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Subways Can Be Improved

Mayor Hayes' Commission Says They Need Better Drainage

Mayor Hayes yesterday made public the report of the commission appointed to investigate the construction of the municipal subways. In its main features the report has been outlined in the Herald. It indorses the general principles of the conduits and makes a number of important criticisms and recommendations for improvements. These recommendations are epitomized as follows:

That the subway be carefully examined wherever excavations are made which expose it, and if the concrete is found imperfect at such points it be removed by the subway department and replaced with good concrete.

That a system of mechanical ventilation similar to the one now in use in the Empire City subway in New York be installed for our subway.

That such arrangements for drainage be provided that in no case can water get to the cables or into the ducts.

Regarding the vexed question of drainage the report says:

“Subway systems have been built in other cities with as deep manholes and laid in as wet ground as those in our system, yet with no drainage system provided. There is evidently some difference of opinion as to whether drainage is necessary. Notwithstanding this fact, we find that out of 247 manholes so far built 42 are drained, and Mr. Phelps has given us a list of 30 more which he says it is his intention to drain. He also assures us that he intends to drain every manhole that ground water gets into, wherever a sewer or drain is near enough to have this done at a reasonable expense.”

The report declares that the present method of ventilating the subways is inadequate.

“Such arrangements for ventilation,” it says, “as the department had in force at the time of the Gay street explosion were ineffective in preventing the explosive mixture of air and gas from accumulating and not being carried off. We believe that such conditions may very probably occur again, and that a system of natural ventilation through holes in a manhole cover or vent pipes will not be effective in preventing such explosions.”

The report concludes with a recommendation that one or two stations for pumping air into the subways be established. The first cost is estimated at between \$45,000 and \$50,000 and the cost of maintenance at from \$4,000 to \$7,000 a year.

The general plan and arrangement of the conduit lines and the use of single manholes for both high and low tension wires are approved by the commission. Regarding the material used the commissioners say that “while none of the concrete is what might be called first class, none of it is so bad as to seriously endanger the stability of the structure or the property of any

company using the subway.” The conduit ducts are said to be partly very good, partly imperfect and partly very bad.

City Engineer Fendall, Water Engineer Quick and Superintendent of Street Cleaning Iglehart composed the commission.