The fact that no overflow into the Rideau canal will be permitted, makes it necessary in the first plan to carry all the storm water west of the canal and east of the ridge near Bell street through the eastern district as far as the Rideau river, before such an overflow is practicable permissible. Thus a sewer of such large dimensions would be required that its cost is excessive.

A glance at the map will explain this fact. Theoratically speaking, when two sewers start at about the centre of a territory and run in opposite direction, then each will drain about half of the whole territory. But when one of these sewers, in addition to draining one half must be large enough to receive and carry off also the water from the other half, then it must have double the capacity.

While this conclusion is evident by itself, it has been further demonstrated by an estimate of cost with the result that the first plan of sewage collection would cost about $$_{33,6'28}$ more than the second. In arriving at this figure it is assumed of course that both plans provide for carrying off an equal proportion of the rain-fall, for a discharge of the sewage into the water works tail-race, and for an over flow, during heavy storms into the Rideau river.

The excessive cost, thus obtained, is not due to the use of the combined system. The same result would appear if the separate system were used, for the conclusion is based on the condition that not only sewage must be kept out of the Rideau canal, but also most of the storm water. The street washings would carry silt and dirt into the canal, which, while not objectionable in a running stream, would be so in the level stretches of a canal.

The first plan should therefore be rejected on the score of economy, and I am obliged to approve in general of the method of alignment adopted by Messrs. Keefer & Davy, dividing the territory by the canal into an eastern and western district.

After having reached this conclusion it is necessary to again take

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