

datum is marked on the contoured plan of Victoria. The relative elevations are as follows:—

	Standard bench- mark.	City Hall bench- mark.
Above Hudson's Bay datum.....	127.11	153.65
Above City datum.....	126.76	153.35

The difference of 0.35 foot is considered by the engineering staff at the City Hall to be the most accurate that can be arrived at, and this value is the same as the difference given by our Standard bench-mark.

Public Works Datum.—This is a Low Water datum established by Mr. F. C. Gamble while Resident Engineer of Public Works, and used as the plane of reference for soundings in the harbour, and also for the tidal observations of 1893 to 1897. This is a most important datum, as it has become the basis of the chart of the harbour, and has afforded indirectly the starting point for the city levels. It was thought to be most definitely fixed with reference to a series of bench-marks around the harbour; but unfortunately all record of the elevation of these was lost by the destruction of the Public Works documents in the fire at New Westminster in September 1898. The most persevering efforts have been made to re-establish this datum, especially by those interested in the chart depths, the grounding of vessels, and dredging operations, but these efforts have been without definite results until a clue was obtained this season.

The Public Works datum was originally the zero of a standard tide scale set by Mr. Gamble to coincide with 2 feet 8 inches on a tide gauge on the Hudson's Bay Co's wharf, this being said to be the lowest level of low water which had been noted. The zero on this standard scale was taken to represent low water mark at spring tides, and nine feet on the scale, to represent high water at spring tides. When the continuous tidal observations were begun, the limiting values afterwards recorded were as follows: Extreme high water, 10 feet 9 inches; extreme low water, at 8.30 a.m., July 3rd, 1894, 18 inches below the zero of the scale; making the extreme range 12 feet 3 inches. The scale thus proved to be well set in its height, as the levels of ordinary high and low water fall symmetrically between these extreme limits. The facts as here stated are taken from a report of Mr. Gamble to his department, dated August, 1894. The tidal observations were continued until May, 1897, when the Public Works office was removed to New Westminster.

The only connection by which the Public Works datum can now be determined is due to Mr. E. A. Wilmot. It was made incidentally, when he was establishing the City Sewer datum for Victoria