestone shovelers. A daily expenditure of \$40 covers the cost of operating the plant for a day of nine hours, and for producing material sufficient for 1,000 square yards of 2-inch topping, or 1,500 square yards of 1 and one half inch binder.

The cost of raw materials in 1900 was as follows: Portland cement in sacks, \$3.65 per bbl., asphalt, \$36 per short ton; sand, \$1.35, and broken stone, \$1.10 per cubic yard, both on cars; labor, 17 and a half to and teams, 40 cents per hour. The plant is located close by a railway line.

The net cost of 45,843 square yards of asphalt paving laid in 1899 was \$2, and the cost of 22,064 square yards laid in 1900 was \$2.064 per yard. This was for a 4 and a half inch Portland cement foundation, a 1 and a half inch binder and 2-inch wearing surface.

These unit figures of cost include only the expenditures for the material and labor used in paving, besides which there were charges for maintenance of the asphalt plant and for tools.

Comparable with that for similar work under contract, such as interest, depreciation, taxes, insurance, land

In addition, several other items should be taken into account in arriving at the figure of total cost content, and both contractors' maintenance guarantee and profits.

It appears that the practice at Winnipeg has been to separate the asphalt accounts into capital, maintenance and tools, the respective items for 1899-1900 being as follows:

Asphalt accounts, Winnipeg, Man. - Expenditure on account of:		
1899-Capital.....	\$12,322	
Tools.....	262	
Maintenance.....	568	\$13,152
1900-Capital.....	*733	
Tools.....	121	
Maintenance.....	**1,048	1,902
		\$15,054

*Chiefly for sand sheds and petroleum residuum tanks.

**Principally for replacing material which was defective when the city bought the plant. It is thought that such heavy items under capital and maintenance as were incurred in 1900 will not be required again, the plant now being in good shape for its present capacity.

(To be continued next week.)

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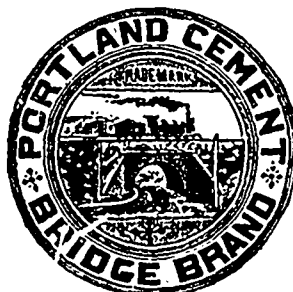
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