CEMENT AND CONCRETE

[NOTE.--Contributions suitable for publication in this Department are invited from subscribers and readers]

Municipal Concrete Pavements

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Concrete pavements have been successfully constructed in Windsor, Ont., and are giving entire satisfaction to the municipality and to the public. They are clean, smooth and entirely sanitary, and they present an appearance similar to sheet asphalt. Both Park and Chatham streets are paved with concrete and together contain about 17,000 square yards of surface. These streets have been open to traffic for some time and are giving entire satisfaction. They are not so dangerous or so slippery as some other high class pavements.

The contract price is 99 cents per square yard, including excavating. This is an exceedingly cheap pavement for one that has so many good qualities. The concrete, of course, will improve with age and should last an indefinite length of time, where the traffic is not excessive. The writer makes this statement because several pieces of concrete work have been observed under conditions of heavy traffic, at alleys and street crossings, and they have shown no signs of wear after eight or ten years. The main object in constructing these pavements is to obtain a medium grade of concrete, not too rich and not too weak.

SPECIFICATIONS TO FIT THE CONDITIONS.

In order to obtain the best results, the writer has followed the practice of varying the specifications in different cases. In the Chatham street work, for example, specifications were as follows:

Foundation, one part by volume of Portland cement; three parts by volume of clean river sand; seven parts by volume of crushed stone, 3 inches to 1-4 inch.

Top layer, one part by volume of Portland cement; two parts by volume of clean river sand; four parts by volume of screened river gravel, 1-4 inch to 1 inch.

The surface was floated with a wooden float and troweled. Expansion was allowed for by making the joints 1 inch wide and filling them with paving pitch. These joints are placed from 40 feet to 80 feet apart. The writer is now having a 1-4 inch strip of wood, 6 inches deep, inserted in the pavement crosswise every 15 feet, and left flush with the surface. This will allow for contraction without cracking. Park street was paved under the same specifications as those for Chatham street.

Church street specifications are as follows:

Bottom layer, composed of concrete, 1:3:7, using stone.

Middle layer, 1:2:4, using gravel, screened.

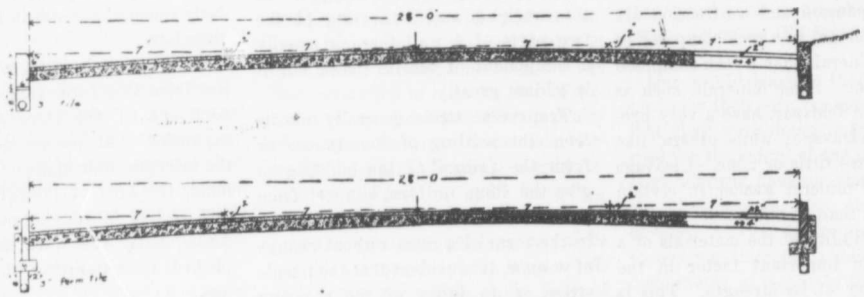
Top layer, 1:2. Surface troweled and floated.

Wyandotte street east:

Bottom layer, 1:2:4.

Top layer, 1:2.

If the mortar or surface is made much richer than 1:2, the tendency would be to make the surface too smooth or slippery.



CROSS SECTION OF PAVEMENT, SHOWING CONSTRUCTION.

CONCRETE GREATLY SUPERIOR TO MACADAM.

The city of Windsor has been constructing macadam pavements with a limestone base for the past seven years, and these pavements have averaged about $1.10 per square yard in cost. The pavements of macadam have been very objectionable to the majority of the citizens, especially in the central portions of the city, where there is considerable traffic and where people are continually crossing the streets.

Park street, Church street and Chatham street are in the central portion of the city and were originally on the schedule for macadam paving. The writer suggested the use of con-