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TIDAL BENCH MARKS (1922)

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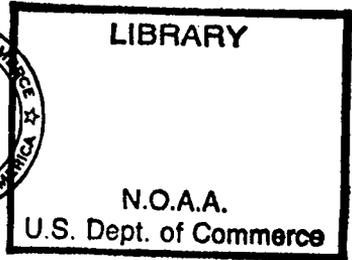
STATE OF NEW YORK

By

L. A. COLE and I. A. ALPERT

Tidal Computers

Special Publication No. 83



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# **National Oceanic and Atmospheric Administration**

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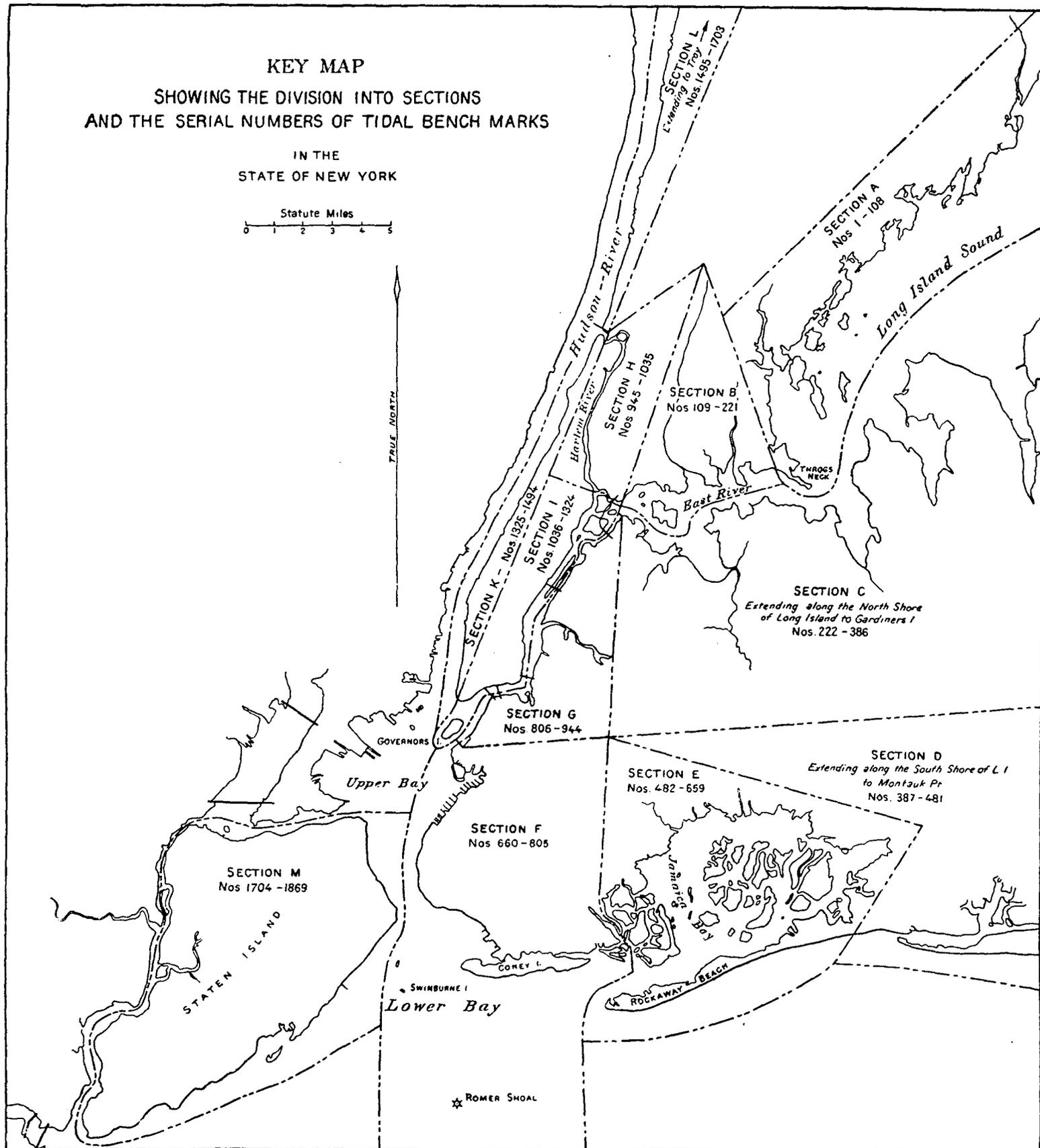
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KEY MAP (FRONTISPIECE).

# TIDAL BENCH MARKS, STATE OF NEW YORK.

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## INTRODUCTION.

In connection with its hydrographic operations the Coast and Geodetic Survey has established from time to time many tidal bench marks along our coasts. Numerous requests from engineers and others for descriptions and elevations of these bench marks has led the Bureau to begin publishing the data which are in manuscript form in the files, in order to be able to furnish the information more promptly and more economically. In addition to its own bench marks it is proposed to include in these publications the descriptions and elevations of bench marks which have been obtained from various other sources, such as municipal and State engineers and from other Federal bureaus.

It is planned to make this information available by sections of the coast, each section to be taken up as other work of the Bureau will permit. Because of the constant requests for this information in the vicinity of New York City, the first section to be published is that for New York State.

The descriptions and elevations of tidal bench marks, other than those of this Bureau, which are included in this publication, were furnished by, or obtained from the publications of the following engineering organizations: United States Army Engineers; United States Geological Survey; United States Waterways Commission; Board of Estimate and Apportionment, New York City (Precise Leveling, Report of Frederick W. Koop, 1914); Board of Water Supply, New York City (Report of C. Goodman, 1908); and the Department of Docks and Ferries, New York City. The Coast and Geodetic Survey desires to express to these organizations its appreciation of the assistance furnished.

The bench marks in this collection were selected with a view to their probable permanence and desirable location as controlling points for hydrographic and other engineering work in the vicinity of the shore. The engineer is advised, however, to connect his work with two or more bench marks in order to guard against any possible disturbance or change in elevation which may have occurred on account of improvements or other causes.

In all engineering work where it is necessary to determine differences in elevation by spirit levels and where it is desired to coordinate the work of various surveys, it is in the interests of efficiency and economy that a uniform datum be used. Of all the tidal planes, mean sea level is the most nearly fixed and therefore the best, and is now used by this Bureau as the datum for all land surveys. From precise-leveling observations it has been found that mean sea level, as determined at the principal tidal stations on the open coasts, may for all

engineering and surveying purposes be considered in the same equipotential surface. In the adjustment of transcontinental lines of levels it is assumed that there is no difference between the mean sea levels as determined from observations in the Atlantic Ocean, the Gulf of Mexico, or the Pacific Ocean. For the other tidal datums which depend upon the character of the tide, this is not the case. In the plane of mean low water, which is the datum of soundings on the Atlantic Coast, the elevation as referred to mean sea level from point to point varies directly as one-half of the mean range of tide, and instead of being an actual plane is a warped surface. This is also true of the other tidal datums which depend on the range and inequalities of the tide.

Mean sea level is the average height of the sea for all stages of the tide and is usually determined from hourly height readings. The accuracy of the determination depends upon the length of the series of observations. A fairly good value may be derived from a year of continuous observations, but if greater accuracy is desired the observations should extend over a number of years. From periods less than a year in length only approximate results can be obtained on account of the annual inequality. Annual inequality in mean sea level is a variation in the reading of mean sea level upon the tide staff at different times of the year, depending in general upon the seasonal changes in the direction and strength of the wind, and at river stations also upon the rainfall and melting snow. There is a rough periodicity in these variations of mean sea level, but they can not be accurately foretold. A good determination of this variation requires several years of observations.

The mean sea level datum of this publication is the mean sea level at Sandy Hook, N. J., which is based on six years of continuous tidal observations made with an automatic tide gauge during the years 1876 to 1881, inclusive. The probable error of the mean sea level resulting from these tidal observations is  $\pm 9.1$  millimeters, or 0.0298 foot. This mean sea level has been carried by this Bureau through a line of precise levels from Sandy Hook, N. J., to Greenbush (now Rensselaer), N. Y., opposite Albany. It has also been carried by the Board of Estimate and Apportionment of New York City from a Coast and Geodetic Survey bench mark at Perth Amboy, N. J., to the different boroughs of Greater New York and was connected with the Coast and Geodetic Survey tide staff at Fort Hamilton, with a closing error of only 4.0 millimeters, or 0.013 foot.<sup>1</sup> This discrepancy is well within the probable error of  $\pm 9.1$  millimeters for mean sea level at Sandy Hook and it has been assumed that the mean sea level is the same at both places.

As a result of the above leveling, Sandy Hook mean sea level has been taken as a standard for all this region and in this publication is referred to as standard sea level.

In addition to standard sea level the other datum planes used in this publication are: Mean tide level, mean high water, mean low water, highest tide, and lowest tide.

Mean tide level is a datum midway between mean high water and mean low water and is obtained by taking one-half of the sum of mean high water and mean low water. A fair approximation can

<sup>1</sup> Precise Leveling in New York City, Frederick W. Koop, 1909-1914, pp. 49-50.

be obtained from one lunation, or 29 days of observations; but like mean sea level, if accurate results are desired, one or more years of observations would be required.

On the open coast mean tide level is practically the same as mean sea level except at places where the duration of fall differs considerably from the duration of rise, or where the diurnal inequality is large. On inside waters, especially up tidal rivers, there may be a considerable difference in the elevation of the two planes. For the outside waters in the vicinity of New York the difference is very small. At Fort Hamilton, N. Y., as determined from 20 years of observations mean sea level is 0.04 foot above mean tide level. Up the Hudson River, on account of the slope of the river bed, there is an increasing difference from Spuyten Duyvil to Troy, and the bench marks in this region (section "L") have been referred to both planes.

Mean high water is the mean height of all the high waters, and mean low water is the mean height of all the low waters for the period of the observations. The relation of mean high water and mean low water to mean tide level at any point is one-half the mean range of tide. The mean tidal range is the difference in height between mean high water and mean low water. Nearly all of the data for the local mean ranges of the tides covered by these bench marks have been adjusted, and may be assumed to be correct within a tenth of a foot.

The highest and lowest tides represent the probable extreme heights for each locality and, in places where long series of observations were not available, they have been estimated to the nearest half foot.

The elevations furnished with the descriptions of many of these bench marks by the various organizations were referred to some local datum, the relation of which to standard sea level has been well determined. In all such cases the elevations were first referred to standard sea level by applying the known difference between the local datum and standard sea level to the given elevation of the bench mark, and then the elevations were referred to the other tide planes through the local mean range of tide. A table showing the relation of each of these local datums to standard sea level, and the bench marks used for determining this relation, are given below:

B. M. serial No.	Location of B. M.	Name of local datum.	Elevation of B. M. above local datum.	Elevation of B. M. above standard sea level.	Difference of elevations.
			<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1314	Pier A.....	Battery.....	8.785	6.662	-2.103
929	Hallots Point.....	Hallots Point.....	10.036	7.058	-2.378
200	North Brothers Island.....	Local low water.....	11.305	8.449	-2.856
975	Third Avenue Bridge.....	Harlem River.....	14.613	11.786	-2.827
144	Westchester Avenue Bridge.....	Bronx River.....	11.749	8.075	-3.074
117	Unionport.....	Westchester Creek.....	12.075	8.860	-3.215
72	City Island.....	East Chester Creek.....	30.862	27.430	-3.432
848	Kent Avenue.....	Battery (Kent Street to Williamsburg Bridge).	29.153	26.075	-2.178
897	Borden Avenue.....	Battery (vicinity of Vernon Avenue Bridge).	10.017	7.882	-2.135

(For a graphic representation of this table see fig. 1.)

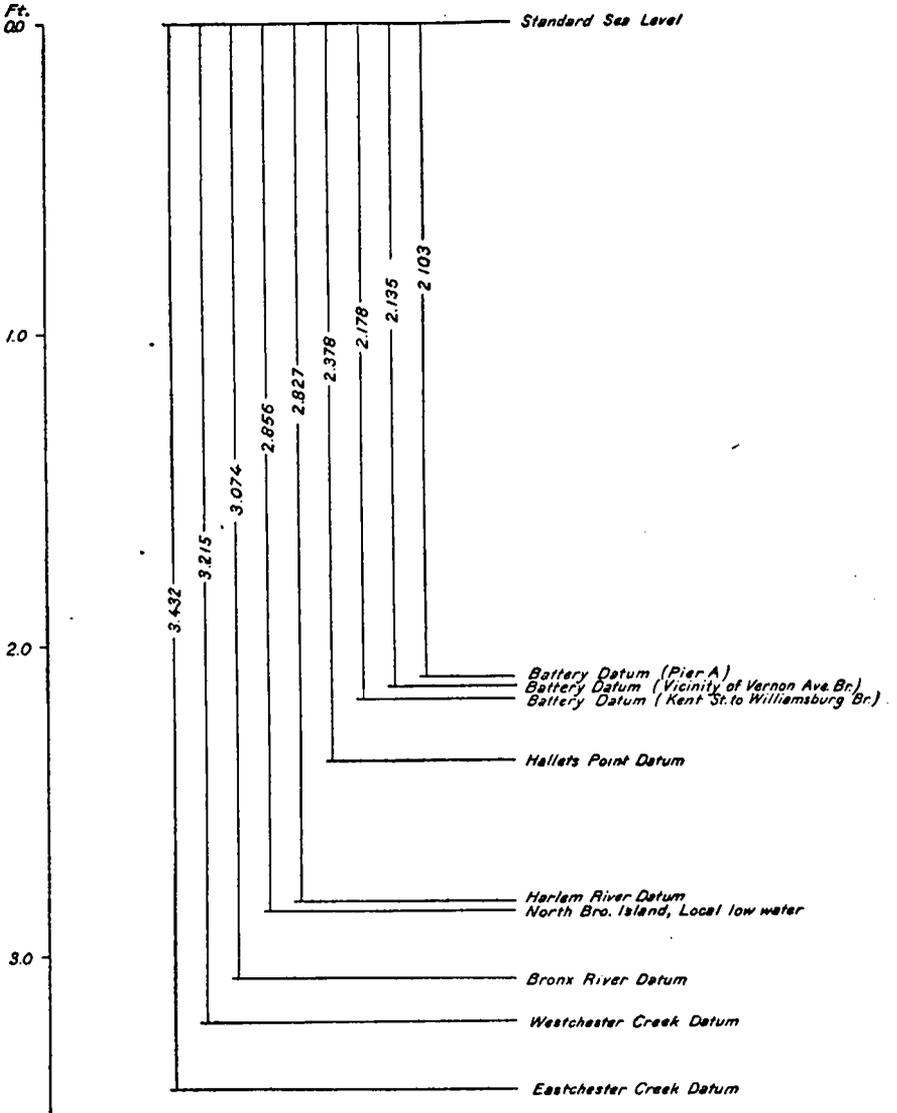


FIG. 1—COMPARISON OF DATUM PLANES

### EXPLANATION OF THE TABLES.

For convenience of reference the bench marks have been divided into 12 groups or sections, according to geographic position, each section being designated by a letter as shown by key map (see frontispiece). Each bench mark has also, as shown, been given a serial number and arranged as far as possible in the order of location along the shore.

The table of elevations at the beginning of each section generally gives the elevations of the bench marks above five tide planes. Exceptions to the rule are portions of sections "D" and "E" and the whole of section "L."

In section "D" the bench marks for Shinnecock Bay and Moriches Bay are usually referred to one plane only, either the plane of local mean low water as determined by the United States Engineers or to standard sea level. As these bays have very narrow outlets the slight fluctuations in water level are probably due to meteorological conditions. Attention is called to the fact that, where the bench marks in these bays are referred to both the planes of standard sea level and mean low water, standard sea level appears to be below mean low water. As standard sea level applies to outside waters and mean low water to the waters of the bays this would seem to indicate a slope between the inside and outside waters. At the eastern end of Great South Bay the periodic tide is very small, but standard sea level still appears to be below mean low water. The outlet of this bay would appear large enough to allow a ready adjustment of its waters in accordance with outside tidal conditions, and this apparent difference in elevation is probably due to a general piling up of the waters by the prevailing winds at the time the tides, on which the determination of the plane of mean low water is based, were being observed.

In section "E," from a long series of observations at Seaside, Jamaica Bay, mean tide level is found to be 0.16 foot above standard sea level. This same relation is assumed for these planes over the whole of Jamaica Bay, and the bench marks have been referred to both planes.

Also in section "L," which covers the Hudson River, the bench marks have been referred to both planes. This is due to the fact that the planes of standard sea level and mean tide level differ considerably on the upper portions of the river, as already explained.

### ACCURACY OF THE ELEVATIONS.

The accuracy of the elevations of these bench marks above the different tidal planes varies in accordance with the length of the tidal series upon which they depend. As already stated, standard sea level was determined from six years of tidal observations at Sandy Hook, N. J., and all bench marks referred to this datum have been connected by lines of precise spirit levels. A well-determined and uniform plane of reference is thus afforded for all bench marks which are connected in this precise level net. Bench marks not connected with this datum are referred to the mean tide level as determined independently in each locality from observed high and low waters. Bench marks referred to mean tide level in different localities have not been, in general, connected by spirit levels. Eleva-

tions referred to standard sea level or to mean tide level are given to hundredths of a foot.

The elevations above the planes of mean high water and mean low water are obtained from standard sea level or mean tide level through the local mean range of tide and are given to the nearest tenth of a foot.

The elevations above the planes of highest and lowest tides are based on values estimated to the nearest half foot above and below mean low water. These estimated values have been adopted after consideration of all the highest and lowest observed values for the region. The purpose of these elevations is to give the engineer an approximation of the extreme stages of the water that are likely to occur in that locality. They are given, however, to the nearest tenth of a foot in order to preserve the relation between bench marks. If accurate differences in relations between bench marks are desired, the values for the elevations above the plane of standard sea level or mean tide level should be used. Standard sea level being a uniform datum will show the relative elevations of all the bench marks referred to it, while mean tide level, based on local tidal observations with different lengths of series, is not a uniform datum and will give accurate relations only to bench marks in the group referred to it and only approximate relations for bench marks in different groups.

The highest tide for points on the upper Hudson River is based on the highest stages of the river due to freshets reported by the United States Weather Bureau. These highest stages are as follows:

Station.	Maximum stage above mean sea level.	Date.
	<i>Feet.</i>	
Troy.....	30.3	Mar. 28, 1913.
Albany.....	22.4	.....do.....
Castleton.....	18.0	Mar. 2, 1910.
Stuyvesant.....	11.2	Mar. 28, 1913.

The above values were plotted in connection with those for points extending to the mouth of the river, and from the curves thus obtained values were derived for the various points along the river.

#### DESCRIPTIONS OF BENCH MARKS.

Following the table of elevations is a detailed description of each bench mark given under the same serial number as in the table. In addition to the serial number there is also given the number by which the bench mark is known by the organization establishing it or furnishing its description and elevation, the organization being indicated by initials in parenthesis following the number. The names of these organizations and the initials used are as follows:

Name.	Initials.
U. S. Coast and Geodetic Survey.	(C. & G. S.)
U. S. Army Engineers.	(U. S. E.)
U. S. Geological Survey.	(G. S.)
U. S. Deep Waterways Commission.	(D. W.)
Board of Estimate and Apportionment.	(B. E. & A.)
Board of Water Supply.	(B. W. S.)
Department of Docks and Ferries.	(D. D.)

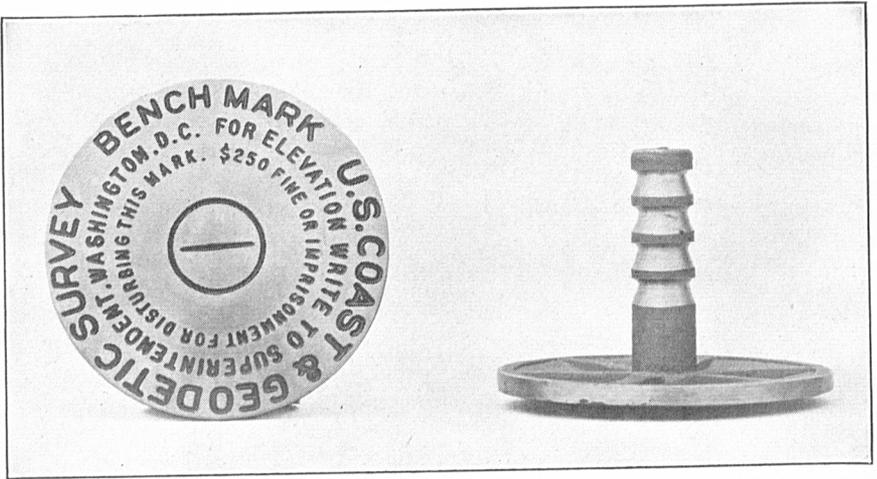


FIG. 2.—STANDARD BENCH MARK.

At the end of each description the elevation of the bench mark is given above the plane of local mean low water and the plane of standard sea level or mean tide level—the planes that have the most general use. On the Hudson River from Spuyten Duyvil to Troy (section "L"), elevations are given above both standard sea level and mean tide level (mean river level), since there is considerable difference in the elevation of these planes in this section, as already stated.

### STANDARD BENCH MARK.

The standard identification mark used by this Bureau is referred to in this publication as the "C. & G. Survey standard disk." The present model of this mark is a brass disk or cap about 3 inches in diameter and has the following inscription: U. S. Coast & Geodetic Survey Bench Mark. For elevation write to superintendent, Washington, D. C. \$250 fine or imprisonment for disturbing this mark." The standard disk bench mark has a shank about 2½ inches long for insertion in a building or other substantial support. (See fig. 2.)

### CHANGES IN ELEVATION.

Although a bench mark may appear quite permanent in character and correspond with its description, the elevation may have changed materially since its determination because of settling of the immediate locality, from construction work, or from other causes. Engineers are, therefore, cautioned to make use of at least two bench marks where possible. They will confer a favor on the profession and on this Bureau by reporting to the Director, United States Coast and Geodetic Survey, any changes in elevation or destruction of bench marks noted, in order that information in regard to these marks may be kept up to date and this publication revised at intervals.

### SECTION A.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 1 TO 108: PORT CHESTER TO FORT SCHUYLER ROAD.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
1	Port Chester .....	<i>Fcet.</i> 15.1	<i>Fcet.</i> 18.3	<i>Fcet.</i> 21.06	<i>Fcet.</i> .....	<i>Fcet.</i> 25.6	<i>Fcet.</i> 29.6
2	.....do.....	8.5	11.7	15.38	.....	19.0	23.0
3	.....do.....	6.4	8.6	12.25	.....	15.9	19.9
4	.....do.....	-2.3	0.0	4.50	.....	8.2	12.2
5	.....do.....	-0.8	2.8	6.26	.....	9.9	13.9
6	.....do.....	-0.5	2.7	6.30	.....	10.0	14.0
7	.....do.....	0.4	3.6	7.28	.....	10.9	14.9
8	.....do.....	6.2	8.4	12.01	.....	15.7	19.7
9	.....do.....	3.3	6.5	10.14	.....	13.8	17.8
10	.....do.....	3.5	6.7	10.36	.....	14.0	18.0
11	.....do.....	3.0	6.2	9.83	.....	13.5	17.5
12	.....do.....	2.9	6.1	9.72	.....	13.4	17.4
13	.....do.....	1.7	4.0	8.00	.....	12.2	16.2
14	.....do.....	2.9	6.1	9.79	.....	13.4	17.4
15	.....do.....	4.5	7.7	11.35	.....	15.0	19.0
16	.....do.....	6.9	10.1	13.75	.....	17.4	21.4
17	.....do.....	-0.9	2.3	5.91	.....	9.0	13.6
18	.....do.....	4.2	7.4	11.09	.....	14.7	18.7
19	.....do.....	5.8	9.0	12.64	.....	16.3	20.3
20	.....do.....	3.3	6.5	10.15	.....	13.8	17.8

## SECTION A.—Elevations of bench marks, serial Nos. 1 to 108; Port Chester to Fort Schuyler Road—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>
21	Port Chester	-0.4	2.8	6.46		10.1	14.1
22	do.	0.4	3.6	7.25		10.9	14.9
23	do.	1.0	4.2	7.81		11.5	15.5
24	do.	1.5	4.7	8.34		12.0	16.0
25	do.	4.6	7.8	11.44		15.1	19.1
26	do.	4.5	7.7	11.30		15.0	19.0
27	do.	-1.2	2.0	5.63		9.3	13.3
28	do.	2.7	5.9	9.69		13.2	17.2
29	do.	2.6	5.8	9.47		13.1	17.1
30	do.	-0.7	2.5	6.15		9.8	13.8
31	do.	3.1	6.3	9.93		13.6	17.6
32	do.	2.5	5.7	9.34		13.0	17.0
33	Mamaroneck	2.3	5.5	9.19		12.8	16.8
34	do.	22.1	25.3	28.93		32.6	36.6
35	do.	20.3	23.5	27.14		30.8	34.8
36	do.	-1.1	2.1	5.70		9.4	13.4
37	do.	5.1	8.3	11.90		15.6	19.6
38	do.	8.4	11.6	15.28		18.9	22.9
39	do.	6.9	10.1	13.77		17.4	21.4
40	do.	6.1	9.3	12.93		16.6	20.6
41	do.	4.1	7.3	10.95		14.6	18.6
42	do.	1.3	4.5	8.19		11.8	15.8
43	do.	2.7	5.9	9.59		13.2	17.2
44	do.	16.2	19.4	23.03		26.7	30.7
45	do.	9.4	12.6	16.27		19.9	23.9
46	do.	6.0	9.2	12.88		16.5	20.5
47	Larchmont	-2.5	0.7	4.32		8.0	12.0
48	do.	1.9	5.1	8.75		12.4	16.4
49	New Rochelle	22.1	25.3	28.91		32.6	36.6
50	do.	3.4	6.6	10.29		13.9	17.9
51	do.	6.4	9.6	13.24		16.9	20.9
52	do.	1.1	4.3	7.91		11.6	15.6
53	do.	3.1	6.3	9.96		13.6	17.6
54	do.	6.4	9.6	13.23		16.9	20.9
55	do.	11.7	14.9	18.55		22.2	26.2
56	do.	5.5	8.7	12.32		16.0	20.0
57	do.	1.8	5.0	8.64		12.3	16.3
58	do.	2.9	6.1	9.79		13.4	17.4
59	do.	-0.6	2.6	6.29		9.9	13.9
60	do.	-0.3	2.9	6.51		10.2	14.2
61	do.	14.6	17.8	21.41		25.1	29.1
62	do.	1.6	4.8	8.46		12.1	16.1
63	do.	9.7	12.9	16.52		20.2	24.2
64	do.	6.5	9.7	13.34		17.0	21.0
65	do.	-0.5	2.7	6.40		10.0	14.0
66	do.	2.4	5.6	9.29		12.9	16.9
67	David's Island	1.5	4.7	8.35		12.0	16.0
68	do.	0.7	3.9	7.52		11.2	15.2
69	do.	3.0	6.2	9.80		13.5	17.5
70	do.	2.4	5.6	9.23		12.9	16.9
71	City Island	-2.0	1.3	4.86		8.5	12.5
72	do.	20.5	23.8		27.43	31.0	35.0
73	do.	6.0	9.3		12.91	16.5	20.5
74	do.	14.4	17.7		21.32	24.9	28.9
75	do.	12.7	16.0		19.56	23.2	27.2
76	do.	3.1	6.4		10.02	13.6	17.6
77	East Chester	1.7	5.0		8.54	12.2	16.2
78	do.	4.8	8.1		11.67	15.3	19.3
79	do.	1.6	4.9		8.48	12.1	16.1
80	do.	1.9	5.2		8.77	12.4	16.4
81	do.	4.7	8.0		11.55	15.2	19.2
82	do.	3.1	6.4		9.94	13.6	17.6
83	do.	4.6	7.9		11.52	15.2	19.1
84	do.	6.7	10.0		13.59	17.2	21.2
85	do.	5.6	8.9		12.44	16.1	20.1

## SECTION A.—Elevations of bench marks, serial Nos. 1 to 108: Port Chester to Fort Schuyler Road—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
86	East Chester .....	14.4	17.7		21.28	24.9	28.9
87	do .....	8.2	11.5		15.07	18.7	22.7
88	do .....	4.0	8.2		11.77	15.4	19.4
89	do .....	5.0	8.3		11.90	15.5	19.5
90	do .....	1.7	5.0		8.55	12.2	16.2
91	do .....	0.4	3.7		7.26	10.9	14.9
92	do .....	2.3	5.6		9.22	12.8	16.8
93	do .....	1.7	5.0		8.58	12.2	16.2
94	do .....	0.7	4.0		7.58	11.2	15.2
95	Throgs Neck .....	0.9	4.7		8.26	11.9	15.9
96	do .....	10.1	13.9		17.53	21.1	25.1
97	do .....	10.0	13.8		17.44	21.0	25.0
98	do .....	13.4	17.2		20.78	24.4	28.4
99	do .....	1.8	5.6		9.24	12.8	16.8
100	do .....	6.2	10.0		13.62	17.2	21.2
101	Fort Schuyler Road .....	31.1	34.9		38.48	42.1	46.1
102	do .....	32.5	36.3		39.94	43.5	47.5
103	do .....	32.2	36.0		39.62	43.2	47.2
104	do .....	35.0	38.8		42.36	46.0	50.0
105	do .....	40.4	44.2		47.76	51.4	55.4
106	do .....	29.5	33.3		36.94	40.5	44.5
107	do .....	30.0	33.8		37.38	41.0	45.0
108	do .....	50.2	54.0		57.58	61.2	65.2

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 1 TO 108: PORT CHESTER TO FORT SCHUYLER ROAD.

**Serial No. 1.** *Port Chester:* B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk set with cement in a stone retaining wall along the New York, New Haven & Hartford Railroad tracks in front of station at the head of Adee Street. It is 20.2 feet from the south curb of the street and 2.2 feet above the ground. Marked "No. 1, 1916." Elevation: 25.6 feet above mean low water; 21.96 feet above mean tide level.

**Serial No. 2.** *Port Chester:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk cemented in the side of the red sandstone building of the First National Bank at the corner of North Main Street and Willet Avenue. It is on the northeast side of the building, 21.9 feet from east corner and 1.5 feet above the sidewalk. Marked "No. 2, 1916." Elevation: 19.0 feet above mean low water; 15.38 feet above mean tide level.

**Serial No. 3.** *Port Chester:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk cemented in the side of the white stone building of the Mutual Trust Co., of Westchester County at the corner of North Main Street and King Street. It is on the northwest side of the building, 0.5 foot from the north corner and 1.7 feet above the sidewalk. Marked "No. 3, 1916." Elevation: 15.9 feet above mean low water; 12.25 feet above mean tide level.

**Serial No. 4.** *Port Chester:* B. M. 2 (U. S. E.) is a drill hole with radial scores on the east face of the wharf 10.0 feet north of the southeast corner and 2 feet below the top of the Town Wharf. Elevation: 8.2 feet above mean low water; 4.50 feet above mean tide level.

**Serial No. 5.** *Port Chester:* B. M. 3 (U. S. E.) is the top of the water table at the southeast corner of Abendroth's Foundry on the north side of Highland Street. Elevation: 9.9 feet above mean low water; 6.26 feet above mean tide level.

**Serial No. 6.** *Port Chester:* B. M. 8 (U. S. E.) is a square cut on top of water table at the northeast corner of Abendroth's Foundry on the south side of Highland Street. Elevation: 10.0 feet above mean low water; 6.30 feet above mean tide level.

**Serial No. 7.** *Port Chester:* B. M. 9 (U. S. E.) is a screw head surrounded by four nails in the form of a square on the inside edge of the cap log on the front of the Steamboat Wharf at the foot of Adee Street. It is about 5 feet 5 inches from the northeast corner of wharf. Elevation: 10.9 feet above mean low water; 7.28 feet above mean tide level.

**Serial No. 8.** *Port Chester:* B. M. 5 (U. S. E.) is a square cut on stone pedestal block at the east end of Mill Street Bridge and marked "U. S." The block is at the southeast corner of the bridge and joins the sidewalk. Elevation: 15.7 feet above mean low water; 12.04 feet above mean tide level.

**Serial No. 9.** *Port Chester:* B. M. 6 (U. S. E.) is an iron bolt surrounded by a square cut in the stone pedestal block at the southwest corner of the Mill Street Bridge and marked "U. S." The block joins the sidewalk. Elevation: 13.8 feet above mean low water; 10.14 feet above mean tide level.

**Serial No. 10.** *Port Chester:* B. M. 7 (U. S. E.) is a square cut on second stone step of J. Ryan's grain store on north side of Mill Street, near bridge. The cut is on the southeast corner of the step. Elevation: 14.0 feet above mean low water; 10.36 feet above mean tide level.

**Serial No. 11.** *Port Chester:* B. M. 11 (U. S. E.) is an arrow on northwest corner of stone catch basin on south side of Adee Street in front of Erickson's store. Elevation: 13.5 feet above mean low water; 9.83 feet above mean tide level.

**Serial No. 12.** *Port Chester:* B. M. 12 (U. S. E.) is a square cut on southeast corner of stone catch basin on north side of Adee Street, opposite Erickson's store. Elevation: 13.4 feet above mean low water; 9.72 feet above mean tide level.

**Serial No. 13.** *Port Chester:* B. M. 13 (U. S. E.) is the top of the doorsill at its south end (not marked) which doorsill (1908) is at the west end of concrete block building owned by G. Mertz & Sons. The building is about 100 feet from the edge of the east bank of the Byram River and is opposite the Steamboat Wharf. Elevation: 12.2 feet above mean low water; 8.60 feet above mean tide level.

**Serial No. 14.** *Port Chester:* B. M. 14 (U. S. E.) is an arrow cut in the south end of the west side of the lower concrete step on the north side of concrete building owned by G. Mertz & Sons. The building is on the east bank of the Byram River and opposite the Steamboat Wharf. Elevation: 13.4 feet above mean low water; 9.79 feet above mean tide level.

**Serial No. 15.** *Port Chester:* B. M. 15 (U. S. E.) is a square cut on north corner of stone catch basin on northeast corner of North Main and Adee Streets. Elevation: 15.0 feet above mean low water; 11.35 feet above mean tide level.

**Serial No. 16.** *Port Chester:* B. M. 16 (U. S. E.) is a square cut on the curb on the southeast corner of Westchester Avenue and Traverse Street. Elevation: 17.4 feet above mean low water; 13.75 feet above mean tide level.

**Serial No. 17.** *Port Chester:* B. M. 18 (U. S. E.) is a square cut on a stone on the south side of Ryan's Wharf, and south of the foot of Westchester Avenue. Elevation: 9.6 feet above mean low water; 5.91 feet above mean tide level.

**Serial No. 18.** *Port Chester:* B. M. 19 (U. S. E.) is a square cut in the south corner of stone catch basin on the southwest corner of Traverse and Jane Streets. Elevation: 14.7 feet above mean low water; 11.09 feet above mean tide level.

**Serial No. 19.** *Port Chester:* B. M. 20 (U. S. E.) is a square cut in west corner of stone catch basin on the northeastern corner of Purdy Avenue and Traverse Street. Elevation: 16.3 feet above mean low water; 12.64 feet above mean tide level.

**Serial No. 20.** *Port Chester:* B. M. 21 (U. S. E.) is a square cut in the east end of the doorsill of the entrance to the office of the Globe Foundry, on the north side of Purdy Avenue and Byram River. Elevation: 13.8 feet above mean low water; 10.15 feet above mean tide level.

**Serial No. 21.** *Port Chester:* B. M. 22 (U. S. E.) is the top of a large ring bolt situated on the ledge rock at the first salient point south of the Globe Foundry at the foot of Purdy Avenue. The ring bolt is 24.6 feet from a small ring bolt to the west of it and is 8 feet from  $\Delta$  station to the east of it. Elevation: 10.1 feet above mean low water; 6.46 feet above mean tide level.

**Serial No. 22.** *Port Chester:* B. M. 23 (U. S. E.) is a square with the letters "U. S." cut on ledge rock on the south side of the Fox Island Road as it enters Fox Island and across the road from the town dump. It is 11.5 feet from a white oak tree, 25 feet west from a black oak tree, 32.7 feet from an electric light pole, and 24.3 feet from a cedar tree. Elevation: 10.9 feet above mean low water; 7.25 feet above mean tide level.

**Serial No. 23.** *Port Chester:* B. M. 24 (U. S. E.) is an arrow near a large ring bolt on the north end of Davis Wharf, the first stone wharf north of Gould's Wharf of the west side of Byram River. Elevation: 11.5 feet above mean low water; 7.81 feet above mean tide level.

**Serial No. 24.** *Port Chester:* B. M. 25 (U. S. E.) is an arrow cut on the top of an outcrop of ledge of rock a few feet north of the end of Gould's Wharf. The rock is

peculiar in shape coming to a point at the top, and is 7.8 feet from the small piece of seawall at the end of the wharf. Elevation: 12.0 feet above mean low water; 8.34 feet above mean tide level.

**Serial No. 25.** *Port Chester:* B. M. 26 (U. S. E.) is an arrow cut in ledge rock on the south edge of path leading to Gould's Wharf. It is 33.8 feet from the angle in the seawall and is 8.2 feet from the junction of the south side of the wharf and the ledge rock. Elevation: 15.1 feet above mean low water; 11.44 feet above mean tide level.

**Serial No. 26.** *Port Chester:* B. M. 27 (U. S. E.) is a square with the letters "U. S." cut in ledge rock at the junction of the south edge of the wharf and ledge rock. Elevation: 15.0 feet above mean low water; 11.30 feet above mean tide level.

**Serial No. 27.** *Port Chester:* B. M. 28 (U. S. E.) is a square with the letters "U. S." cut on ledge of rock 17.2 feet south of the south face of the Town Wharf on Fox Island and 24.0 feet from the southeast corner of wharf. Elevation: 9.3 feet above mean low water; 5.63 feet above mean tide level.

**Serial No. 28.** *Port Chester:* B. M. 29 (U. S. E.) is an arrow cut on the southeast corner of stone catch basin on west side of road leading down to the breakwater in the harbor. The road at this point is opposite Fox Island and has a curved beach on its east side and a marsh on the west. Elevation: 13.2 feet above mean low water; 9.59 feet above mean tide level.

**Serial No. 29.** *Port Chester:* B. M. 30 (U. S. E.) is a square cut on southwest corner of catch basin on the east side of road leading down to the breakwater where the road is nearest Long Island Sound. Elevation: 13.1 feet above mean low water; 9.47 feet above mean tide level.

**Serial No. 30.** *Port Chester:* B. M. 31 (U. S. E.) is an arrow cut in ledge of rock on the shore opposite the end of the breakwater. The rock is very flat and smooth. Elevation: 9.8 feet above mean low water; 6.15 feet above mean tide level.

**Serial No. 31.** *Port Chester:* B. M. 32 (U. S. E.) is a square cut on a high point of ledge rock near the end of the breakwater. It is 81 feet from B. M. No. 31. Elevation: 13.6 feet above mean low water; 9.93 feet above mean tide level.

**Serial No. 32.** *Port Chester:* B. M. 33 (U. S. E.) is a square with the letters "U. S." cut in ledge rock on the shore end of the breakwater. It is 14.8 feet north of beacon light and 156 feet from B. M. No. 31. Elevation: 13.0 feet above mean low water; 9.34 feet above mean tide level.

**Serial No. 33.** *Mamaroneck:* B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk cemented in a concrete bridge. The bridge is on the road which is a continuation of Mamaroneck Avenue and is over a salt-water marsh. The bench mark is set in the concrete sidewalk of the bridge about 3 inches from parapet and the same distance from the post at the northwest corner. Elevation: 12.8 feet above mean low water; 9.19 feet above mean tide level.

**Serial No. 34.** *Mamaroneck:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set with cement in the brick building of the First National Bank on the Boston Post Road. It is on the south side of the building, 0.95 meter from east corner and 0.83 meter above sidewalk. Elevation: 32.6 feet above mean low water; 28.93 feet above mean tide level.

**Serial No. 35.** *Mamaroneck:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk cemented in the top of the stone balustrade of the stone bridge where the Boston Post Road crosses the Mamaroneck River. It is on the east side of the bridge, 9.25 meters from south end of balustrade. It is in the sixth stone from the south end, this stone being slightly lower than the others. Elevation: 30.8 feet above mean low water; 27.14 feet above mean tide level.

**Serial No. 36.** *Mamaroneck:* B. M. 1 (U. S. E.) is a point on spring line of arch of stone bridge at head of harbor, on southeast corner of west abutment. Elevation: 9.4 feet above mean low water; 5.70 feet above mean tide level.

**Serial No. 37.** *Mamaroneck:* B. M. 5 (U. S. E.) is a square cut on top of large boulder near iron fence on east side of Rushmore Avenue, with letters "U. S." cut alongside of it. It is on southeast corner of Bleacher and Rushmore Avenues. Elevation: 15.6 feet above mean low water; 11.90 feet above mean tide level.

**Serial No. 38.** *Mamaroneck:* B. M. 6 (U. S. E.) is a square cut on top of boulder on east side of Rushmore Avenue and north of Dr. Carpenter's home. Elevation: 18.9 feet above mean low water; 15.28 feet above mean tide level.

**Serial No. 39.** *Mamaroneck:* B. M. 7 (U. S. E.) is a square cut on top of center boulder of three, and is 39 feet east of curb of Rushmore Avenue and north of Dr. Carpenter's home. Elevation: 17.4 feet above mean low water; 13.77 feet above mean tide level.

**Serial No. 40.** *Mamaroneck*: B. M. 8 (U. S. E.) is a square cut on top of south boulder of three, and is 48 feet east of curb of Rushmore Avenue and north of Dr. Carpenter's home. Elevation: 16.6 feet above mean low water; 12.93 feet above mean tide level.

**Serial No. 41.** *Mamaroneck*: B. M. 9 (U. S. E.) is a stone monument in northeast corner of Rushmore Avenue and cross road north of Bleecher Avenue. Elevation: 14.6 feet above mean low water; 10.95 feet above mean tide level.

**Serial No. 42.** *Mamaroneck*: B. M. 10 (U. S. E.) is a stone monument 4 feet from north edge of sidewalk on north side of Rushmore Avenue and about 400 feet from Orienta Avenue. Elevation: 11.8 feet above mean low water; 8.19 feet above mean tide level.

**Serial No. 43.** *Mamaroneck*: B. M. 11 (U. S. E.) is a square cut on stone wall north side of Orienta Avenue, between Rushmore Avenue and Boston Post Road. Elevation: 13.2 feet above mean low water; 9.59 feet above mean tide level.

**Serial No. 44.** *Mamaroneck*: B. M. 17 (U. S. E.) is a square cut in ledge rock at the northeast corner of Britt's grocery store. Elevation: 26.7 feet above mean low water; 23.03 feet above mean tide level.

**Serial No. 45.** *Mamaroneck*: B. M. 18 (U. S. E.) is a square cut on curb to the southwest of Huptel's saloon and on the east curb of Mamaroneck Avenue and about 20 feet from south end of curb. Elevation: 19.9 feet above mean low water; 16.27 feet above mean tide level.

**Serial No. 46.** *Mamaroneck*: B. M. 19 (U. S. E.) is a square cut on stone retaining wall on west side of Mamaroneck Avenue, marked with "U. S." cut alongside and is opposite Charles W. Davis's office. Elevation: 16.5 feet above mean low water; 12.88 feet above mean tide level.

**Serial No. 47.** *Larchmont*: B. M. 2 (U. S. E.) is a 1-inch copper bolt set flush in ledge and crossed (X). It is 17.3 feet northeast from corner of piazza of boat house, take a right angle offset 2.1 feet south, near boat house in Horse Shoe Harbor. Elevation: 8.0 feet above mean low water; 4.32 feet above mean tide level.

**Serial No. 48.** *Larchmont*: B. M. 3 (U. S. E.) is a square cut in the granite capstone of the northeast corner of Flagler's Wharf next to iron davit. Elevation: 12.4 feet above mean low water; 8.75 feet above mean tide level.

**Serial No. 49.** *New Rochelle*: B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk cemented in a shelf on the side of a cliff of solid rock about 15 feet high along west side of Cedar Road near the corner of Echo Avenue. It is 13.5 meters from the curb of Echo Avenue and 1.2 meters above the sidewalk. It is across the street from northern entrance to New Rochelle Coal & Lumber Yard. Elevation: 32.6 feet above mean low water; 28.91 feet above mean tide level.

**Serial No. 50.** *New Rochelle*: B. M. 5 (U. S. E.) is the highest point in a square cut on a projecting point of rock between the Y. M. C. A. boat house and the Hudson Park Bath House. Elevation: 13.9 feet above mean low water; 10.29 feet above mean tide level.

**Serial No. 51.** *New Rochelle*: B. M. 7 (U. S. E.) is the highest point in a square cut in the top of concrete sea wall. It is 1.37 feet north of a cross cut in the north sea wall of the property of M. M. Loram, 13.43 feet from a cross cut in the top of the end of wall near the shed on the property of M. M. Loram and 1.59 feet from the face of the wall. Elevation: 16.9 feet above mean low water; 13.24 above mean tide level.

**Serial No. 52.** *New Rochelle*: B. M. 10 (U. S. E.) is the highest point in a square cut on the southeast corner of flooring of pergola (open waiting room), at the entrance to Hudson Park. It is just outside the railing. Elevation: 11.6 feet above mean low water; 7.91 feet above mean tide level.

**Serial No. 53.** *New Rochelle*: B. M. 11 (U. S. E.) is the highest point in a square cut on the northwest corner of base of west masonry post at the entrance to Wildcliff. Elevation: 13.6 feet above mean low water; 9.96 feet above mean tide level.

**Serial No. 54.** *New Rochelle*: B. M. 12 (U. S. E.) is a square cut on stone wall surrounding the property at the corner of Hudson Park Road and Davenport Avenue. It is 55.35 feet north of eastern gate post at the entrance to Davenport Avenue. Elevation: 16.9 feet above mean low water; 13.23 feet above mean tide level.

**Serial No. 55.** *New Rochelle*: B. M. 13 (U. S. E.) is a square cut on the most westerly corner of the west gate post at the entrance to Davenport Avenue. Elevation: 22.2 feet above mean low water; 18.55 feet above mean tide level.

**Serial No. 56.** *New Rochelle*: B. M. 14 (U. S. E.) is a square cut in the south end of a bluestone window sill of a double window on the west end of a new three-story

brick planing mill of the New Rochelle Coal & Lumber Co. (built in 1910). Elevation: 16.0 feet above mean low water; 12.32 feet above mean tide level.

**Serial No. 57.** *New Rochelle:* B. M. 15 (U. S. E.) is a square cut in the northeast corner of concrete base of structural steel crane at the southwest corner of hoisting engine shed in coal yard of New Rochelle Coal & Lumber Co. It is 21.08 feet east of center of a bolt marked "U. S." in the base of a coal elevator, 20.75 feet southeast of a bolt marked "U. S." in brace of bent supporting overhead coal tracks, and 13.63 feet southwest of corner of hoisting shed. Elevation: 12.3 feet above mean low water; 8.64 feet above mean tide level.

**Serial No. 58.** *New Rochelle:* B. M. 16 (U. S. E.) is a square cut in concrete footing on south end of coal sheds in yard of the New Rochelle Coal & Lumber Co. It is 3.4 feet west of the east end of footing; 23.45 feet northwest of the northeast corner of hoisting engine and 20.95 feet northeast of northwest corner of same shed. Elevation: 13.4 feet above mean low water; 9.79 feet above mean tide level.

**Serial No. 59.** *New Rochelle:* B. M. 18 (U. S. E.) is a square cut on masonry bulkhead 1 foot below the top of cinder concrete coping at the inner end of the slip immediately to the east of the lumber shed in the extreme eastern end of the New Rochelle Coal & Lumber Co. yard. It is 3.32 feet west of the inner face of coping along the east side of slip and 38.02 feet east of west end of coping at inner end of slip. There is an arrow head on top of the coping. Elevation: 9.9 feet above mean low water; 6.24 feet above mean tide level.

**Serial No. 60.** *New Rochelle:* B. M. 17 (U. S. E.) is a square cut on top of a gravel concrete coping at the southeast corner of step. It is 1.58 feet from the south face of coping, 1.58 feet from the face of the west coping, 2.42 feet from the outer corner and 0.70 feet from inner corner of coping. Elevation: 10.2 feet above mean low water; 6.51 feet above mean tide level.

**Serial No. 61.** *New Rochelle:* B. M. 25 (U. S. E.) is a square cut on top of wall at the foot of old Town Dock Road. It is 0.41 foot from street face of wall and 1.99 feet from harbor face. It is 6.22 feet from telegraph pole and 4.74 feet from fire hydrant valve nut. Elevation: 25.1 feet above mean low water; 21.41 feet above mean tide level.

**Serial No. 62.** *New Rochelle:* B. M. 19 (U. S. E.) is the highest point in a square cut in ledge rock near Sutton Manor Realty Co. Elevation: 12.1 feet above mean low water; 8.46 feet above mean tide level.

**Serial No. 63.** *New Rochelle:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk cemented in a shelf on the northwest side of a large rock in the grounds of the New Rochelle public park on Beaufort Point. It is just across the street from the ferry slip of the Sea Cliff Ferry and west of the club house of the New Rochelle Rowing Club. Elevation: 20.2 feet above mean low water; 16.52 feet above mean tide level.

**Serial No. 64.** *New Rochelle:* B. M. 24 (U. S. E.) is a cross cut on the top of stone retaining wall on the southwest corner of Premium Point opposite Echo Island on Schaefer property. It is on the corner directly north of break in wall holding landing stage. Elevation: 17.0 feet above mean low water; 13.34 feet above mean tide level.

**Serial No. 65.** *New Rochelle:* B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk cemented in the highest part of Little Hassoc Rock in Echo Bay. Elevation: 10.0 feet above mean low water; 6.40 feet above mean tide level.

**Serial No. 66.** *New Rochelle:* B. M. 23 (U. S. E.) is a cross cut on the ledge rock on the most southerly end of Goat Island, about 200 feet west of dock and 15.40 feet northeast of telegraph pole. It is the nearest point to Little Harrison Island. Elevation: 12.9 feet above mean low water; 9.29 feet above mean tide level.

**Serial No. 67.**  *Davids Island:* B. M. 2 (C. & G. S.) is a cross with a circle cut around it, cut on the northwest face of rock about 4 feet above high water mark. It is on rocky point west of tall square brick water tower and distant 321 feet from the tower. Beneath the bench mark is painted in black "B. M. 1894." Elevation: 12.0 feet above mean low water; 8.35 feet above mean tide level.

**Serial No. 68.**  *Davids Island:* B. M. 3 (C. & G. S.) is a square 2½ inches on a side and ½-inch deep, cut in top face of concrete wall, on top of sea wall at its southern extremity about 4 inches from where it joins the rocky ledge on which B. M. 2 is located, and 4 inches from sea wall ledge. Elevation: 11.2 feet above mean low water; 7.52 feet above mean tide level.

**Serial No. 69.**  *Davids Island:* B. M. 4 (C. & G. S.) is a roughly formed square 4 inches on a side and ¼-inch deep. The southwest corner of the depression was used as the bench mark. It is on topmost step of the flight of concrete steps leading into the basement of the brick building used as quartermaster's headquarters at Fort Slocum. Elevation: 13.5 feet above mean low water; 9.86 feet above mean tide level.

**Serial No. 70.**  *Davids Island:* B. M. 5 (C. & G. S.) is the toe calk of a large horse-shoe that was embedded in the top surface of the sea wall at time of construction, about  $\frac{1}{2}$ -inch above the surface of the wall. It is on the outer end of the sea wall just south of the passenger dock at Fort Slocum. Elevation: 12.9 feet above mean low water; 9.23 feet above mean tide level.

**Serial No. 71.**  *City Island:* B. M. 1 (C. & G. S.) is a hole in the east side of a rock on the shore, 47 meters north of the wharf. Elevation: 8.5 feet above mean low water; 4.86 feet above mean tide level.

**Serial No. 72.**  *City Island:* B. M. 3 (U. S. E.) is a square cut on ledge rock on east corner of intersection of road to New York City and road to City Island, marked "U. S. B. M.," opposite paths to depot and bridge to City Island Railroad Station. Elevation: 31.0 feet above mean low water; 27.43 feet above standard sea level.

**Serial No. 73.**  *City Island:* B. M. 4 (U. S. E.) is a square cut in rock at edge of sidewalk on east side of road to City Island, 90 feet from electric pole L273, 76.6 feet from electric pole L272. Elevation: 16.5 feet above mean low water; 12.91 feet above standard sea level.

**Serial No. 74.**  *City Island:* B. M. 5 (U. S. E.) is a square cut in stone in the center of sidewalk on east side of roadway over northwest abutment of drawbridge. Elevation: 24.9 feet above mean low water; 21.32 feet above standard sea level.

**Serial No. 75.**  *City Island:* B. M. 6 (U. S. E.) is a square cut in stone slab abutting edge of sidewalk in front of hardware store at northeast corner of intersection of City Island Avenue and Fordham Street. Elevation: 23.2 feet above mean low water; 19.56 feet above standard sea level.

**Serial No. 76.**  *City Island:* B. M. 7 (U. S. E.) is a square cut in cap log marked "B. M. U. S. E. D.," on inner corner of outer end of pier at foot of Main Street on southeast end of City Island at Belden Point, near Belden Point Inn. Elevation: 13.6 feet above mean low water; 10.02 feet above standard sea level.

**Serial No. 77.**  *East Chester Creek:* B. M.-A (U. S. E.) is a square with the letters "U. S." cut on northeast corner of North Bridge Pier of the New Fulton Avenue Bridge over East Chester Creek. Elevation: 12.2 feet above mean low water; 8.54 feet above standard sea level.

**Serial No. 78.**  *East Chester Creek:* B. M. 1 (U. S. E.) is a square cut on corner of shelf of ledge of rock near Town Wharf. An arrowhead pointing upward was cut on rock on the up-river face and also on the river face. Elevation: 15.3 feet above mean low water; 11.67 feet above standard sea level.

**Serial No. 79.**  *East Chester Creek:* B. M. 2 (U. S. E.) is a bolt surrounded by four brass nails on stringer at the northeast corner of Town Wharf. Elevation: 12.1 feet above mean low water; 8.48 feet above standard sea level.

**Serial No. 80.**  *East Chester Creek:* B. M. 6 (U. S. E.) is a square with the letters "U. S." cut on ledge of rock northwest of City Wharf. Elevation: 12.4 feet above mean low water; 8.77 feet above standard sea level.

**Serial No. 81.**  *East Chester Creek:* B. M. 8 (U. S. E.) is a square cut on the northeast corner of the east draw pier of the New York, New Haven & Hartford Railroad. Elevation: 15.2 feet above mean low water; 11.55 feet above standard sea level.

**Serial No. 82.**  *East Chester Creek:* B. M. 9 (U. S. E.) is a square cut in the northwest corner of the first pier west of the west draw pier of the New York, New Haven and Hartford Railroad. Elevation: 13.6 feet above mean low water; 9.94 feet above standard sea level.

**Serial No. 83.**  *East Chester Creek:* B. M. 10 (U. S. E.) is a square cut on the southeast corner of the east draw pier of the New York, New Haven & Hartford Railroad. Elevation: 15.2 feet above mean low water; 11.52 feet above standard sea level.

**Serial No. 84.**  *East Chester Creek:* B. M. 11 (U. S. E.) is a square with the letters "U. S." cut on a large flat rock at the shore end of City Wharf. Elevation: 17.2 feet above mean low water; 13.59 feet above standard sea level.

**Serial No. 85.**  *East Chester Creek:* B. M. 17 (U. S. E.) is a square cut on a large ledge on west side of East Chester Creek south of Lockwood's Bridge on the property of Paul Kohn. Elevation: 16.1 feet above mean low water; 12.44 feet above standard sea level.

**Serial No. 86.**  *East Chester Creek:* B. M. 1137 (B. E. & A.) is the center of a brass bolt marking the U. S. C. & G. S. triangulation station Maguire. The bench mark is on the land of Paul Kohn, about 500 feet southeasterly from Boston Road and about 500 feet westerly from East Chester Creek. The bolt is about 150 feet south of the house and flush with the ground. Elevation: 24.9 feet above mean low water; 21.28 feet above standard sea level.

**Serial No. 87.** *East Chester Creek:* B. M. 1139 (B. E. & A.) is a square cut in the top of the southwest corner of the bluestone doorsill of wide door at the southeast corner of the two-story and attic red brick gas purification building of the Westchester Lighting Co., about 1,000 feet northwesterly from Boston Road and about 1,000 feet east of East Chester Creek (Hutchinson River.) The bench mark is about 50 feet north of Storage Holder No. 1 and flush with the ground. Elevation: 13.7 feet above mean low water; 15.07 feet above standard sea level.

**Serial No. 88.** *East Chester Creek:* B. M. 21 (U. S. E.) is a square with the letters "U. S." cut on a window sill of an old brick building near the Town Wharf. It is on the north end of the sill and on east side of the building on the window next to the door. Elevation: 15.4 feet above mean low water; 11.77 feet above standard sea level.

**Serial No. 89.** *East Chester Creek:* B. M. 25 (U. S. E.) is a square with the letters "U. S." cut on a flat ledge rock on the west side of the creek about half way between Lockwood's Bridge and Town Wharf. Elevation: 15.5 feet above mean low water; 11.90 feet above standard sea level.

**Serial No. 90.** *East Chester Creek:* B. M. 28 (U. S. E.) is a square with the letters "U. S." cut on ledge of rock on an island on the west side of East Chester Creek, northwest of Goose Island. Elevation: 12.2 feet above mean low water; 8.55 feet above standard sea level.

**Serial No. 91.** *East Chester Creek:* B. M. 29 (U. S. E.) is a square cut on ledge of rock on Kidds Point 54.3 feet north from  $\Delta$  station. The letters "U. S." are cut beside bench mark. Elevation: 10.9 feet above mean low water; 7.26 feet above standard sea level.

**Serial No. 92.** *East Chester Creek:* B. M. 30 (U. S. E.) is a square cut on ledge of rock on the northeast shore of island on west shore of the creek and northwest of Kidds Point. The letters "U. S." are cut beside bench mark. Elevation: 12.8 feet above mean low water; 9.22 feet above standard sea level.

**Serial No. 93.** *East Chester Creek:* B. M. 31 (U. S. E.) is a square cut on ledge on south end of Ballards Point, 52.0 feet from  $\Delta$  station 619A. The letters "U. S." are cut beside bench mark. Elevation: 12.2 feet above mean low water; 8.58 feet above standard sea level.

**Serial No. 94.** *East Chester Creek:* B. M. 32 (U. S. E.) is a square cut on ledge of rock on west shore of East Chester Creek, northwest of Ballards Point near Mill Creek and about 10 feet from high water mark. The letters "U. S." are cut beside bench mark. Elevation: 11.2 feet above mean low water; 7.58 feet above standard sea level.

**Serial No. 95.** *Throgs Neck:* B. M. 999 (B. E. & A.) is a  $\frac{7}{8}$ -inch copper bolt in the top of the southeast corner of a large coping stone on top of the sea wall on the southerly side of the military reservation at Fort Schuyler. The bolt is 3 feet south of the southeast corner of the two-story brick house occupied by Mr. Mayhew, post engineer, and about 50 feet west of the east dock. The bolt is 5 inches from the face of the sea wall and in the center of a 4-inch square cavity in the coping stone, which is also a part of the foundation of the post engineer's house. Elevation: 11.9 feet above mean low water; 8.26 feet above standard sea level.

**Serial No. 96.** *Throgs Neck:* B. M. 1000 (B. E. & A.) is the bottom of a square cut in the projecting granite foundation stone in front of the easterly salient of the easterly bastion of old Fort Schuyler. The bench mark is 9 inches east of the east corner of the bastion and immediately west of the south end of Battery Bell. The number of the bench mark, 1000, is cut in the top of the granite sill of the small window 2.3 feet above the point. Elevation: 21.1 feet above mean low water; 17.53 feet above standard sea level.

**Serial No. 97.** *Throgs Neck:* B. M. 1001 (B. E. & A.) is a square cut in the projecting foundation stone in front of the southeasterly salient of the most southeasterly bastion of old Fort Schuyler. The bench mark is near the most easterly part of Throgs Neck and about 275 feet northeast of the east dock near the post engineer's house. The number of the bench mark, 1001, is cut in the top of the granite sill of the small window 2.75 feet above the point, which is 3 inches from the corner of the bastion. Elevation: 21.0 feet above mean low water; 17.44 feet above standard sea level.

**Serial No. 98.** *Throgs Neck:* B. M. 1002 (B. E. & A.) is a cross cut in the dressed edge of the masonry at the southeast corner of the one-story stone building below the Throgs Neck Light House, in the military reservation at Fort Schuyler. The bench mark is about 42 feet west of the west end of old Fort Schuyler, is about 130 feet north of the sea wall and 5 feet above the ground. An arrowhead cut in the stone points up to the bench mark, which is 1 inch from the corner. Elevation: 24.4 feet above mean low water; 20.78 feet above standard sea level.

**Serial No. 99.** *Throgs Neck:* B. M. 1003 (B. E. & A.) is a cross cut in the top of iron lug on the northeasterly side of the rim of Croton water manhole on the north side of Fort Schuyler Road, at the beginning of the causeway leading to the military reservation at Fort Schuyler. The bench mark is just south of the corner of a stone fence and 1.3 feet above the ground. Elevation: 12.8 feet above mean low water; 9.24 feet above standard sea level.

**Serial No. 100.** *Throgs Neck:* B. M. 1004 (B. E. & A.) is a square cut in the top of the northeasterly edge of the 10-inch square granite monument at the base of the stone fence on the southwesterly side of Fort Schuyler Road, alongside of the one-story brick dairy on the Havemeyer estate. The bench mark is about 1 mile west of Fort Schuyler, about 45 feet south of a private road to the estate, and nearly opposite a fire hydrant on the easterly side of Fort Schuyler Road. The top of the monument is 2 feet above the ground and an arrowhead on the easterly side of the monument points to the bench mark. Elevation: 17.2 feet above mean low water 13.62 feet above standard sea level.

**Serial No. 101.** *Fort Schuyler Road:* B. M. 1005 (B. E. & A.) is a square cut in the top of the west edge of the 12-inch square granite monument in the corner of the stone fence on the southeast corner of Fort Schuyler Road and a private road leading southerly to the Havemeyer estate. The top of the monument is 1.2 feet above the ground and contains the letter "X." It is about 1,000 feet west of Pennyfield Road. Elevation: 42.1 feet above mean low water; 38.48 feet above standard sea level.

**Serial No. 102.** *Fort Schuyler Road:* B. M. 1006 (B. E. & A.) is the center of a square cut in the top of the center of the large granite gatepost on the east side of the entrance to the Havemeyer estate, on the south side of Fort Schuyler Road about 1.3 miles southeasterly from Eastern Boulevard and about 600 feet south of Ocean Avenue (Pennyfield Avenue). The bench mark is on the most easterly of 4 granite gateposts and 7 feet above the ground. Elevation: 43.5 feet above mean low water; 39.94 feet above standard sea level.

**Serial No. 103.** *Fort Schuyler Road:* B. M. 1007 (B. E. & A.) is a square cut in the top of the east edge of the large cubical granite block on the south side of the south gate to the Morris estate, on the west side of Fort Schuyler Road. The bench mark is about 9 feet north of the south line of Ocean Avenue (Pennyfield Avenue), is 2.2 feet above the ground and 4 inches from the north edge of the stone. An arrowhead cut in the east face of the stone points to the bench mark. Elevation: 43.2 feet above mean low water; 39.62 feet above standard sea level.

**Serial No. 104.** *Fort Schuyler Road:* B. M. 1008 (B. E. & A.) is the bottom of a square cut in the top of the north end of the projecting stone at the bottom of the stone fence on the easterly side of Fort Schuyler Road, in front of the Jackson estate. The bench mark is about 800 feet north of Ocean Avenue (Pennyfield Avenue), is about 20 feet north of the lodge gate and 1 foot above the ground. The letter "B" is cut in the stone, at the south side of the point. Elevation: 46.0 feet above mean low water; 42.36 feet above standard sea level.

**Serial No. 105.** *Fort Schuyler Road:* B. M. 1009 (B. E. & A.) is the bottom of a square cut in the top of the south corner of the bluestone doorsill at the entrance to the four-story red brick water tower on the Jackson estate. The bench mark is about 800 feet north of Ocean Avenue (Pennyfield Avenue) and about 270 feet east of Fort Schuyler Road. Elevation: 51.4 feet above mean low water; 47.76 feet above standard sea level.

**Serial No. 106.** *Fort Schuyler Road:* B. M. 1010 (B. E. & A.) is a square cut in the top of the northeast corner of the stone wall on the south side of the gate at the entrance to Colford's pasture for horses, on the west side of Fort Schuyler Road about 150 feet south of Burdett Avenue. The bench mark is 3.3 feet above the ground. Elevation: 40.5 feet above mean low water; 36.94 feet above standard sea level.

**Serial No. 107.** *Fort Schuyler Road:* B. M. 1011 (B. E. & A.) is a square cut in the top of the west edge of the bluestone sill of the south gate at the entrance to the Montgomery estate, on the east side of Fort Schuyler Road and 50 feet of the south side of Roosevelt Avenue. The bench mark is 4 inches from the south end of the sill. Elevation: 41.0 feet above mean low water; 37.38 feet above standard sea level.

**Serial No. 108.** *Fort Schuyler Road:* B. M. 1012 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the marble city monument marking the U. S. C. & G. S. triangulation station Crosby. This point marks the eastern end of the Unionpost base line and is located in Hoffman's picnic grounds, formerly the Kelly estate. The monument is set in concrete 3 by 3 by 4 inches, is about 225 feet west of Fort Schuyler Road and about 830 feet south of Eastern Boulevard. The top is flush with the ground. Elevation: 61.2 feet above mean low water; 57.58 feet above standard sea level.

## SECTION B.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 109 TO 221: WESTCHESTER CREEK TO PORT MORRIS.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
109	Westchester Creek	5.7	9.0	12.63	16.2	20.2
110	do	6.5	9.8	13.44	17.0	21.0
111	do	3.5	6.8	10.36	14.0	18.0
112	do	-2.2	1.1	4.73	8.3	12.3
113	do	3.3	6.6	10.25	13.8	17.8
114	do	0.4	3.7	7.26	10.9	14.9
115	do	7.7	11.0	14.66	18.2	22.2
116	do	2.0	5.3	8.86	12.5	16.5
117	do	2.0	5.3	8.86	12.5	16.5
118	do	-0.2	3.1	6.07	10.3	14.3
119	do	7.7	11.0	14.58	18.2	22.2
120	do	6.5	9.8	13.41	17.0	21.0
121	do	2.6	5.9	9.52	13.1	17.1
122	do	5.6	8.9	12.51	16.1	20.1
123	do	9.3	12.6	16.17	19.8	23.8
124	do	20.7	24.0	27.60	31.2	35.2
125	do	4.6	7.9	11.46	15.1	19.1
126	do	2.3	5.6	9.22	12.8	16.8
127	do	4.0	7.3	10.87	14.5	18.5
128	do	13.5	16.8	20.43	24.0	28.0
129	do	15.2	18.5	22.11	25.7	29.7
130	do	15.2	18.5	22.06	25.7	29.7
131	do	-0.3	3.0	6.60	10.2	14.2
132	do	0.2	3.5	7.10	10.7	14.7
133	do	1.9	5.2	8.79	12.4	16.4
134	Clason Point	8.5	11.0	15.49	19.0	23.0
135	do	4.8	8.2	11.79	15.3	19.3
136	do	1.4	4.8	8.34	11.9	15.9
137	do	-3.7	-0.3	3.25	6.8	10.8
138	do	6.5	9.9	13.50	17.0	21.0
139	Bronx River	0.1	3.5	7.02	10.6	14.6
140	do	19.9	23.3	26.85	30.4	34.4
141	do	19.9	23.3	26.85	30.4	34.4
142	do	19.9	23.3	26.84	30.4	34.4
143	do	1.7	5.1	8.68	12.2	16.2
144	do	1.7	5.1	8.68	12.2	16.2
145	do	19.9	23.3	26.83	30.4	34.4
146	do	20.8	24.2	27.74	31.3	35.3
147	do	25.3	28.7	32.20	35.8	39.8
148	do	7.6	11.0	14.50	18.1	22.1
149	do	1.7	5.1	8.68	12.2	16.2
150	do	1.7	5.1	8.69	12.2	16.2
151	do	4.3	7.7	11.20	14.8	18.8
152	do	5.8	9.2	12.73	16.3	20.3
153	do	9.5	12.9	16.40	20.0	24.0
154	do	3.1	6.5	10.03	13.6	17.6
155	do	7.7	11.1	14.63	18.2	22.2
156	do	-1.0	2.4	5.98	9.5	13.5
157	do	2.9	6.3	9.83	13.4	17.4
158	do	0.1	3.5	7.02	10.6	14.6
159	do	22.3	25.7	29.25	32.8	36.8
160	do	12.6	16.0	19.53	23.1	27.1
161	do	10.8	14.2	17.73	21.3	25.3
162	do	9.1	12.5	16.03	19.0	23.6
163	do	4.5	7.9	11.43	15.0	19.0
164	do	2.1	5.5	9.03	12.6	16.6
165	do	12.3	15.7	19.24	22.8	26.8
166	do	12.5	15.9	19.50	23.0	27.0
167	do	12.3	15.7	19.23	22.8	26.8
168	do	8.5	11.9	15.50	19.0	23.0
169	do	13.6	17.0	20.59	24.1	28.1
170	do	3.7	7.1	10.60	14.2	18.2
171	do	14.1	17.5	21.03	24.0	28.0
172	do	13.9	17.3	20.87	24.4	28.4
173	do	2.6	6.0	9.59	13.1	17.1
174	do	10.5	13.9	17.50	21.0	25.0
175	do	13.7	17.1	20.02	24.2	28.2
176	do	11.8	15.2	18.77	22.3	26.3
177	do	3.2	6.6	10.11	13.7	17.7
178	do	-0.7	2.7	6.25	9.8	13.8

## SECTION B.—Elevations of bench marks, serial Nos. 109 to 221: Westchester Creek to Port Morris—Continued.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
179	Hunts Point.....	4.9	8.3	11.87	15.4	19.4
180	do.....	2.1	5.5	9.00	12.6	16.6
181	do.....	2.5	5.9	9.48	13.0	17.0
182	do.....	3.2	6.6	10.17	13.7	17.7
183	Barretto Point.....	4.5	8.0	11.45	15.0	19.0
184	do.....	14.0	17.5	21.00	24.5	28.5
185	do.....	8.9	12.4	15.94	19.4	23.4
186	Rikers Island.....	1.7	5.2	8.74	12.2	16.2
187	do.....	3.3	6.8	10.30	13.8	17.8
188	do.....	2.0	5.5	8.90	12.5	16.5
189	do.....	5.0	9.1	12.63	16.1	20.1
190	do.....	0.1	3.6	7.10	10.6	14.6
191	do.....	8.7	12.2	15.69	19.2	23.2
192	do.....	2.1	5.6	9.15	12.6	16.6
193	do.....	1.7	5.2	8.65	12.2	16.2
194	do.....	-1.0	1.0	5.41	8.9	12.9
195	do.....	13.3	16.8	20.33	23.8	27.8
196	do.....	10.2	13.7	17.22	20.7	24.7
197	North Brother Island.....	2.0	5.6	9.08	12.5	16.5
198	do.....	1.3	4.9	8.37	11.8	15.8
199	do.....	2.0	5.6	9.00	12.5	16.5
200	do.....	1.4	5.0	8.45	11.9	15.9
201	do.....	1.9	5.5	8.90	12.4	16.4
202	do.....	-0.3	3.3	6.79	10.2	14.2
203	do.....	-0.1	3.5	6.93	10.4	14.4
204	Eastern Boulevard and Barretto Street.....	14.2	17.8	21.20	24.7	28.7
205	Eastern Boulevard and Tiffany Street.....	8.3	11.9	15.40	18.8	22.8
206	Ligget Avenue and Ferry Street.....	18.3	21.9	25.33	28.8	32.8
207	Port Morris.....	20.9	25.0	28.42	31.9	35.9
208	do.....	20.9	25.0	28.48	31.9	35.9
209	do.....	15.3	19.4	22.82	26.3	30.3
210	do.....	33.8	37.9	41.31	44.8	48.8
211	do.....	36.6	40.7	44.18	47.6	51.6
212	do.....	36.7	40.8	44.27	47.7	51.7
213	do.....	2.0	6.1	9.51	13.0	17.0
214	do.....	3.1	7.2	10.64	14.1	18.1
215	do.....	4.1	8.2	11.61	15.1	19.1
216	do.....	1.3	5.4	8.81	12.3	16.3
217	do.....	1.5	5.6	9.04	12.5	16.5
218	do.....	2.0	6.1	9.54	13.0	17.0
219	do.....	3.1	7.2	*10.68	14.1	18.1
220	do.....	1.6	5.5	8.76	12.1	16.1
221	do.....	2.5	6.4	9.72	13.0	17.0

\* Elevation above mean tide level.

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 109 TO 221: WESTCHESTER CREEK TO PORT MORRIS.

**Serial No. 109.** *Westchester Creek:* B. M.  $\Delta 4$  (U. S. E.) is a copper plug in concrete monument with U. S. E. D. marked around it and about 2 inches below surface. Elevation: 16.2 feet above mean low water; 12.63 feet above standard sea level.

**Serial No. 110.** *Westchester Creek:* B. M. 7G (U. S. E.) is a cross cut on top face of large boulder with U. S. marked alongside and 3 inches above surface, 111.83 feet southwest of B. M. 4. Elevation: 17.0 feet above mean low water; 13.44 feet above standard sea level.

**Serial No. 111.** *Westchester Creek:* B. M.  $\Delta 6$  (U. S. E.) is a copper plug in a concrete monument with U. S. E. D. marked around it. Bench mark is on the west side of Old Ferry Point Road and is on the property of Dr. A. Zerega. Elevation: 14.0 feet above mean low water; 10.36 feet above standard sea level.

**Serial No. 112.** *Westchester Creek:* B. M. 5E (U. S. E.) is top of eyebolt in large boulder 1 foot west of Stadia Station No. 13 marked "U. S." cut in boulder and about 750 feet south of  $\Delta 10$  and 50 feet west of stone-retaining wall on meadows property of Warner brothers. Elevation: 8.3 feet above mean low water; 4.73 feet above standard sea level.

**Serial No. 113.** *Westchester Creek:* B. M.  $\Delta 10$  (U. S. E.) is a copper plug in a 6 by 8 inch concrete monument with U. S. E. D. marked around it. Bench mark is on east side of creek and on only point of land to the creek property of A. L. Lowenstein. Elevation: 13.8 feet above mean low water; 10.25 feet above standard sea level.

**Serial No. 114.** *Westchester Creek:* B. M.  $\Delta 12$  (U. S. E.) is a copper plug set in a concrete monument 6 by 8 inches with the letters "U. S. E. D." marked around it on south side of Eastern Boulevard and about 142 feet from northwest corner of old pottery factory. Elevation: 10.9 feet above mean low water; 7.26 feet above standard sea level.

**Serial No. 115.** *Westchester Creek:* B. M. 1042 (B. E. & A.) is a square cut in the top of the bluestone sill of the west door on the north side of the two-story, red brick pottery building on the south side of East One hundred and seventy-seventh Street, about 400 feet east of Westchester Creek. The bench mark is about 25 feet from the west end of the building and 6 inches from the east end of the doorsill. Elevation: 18.2 feet above mean low water; 14.66 feet above standard sea level.

**Serial No. 116.** *Westchester Creek:* B. M. 1041 (B. E. & A.) is a quadrant cut in the top of the southeast corner of the granite coping stone on the top of the south end of the bridge east of the west abutment of the old highway bridge on East One hundred and seventy-seventh Street, over Westchester Creek. The bench mark is 3.7 feet below the roadway of the bridge. (It was established by the Bronx Highway Bureau.) Elevation: 12.5 feet above mean low water; 8.86 feet above standard sea level.

**Serial No. 117.** *Westchester Creek:* B. M. 2 (U. S. E.) is known as B. M. 1040 (B. E. & A.) is a square cut in top of northeast corner of granite coping stone on top of north end of bridge seat of west abutment of the old highway bridge on East One hundred and seventy-seventh Street over Westchester Creek. It is 3.7 feet below the roadway of the bridge. Elevation: 12.5 feet above mean low water; 8.86 feet above standard sea level.

**Serial No. 118.** *Westchester Creek:* B. M.  $\Delta 16$  (U. S. E.) is a  $\frac{1}{2}$ -inch iron pipe in concrete monument, U. S. E. D. marked around it, flush with surface in Standard Oil Co. yard at Waterbury Avenue, and approximately 94 feet west of small tank. Elevation: 10.3 feet above mean low water; 6.67 feet above standard sea level.

**Serial No. 119.** *Westchester Creek:* B. M. 14N (U. S. E.) is a square cut on sill of south window on west side and in southwest corner of brick storehouse of Standard Oil Co. at Waterbury Avenue. Elevation: 18.2 feet above mean low water; 14.58 feet above standard sea level.

**Serial No. 120.** *Westchester Creek:* B. M. 15X (U. S. E.) is a square hole cut on top stone of northwest corner foundation for small tank of Standard Oil Co. at Waterbury Avenue. Elevation: 17.0 feet above mean low water; 13.41 feet above standard sea level.

**Serial No. 121.** *Westchester Creek:* B. M.  $\Delta 18$  (U. S. E.) is a  $\frac{1}{2}$ -inch copper plug in concrete monument 6 by 8 inches, U. S. E. D. marked around it and about 2 inches below surface. Bench mark is about 200 feet east of causeway and on north side of Fort Schuyler Road. Elevation: 13.1 feet above mean low water; 9.52 feet above standard sea level.

**Serial No. 122.** *Westchester Creek:* B. M. 12L (U. S. E.) is a square cut on face of boulder at the southwest corner of Henry Weisgerber Barber Shop and 34.42 feet east of  $\Delta 18$ . Elevation: 16.1 feet above mean low water; 12.51 feet above standard sea level.

**Serial No. 123.** *Westchester Creek:* B. M. 13M (U. S. E.) is a square cut on south end of large boulder with ringbolt in to tie horses and opposite Green's Hotel on Pelham Road. Elevation: 19.8 feet above mean low water; 16.17 feet above standard sea level.

**Serial No. 124.** *Westchester Creek:* B. M. "Fountain" (U. S. E.) is a square cut on south side of basin on east side of base of fountain. Fountain is a white marble arch on granite base on south side of Westchester Square on Westchester Avenue. Elevation: 31.2 feet above mean low water; 27.60 feet above standard sea level.

**Serial No. 125.** *Westchester Creek:* B. M. 9Y (U. S. E.) is a square cut on top of bluestone doorstep off Bronx Gas & Electric Co., on south side of building and on west side of step of west doorway at southwest corner. Elevation: 15.1 feet above mean low water; 11.46 feet above standard sea level.

**Serial No. 126.** *Westchester Creek:* B. M. 11K (U. S. E.) is a spike in center of square cut on northeast corner of wharf of Bronx Gas & Electric Co. The letters "U. S." are cut around the mark. Elevation: 12.8 feet above mean low water; 9.22 feet above standard sea level.

**Serial No. 127.** *Westchester Creek:* B. M. 1 (U. S. E.) is a square cut on a rock near the head of the slip between Town Dock and Soda Factory Dock at Westchester. The creek is closed just above this mark by a low solid causeway which has no draw. Elevation: 14.5 feet above mean low water; 10.87 feet above standard sea level.

**Serial No. 128.** *Westchester Creek:* B. M. 1039 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the bluestone coping at the corner entrance to Kaiser's Hotel (two-story, terra cotta brick), on the southeast corner of East One hundred and seventy-seventh Street and Zerega Avenue. The entrance to the building is at the southwest corner, there being a triangular space or vestibule before the door. The bolt is in the northwest corner of this space, 4.5 feet from the corner of the building. It is 10 inches above the sidewalk. Elevation: 24.0 feet above mean low water; 20.43 feet above standard sea level.

**Serial No. 129.** *Westchester Creek:* B. M. 19 (U. S. E.) is on the west corner of granite doorstep of southwest shelter house on Unionport Bridge, East One hundred and seventy-seventh Street. Elevation: 25.7 feet above mean low water; 22.11 feet above standard sea level.

**Serial No. 130.** *Westchester Creek:* B. M. 20 (U. S. E.) is a square on west corner of granite doorstep of northeast shelter house on Unionport Bridge, East One hundred and seventy-seventh Street. Elevation: 25.7 feet above mean low water; 22.06 feet above standard sea level.

**Serial No. 131.** *Westchester Creek:* B. M. 3 (U. S. E.) is a square cut on a rock 20 feet northeast of the summer house on J. H. Schriren's Dock at mouth of creek. Elevation: 10.2 feet above mean low water; 6.60 feet above standard sea level.

**Serial No. 132.** *Westchester Creek:* B. M. 16P (U. S. E.) is a circle with hole cut in center on boulder on top and in center line of fill at east end and adjoining wood floor of wharf known as Schriren's Wharf on south side of Lozier Motor Co. Elevation: 10.7 feet above mean low water; 7.10 feet above standard sea level.

**Serial No. 133.** *Westchester Creek:* B. M. 17Q (U. S. E.) is a square cut on granite monument 8 by 8 inches on south boundary line of Lozier Motor Co. Bench mark is about 1 foot above surface. Elevation: 12.4 feet above mean low water; 8.79 feet above standard sea level.

**Serial No. 134.** *Clason Point:* B. M. X (U. S. E.) is a square pocket with the letters "U. S." cut in a small outcrop of ledge rock at base of a tree on the west slope of a knoll at Clason Point. Bench mark is in the vicinity of Lacombe and Rosedale Avenues as laid out by the city. Elevation: 19.0 feet above mean low water; 15.49 feet above standard sea level.

**Serial No. 135.** *Clason Point:* B. M. Y (U. S. E.) is a circle cut on west face of an outcrop of ledge rock at Clason Point on east bank and near mouth of the Bronx River. The ledge is west of pathway leading to an old dock and about 50 feet from B. M. X. The letters "U. S. E." are cut beside bench mark. Elevation: 15.3 feet above mean low water; 11.79 feet above standard sea level.

**Serial No. 136.** *Clason Point:* B. M. 32 (U. S. E.) is the highest point in a square cut on a boulder near Michau's Boathouse. Bench mark is 21 feet west from shed adjoining the boathouse and 68.60 feet east from Higg's Boathouse. It lies between two marine railways 10.5 feet west from the nearest rail of the eastern one and 57 feet east of the nearest rail of the western one. Elevation: 11.9 feet above mean low water; 8.34 feet above standard sea level.

**Serial No. 137.** *Clason Point:* B. M. 31 (U. S. E.) is the highest point in a square cut on a large stone on the northwest side of stone fill for dock at the foot of Beach Avenue. It is marked "U. S." Elevation: 6.8 feet above mean low water; 3.25 feet above standard sea level.

**Serial No. 138.** *Clason Point:* B. M. 30 (U. S. E.) is a copper bolt set in a granite monument (City Monument) along the east side of Beach Avenue. Bench mark is 363 feet from high water line at the foot of Beach Avenue. Elevation: 17.0 feet above mean low water; 13.50 feet above standard sea level.

**Serial No. 139.** *Bronx River:* B. M. 42 (U. S. E.) is a square cut on the top of head wall to sewer outlet on east side of river opposite Lafayette Avenue. It is 4.5 feet from bend in wall to the south and 4.1 feet from bend in wall to the north. Elevation: 10.6 feet above mean low water; 7.02 feet above standard sea level.

**Serial No. 140.** *Bronx River:* B. M. 1021 (B. E. & A.) is the surface between two parallel lines cut in the top of the white stone coping on the top of the concrete abutment at the east end of the highway bridge on the Westchester Avenue over the Bronx River. The bench mark is 9 feet south of the south side of the bridge and 5 inches from the east edge of the coping stone. Elevation: 30.4 feet above mean low water; 26.85 feet above standard sea level.

**Serial No. 141.** *Bronx River:* B. M. 1020 (B. E. & A.) is a square cut in the top of the east edge of the white stone coping on the top of the concrete abutment at the east end of the highway bridge on Westchester Avenue over Bronx River. The bench mark is  $7\frac{1}{4}$  inches north of the south side of the bridge. Elevation: 30.4 feet above mean low water; 26.85 feet above standard sea level.

**Serial No. 142.** *Bronx River:* B. M. 1019 (B. E. & A.) is a 1-inch square cut in the top of the white stone coping on the top of the concrete abutment at the east end of the highway bridge on Westchester Avenue, over the Bronx River. The bench mark is 10 inches south of the south side of the bridge and 2 inches from the west edge of the coping stone. Elevation: 30.4 feet above mean low water; 26.84 feet above standard sea level.

**Serial No. 143.** *Bronx River:* B. M. 1018 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the large coping stone on the southwest corner of the sea wall on the east side of the Bronx River at Westchester Avenue. The bolt is 1.33 feet from the curved corner of the coping stone. Elevation: 12.2 feet above mean low water; 8.68 feet above standard sea level.

**Serial No. 144.** *Bronx River:* B. M. 1017 (B. E. & A.) is a square lettered "U. S.," cut in the top of the southwest corner of the white stone coping of the sea wall on the east side of the Bronx River at Westchester Avenue. The bench mark is 6 inches northeast of the curved corner of the coping stone. Elevation: 12.2 feet above mean low water; 8.68 feet above standard sea level.

**Serial No. 145.** *Bronx River:* B. M. 1016 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the white stone coping on the top of the concrete abutment at the east end of the highway bridge on Westchester Avenue, over the Bronx River. The bolt is 5 inches south of the south side of the bridge and 5 inches east of the west side of the coping stone. Elevation: 30.4 feet above mean low water; 26.83 feet above standard sea level.

**Serial No. 146.** *Bronx River:* B. M. 1024 (B. E. & A.) is a cross cut in the top of the west end of the bluestone sill of the east basement window on the south side of Public School No. 15, on the north side of Westchester Avenue at St. Lawrence Avenue (East One hundred and seventy-second Street). The cross is on the south wing of the school, at the small window with iron bars. Elevation: 31.3 feet above mean low water; 27.74 feet above standard sea level.

**Serial No. 147.** *Bronx River:* B. M. 1023 (B. E. & A.) is the bottom of a square cut in the top of the rough stone water table at the southeast corner of Public School No. 15, on the north side of Westchester Avenue at St. Lawrence Avenue (East One hundred and seventy-second Street). The bench mark is 4.7 feet above the area. Elevation: 35.8 feet above mean low water; 32.20 feet above standard sea level.

**Serial No. 148.** *Bronx River:* B. M. 1022 (B. E. & A.) is the top of a railroad spike driven horizontally into the east side of a large sycamore tree about 75 feet south of Westchester Avenue and about 50 feet west of Old Clason Point Road, The spike is 8 inches above the ground. Elevation: 18.1 feet above mean low water; 14.56 feet above standard sea level.

**Serial No. 149.** *Bronx River:* B. M. 16P (U. S. E.) is a square with the letters "U. S." alongside cut on south end of east abutment of the Westchester Avenue Bridge. Elevation: 12.2 feet above mean low water; 8.68 feet above standard sea level.

**Serial No. 150.** *Bronx River:* B. M. 17P (U. S. E.) is a square with the letters "U. S." alongside cut in concrete about 20 feet from north end of east abutment under Westchester Avenue Bridge. Elevation: 12.2 feet above mean low water; 8.69 feet above standard sea level.

**Serial No. 151.** *Bronx River:* B. M. 23 (U. S. E.) is a cross cut on the side of retaining wall of New York, New Haven & Hartford Railroad forming the east bank of the Bronx River opposite the gas works at foot of One hundred and seventy-third Street. Elevation: 14.8 feet above mean low water; 11.20 feet above standard sea level.

**Serial No. 152.** *Bronx River:* B. M. 19P (U. S. E.) is a square cut in top of stone wall which forms the east bank of the Bronx River at the Tremont Avenue Bridge. The bench mark is about 18 feet from the south edge of the dam. Elevation: 16.3 feet above mean low water; 12.73 feet above standard sea level.

**Serial No. 153.** *Bronx River:* B. M. 18P (U. S. E.) is a square cut on the west end of stone coping at south side of the Tremont Avenue Bridge on west bank of Bronx River. The bench mark is near an angle in the coping and the letters "U. S." are cut alongside. Elevation: 20.0 feet above mean low water; 16.46 feet above standard sea level.

**Serial No. 154.** *Bronx River:* B. M. 24 (U. S. E.) is a square cut on coping of wall support at southwest corner of dye house near foot of One hundred and seventy-seventh Street and Bronx River. Elevation: 13.6 feet above mean low water; 10.03 feet above standard sea level.

**Serial No. 155.** *Bronx River:* B. M. 21 (U. S. E.) is a square cut on northwest corner of East One hundred and seventy-sixth Street and West Farms Road. Elevation: 18.2 feet above mean low water; 14.63 feet above standard sea level.

**Serial No. 156.** *Bronx River:* B. M. 20K (U. S. E.) is a cross cut in the top of a stone which projects from side of stone retaining wall which forms west bank of Bronx River at foot of One hundred and seventy-fourth Street. It is a large stone in the fourth course from the top of wall on line of center line of sidewalk and projects about 4 inches from face of wall. Elevation: 9.5 feet above mean low water; 5.98 feet above standard sea level.

**Serial No. 157.** *Bronx River:* B. M. 22K (U. S. E.) is a square cut on foundation stone of most easterly building on southwest corner of the gas works at foot of One hundred and seventy-third Street, Bronx River, near West Farms Road. Letters "U. S." are cut near the bench mark. Elevation: 13.4 feet above mean low water; 9.83 feet above standard sea level.

**Serial No. 158.** *Bronx River:* B. M. 11P (U. S. E.) is a square cut in top of rock wall which forms the west bank of Bronx River and is about 40 feet south of west end of the Westchester Avenue Bridge. Elevation: 10.6 feet above mean low water; 7.02 feet above standard sea level.

**Serial No. 159.** *Bronx River:* B. M. 1015 (B. E. & A.) is a square cut in the top of the extreme northwest corner of the white coping stone under the iron railing on the south side of Westchester Avenue, about 33 feet west of the southwest corner of the highway bridge over the Bronx River. (Established by the public service commission.) Elevation: 32.8 feet above mean low water; 29.25 feet above standard sea level.

**Serial No. 160.** *Bronx River:* B. M. 39 (U. S. E.) is a square cut on the southwest corner of top of retaining wall near Lanigan Bros. Sand Dock. Elevation: 23.1 feet above mean low water; 19.53 feet above standard sea level.

**Serial No. 161.** *Bronx River:* B. M. 40 (U. S. E.) is a square cut in the center of top of wall north side of roadway under railroad tracks opposite Lanigan Bros. Sand Dock. It is 0.7 foot from end of wall. Elevation: 21.3 feet above mean low water; 17.73 feet above standard sea level.

**Serial No. 162.** *Bronx River:* B. M. 41 (U. S. E.) is a square cut on the outside corner of top of wall on the south side of culvert under railroad tracks near Lanigan Bros. Sand Dock. Bench mark is at the end of the fence on wall and at the end of platform. Elevation: 19.8 feet above mean low water; 16.03 feet above standard sea level.

**Serial No. 163.** *Bronx River:* B. M. 9P (U. S. E.) is a spike driven in the retaining wall of the New York, New Haven & Hartford Railroad embankment adjoining the Westchester Avenue Depot. The bench mark is located just north of the opening in the wall through which the A. R. E. R. R. runs, and letters "U. S." are cut beside it. Elevation: 15.0 feet above mean low water; 11.43 feet above standard sea level.

**Serial No. 164.** *Bronx River:* B. M. 10P (U. S. E.) is a cross cut on the retaining wall of the New York, New Haven & Hartford Railroad adjoining the Westchester Avenue Depot and is about 6 feet south of B. M. 9P. The letters "U. S." are cut beside bench mark. Elevation: 12.6 feet above mean low water; 9.03 feet above standard sea level.

**Serial No. 165.** *Bronx River:* B. M. 8P (U. S. E.) is a square cut on curbing at the northwest corner of Garrison Avenue and Whittier Street. The letters "U. S." are cut beside the bench mark. Elevation: 22.8 feet above mean low water; 19.24 feet above standard sea level.

**Serial No. 166.** *Bronx River:* B. M. 37 (U. S. E.) is on  $\Delta$  1 on granite stone top to basin at northeast corner of Garrison Avenue and Whittier Street. Elevation: 23.0 feet above mean low water; 19.50 feet above standard sea level.

**Serial No. 167.** *Bronx River:* B. M. 38 (U. S. E.) is a square cut on east outside corner on granite top to basin at northwest corner of Garrison Avenue and Whittier Street. Elevation: 22.8 feet above mean low water; 19.23 feet above standard sea level.

**Serial No. 168.** *Bronx River:* B. M. 36 (U. S. E.) is a square cut on the southwest corner of stone basin cover at the northeast corner of Seneca Avenue and Whittier Street. Elevation: 19.0 feet above mean low water; 15.50 feet above standard sea level.

**Serial No. 169.** *Bronx River:* B. M. 4P (U. S. E.) is a square cut on curb at the northwest corner of Lafayette Avenue and Whittier Street. It is 31.4 feet west of center of sewer manhole. Elevation: 24.1 feet above mean low water; 20.59 feet above standard sea level.

**Serial No. 170.** *Bronx River:* B. M.  $\Delta$  3 (U. S. E.) is a hole in  $\Delta$  on flagstone walk at northwest corner of Lafayette Avenue and Halleck Street. It is 6.6 feet from curb on south and 8.7 feet from curb on east. Elevation: 14.3 feet above mean low water; 10.60 feet above standard sea level.

**Serial No. 171.** *Bronx River:* B. M. 35 (U. S. E.) is a square cut on curb on north-west corner of Lafayette Avenue and Whittier Street. It is 3.7 feet west of west line of Whittier Street, and 36.25 feet from center of iron basin cover in line of north curb of Lafayette Avenue. Elevation: 24.6 feet above mean low water; 21.03 feet above standard sea level.

**Serial No. 172.** *Bronx River:* B. M. 34 (U. S. E.) is a square cut in curb on south-west corner of Lafayette Avenue and Whittier Street. It is opposite west edge of cross walk. Elevation: 24.4 feet above mean low water; 20.87 feet above standard sea level.

**Serial No. 173.** *Bronx River:* B. M. 33 (U. S. E.) is a square cut on concrete foundation pier on north side of Rogers & Hagerty's Machine Shop at the foot of Randall Avenue. It is 21 feet from north end of building. Elevation: 19.1 feet above mean low water; 9.59 feet above standard sea level.

**Serial No. 174.** *Bronx River:* B. M. 29 (U. S. E.) is the highest point in a square cut on an outcropping rock about 30 feet inland from Triangle No. 7 on south bank of Bronx River near Randall Avenue. Elevation: 21.0 feet above mean low water; 17.50 feet above standard sea level.

**Serial No. 175.** *Bronx River:* B. M. 2P (U. S. E.) is a square pocket cut in ledge of rocks adjacent to cave which is in the center of a field adjoining mouth of Bronx River. The cave is about 500 feet from the river and about in line with Bay Avenue as laid out by the city. Elevation: 24.2 feet above mean low water; 20.62 feet above standard sea level.

**Serial No. 176.** *Bronx River:* B. M. 3P (U. S. E.) is a square cut on east end of same ledge of rock as B. M. 2P. Elevation: 22.3 feet above mean low water; 18.77 feet above standard sea level.

**Serial No. 177.** *Bronx River:* B. M. 1P (U. S. E.) is a square with letters "U. S." cut on corner stone of fence at entrance to field opposite junction of Hunts Point Road and road to farmhouse. It is at the corner of Ryawa Avenue and Falconer Street. Elevation: 13.7 feet above mean low water; 10.11 feet above standard sea level.

**Serial No. 178.** *Bronx River:* B. M. 25 (U. S. E.) is a square cut and marked "U. S." on boulder on the east side of the walk leading to the landing float at the Bronx County Yacht Club. Elevation: 9.8 feet above mean low water; 6.25 feet above standard sea level.

**Serial No. 179.** *Hunts Point:* B. M. 116 (U. S. E.) is a square cut on the north side of iron manhole cover frame 47 feet from head wall of sewer at Hunts Point. Elevation: 15.4 feet above mean low water; 11.87 feet above standard sea level.

**Serial No. 180.** *Hunts Point:* B. M. 117 (U. S. E.) is a square cut in the end of concrete bulkhead wall west of sewer at Hunts Point. Elevation: 12.6 feet above mean low water; 9.00 feet above standard sea level.

**Serial No. 181.** *Hunts Point:* B. M. 1K (U. S. E.) is a bolt with a square cut around it on second-string piece from the river on wharf at foot of Farragut Street at Hunts Point. Elevation: 13.0 feet above mean low water; 9.46 feet above standard sea level.

**Serial No. 182.** *Hunts Point:* B. M. 2K or 118 (U. S. E.) is a square cut on outer edge of stone sewer coping at the foot of Farragut Street at Hunts Point. Elevation: 13.7 feet above mean low water; 10.17 feet above standard sea level.

**Serial No. 183.** *Barretto Point:* B. M. 113 (U. S. E.) is a bolt on the west side of cap to hydrant at the foot of Manda Street near shore line at Barretto Point. Elevation: 15.0 feet above mean low water; 11.45 feet above standard sea level.

**Serial No. 184.** *Barretto Point:* B. M. 114 (U. S. E.) is on a copper  $\Delta$  station plug in ledge rock at  $\Delta$  station Barretto, 1917. Elevation: 24.5 feet above mean low water; 21.00 feet above standard sea level.

**Serial No. 185.** *Barretto Point:* B. M. 115 (U. S. E.) is a square cut with U. S. on a large rock about 1 foot above surface at Barretto Point. Bench Mark is 185 feet from  $\Delta$  station Barretto 1917, and 60 feet from corner of small house to the south. Elevation: 19.4 feet above mean low water; 15.94 feet above standard sea level.

**Serial No. 186.** *Rikers Island:* B. M. 1 (D. D.) is a square with cross cut in a boulder 9 feet inshore from the inshore end of crib on the southeast end of island. Elevation: 12.2 feet above mean low water; 8.74 feet above standard sea level.

**Serial No. 187.** *Rikers Island:* B. M. 2 (D. D.) is a square cut on monument No. 5. Elevation: 13.8 feet above mean low water; 10.30 feet above standard sea level.

**Serial No. 188.** *Rikers Island:* B. M. 3 (D. D.) is a square cut on monument No. 6. Elevation: 12.5 feet above mean low water; 8.99 feet above standard sea level.

**Serial No. 189. Rikers Island:** B. M. 4 (D. D.) is a square cut on a large bowlerd near a scrub oak on southeast side of island facing North Beach. Elevation: 16.1 feet above mean low water; 12.63 feet above standard sea level.

**Serial No. 190. Rikers Island:** B. M.-5 (D. D.) is a square cut on a large bowlerd about 75 feet east of old runway at extreme south end of island. Elevation: 10.6 feet above mean low water; 7.10 feet above standard sea level.

**Serial No. 191. Rikers Island:** B. M. 6 (D. D.) is a square cut on monument No. 8. Elevation: 19.2 feet above mean low water; 15.69 feet above standard sea level.

**Serial No. 192. Rikers Island:** B. M. 7 (D. D.) is a square cut on a bowlerd at about the foot of small hill, 45 feet inshore from station 24 of survey. Elevation: 12.6 feet above mean low water; 9.15 feet above standard sea level.

**Serial No. 193. Rikers Island:** B. M. 8 (D. D.) is a square cut on monument No. 3. Elevation: 12.2 feet above mean low water; 8.65 feet above standard sea level.

**Serial No. 194. Rikers Island:** B. M. 9 (D. D.) is a square cut on field stone near station 28 of survey. Elevation: 8.9 feet above mean low water; 5.41 feet above standard sea level.

**Serial No. 195. Rikers Island:** B. M. 10 (D. D.) is a square cut on monument No. 1. Elevation: 23.8 feet above mean low water; 20.33 feet above standard sea level.

**Serial No. 196. Rikers Island:** B. M. 11 (D. D.) is a square cut in east curb of East Shore Road, about 500 feet from station 24. Elevation: 20.7 feet above mean low water; 17.22 feet above standard sea level.

**Serial No. 197. North Brother Island:** B. M. "A" (U. S. E.) is a square cut in cap log on northeast corner of north outer end of north dock at North Brothers Island. Elevation: 12.5 feet above mean low water; 9.08 feet above standard sea level.

**Serial No. 198. North Brother Island:** B. M. 2A (U. S. E.) is a square cut in granite coping of sea wall 7.35 feet south of south face of shore end of north dock. Elevation: 11.8 feet above mean low water; 8.37 feet above standard sea level.

**Serial No. 199. North Brother Island:** B. M. "B" (U. S. E.) is a square cut in cap log on east side of outer end of north dock and is 3.75 feet from northeast corner of one-story frame shed on dock and 15.9 feet from the southeast corner. Elevation: 12.5 feet above mean low water; 9.06 feet above standard sea level.

**Serial No. 200. North Brother Island:** B. M. 2 (U. S. E.) is a square cut in granite coping of sea wall 0.85 foot north from north side of shore end of north dock. Elevation: 11.9 feet above mean low water; 8.45 feet above standard sea level.

**Serial No. 201. North Brother Island:** B. M. 3 (D. D.) is a square cut on bluestone flag at west entrance to power house. Elevation: 12.4 feet above mean low water; 8.90 feet above standard sea level.

**Serial No. 202. North Brother Island:** B. M. 6 (D. D.) is a square cut on bend of sea wall near pavilion on the east shore of island. Elevation: 10.2 feet above mean low water; 6.79 feet above standard sea level.

**Serial No. 203. North Brother Island:** B. M. 7 (D. D.) is a square cut on sea wall on the east shore of island, 84 feet south of bend in sea wall. Elevation: 10.4 feet above mean low water; 6.93 feet above standard sea level.

**Serial No. 204. Eastern Boulevard and Barretto Street:** B. M. 112 (U. S. E.) is a square cut on the inside corner of stone basin cover at the southwest corner of Eastern Boulevard and Barretto Street. Elevation: 24.7 feet above mean low water; 21.29 feet above standard sea level.

**Serial No. 205. Eastern Boulevard and Tiffany Street:** B. M. 111 (U. S. E.) is a square cut on the rim of iron basin in center of Tiffany Street on south line of Eastern Boulevard. Elevation: 18.8 feet above mean low water; 15.40 feet above standard sea level.

**Serial No. 206. Leggett Avenue and Berry Street:** B. M. 110 (U. S. E.) is a square cut on curb at southwest corner of Leggett Avenue and Berry Street. It is 2 feet from electric-light pole east of railroad bridge. Elevation: 28.8 feet above mean low water; 25.33 feet above standard sea level.

**Serial No. 207. Port Morris:** B. M. 971 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt set vertically in the top of the westerly end of the northerly abutment of the highway bridge on Whitlock Avenue, over the Port Morris branch of the New York & Harlem Railroad. The bolt is in the northwesterly corner of the concrete abutment. It is about 110 feet east of the Southern Boulevard and about 6 feet north of the south curb line of East One hundred and forty-second Street. It is 6 inches west of the westerly girder of the bridge. Elevation: 31.9 feet above mean low water; 28.42 feet above standard sea level.

**Serial No. 208.** *Port Morris:* B. M. 970 (B. E. & A.) is a square cut in the sidewalk at the southerly corner of the base of southerly iron fence post on the westerly side of Southern Boulevard, about 35 feet north of East One hundred and forty-second Street. The bench mark is on the westerly side of the highway bridge over the Port Morris branch of the New York & Harlem Railroad. It is known as Public Service Commission B. M. 1.389. Elevation: 31.9 feet above mean low water; 28.48 feet above standard sea level.

**Serial No. 209.** *Port Morris:* B. M. 107 (U. S. E.) is a square cut on the inside corner of stone basin cover at the northeast corner of One hundred and forty-first Street and Southern Boulevard. Elevation: 26.3 feet above mean low water; 22.82 feet above standard sea level.

**Serial No. 210.** *Port Morris:* B. M. 969 (B. E. & A.) is the top of a railroad spike driven in the root on the east side of an elm tree on the southeasterly side of Southern Boulevard, about 100 feet south of East One hundred and thirty-eighth Street. Elevation: 44.8 feet above mean low water; 41.31 feet above standard sea level.

**Serial No. 211.** *Port Morris:* B. M. 968 (B. E. & A.) is a square cut in the top of the bluestone coping on top of the brick balustrade on the north side of the corner or office entrance to Winter's Piano Factory, on the northeast corner of Southern Boulevard and East One hundred and thirty-seventh Street. The bench mark is 10½ inches from the east end of the coping and 2.3 feet above the ground. Elevation: 47.6 feet above mean low water; 44.18 feet above standard sea level.

**Serial No. 212.** *Port Morris:* B. M. 967 (B. E. & A.) is a ¾-inch copper bolt in the top of the northwest corner of the bluestone doorsill at the corner or office entrance to Winter's Piano Factory (five-story red brick) on the northeast corner of Southern Boulevard and East One hundred and thirty-seventh Street. The bolt is 3¼ inches south of the base of the bluestone column on the north side of the entrance. Elevation: 47.7 feet above mean low water; 44.27 feet above standard sea level.

**Serial No. 213.** *Port Morris:* B. M. 101 (U. S. E.) is a square cut on the inside corner of stone basin cover at the northeast corner of One hundred and thirty-seventh Street and Walnut Avenue. Elevation: 13.0 feet above mean low water; 9.51 feet above standard sea level.

**Serial No. 214.** *Port Morris:* B. M. 102 (U. S. E.) is a square cut on outside corner of stone catch basin on northwest corner of One hundred and thirty-eighth Street and Locust Avenue. Elevation: 14.1 feet above mean low water; 10.64 feet above standard sea level.

**Serial No. 215.** *Port Morris:* B. M. 103 (U. S. E.) is on the ledge of the hydrant on the south side of cap on the north side of One hundred and thirty-eighth Street near shore end of dock. Elevation: 15.1 feet above mean low water; 11.61 feet above standard sea level.

**Serial No. 216.** *Port Morris:* B. M. 104 (U. S. E.) is a square cut on the north side of iron rim to cover frame to basin in center of One hundred and thirty-eighth Street near dock. Elevation: 12.3 feet above mean low water; 8.81 feet above standard sea level.

**Serial No. 217.** *Port Morris:* B. M. 105 (U. S. E.) is a square cut on the north side of rim of iron cover frame to basin on south walk to One hundred and thirty-eighth Street near dock. Elevation: 12.5 feet above mean low water; 9.04 feet above standard sea level.

**Serial No. 218.** *Port Morris:* B. M. 106 (U. S. E.) is a nail in a square marked "U. S." on the edge of cap log on south side of dock at foot of One hundred and thirty-eighth Street. Elevation: 13.0 feet above mean low water; 9.54 feet above standard sea level.

**Serial No. 219.** *Port Morris:* B. M. 1 (C. & G. S.) is a cross on the north face of the rubble-stone structure adjacent to the water tank of the Harlem River Railroad dock. It is about 2 feet above the ground. Elevation: 14.1 feet above mean low water; 10.68 feet above mean tide level.

**Serial No. 220.** *Port Morris:* B. M. 92 (U. S. E.) is a cross cut within a square, cut in water supply manhole at the foot of East One hundred and thirty-second Street and East River. Elevation: 12.1 feet above mean low water; 8.76 feet above standard sea level.

**Serial No. 221.** *Port Morris:* B. M. 93 (U. S. E.) is a cross cut on a square bolt with red paint around it, with U. S. and arrow, on old dock south of One hundred and thirty-second Street and East River. Elevation: 13.0 feet above mean low water; 9.72 feet above standard sea level.

## SECTION C.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 222 TO 386: FLUSHING TO RIVERHEAD.

Serial No.	Locality.	Elevations of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
222	Flushing	10.1	13.4		16.78	20.1	24.1
223	do	10.2	13.5		16.82	20.2	24.2
224	do	17.5	20.8		24.11	27.5	31.5
225	do	32.0	35.3		38.66	42.0	46.0
226	do	32.2	35.5		38.84	42.2	46.2
227	do	43.2	46.5		49.86	53.2	57.2
228	do	66.1	69.4		72.71	76.1	80.1
229	do	67.6	70.9		74.30	77.6	81.6
230	do	66.2	69.5		72.81	76.2	80.2
231	do	2.1	5.4		8.77	12.1	16.1
232	do	1.8	5.1		8.47	11.8	15.8
233	do	-0.7	2.0	5.94		9.3	13.3
234	do	2.2	5.5	8.89		12.2	16.2
235	do	7.3	10.6	13.93		17.3	21.3
236	do	2.1	5.4	8.75		12.1	16.1
237	do	3.7	7.0	10.38		13.7	17.7
238	do	14.5	17.8	21.19		24.5	28.5
239	do	20.1	23.4	26.79		30.1	34.1
240	do	10.6	13.9	17.23		20.6	24.6
241	College Point	2.7	6.1	9.65		13.2	17.2
242	do	4.0	8.3	11.81		16.4	19.4
243	do	2.7	6.1		9.59	13.2	17.2
244	do	26.7	40.1		43.63	47.2	51.2
245	do	37.7	41.1		44.63	48.2	52.2
246	do	3.3	6.7		10.23	13.8	17.8
247	do	2.8	6.2		9.69	13.3	17.3
248	do	14.7	18.1		21.66	25.2	29.2
249	do	35.1	38.5		42.02	45.6	49.6
250	do	49.7	53.1		56.60	60.2	64.2
251	do	49.6	53.0		56.54	60.1	64.1
252	do	35.0	38.4		41.97	45.5	49.5
253	do	50.5	53.9		57.45	61.0	65.0
254	do	20.7	30.1		34.38	37.2	41.2
255	Whitestone	8.8	12.6		16.21	19.8	23.8
256	do	4.4	8.2		11.84	15.4	19.4
257	do	5.2	9.0		12.57	16.2	20.2
258	do	5.1	8.9		12.48	16.1	20.1
259	do	44.0	47.8		51.39	55.0	59.0
260	do	44.4	48.2		51.78	55.4	59.4
261	do	4.4	8.2		11.83	15.4	19.4
262	Willetts Point	4.3	8.1		11.69	15.3	19.3
263	do	6.0	9.8		13.44	17.0	21.0
264	do	8.2	12.0		15.60	19.2	23.2
265	do	8.2	12.0		15.60	19.2	23.2
266	do	41.6	45.4		48.99	52.6	56.6
267	do	3.6	7.4		11.00	14.6	18.6
268	do	2.7	6.5		10.07	13.7	17.7
269	Little Neck	26.4	30.2		33.79	37.4	41.4
270	do	20.5	23.3		26.74	40.5	44.5
271	do	75.7	79.5		83.12	86.7	90.7
272	do	177.7	181.5		185.14	188.7	192.7
273	do	150.5	154.3		157.88	161.5	165.5
274	do	176.4	180.2		183.81	187.4	191.4
275	do	259.1	262.9		266.49	270.1	274.1
276	do	259.1	262.9		266.46	270.1	274.1
277	do	229.7	233.5		237.05	240.7	244.7
278	Elm Point	0.5	4.3	7.93		11.5	15.5
279	do	4.4	8.2	11.85		15.4	19.4
280	do	27.4	31.2	34.83		38.4	42.4
281	Hewletts Point	18.8	22.6		26.25	29.8	33.8
282	do	17.8	21.6		25.22	28.8	32.8
283	do	10.5	20.3		23.88	27.5	31.5
284	Execution Rocks Light	2.7	5.9	9.57		13.2	17.2
285	do	3.0	6.2	9.82		13.5	17.5
286	Glen Cove	5.7	8.9	12.59		16.2	19.7

## SECTION C.—Elevations of bench marks, serial Nos. 222 to 386: Flushing to River-head—Continued.

Serial No.	Locality.	Elevations of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>
287	Glen Cove.....	16.8	20.0	23.68		27.3	30.8
288	do.....	9.0	12.2	15.80		19.5	23.0
289	do.....	2.4	5.0	9.28		12.9	16.4
290	do.....	5.3	8.5	12.11		15.8	19.3
291	do.....	3.8	7.0	10.61		14.3	17.8
292	Oyster Bay.....	-0.4	2.8	6.49		10.1	13.1
293	do.....	9.8	13.0	16.62		20.3	23.3
294	do.....	13.6	16.8	20.46		24.1	27.1
295	Cold Spring Harbor.....	2.0	5.1	8.82		12.5	15.6
296	do.....	5.1	8.2	11.93		15.6	18.6
297	do.....	8.0	11.1	14.83		18.5	21.5
298	Huntington Harbor.....	4.9	7.5	11.18		14.9	17.9
299	do.....	1.4	4.0	7.72		11.4	14.4
300	do.....	0.3	2.9	6.61		10.3	13.3
301	do.....	2.3	4.9	8.59		12.3	15.3
302	do.....	0.3	2.9	6.64		10.3	13.3
303	do.....	1.0	3.6	7.28		11.0	14.0
304	Lloyd Harbor Lighthouse.....	6.6	9.2	12.82		16.6	19.6
305	do.....	4.6	7.2	10.86		14.6	17.6
306	do.....	4.1	6.7	10.36		14.1	17.1
307	Northport.....	7.1	9.8	13.47		17.1	20.1
308	do.....	5.2	7.9	11.50		15.2	18.2
309	do.....	9.7	12.4	16.09		19.7	22.7
310	Smithtown Branch.....	118.6	121.6		125.06	128.6	131.6
311	do.....	71.4	74.4		77.89	81.4	84.4
312	do.....	55.5	58.5		62.04	65.5	68.5
313	do.....	57.2	60.2		63.68	67.2	70.2
314	do.....	19.6	22.6		26.09	29.6	32.6
315	do.....	13.6	16.6		20.07	23.6	26.6
316	do.....	37.1	40.1		43.57	47.1	50.1
317	Stratford Shoal Light.....	4.3	6.7	9.95		13.3	16.3
318	Port Jefferson entrance.....	7.5	10.8	13.87		17.0	20.0
319	do.....	-1.0	2.3	5.40		8.5	11.5
320	do.....	6.6	9.9	13.00		16.1	19.1
321	do.....	7.9	11.2	14.27		17.4	20.4
322	do.....	-1.0	1.4	4.54		7.6	10.6
323	Port Jefferson.....	185.9	189.0	192.15		195.4	198.4
324	do.....	148.2	151.3	154.48		157.7	160.7
325	do.....	5.5	8.6	11.70		15.0	18.0
326	do.....	11.2	14.3	17.40		20.7	23.7
327	do.....	13.1	16.2	19.37		22.6	25.6
328	Mattituck.....	1.0	3.8	6.12		8.4	11.4
329	do.....	2.4	4.3	6.61		8.9	11.9
330	do.....	-0.1	1.8	4.03		6.4	9.4
331	do.....	2.2	4.1	6.41		8.7	11.7
332	do.....	-1.0	0.9	3.23		5.5	8.5
333	do.....	0.9	11.8	14.07		16.4	19.4
334	do.....	7.4	9.3	11.55		13.9	16.9
335	do.....	1.9	3.8	6.08		8.4	11.4
336	do.....	2.9	4.8	7.00		9.4	12.4
337	do.....	4.4	6.8	8.61		10.9	13.9
338	do.....	0.8	2.7	4.95		7.3	10.3
339	do.....	1.1	3.0	5.24		7.6	10.6
340	do.....	-0.7	1.2	3.45		5.8	8.8
341	do.....	2.9	4.8	7.02		9.4	12.4
342	do.....	0.6	2.5	4.76		7.1	10.1
343	do.....	-0.5	1.4	3.68		6.0	9.0
344	do.....	-0.2	1.7	3.97		6.3	9.3
345	do.....	-0.4	1.5	3.75		6.1	9.1
346	do.....	0.6	2.5	4.79		7.1	10.1
347	do.....	3.0	4.9	7.15		9.5	12.5
348	do.....	1.8	3.7	5.95		8.3	11.3
349	Orient.....	-0.7	1.9	3.61		5.3	7.8
350	Plum Island.....	-1.0	1.3	2.69		4.0	6.5
351	do.....	5.0	7.3	8.63		10.0	12.5

## SECTION C.—Elevations of bench marks, serial Nos. 222 to 286: Flushing to Riverhead—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
352	Plum Island.....	6.4	8.7	10.05	.....	11.4	13.9
353	Little Gull Island.....	4.5	7.0	8.23	.....	9.5	12.0
354	Gardiners Island.....	-0.8	1.5	2.81	.....	4.2	6.7
355	Long Beach Bar Lighthouse.....	3.9	6.4	7.61	.....	8.9	11.4
356	.....do.....	4.5	7.0	8.28	.....	9.5	12.0
357	.....do.....	5.4	7.9	9.12	.....	10.4	12.9
358	.....do.....	5.8	8.3	9.60	.....	10.8	13.3
359	Greenport.....	1.7	3.8	5.00	.....	6.2	8.2
360	.....do.....	0.5	2.6	3.84	.....	5.0	7.0
361	.....do.....	1.7	3.8	5.00	.....	6.2	8.2
362	.....do.....	3.3	5.4	6.56	.....	7.8	9.8
363	.....do.....	3.2	5.3	6.50	.....	7.7	9.7
364	.....do.....	7.6	9.7	10.88	.....	12.1	14.1
365	.....do.....	7.5	9.6	10.79	.....	12.0	14.0
366	.....do.....	4.8	6.9	8.10	.....	9.8	11.3
367	.....do.....	0.7	2.8	4.05	.....	5.2	7.2
368	.....do.....	5.6	7.7	8.88	.....	10.1	12.1
369	Manhasset Manor.....	9.8	11.9	13.06	.....	14.3	16.3
370	.....do.....	3.1	5.2	6.38	.....	7.6	9.6
371	.....do.....	3.0	5.1	6.34	.....	7.5	9.5
372	Southold.....	2.5	4.5	5.80	.....	7.0	9.0
373	.....do.....	7.9	9.9	11.12	.....	12.4	14.4
374	.....do.....	2.9	4.9	6.19	.....	7.4	9.4
375	New Suffolk.....	2.5	4.4	5.66	.....	7.0	9.0
376	.....do.....	1.7	3.6	4.88	.....	6.2	8.2
377	.....do.....	3.7	5.6	6.84	.....	8.2	10.2
378	.....do.....	2.4	4.3	5.57	.....	6.9	8.9
379	.....do.....	1.2	3.1	4.40	.....	5.7	7.7
380	.....do.....	1.2	3.1	4.34	.....	5.7	7.7
381	Riverhead.....	24.9	27.0	.....	28.18	29.4	31.4
382	.....do.....	18.2	20.3	.....	21.51	22.7	24.7
383	.....do.....	20.4	22.5	.....	23.74	24.9	26.9
384	.....do.....	2.9	5.0	.....	6.19	7.4	9.4
385	.....do.....	18.5	20.6	.....	21.77	23.0	25.0
386	.....do.....	17.1	19.2	.....	20.44	21.6	23.6

## DESCRIPTION OF BENCH MARKS SERIAL NOS. 222 TO 286: FLUSHING TO RIVERHEAD.

**Serial No. 222.** *Flushing:* B. M. 683 (B. E. & A.) is a square cut in the top of the west edge of the granite coping of the west abutment of the highway bridge over Flushing Creek at Jackson Avenue. The bench mark is on the south side of Jackson Avenue between two square granite posts on the west abutment and on the west side of the stone fence. It is 5.9 feet south of the northerly post and 7.15 feet north of the southerly post. Elevation: 20.1 feet above mean low water; 16.78 feet above standard sea level.

**Serial No. 223.** *Flushing:* B. M. 684 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt set vertically in the top of the north end of the east abutment of the highway bridge on Jackson Avenue, over Flushing Creek. The bolt is 9 inches from the west face of the abutment and 6 inches south of the granite post at the north end. Elevation: 20.2 feet above mean low water; 16.82 feet above standard sea level.

**Serial No. 224.** *Flushing:* B. M. 685 (B. E. & A.) is a square cut in the top of the outer edge of the concrete water table in front of the Queensboro Garage (two-story cement block) at No. 66 Jackson Avenue (Broadway), between Prince and Main Streets. The bench mark is about 14 feet from the west side of the building and 11 inches above the sidewalk. It is 3 inches from the east end of the water table. Elevation: 27.5 feet above mean low water; 24.11 feet above standard sea level.

**Serial No. 225.** *Flushing:* B. M. 686 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt set vertically in the southwest corner of the granite base block of the limestone column at the

south side of the main entrance to the Queens County Savings Bank. The bolt is 3 feet above the sidewalk, is 6.5 feet from the south side of the building, and almost on line with the west side. Elevation: 42.0 feet above mean low water; 38.66 feet above standard sea level.

**Serial No. 226.** *Flushing:* B. M. 687 (B. E. & A.) is a square cut in the top of the east end of the coping stone in front of the Flushing Post Office (Marx Building) on the south side of Amity Street, about 115 feet east of Main Street. The bench mark is 7 feet west of the east end of the building and  $3\frac{1}{4}$  inches above the sidewalk. Elevation: 42.2 feet above mean low water; 38.84 feet above standard sea level.

**Serial No. 227.** *Flushing:* B. M. 688 (B. E. & A.) is a square cut in the top of the north easterly corner of the granite basin head on the northerly corner of Sanford Avenue and Kissena Road (Jamaica Road). Elevation: 53.2 feet above mean low water; 49.86 feet above standard sea level.

**Serial No. 228.** *Flushing:* B. M. 689 (B. E. & A.) is a square cut in the top of the west end of the bluestone doorsill at the southwesterly corner of Public School No. 22, on the northeasterly corner of Sanford Avenue and Murray Street. The bench mark is on the Sanford Avenue side of the building under the shed, is 2.25 feet from the west side, and 4 inches above the walk. It is 8.5 feet north of the Sanford Avenue side of the main building. Elevation: 76.1 feet above mean low water; 72.71 feet above standard sea level.

**Serial No. 229.** *Flushing:* B. M. 690 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{4}$ -inch copper bolt set horizontally into the brick at the southwesterly corner of Public School No. 22, on the northeasterly corner of Sanford Avenue and Murray Street. The bolt is on the Murray Street side of the building, is 1.75 feet from the corner and 1.75 feet above the ground. Elevation: 77.6 feet above mean low water; 74.30 feet above standard sea level.

**Serial No. 230.** *Flushing:* B. M. 691 (B. E. & A.) is a square cut in the top of the west end of the bluestone sill of the eighth basement window from Murray Street on the south side of Public School No. 22, on the northeasterly corner of Murray Street and Sanford Avenue. The bench mark is 8 feet east of the boys' entrance and 8 inches above the walk. Elevation: 76.2 feet above mean low water; 72.81 feet above standard sea level.

**Serial No. 231.** *Flushing:* B. M. 717 (B. E. & A.) is the center of the top of the granite city monument on the southeasterly corner of Connorton Avenue (Myrtle Avenue) and Tallman Avenue (Lawrence Avenue.) The top of the monument is flush with the ground. Elevation: 12.1 feet above mean low water; 8.77 feet above standard sea level.

**Serial No. 232.** *Flushing:* B. M. 10 (C. & G. S.) is a small square cut into a sandstone sidewalk flag on Lawrence Street near J. Milnor Peck's lumber yard. Elevation: 11.8 feet above mean low water; 8.47 feet above standard sea level.

**Serial No. 233.** *Flushing:* B. M. "Lawrence" (U. S. E.) is a square cut in top of sea wall in small slip northeast of the boathouse on the Lawrence Estate. Elevation: 9.3 feet above mean low water; 5.94 feet above mean tide level.

**Serial No. 234.** *Flushing:* B. M. "Copp" (U. S. E.) is marked by a cross cut on the northwest bolt on the Nigger Head on the northwest corner of Copp's Lumber Dock. Elevation: 12.2 feet above mean low water; 8.89 feet above mean tide level.

**Serial No. 235.** *Flushing:* B. M. 1P (U. S. E.) is on 8-inch by 8-inch corner stone located 196 feet from line projected eastward from the south side of Flushing Boat Club. It is 105 feet south of line of Ward's Dock and about 76 feet back from high water line. Elevation: 17.3 feet above mean low water; 13.93 feet above mean tide level.

**Serial No. 236.** *Flushing:* B. M. 1S (U. S. E.) is a cross cut in top of large bowlder about 6 feet north of clubhouse and about on the high water line. The letters "U. S. B. M." are chiseled on the bowlder. Elevation: 12.1 feet above mean low water; 8.75 feet above mean tide level.

**Serial No. 237.** *Flushing:* B. M. 2P (U. S. E.) is square cut in top of cement wall in front of Van Nostrand's property, which is located just north of the patch of timber on the east bank of Flushing Bay, near the entrance to Flushing Creek. It is 73 feet from the south end and 44 feet from the north end of the wall. Elevation: 13.7 feet above mean low water; 10.38 feet above mean tide level.

**Serial No. 238.** *Flushing:* B. M. 3P (U. S. E.) is a property monument which is located 44 feet south of Van Nostrand's south fence line and 35 feet east of gate. It is back in the timber about 200 feet from the high water line. Elevation: 24.5 feet above mean low water; 21.19 feet above mean tide level.

**Serial No. 239. Flushing:** B. M. 4P (U. S. E.) is a square cut on top of a long gray bowlder near the top of the wooded hill at the entrance of Flushing Creek. The bowlder is large enough to be distinguished from all others in this vicinity. It is marked with the letters "U. S. B. M." Elevation: 30.1 feet above mean low water; 26.79 feet above mean tide level.

**Serial No. 240. Flushing:** B. M. 5P (U. S. E.) is a property monument near the south end of the patch of timber. It is about 50 feet east of the center line of the dike around the mud fill. It is located about 250 feet back of the high water line of the bay. It is also the last of the most southerly property line stone in the woods. Elevation: 20.6 feet above mean low water; 17.23 feet above mean tide level.

**Serial No. 241. College Point:** B. M. 5S (U. S. E.) is a square cut in the northeast corner of catch basin located at the northeast corner of First Street and Third Avenue. Elevation: 13.2 feet above mean low water; 9.65 feet above mean tide level.

**Serial No. 242. College Point:** B. M. 4S (U. S. E.) is a square cut in the south corner of catch basin in the southeast corner of Tenth Street and Fifth Avenue. The square is marked "U. S." Elevation: 15.4 feet above mean low water; 11.81 feet above mean tide level.

**Serial No. 243. College Point:** B. M. 68 (C. & G. S.) is a cross cut in the foundation stone on the west side of the two-story and attic frame house on the south side of Gower Avenue (Third Avenue) and 25 feet west of the west line of Ansonia Street (First Street). The bench mark is 10 inches north of the rear of the house and 6 inches above the ground. Elevation: 13.2 feet above mean low water; 9.59 feet above standard sea level.

**Serial No. 244. College Point:** B. M. 718 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{2}$ -inch copper bolt set horizontally into the second course of masonry of the northeast corner of the four-story brick factory building on the southwest corner of Schlesinger Street (Nineteenth Street) and Kinney Avenue (Fifth Avenue). The bolt is on the east side of the building, is 1.2 feet above the ground and 6 inches from the corner. Elevation: 47.2 feet above mean low water; 43.63 feet above standard sea level.

**Serial No. 245. College Point:** B. M. 719 (B. E. & A.) is a square cut in the top of the northeast corner of the lowest bluestone step at the main entrance of the five-story brick factory building on the southwest corner of Schlesinger Street (Nineteenth Street) and Kenney Avenue (Fifth Avenue). The bench mark is on the north side of the building and 19.9 feet from the east side. Elevation: 48.2 feet above mean low water; 44.63 feet above standard sea level.

**Serial No. 246. College Point:** B. M. 721 (B. E. & A.) is the bottom of a square cut in the projecting foundation stone at the southwest corner of the three-story brick factory building on the northwest corner of Ansonia Street (First Street) and Gower Avenue (Third Avenue). The bench mark is on the south side of the building, is 3 feet east of the west side, and 1.64 feet above the sidewalk. An arrowhead is cut in the first course of the brick above the foundation and points to the bench mark. Elevation: 13.8 feet above mean low water; 10.23 feet above standard sea level.

**Serial No. 247. College Point:** B. M. 722 (B. E. & A.) is a square cut in the top of the north end of the granite basin head on the northeast corner of Ansonia Street (First Street) and Gower Avenue (Third Avenue). Elevation: 13.3 feet above mean low water; 9.69 feet above standard sea level.

**Serial No. 248. College Point:** B. M. 723 (B. E. & A.) is a square cut in the top of the southwest corner of the granite basin head on the southeast corner of Chelsea Street (Third Street) and Villaview Road (First Avenue). Elevation: 25.2 feet above mean low water; 21.66 feet above standard sea level.

**Serial No. 249. College Point:** B. M. 724 (B. E. & A.) is the center of the top of the granite city monument on the northwest corner of Mamaroneck Street (Thirteenth Street) and Gower Avenue (Third Avenue). The top of the monument is flush with the sidewalk. Elevation: 45.6 feet above mean low water; 42.02 feet above standard sea level.

**Serial No. 250. College Point:** B. M. 725 (B. E. & A.) is a square cut in the top of the east end of the bluestone sill of the most easterly basement window on the north side of Public School No. 27, on the west side of Mamaroneck Street (Thirteenth Street) between Elf Road (High Street) and Villaview Avenue (First Avenue). The bench mark is 4.3 feet from the east side of the building. Elevation: 60.2 feet above mean low water; 56.60 feet above standard sea level.

**Serial No. 251. College Point:** B. M. 726 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt set vertically in the top of the northeast corner of the bluestone sill of basement window

on the east side of Public School No. 27, on the west side of Mamaroneck Street (Thirteenth Street) between Elf Road (High Street) and Villaview Avenue (First Avenue). The bolt is in the sill of the first basement window south of the main entrance and 1 foot above the ground. Elevation: 60.1 feet above mean low water; 56.54 feet above standard sea level.

**Serial No. 252. College Point:** B. M. 727 (B. E. & A.) is a square cut in the top of the northeast corner of the granite basin head on the northwest corner of Kinney Avenue (Fifth Avenue) and Schlesinger Street (Nineteenth Street). This point was formerly C. & G. S. B. M. No. 11. During the past few years, however, the position of the basin head has been changed, thus destroying the original elevation. Elevation: 45.5 feet above mean low water; 41.97 feet above standard sea level.

**Serial No. 258. College Point:** B. M. 728 (B. E. & A.) is a square cut in the top of the northwest corner of the granite basin head on the southwest corner of Elf Road (High Street) and Rockville Street (North Eighteenth Street), at the gore-shaped corner formed by the intersection of Elf Road and Gower Avenue (Third Avenue). Elevation: 61.0 feet above mean low water; 57.45 feet above standard sea level.

**Serial No. 254. College Point:** B. M. 12 (C. & G. S.) is the middle of a square cut on the southwest corner of the top stone of the bridge culvert about 700 feet beyond the College Point Station of the L. I. R. R., north division, in the direction toward Whitestone. Elevation: 37.2 feet above mean low water; 34.38 feet above standard sea level.

**Serial No. 255. Whitestone:** B. M. A (U. S. E.) is a square cut in center of cap (concrete) about 5.8 feet above sidewalk north end of east wing wall of Long Island Railroad bridge over street about 40 feet east of Malba Station. Elevation: 19.8 feet above mean low water; 16.21 feet above standard sea level.

**Serial No. 256. Whitestone:** B. M. B (U. S. E.) is a square cut in concrete platform in front of office on land and of Malba Pier at Powells Cove, Long Island. Elevation: 15.4 feet above mean low water; 11.84 feet above standard sea level.

**Serial No. 257. Whitestone:** B. M. C (U. S. E.) is a square cut in cap log on southwest inside corner of outer end of Malba Pier, Long Island. Elevation: 16.2 feet above mean low water; 12.57 feet above standard sea level.

**Serial No. 258. Whitestone:** B. M. D (U. S. E.) is a square cut in cap log on northeast inside corner of outer end of Malba Pier, Long Island. Elevation: 16.1 feet above mean low water; 12.48 feet above standard sea level.

**Serial No. 259. Whitestone:** B. M. 729 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{2}$ -inch copper bolt set horizontally into the granite base course at the northeast corner of Public School No. 79, on the west side of Ziegler Avenue (Seventh Avenue) between Arndt Avenue (Fourteenth Street) and Iredell Street (Fifteenth Street). The bolt is on the east side of the building, is 1 foot from the north side and 9 inches above the ground. Elevation: 55.0 feet above mean low water; 51.39 feet above standard sea level.

**Serial No. 260. Whitestone:** B. M. 730 (B. E. & A.) is a square cut in the top of the northwest corner of the granite balustrade on the east side of the north basement entrance to Public School No. 79, on the west side of Ziegler Avenue (Seventh Avenue) between Arndt Avenue (Fourteenth Street) and Iredell Street (Fifteenth Street). The bench mark is on the north side of the building near the base of the iron railing and 1.3 feet above the ground. Elevation: 55.4 feet above mean low water; 51.78 feet above standard sea level.

**Serial No. 261. Whitestone:** B. M. 731 (B. E. & A.) is a quadrant cut in the top of the northeast corner of a projecting stone below the top course of masonry in the stone pier north of the White Rock Lake Hotel, on the south side of Little Bay. The pier containing the bench mark is said to be the base of the Harvy W. Peace Monument. It is on the shore between the north side of Little Bay Avenue (Willets Point Road) and the edge of Little Bay. Is about 16 feet west of the west side of the White Rock Lake Hotel and 3.7 feet above the ground. The letter "B" is cut in the east side of the stone containing the bench mark. Elevation: 15.4 feet above mean low water; 11.83 feet above standard sea level.

**Serial No. 262. Willets Point:** B. M. 732 (B. E. & A.) is a square cut in the top of the northeast corner of the lowest bluestone step of old unused entrance to the grounds of the Sacred Heart Convent, on the south side of Little Bay Avenue (Willets Point Road) about 1,500 feet west of Bell Avenue. The bench mark is about 28 feet east of the west end of the stone wall on the south side of Little Bay Avenue and 1.6 feet

above the ground. Elevation: 15.3 feet above mean low water; 11.69 feet above standard sea level.

**Serial No. 263.** *Willets Point:* B. M. 733 (B. E. & A.) is a cross cut in the top of the west nut on the top of the fixed rim of the fire hydrant at the intersection of the center lines of Bell Avenue and Little Bay Avenue (Willets Point Road). The hydrant is on the south side of a small grass plot and 2 feet above the ground. Elevation: 17 feet above mean low water; 13.44 feet above standard sea level.

**Serial No. 264.** *Willets Point:* B. M. 734 (B. E. & A.) is a small cross,  $\frac{3}{4}$  inch, cut in the top of the horizontal surface at the east end of the bluestone sill of the east window on the north side of the two-story red brick casemate storehouse building, just south of the long dock, in the military reservation at Fort Totten. The cross is  $3\frac{3}{4}$  inches from the east end of the sill and the figure 19.5205 is scratched below, on the vertical face of the sill. Elevation: 19.2 feet above mean low water; 15.60 feet above standard sea level.

**Serial No. 265.** *Willets Point:* B. M. 735 (B. E. & A.) is a small cross, 1 inch, cut in the top of the horizontal surface at the east end of the bluestone sill of the west window on the north side of the two-story red brick casemate storehouse building, just south of the long dock, in the military reservation at Fort Totten. The cross is 2 $\frac{1}{2}$  inches from the east end of the sill and the figure 19.454 is scratched below, on the vertical face. Elevation: 19.2 feet above mean low water; 15.60 feet above standard sea level.

**Serial No. 266.** *Willets Point:* B. M. 736 (B. E. & A.) is the center of the top of a  $\frac{3}{4}$ -inch copper bolt set vertically in the inclined top of the granite base course at the northeast corner of the east wing of the quartermaster's building (two-story red brick) in the military reservation at Fort Totten. The building containing the bench mark was formerly known as the artillery school or officers' school building, and is just north of the headquarters or administration building. The bench mark is about 75 feet north of the north side of the main road, is 11 inches above the ground, and 10 $\frac{1}{2}$  inches west of the corner of the building. The figures 52.827 are cut in the limestone block above the bench mark. Elevation: 52.6 feet above mean low water; 48.99 feet above standard sea level.

**Serial No. 267.** *Willets Point:* B. M. 737 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt set vertically in the top of the southwest corner of a massive granite block in the top of the sea wall in the military reservation at Fort Totten. The bolt is about 100 feet south of the south side of the long dock and on the west side of the casemate storehouse building (two-story red brick), about 38 feet south of the north side of the building. It is opposite an arrowhead cut in the first course of brick above the concrete foundation and 5 inches from the face of the wall. Elevation: 14.6 feet above mean low water; 11.00 feet above standard sea level.

**Serial No. 268.** *Willets Point.* B. M. 105 (C. & G. S.) is a square cut in the stringer of the long dock at Willets Point, immediately over the C. & G. Survey gauge of 1886. Elevation: 13.7 feet above mean low water; 10.07 feet above standard sea level.

**Serial No. 269.** *Little Neck:* B. M. 708 (B. E. & A.) is the top of the fire hydrant on the westerly side of Two hundred and fiftieth Street (Old House Landing Road), about 50 feet north of the North Side Division of the Long Island Railroad. Elevation: 37.4 feet above mean low water; 33.79 feet above standard sea level.

**Serial No. 270.** B. M. 709 (B. E. & A.) is a square cut in the top of the west end of the bluestone doorsill on the south side of the Long Island Railroad Station, just east of Two hundred and fiftieth Street (Old House Landing Road). Elevation: 40.5 feet above mean low water; 36.74 feet above standard sea level.

**Serial No. 271.** *Little Neck:* B. M. 710 (B. E. & A.) is the top of a railroad spike driven vertically in the root of a large oak tree on the north side of Jackson Avenue (Broadway), about 150 feet west of Little Neck Road. The bench mark is on the north side of the tree. Elevation: 86.7 feet above mean low water; 83.12 feet above standard sea level.

**Serial No. 272.** *Little Neck:* B. M. 711 (B. E. & A.) is a square cut in the top of the northeast corner of the bluestone coping on the west parapet wall of culvert crossing, Little Neck Road, about 2,000 feet north of Sixty-first Avenue (Hyde Park Road). The bench mark is just north of Van Nostrand's farm and about 750 feet north of two masonry columns surmounted by lions at the entrance to the Vanderbilt Estate. The bench mark is 3 feet above the roadway. Elevation: 188.7 feet above mean low water; 185.14 feet above standard sea level.

**Serial No. 273.** *Little Neck:* B. M. 712 (B. E. & A.) is a quadrant cut in the top of a projecting foundation stone at the northwest corner of Public School No. 32 (one-story and attic frame), on the east side of Little Neck Road, about 50 feet south of

Lakeville Road (Floral Park Road). The bench mark is on the west side of the building and 6 inches from the north side. Elevation: 161.5 feet above mean low water; 157.88 feet above standard sea level.

**Serial No. 274.** *Little Neck:* B. M. 713 (B. E. & A.) is a quadrant cut in the top of the bluestone coping of the second step of wing wall at the north end of the west parapet wall of culvert crossing Little Neck Road, about 2,000 feet north of Sixty-first Avenue (Hyde Park Road). The bench mark is on the first culvert north of Hyde Park Road and is in bad condition. (Established by the Queens Topographical Bureau.) Elevation: 187.4 feet above mean low water; 183.81 feet above standard sea level.

**Serial No. 275.** *Little Neck:* B. M. 714 (B. E. & A.) is the top of a 1-inch brass bolt marking the U. S. C. & G. S.  $\Delta$  station Payne. The bench mark is on the Schenck farm, is about 810 feet east of Little Neck Road and about 435 feet south of Sixty-first Avenue (Hyde Park Road). The regular C. & G. S. marking bolt has been broken off leaving the 1-inch shank in the monument, which is set in concrete 3 by 3 by 4 feet. The bench mark is flush with the ground and 16 feet west of the post and wire fence on the west side of the Vanderbilt Estate. Elevation: 270.1 feet above mean low water; 266.49 feet above standard sea level.

**Serial No. 276.** *Little Neck:* B. M. 715 (B. E. & A.) is the center of a granite city monument on the Schenck farm, 12.92 feet southeast of U. S. C. & G. S.  $\Delta$  Payne. The monument was set by the Queens Topographical Bureau and is 7 feet west of the post and wire fence on the west side of the Vanderbilt Estate. Elevation: 270.1 feet above mean low water; 266.46 feet above standard sea level.

**Serial No. 277.** *Little Neck:* B. M. 716 (B. E. & A.) is the center of the granite city monument at the intersection of Little Neck Road and Sixty-first Avenue (Hyde Park Road). The monument is about 14 feet west of the fence line on the east side of Little Neck Road and on the center line of Sixty-first Avenue. The top of the monument is 1 inch below the ground. Elevation: 240.7 feet above mean low water; 237.05 feet above standard sea level.

**Serial No. 278.** *Elm Point:* B. M. 1 (C. & G. S.) is a right angle cut on top of eastern end of stone breakwater on south side of foot of pier extending out from Elm Point Avenue. Elevation: 11.5 feet above mean low water; 7.93 feet above mean tide level.

**Serial No. 279.** *Elm Point:* B. M. 2 (C. & G. S.) is a square cut on west end of concrete culvert at entrance, on Elm Point Avenue, of house on water front on the north side of street. The culvert is about 90 feet east of foot of pier. Elevation: 15.4 feet above mean low water; 11.85 feet above mean tide level.

**Serial No. 280.** *Elm Point:* B. M. 3 (C. & G. S.) is head of highest bolt on top of fire plug on south side of Elm Point Avenue, about 500 feet east from B. M. 2. Elevation: 38.4 feet above mean low water; 34.83 feet above mean tide level.

**Serial No. 281.** *Hewletts Point:* B. M. 1 (U. S. E.) is the top of the bluestone monument (3 feet by 3 feet) with cross on top, marking boundary between Trinity Cemetery and Standard Oil Co. property. It is 91.5 feet north of the east corner of junction of Broadway and Trinity Place, 1.7 feet northeast of the north end of iron picket fence of Trinity Cemetery, 7 feet west of junction of Broadway and west side of road to Standard Oil tanks, 55.6 feet south of southwest corner of two-story frame house. The top of monument is a few inches above the ground. Elevation: 29.8 feet above mean low water; 26.25 feet above standard sea level.

**Serial No. 282.** *Hewletts Point:* B. M. 2 (U. S. E.) is the top of bluestone monument (4 feet by 4 feet) on west line of Carter's estate, 6.6 feet east of N. Y. T. Co., pole No. 84, about 300 feet north of the southeast corner of estate on west side of Broadway opposite Carter's and 164.0 feet south of private road. Monument is just west of hedge and about 4 inches above the ground. Elevation: 28.8 feet above mean low water; 25.22 feet above standard sea level.

**Serial No. 283.** *Hewletts Point:* B. M. 3 (U. S. E.) is the top of a monument on the north line of Tracy Harris estate. It is 67.2 feet northwest of the northwest corner of house, 70.55 feet east of the third tree east of Broadway on Main Street and 56.7 feet west of the fourth tree. Monument is a few inches above the ground at west end of high hedge and about 300 feet east of Broadway. Elevation: 27.5 feet above mean low water; 23.88 feet above standard sea level.

**Serial No. 284.** *Execution Rocks Light:* B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk cemented into concrete walk on south side of dwelling house. The disk is flush with the walk and about 6 feet south of south wall of house. Elevation: 13.2 feet above mean low water; 9.57 feet above mean tide level.

**Serial No. 285. Execution Rocks Light:** B. M. 2 (C. & G. S.) is the top of iron bolt, leaded into top of stone wall, holding down west side of iron ladder on south side of island. Elevation: 13.5 feet above mean low water; 9.82 feet above mean tide level.

**Serial No. 286. Glen Cove:** B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk set with cement in the side of a 5-foot high stone wall along the front of the La Due Estate. Bench mark is 5.6 meters from the gate, 36 meters from high-water line, and across the street from a trolley station. Elevation: 16.2 feet above mean low water; 12.59 feet above mean tide level.

**Serial No. 287. Glen Cove:** B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set with cement in the north side of the eastern of three square brick gate posts at the entrance to the grounds of a large hotel known as The Hall, which is the first building from the dock on the south side of the street. Elevation: 27.3 feet above mean low water; 23.68 feet above mean tide level.

**Serial No. 288. Glen Cove:** B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set with cement in top of a large rock projecting about 3 feet above the ground in a grove of locust trees, along the shore south of the New York Yacht Club Dock. The rock is 14 meters back from the high-water line and is the only large rock in the vicinity above high water. Elevation: 19.5 feet above mean low water; 15.86 feet above mean tide level.

**Serial No. 289. Glen Cove:** B. M. 2 (U. S. E.) is a drift bolt in top of stringer south side of dock (steamboat landing) 34.8 feet from the northwest corner of fishermen's boathouse. Bench mark is top of bolt slightly below top of stringer. Elevation: 12.9 feet above mean low water; 9.28 feet above mean tide level.

**Serial No. 290. Glen Cove:** B. M. 3 (U. S. E.) is a square in top of flag 5 inches north of eastern gate post at entrance to E. R. Landis's property opposite Glen Cove Dock. Elevation: 15.8 feet above mean low water; 12.11 feet above mean tide level.

**Serial No. 291. Glen Cove:** B. M. 7 (U. S. E.) is a square cut on top of first concrete step (left side) to the east of and approaching Ayer's Hotel. Elevation: 14.3 feet above mean low water; 10.61 feet above mean tide level.

**Serial No. 292. Oyster Bay:** B. M. 2 (C. & G. S.) is the end of railroad rail driven vertically into the ground, 3.3 feet from the most easterly of four concrete supports for an oil tank and 12 feet from the corner of the cribwork of the southwest corner of the slip. Elevation: 10.1 feet above mean low water; 6.49 feet above mean tide level.

**Serial No. 293. Oyster Bay:** B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set in the brickwork on the northwest wall of the Town Hall about 3 feet above the ground. Elevation: 20.3 feet above mean low water; 16.62 feet above mean tide level.

**Serial No. 294. Oyster Bay:** B. M. 4 (C. & G. S.) is a C. & G. Survey standard disk set in the brickwork of the Oyster Bay Bank, on the northwest wall about 3 feet from the ground. Elevation: 24.1 feet above mean low water; 20.46 feet above mean tide level.

**Serial No. 295. Cold Spring Harbor:** B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk cemented in the side of a concrete post at the end of a concrete wall along the estate of W. Jennings. The post is at the west end of driveway entering the grounds and across the street from the residence of Capt. W. W. Bingham, near the docks. Elevation: 12.5 feet above mean low water; 8.82 feet above mean tide level.

**Serial No. 296. Cold Spring Harbor:** B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk cemented in top of a stone retaining wall along the east side of the road leading from the dock to the village. It is 8.7 meters from south end of the wall. The wall is located at the point where the road takes a sharp curve. Elevation: 15.6 feet above mean low water; 11.93 feet above mean tide level.

**Serial No. 297. Cold Spring Harbor:** B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk cemented in the side of the brick building of the Cold Spring Harbor Library. It is on the north side of the building 1 meter from west corner. This is the back of the building, but the side which faces the harbor. Elevation: 18.5 feet above mean low water; 14.83 feet above mean tide level.

**Serial No. 298. Huntington Harbor:** B. M. 3 (U. S. E.) is marked by a square cut on stone window sill of the northwest corner of electric power house on Town Dock. Elevation: 14.9 feet above mean low water; 11.18 feet above mean tide level.

**Serial No. 299. Huntington Harbor:** B. M. 4 (U. S. E.) is a square cut in the northwest corner of a concrete square in front of the center entrance to T. B. Archer's saloon. The bench mark is further distinguished by U. S. cut close to the square, the concrete square is 5.2 feet long and 4.2 feet wide and 9.7 feet from the southwest of

the saloon porch. Elevation: 11.4 feet above mean low water; 7.72 feet above mean tide level.

**Serial No. 800. Huntington Harbor:** B. M. 6 (U. S. E.) is a square cut in the top of concrete bulkhead. It is 1.3 feet from the face and 2.6 feet from the junction of the bulkhead and pier. Elevation: 10.3 feet above mean low water; 6.61 feet above mean tide level.

**Serial No. 801. Huntington Harbor:** B. M. 8 (U. S. E.) is a square cut in top of a large gray rock, the only one of great size along the shore at this point, north of Heckscher's Pier. The rock is about 10 feet long, 6 feet wide, and 4 feet high, and is at the high-water line. On the side of the rock near the bench mark the letters "U. S." are inscribed. Elevation: 12.3 feet above mean low water; 8.59 feet above mean tide level.

**Serial No. 802. Huntington Harbor:** B. M. 9 (U. S. E.) is a square marked "U. S." cut in the top of low concrete sea wall along the foot of the bank. It is 14 feet from the end of the wall and 109.5 feet north of Heckscher's Boathouse. Elevation: 10.3 feet above mean low water; 6.64 feet above mean tide level.

**Serial No. 803. Huntington Harbor:** B. M. 10 (U. S. E.) is a square marked "U. S." cut in the top of the low concrete wall at the high-water mark south of Heckscher's Boathouse. It is 41.4 feet from the southeast corner of the house and 3 feet from the twin white-pine trees. Elevation: 11.0 feet above mean low water; 7.28 feet above mean tide level.

**Serial No. 804. Lloyd Harbor Lighthouse:** B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk cemented in concrete foundation of Lloyd Harbor Lighthouse. It is on the south side of the building, 0.6 meter from the east corner and 1 meter above the concrete platform of the landing stage. Elevation: 16.6 feet above mean low water; 12.92 feet above mean tide level.

**Serial No. 805. Lloyd Harbor Lighthouse:** B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk cemented in top of a large boulder projecting about 6 feet above the ground on the point south of lighthouse. It is the largest boulder on the point and is about at high water mark. Elevation: 14.6 feet above mean low water; 10.86 feet above mean tide level.

**Serial No. 806. Lloyd Harbor Lighthouse:** B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk cemented in top of stone sea wall along the A. & G. Millbank estate. It is at the center of the curve where it curves around the point. Bench marks 1, 2, and 3 are almost in range. Elevation: 14.1 feet above mean low water; 10.36 feet above mean tide level.

**Serial No. 807. Northport:** B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk set with cement in the top surface of concrete landing at the entrance to the First National Bank Building, about half way between the building and the edge of the platform in front of the post office and between the two westernmost of the four pillars. Elevation: 17.1 feet above mean low water; 13.47 feet above mean tide level.

**Serial No. 808. Northport:** B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk cemented in the western side of the brick building of the Edward Thompson Co., on Woodbine Avenue, 2.3 feet from the front of the entrance and 1.5 feet above the ground. Elevation: 15.2 feet above mean low water; 11.50 feet above mean tide level.

**Serial No. 809. Northport:** B. M. 3 (C. & G. S.) is the 3 by 3 inch top of a white marble town monument which projects about 3 inches above the concrete sidewalk in front of the residence of C. J. Sammis on Woodbine Avenue. The monument is marked with a cross in the top, marks the property line at a turn in the street, and sets against the retaining wall in front of the yard of Mr. Sammis. Elevation: 19.7 feet above mean low water; 16.09 feet above mean tide level.

**Serial No. 810. Smithtown Branch:** B. M. B-100 (B. W. S.) is a bolt in root of oak at intersection of roads 2 miles east of Smithtown Branch. Elevation: 128.6 feet above mean low water; 125.06 feet above standard sea level.

**Serial No. 811. Smithtown Branch:** B. M. B-101 (B. W. S.) is bolt in root of oak in southwest fork of roads 1 mile east of Smithtown Branch. Elevation: 81.4 feet above mean low water; 77.89 feet above standard sea level.

**Serial No. 812. Smithtown Branch:** B. M. B-102 (B. W. S.) is a square cut in southeast corner of top step at entrance to the house of Mrs. Charles Miller, south side of road opposite Smithtown Branch post office. Elevation: 65.5 feet above mean low water; 62.04 feet above standard sea level.

**Serial No. 813. Smithtown Branch:** B. M. B-103 (B. W. S.) is a cross cut in top of bolt on the northeast corner of signal post at Smithtown railroad station. Elevation: 67.2 feet above mean low water; 63.68 feet above standard sea level.

**Serial No. 814. Smithtown Branch:** B. M. 1 (G. S.) is bronze tablet in southwest wing wall of railroad bridge at Smithtown. Elevation: 29.6 feet above mean low water; 26.09 feet above standard sea level.

**Serial No. 815. Smithtown Branch:** B. M. 104 (B. W. S.) is a bolt in root of large oak on west side of road 100 feet north of brook crossing 0.9 mile southeast of Smithtown. Elevation: 23.6 feet above mean low water; 20.07 feet above standard sea level.

**Serial No. 816. Smithtown Branch:** B. M. B-105 (B. W. S.) is a bolt in root of twin oak on north side of fork of roads, 3 miles east of Commack. Elevation: 47.1 feet above mean low water; 43.57 feet above standard sea level.

**Serial No. 817. Stratford Shoal Light:** B. M. 1 (C. & G. S.) is the center of a cross cut in the lead filling of a round hole drilled in the middle of the sixth course of stone from the top of the granite foundation. Elevation: 13.3 feet above mean low water; 9.95 feet above mean tide level.

**Serial No. 818. Port Jefferson entrance:** B. M. 12 (C. & G. S.) is a C. & G. Survey standard disk set in brownstone ledge surrounding the light keeper's house toward the outer end of the eastern breakwater at the entrance to the harbor. It is about 7 feet north-northwest from the northwest corner of the house. Elevation: 17.0 feet above mean low water; 13.87 feet above mean tide level.

**Serial No. 819. Port Jefferson entrance:** B. M. 1 (U. S. E.) is a white marble monument on the east beach in line with the east breakwater. It is 465.5 feet back from the south (shore) end of the breakwater. Elevation: 8.5 feet above mean low water; 5.40 feet above mean tide level.

**Serial No. 820. Port Jefferson entrance:** B. M. 2 (U. S. E.) is on the southeast corner of the lighthouse foundation (brownstone, no mark) on the north end of the east breakwater. Elevation: 16.1 feet above mean low water; 13.00 feet above mean tide level.

**Serial No. 821. Port Jefferson entrance:** B. M. 3 (U. S. E.) is a cross on the southwest corner of the lighthouse foundation on the north end of the east breakwater and also marks the position of station "O." Elevation: 17.4 feet above mean low water; 14.27 feet above mean tide level.

**Serial No. 822. Port Jefferson entrance:** B. M. 5 (U. S. E.) is a  $\frac{3}{4}$ -inch galvanized iron pipe projecting 0.3 foot above the surface. It is 75 feet south of B. M. 1 and 2 feet west of fence. Elevation: 7.6 feet above mean low water; 4.54 feet above mean tide level.

**Serial No. 823. Port Jefferson:** B. M. 3 (C. & G. S.) is a bronze cap top of pipe 6 feet west of the west fence line, 8 feet north of the track, and 250 feet west of Port Jefferson Station. (Established by U. S. Geological Survey.) Elevation: 195.4 feet above mean low water; 192.15 feet above mean tide level.

**Serial No. 824. Port Jefferson:** B. M. 5 (C. & G. S.) is a knob on the northeast corner of a culvert 1,000 feet east of the road crossing, 1 mile east of Port Jefferson station. Bench mark is  $7\frac{1}{2}$  feet below the rails. (Established by the Board of Water Supply and known as B. 185.) Elevation: 157.7 feet above mean low water; 154.48 feet above mean tide level.

**Serial No. 825. B. M. 9 (C. & G. S.)** is a C. & G. Survey standard disk set with cement in the north side of the brick building of F. F. Darling & Sons general store, 1.7 feet from the western corner and 2.3 feet above the floor of the porch. Elevation: 15.0 feet above mean low water; 11.76 feet above mean tide level.

**Serial No. 826. Port Jefferson:** B. M. 10 (C. & G. S.) is a C. & G. Survey standard disk cemented into the concrete foundation on the north side of the brick post-office building, 15 feet from eastern corner and 1.9 feet above the ground. Elevation: 20.7 feet above mean low water; 17.49 feet above mean tide level.

**Serial No. 827. Port Jefferson:** B. M. 11 (C. & G. S.) is a C. & G. Survey standard disk cemented into the stone foundation of the west side of the brick building of the First National Bank, 22.6 feet from the northern corner and 0.4 foot above the concrete sidewalk. Elevation: 22.6 feet above mean low water; 19.37 feet above mean tide level.

**Serial No. 828. Mattituck:** B. M. 1 (C. & G. S.) is a cut in a slat signal on the right bank of the inlet marked by a cross of tacks on the signal and also on the independent post alongside of it. Elevation: 8.4 feet above mean low water; 6.12 feet above mean tide level.

**Serial No. 829. Mattituck:** B. M. A. (U. S. E.) is a concrete monument with a copper nail set in the top. It is on the south end of the east breakwater and also marks the position of station A. Elevation: 8.9 feet above mean low water; 6.61 feet above mean tide level.

**Serial No. 330.** *Mattituck:* B. M. B. (U. S. E.) is a square marked "B" cut in the top of the last stone on the south end of the west breakwater. Elevation: 6.4 feet above mean low water; 4.03 feet above mean tide level.

**Serial No. 331.** *Mattituck:* B. M. 1 (U. S. E.) is a square cut on rock of west breakwater in center of spit. It is nearly covered with sand. Elevation: 8.7 feet above mean low water; 6.41 feet above mean tide level.

**Serial No. 332.** *Mattituck:* B. M. 2 (U. S. E. 1906) is the top of an iron pipe driven in the meadow near gauge. This pipe projects out of the ground about 6 inches and is about 15 feet inland from high bank, on the eastern bank of the Mattituck Creek about 650 feet up creek from Bailey's Dock and about 160 feet north of first branch creek which running westerly empties into Mattituck Creek. Elevation: 5.5 feet above mean low water; 3.23 feet above mean tide level.

**Serial No. 333.** *Mattituck:* B. M. 2 (U. S. E. 1909) is marked by a monument with copper bolt in the top. It is south and west of the south end of the west breakwater. Elevation: 16.4 feet above mean low water; 14.07 feet above mean tide level.

**Serial No. 334.** *Mattituck:* B. M. 3 (U. S. E.) is a 1½-inch iron pipe driven flush with the ground west of B. M. 2. Elevation: 13.9 feet above mean low water; 11.55 feet above mean tide level.

**Serial No. 335.** *Mattituck:* B. M. 4 (U. S. E.) is a 1½-inch iron pipe driven flush with the ground and southwest of B. M. 2. Elevation: 8.4 feet above mean low water; 6.08 feet above mean tide level.

**Serial No. 336.** *Mattituck:* B. M. 5 (U. S. E.) is a 1½-inch galvanized-iron pipe driven flush with the ground and west of B. M. "A." Elevation: 9.4 feet above mean low water; 7.06 feet above mean tide level.

**Serial No. 337.** *Mattituck:* B. M. 6 (U. S. E.) is a 1½-inch galvanized-iron pipe driven flush with the ground and east of B. M. "A." Elevation: 10.9 feet above mean low water; 8.61 feet above mean tide level.

**Serial No. 338.** *Mattituck:* B. M. 7 (U. S. E.) is the top of a 1½-inch galvanized-iron pipe sunk flush with the ground north of Reach pipe No. 12. Elevation: 7.3 feet above mean low water; 4.95 feet above mean tide level.

**Serial No. 339.** *Mattituck:* B. M. 8 (U. S. E.) is a concrete monument with a copper bolt in the top and is east of B. M. 7 and southwest of station No. 2. Elevation: 7.6 feet above mean low water; 5.24 feet above mean tide level.

**Serial No. 340.** *Mattituck:* B. M. 9 (U. S. E.) is an iron pipe at the edge of the marsh on point of land east of B. M. 8. Elevation: 5.8 feet above mean low water; 3.45 feet above mean tide level.

**Serial No. 341.** *Mattituck:* B. M. 10 (U. S. E.) is a square cut on a large bowlder and marked "U. S." The bowlder is south of station 3. Elevation: 9.4 feet above mean low water; 7.02 feet above mean tide level.

**Serial No. 342.** *Mattituck:* B. M. 11 (U. S. E.) is a square cut on top of a bowlder and marked "U. S." It is south of station 3 and south of B. M. 10. Elevation: 7.1 feet above mean low water; 4.76 feet above mean tide level.

**Serial No. 343.** *Mattituck:* B. M. 12 (U. S. E.) is a concrete monument marked by a copper bolt, on the east bank about 250 feet south of station 3. Elevation: 6.0 feet above mean low water; 3.68 feet above mean tide level.

**Serial No. 344.** *Mattituck:* B. M. 13 (U. S. E.) is an iron pipe on the east bank 200 feet south of monument (B. M. 12). Elevation: 6.3 feet above mean low water; 3.97 feet above mean tide level.

**Serial No. 345.** *Mattituck:* B. M. 14 (U. S. E.) is a galvanized-iron pipe on point opposite large rock in meadows and 125 feet north of concrete monument (B. M. 15). Elevation: 6.1 feet above mean low water; 3.75 feet above mean tide level.

**Serial No. 346.** *Mattituck:* B. M. 15 (U. S. E.) is a concrete monument marked by a copper bolt at the edge of the tree line and north of road to the old mill. It is 125 feet south of B. M. 14. Elevation: 7.1 feet above mean low water; 4.79 feet above mean tide level.

**Serial No. 347.** *Mattituck:* B. M. 16 (U. S. E.) is the top of a 1½-inch galvanized-iron pipe driven flush with the ground south of B. M. 15 and south of road to old mill. It is also 17.3 feet east of a cart path along the tide line. Elevation: 9.5 feet above mean low water; 7.15 feet above mean tide level.

**Serial No. 348.** *Mattituck:* B. M. 17 (U. S. E.) is a "T" cut in the south side of the southeast corner foundation stone of 1½-story frame house near a private pier and about 300 feet north of the old mill on the west bank of the Mattituck Creek. Elevation: 8.3 feet above mean low water; 5.95 feet above mean tide level.

**Serial No. 849.** *Orient:* B. M. 1 (C. & G. S.) is the intersection of a cross within a circle which with the date 1883 is cut in a rock about 15 meters back from the water's edge at a point abreast of Schellenger's farm. Elevation: 5.3 feet above mean low water; 3.61 feet above mean tide level.

**Serial No. 850.** *Plum Island:* B. M. — (U. S. E.) is the bottom of white space on South Dock datum board. Elevation: 4.0 feet above mean low water; 2.69 feet above mean tide level.

**Serial No. 851.** *Plum Island:* B. M. 4 (U. S. E.) is the top of a brass lag screw, set into the top of a concrete post. It is located between the torpedo-loading room and the South Dock, about 4 feet from the northeast corner of the torpedo-loading room. Elevation: 10.0 feet above mean low water; 8.63 feet above mean tide level.

**Serial No. 852.** *Plum Island:* B. M. 6 (U. S. E.) is the top of driftbolt in top of string piece east side of South Dock at its inshore end. String piece is cut with radial lines around bolt head and "B. M. 11.404." Elevation: 11.4 feet above mean low water; 10.05 feet above mean tide level.

**Serial No. 853.** *Little Gull Island:* B. M. 1 (C. & G. S.) is at the intersection of a cross with the date of 1883 to the right of it, cut into the side of stone steps leading up into the lighthouse platform. Elevation: 9.5 feet above mean low water; 8.23 feet above mean tide level.

**Serial No. 854.** *Gardiners Island:* B. M. 1 (C. & G. S.) is a cut on southwest face of larger of two boulders on southwest side of island about one-eighth of a mile below landing for the Gardiner mansion. The horizontal mark is the point of reference. Elevation: 4.2 feet above mean low water; 2.81 feet above mean tide level.

**Serial No. 855.** *Long Beach Bar Lighthouse:* B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk set in the top of a large rock on the top of the southeast corner of the rip rap surrounding the lighthouse. Elevation: 8.9 feet above mean low water 7.61 feet above mean tide level.

**Serial No. 856.** *Long Beach Bar Lighthouse:* B. M. 2 (C. & G. S.) is a  $\frac{3}{4}$ -inch hole,  $\frac{1}{4}$  inch deep drilled in the south side of the solid iron column under the southeast corner of the lighthouse 7.5 feet below the iron cap of the column. Elevation: 9.5 feet above mean low water; 8.28 feet above mean tide level.

**Serial No. 857.** *Long Beach Bar Lighthouse:* B. M. 3 (C. & G. S.) is a  $\frac{3}{4}$ -inch hole,  $\frac{1}{4}$ -inch deep drilled in the south side of the solid iron column under the middle of the lighthouse 6.7 feet below the iron cap of the column. Elevation: 10.4 feet above mean low water; 9.12 feet above mean tide level.

**Serial No. 858.** *Long Beach Bar Lighthouse:* B. M. 4 (C. & G. S.) is a  $\frac{3}{4}$ -inch hole,  $\frac{1}{4}$  inch deep, drilled in the south side of the solid iron column under the southwest corner of the lighthouse, 6.3 feet below the iron cap of the column. Elevation: 10.8 feet above mean low water; 9.60 feet above mean tide level.

**Serial No. 859.** *Greenport:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set in the top and near the end of a concrete bulkhead on the west side of the wharf of the Long Island Oyster Farms (Inc.). Elevation: 6.2 feet above mean low water; 5.00 feet above mean tide level.

**Serial No. 860.** *Greenport:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set in a cement sidewalk 54 centimeters out from the wall of G. F. Tuthill's building and 15 centimeters from the southwest corner of the building. Elevation; 5.0 feet above mean low water; 3.84 feet above mean tide level.

**Serial No. 861.** *Greenport:* B. M. 4 (C. & G. S.) is a C. & G. Survey standard disk set in the top and near the end of a concrete bulkhead on the east side of the wharf of the Long Island Oyster Farms (Inc.). Elevation: 6.2 feet above mean low water; 5.00 feet above mean tide level.

**Serial No. 862.** *Greenport:* B. M. 1 (U. S. E.) is the highest corner (N. W.) on granite post on the east side of the Steamboat Dock. The post is 18 inches in diameter and square on top and projects about 2 feet above the ground. The post is out of plumb and looks as though it had settled. It is 7 feet from the edge of the dock. Elevation: 7.8 feet above mean low water; 6.56 feet above mean tide level.

**Serial No. 863.** *Greenport:* B. M. 2 (U. S. E.) is the highest (N. E.) corner on granite post on the west side of Steamboat Dock. The post is of the same description as B. M. 1 except that it is 8 feet from the edge of the dock. Both bench marks are on posts nearest the shore end of the dock. Elevation: 7.7 feet above mean low water; 6.50 feet above mean tide level.

**Serial No. 864.** *Greenport:* B. M. 3 (U. S. E.) is the highest point on the stone monument on the northeast corner of Central Avenue and Main Street. Elevation: 12.1 feet above mean low water; 10.88 feet above mean tide level.

**Serial No. 865.** *Greenport:* B. M. 4 (U. S. E.) is a stone monument on the northeast corner of Central Avenue and Darpenter Street. Elevation: 12.0 feet above mean low water; 10.79 feet above mean tide level.

**Serial No. 866.** *Greenport:* B. M. 5 (U. S. E.) is a square on the lower step at the entrance to the office of Tuthill & Thom's Machine Shop on the north side of Central Avenue. Elevation: 9.3 feet above mean low water; 8.10 feet above mean tide level.

**Serial No. 867.** *Greenport:* B. M. 7 (U. S. E.) is on the northeast corner of the stone foundation on shore porch of the bath house. (No description of mark.) Elevation: 5.2 feet above mean low water; 4.05 feet above mean tide level.

**Serial No. 868.** *Greenport:* B. M. 10 (U. S. E.) is on the concrete step at the entrance to G. W. Volkman's grocery store on the south side of Central Avenue opposite Tuthill & Thorn's. (No description of mark.) Elevation: 10.1 feet above mean low water; 8.88 feet above mean tide level.

**Serial No. 869.** *Manhansett Manor:* B. M. 1 (C. & G. S.) is the horizontal chisel mark on a brass bolt in the water side of a granite post about 6 inches square and 4 feet long, sunk in the ground, with about 10 inches protruding, at the northwest corner of Dr. Poor's lot on West Sylvester Avenue. Bench mark is about 140 feet from the high-water line. Elevation: 14.3 feet above mean low water; 13.06 feet above mean tide level.

**Serial No. 870.** *Manhansett Manor:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set in a 4 by 4 foot boulder projecting 1 foot above the ground on the east side of concrete shore walk and breakwater and 36.2 meters south of the southerly edge of the dock. Elevation: 7.6 feet above mean low water; 6.38 feet above mean tide level.

**Serial No. 871.** *Manhansett Manor:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set in a trap rock boulder, projecting 1 foot above the lawn and having a surface 5 by 3 feet exposed. Bench mark is 18 meters back from high-water line and 37.5 meters south of the southerly corner of a grass plot at the street intersection and 2 feet east of the main concrete sidewalk. Elevation: 7.5 feet above mean low water; 6.34 feet above mean tide level.

**Serial No. 872.** *Southold:* B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk set in a sandstone rock in the stone sea wall south of the wharf and about 10 feet from the south end of the wall. Elevation: 7.0 feet above mean low water; 5.80 feet above mean tide level.

**Serial No. 878.** *Southold:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set in the concrete surface of the cobblestone memorial monument erected by the L. V. I. S. in 1915 and about 0.2 meters from the lowest column of the right-hand side of the monument. The monument is located at the head of the north section of road which leads to wharf but on the south side. Elevation: 12.4 feet above mean low water; 11.12 feet above mean tide level.

**Serial No. 874.** *Southold:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set in a sandstone rock in the stone wall north of the north part of the road leading to wharf and about 200 feet from the end of the wall and opposite the seventh tree north from the road. Elevation: 7.4 feet above mean low water; 6.19 feet above mean tide level.

**Serial No. 875.** *New Suffolk:* B. M. 1 (C. & G. S.) is the top of an iron bolt near the southeast corner of Goldsmith & Tuthill's Pier. The bolt is 18.7 feet from the southeast corner and 0.85 feet from the south edge of the pier. A witness cross is cut in the cement part of the pier, 1.05 feet north of bolt. Elevation: 7.0 feet above mean low water; 5.66 feet above mean tide level.

**Serial No. 876.** *New Suffolk:* B. M. 2 (C. & G. S.) is a triangle cut in the surface of the cement bulkhead joining the western end of the pier of the north. The triangle is 32.7 feet from Goldsmith & Tuthill's Pier and 1.55 feet from the outer edge of the bulkhead and 101.1 feet from the fence at the bend in the wharf, north of the triangle. Elevation: 6.2 feet above mean low water; 4.88 feet above mean tide level.

**Serial No. 877.** *New Suffolk:* B. M. 3 (C. & G. S.) is a cross cut in a brick on the eastern side of the building now occupied by Goldsmith & Tuthill. The cross is 204.7 feet from the junction of the pier and bulkhead, 28.1 feet from the southeast corner and 19.3 feet from the northeast corner of the building. The cross is 1.1 feet from the bottom of the brick part of the foundation. Elevation: 8.2 feet above mean low water; 6.84 feet above mean tide level.

**Serial No. 878.** *New Suffolk:* B. M. 4 (C. & G. S.) is a mark on concrete bulkhead of Tuthill's Wharf, 11.15 meters from the inshore end of the bulkhead. Elevation: 6.9 feet above mean low water; 5.57 feet above mean tide level.

**Serial No. 879.** *New Suffolk:* B. M. 5 (C. & G. S.) is a mark on concrete anchor block of the bulkhead which extends along the shore by the coal pocket on Tuthill's

Wharf. The anchor block is 1 foot below the east top of the bulkhead and 15 meters from the off shore end of the bulkhead. Elevation: 5.7 feet above mean low water; 4.40 feet above mean tide level.

**Serial No. 880.** *New Suffolk:* B. M. 6 (C. & G. S.) is a mark on the west end of a sill which supports column of coal pocket on Tuthill's Wharf. The sill is 5.11 meters from the south pier of the coal pocket. Elevation: 5.7 feet above mean low water; 4.34 feet above mean tide level.

**Serial No. 881.** *Riverhead:* B. M.— (G. S.) is a bronze tablet at the northeast corner of Riverhead Courthouse; 2 feet above ground. Elevation: 29.4 feet above mean low water; 28.18 feet above standard sea level.

**Serial No. 882.** *Riverhead:* B. M. B-46 (B. W. S.) is a bolt in root of large pine at turn of road; 30 feet west of center line of road. Bench mark is  $1\frac{1}{4}$ -miles north of B-45. Elevation: 22.7 feet above mean low water; 21.51 feet above standard sea level.

**Serial No. 883.** *Riverhead:* B. M. B-47 (B. W. S.) is a bolt in root of oak tree 50 feet west of center line of road, 40 feet south of Wallace Nesbit's house. Bench mark is 1,500 feet south of intersection of roads and 6,100 feet north of B. M. B-46. Elevation: 24.9 feet above mean low water; 23.74 feet above standard sea level.

**Serial No. 884.** *Riverhead:* B. M. B-48 (B. W. S.) is a knob on northwest corner of bridge culvert over Peconic River. Bench mark is 2 feet north of spring line of arch and 150 feet south of Riverhead Mill. Elevation: 7.4 feet above mean low water; 6.19 feet above standard sea level.

**Serial No. 885.** *Riverhead:* B. M. B-49 (B. W. S.) is a knob on northwest corner of highway bridge  $\frac{1}{2}$  mile west of Riverhead railroad station. Elevation: 23.0 feet above mean low water; 21.77 feet above standard sea level.

**Serial No. 886.** *Riverhead:* B. M. B-50 (B. W. S.) is a bolt in root of large oak tree south side of middle country road, west side of house of F. W. Conklin. Bench mark is 200 feet south of track and 1 mile west of B. M. B-49. Elevation: 21.6 feet above mean low water; 20.44 feet above standard sea level.

#### SECTION D.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 387 TO 481: SAG HARBOR TO LONG BEACH.

Serial No.	Locality.	Elevations of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
387	Sag Harbor.....	1.2	3.2	4.49		5.7	7.7
388	Three Mile Harbor.....	0.1	1.8	3.12		4.4	6.4
389	.....do.....	0.1	2.0	3.31		4.6	6.6
390	.....do.....	6.2	8.1	9.41		10.7	12.7
391	.....do.....	6.0	7.9	9.23		10.5	12.5
392	.....do.....	6.6	8.5	9.77		11.1	13.1
393	.....do.....	2.9	4.8	6.06		7.4	9.4
394	Fort Pond Bay.....	2.8	5.1	6.21		7.3	9.3
395	.....do.....	18.5	18.8	19.89		21.0	23.0
396	.....do.....	0.4	2.7	3.82		4.9	6.9
397	.....do.....	4.0	6.3	7.37		8.5	10.5
398	.....do.....	3.8	6.1	7.19		8.3	10.3
399	Montauk Point.....	5.4	7.4	8.36		9.4	11.4
400	.....do.....	1.5	3.5	4.45		5.5	7.5
401	.....do.....	3.1	5.1	6.13		7.1	9.1
402	East Quogue.....					6.4	
403	Phillips Cove.....					5.2	
404	.....do.....					2.7	
405	Quogue.....					10.6	
406	.....do.....					22.8	
407	.....do.....					10.4	
408	West Hampton.....					2.3	
409	.....do.....				48.28		
410	.....do.....				54.02		
411	Eastport.....				30.10		
412	Center Moriches.....				31.75		
413	Brook Haven.....				20.24	10.9	
414	.....do.....				20.21	19.9	
415	Ballport.....				27.33	27.1	
416	Patchogue.....	0.3	1.3	1.77		2.3	3.3

SECTION D.—Elevations of bench marks, serial Nos. 387 to 481: Sag Harbor to Long Beach—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
417	Patchogue.....	13.4	14.4	.....	15.84	15.4	16.4
418	do.....	4.2	5.2	.....	6.61	6.2	7.2
419	do.....	1.7	2.7	.....	4.15	3.7	4.7
420	do.....	1.9	2.9	.....	4.34	3.9	4.9
421	do.....	2.0	3.0	.....	4.37	4.0	5.0
422	do.....	2.6	3.6	.....	5.09	4.6	5.6
423	do.....	2.6	3.6	.....	5.00	4.6	5.6
424	do.....	3.0	4.0	.....	5.44	5.0	6.0
425	do.....	4.3	5.3	.....	6.70	6.3	7.3
426	do.....	16.0	17.0	.....	18.41	18.0	19.0
427	Blue Point.....	.....	.....	.....	22.76	.....	.....
428	Bayport.....	.....	.....	.....	6.68	.....	.....
429	Sayville.....	0.6	2.6	3.05	.....	3.6	5.6
430	do.....	0.5	2.5	3.03	.....	3.5	5.5
431	do.....	0.8	2.3	2.77	.....	3.3	5.3
432	do.....	0.4	2.4	2.98	.....	3.4	5.4
433	do.....	2.0	4.0	4.48	.....	5.0	7.0
434	do.....	2.0	4.0	4.47	.....	5.0	7.0
435	do.....	1.9	3.9	4.42	.....	4.9	6.9
436	Sayville.....	2.0	4.0	4.51	.....	5.0	7.0
437	Great River.....	24.0	26.0	.....	26.49	27.0	29.0
438	do.....	8.3	5.3	.....	5.79	6.3	8.3
439	Fire Island Light.....	-0.1	1.9	2.94	.....	3.9	5.9
440	do.....	10.5	12.5	13.60	.....	14.5	16.5
441	do.....	2.4	4.4	5.42	.....	6.4	8.4
442	Islip.....	8.5	10.5	.....	10.98	11.5	13.5
443	Bay Shore.....	20.8	22.6	.....	23.21	23.8	25.8
444	do.....	18.6	20.4	.....	21.01	21.6	23.6
445	Babylon.....	14.5	16.3	.....	16.80	17.5	19.5
446	do.....	3.0	4.8	.....	5.38	6.0	8.0
447	do.....	2.2	4.0	.....	4.65	5.2	7.2
448	do.....	14.4	16.2	.....	16.82	17.4	19.4
449	do.....	20.0	21.8	.....	22.43	23.0	25.0
450	do.....	22.0	23.8	.....	24.35	25.0	27.0
451	Lindenhurst.....	15.6	17.4	.....	18.01	18.6	20.6
452	Coplaque.....	22.8	24.0	.....	25.20	25.8	27.8
453	do.....	20.1	21.9	.....	22.61	23.1	25.1
454	Amityville.....	23.7	25.5	.....	26.14	26.7	28.7
455	do.....	2.7	4.5	.....	5.10	5.7	7.7
456	do.....	1.6	3.4	.....	3.97	4.6	6.6
457	do.....	5.8	7.6	.....	8.22	8.8	10.8
458	do.....	4.4	6.2	.....	6.80	7.4	9.4
459	do.....	22.8	24.6	.....	25.19	25.8	27.8
460	Massapeque.....	16.6	18.7	.....	19.86	21.1	23.1
461	Bellmore.....	15.4	16.5	.....	18.20	19.9	22.4
462	Merrick.....	16.3	17.4	.....	19.13	20.6	23.3
463	Freshport.....	14.7	15.8	.....	17.52	18.2	21.7
464	Baldwin.....	24.8	26.0	.....	27.08	28.3	31.8
465	do.....	15.9	17.1	.....	18.75	20.4	22.9
466	Rockville Center.....	9.5	10.7	.....	12.82	14.0	16.5
467	do.....	23.8	25.0	.....	26.02	28.3	30.8
468	Oceanside.....	8.6	4.8	.....	6.48	8.1	10.6
469	Lynbrook.....	16.1	18.3	.....	20.26	22.1	25.1
470	do.....	16.6	18.8	.....	20.70	22.6	25.6
471	Valley Stream.....	8.2	10.4	.....	12.27	14.2	17.2
472	do.....	10.0	12.2	.....	14.12	16.0	19.0
473	do.....	12.2	14.4	.....	16.30	18.2	21.2
474	do.....	15.0	17.2	.....	19.14	21.0	24.0
475	do.....	16.0	18.2	.....	20.16	22.0	25.0
476	do.....	8.2	5.4	.....	7.27	9.2	12.2
477	do.....	2.3	4.5	.....	6.45	8.3	11.3
478	Post Lead Channel.....	-2.4	-0.5	1.69	.....	8.6	6.6
479	Barnum Island.....	4.8	0.7	.....	8.78	10.8	13.8
480	Long Beach.....	2.9	4.8	.....	8.87	8.9	11.9
481	do.....	2.0	4.8	.....	6.51	8.0	11.6

DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 387 TO 481: SAG HARBOR  
TO LONG BEACH.

**Serial No. 887.** *Sag Harbor:* B. M. 3 (U. S. E.) is an oval cut in the southwest corner of the old breakwater and is on the southwest stone of that corner. Elevation: 5.7 feet above mean low water; 4.49 feet above mean tide level.

**Serial No. 888.** *Three Mile Harbor:* B. M. 3 (U. S. E.) is a bolt head surrounded by four nails in the top of the west jetty near its south end. Elevation: 4.4 feet above mean low water; 3.12 feet above mean tide level.

**Serial No. 889.** *Three Mile Harbor:* B. M. 4 (U. S. E.) is the top of a large boulder on the west shore at the high-water line and is south of station R. W. R. Elevation: 4.6 feet above mean low water; 3.31 feet above mean tide level.

**Serial No. 890.** *Three Mile Harbor:* B. M. 5 (U. S. E.) is a square cut on the west edge of the concrete step on the south side of Capt. Hussey's house. Elevation: 10.7 feet above mean low water; 9.44 feet above mean tide level.

**Serial No. 891.** *Three Mile Harbor:* B. M. 6 (U. S. E.) is a square cut on the concrete step on the west side of Capt. Hussey's house. Elevation: 10.5 feet above mean low water; 9.23 feet above mean tide level.

**Serial No. 892.** *Three Mile Harbor:* B. M. 7 (U. S. E.) is a square cut on the east side of the concrete step on the south side of Capt. Hussey's house. Elevation: 11.1 feet above mean low water; 9.77 feet above mean tide level.

**Serial No. 893.** *Three Mile Harbor:* B. M. 8 (U. S. E.) is a square with the letters "U. S." cut on a boulder on the edge of the bank, on the east shore of the harbor and north of Duck Creek. The bench mark is 144 feet north of scrub oak tree near the edge of the bank. Elevation: 7.4 feet above mean low water; 6.06 feet above mean tide level.

**Serial No. 894.** *Fort Pond Bay:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set in a drill hole in the top of a 6-foot boulder lying at the water edge, partly covered at high water, on the east shore of Fort Pond Bay. The boulder is the first large one north of Capt. E. B. Tuthill's fish dock. Elevation: 7.3 feet above mean low water; 6.21 feet above mean tide level.

**Serial No. 895.** *Fort Pond Bay:* B. M. 4 (C. & G. S.) is the top of a drill hole inside of a 6-inch circle cut in the top of a prominent boulder. Boulder lies on the east side of Fort Pond Bay, about 50 yards east of the shore line and 20 yards northwest of the shore of the Duck Pond. It is on the land owned by Capt. E. B. Tuthill and is the first large boulder seen, north from the low-lying ground on which most of the town is built. Elevation: 21.0 feet above mean low water; 19.89 feet above mean tide level.

**Serial No. 896.** *Fort Pond Bay:* B. M. 5 (C. & G. S.) is the top of a drill hole cut inside of a circle on the concrete platform north of the fish house at the Montauk Fish & Supply Co.'s Dock. It is on the east side of the concrete slab, midway between the dock and the fish house. Elevation: 4.9 feet above mean low water; 3.82 feet above mean tide level.

**Serial No. 897.** *Fort Pond Bay:* B. M. 6 (C. & G. S.) is the top of a drill hole cut in a circle on the highest part of the concrete of an old engine base. It is on the north side of the railroad track, about 30 yards east of the freight house. Elevation: 8.5 feet above mean low water; 7.37 feet above mean tide level.

**Serial No. 898.** *Fort Pond Bay:* B. M. 7 (C. & G. S.) is the top of a piece of rail, 5 feet long, embedded vertically in the roadbed on the center line of the railroad. It is 40 feet east of the freight shed. Elevation: 8.3 feet above mean low water; 7.19 feet above mean tide level.

**Serial No. 899.** *Montauk Point:* B. M. 1 (C. & G. S.) is the highest peak of the largest and most conspicuous rock near the high-water line in the first cove northward of the lighthouse. The rock may be identified by two holes drilled about 1 inch deep with a 4-inch circle around and the letters "U. S." outside. Bench mark bears  $312^{\circ} 50'$  (NW. by W.) from the lighthouse and  $248^{\circ} 30'$  (WSW.) from Beacon Hill on Block Island. Elevation: 9.4 feet above mean low water; 8.36 feet above mean tide level.

**Serial No. 400.** *Montauk Point:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set on top of the three-faced point of the only boulder in the field. Bench mark is about 50 meters from B. M. 1 and about  $30^{\circ}$  clockwise from Montauk Lighthouse. Elevation: 5.5 feet above mean low water; 4.45 feet above mean tide level.

**Serial No. 401.** *Montauk Point:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set in top of the southeast corner of the concrete foundation wall of a demolished

building, on the point just west of B. M. 1. It is about 10 meters east of an old fishing shack and about 50 meters east of another concrete foundation wall. Elevation: 7.1 feet above mean low water; 6.13 feet above mean tide level.

**Serial No. 402. East Quogue:** B. M. 31 (U. S. E.) is a square cut on the north end of the east abutment of culvert over small brook flowing under Main Road. Bench mark is approximately 1,000 feet southwest of Post Beach estates, 100 feet northeast of entrance to Audobon estate and 78 feet northeast of cast-iron lamp-post. It is marked "U. S." Elevation: 6.4 feet above mean low water, Phillips Cove. (There is practically no periodic tide.)

**Serial No. 403. Phillips Cove:** B. M. 32 (U. S. E.) is two marks cut on the edge of steel drainpipe 63 feet northeast of residence of J. G. Montgomery and approximately 30 feet southwest of corner of private yacht slip marked with an arrow. Elevation: 5.2 feet above mean low water. (There is practically no periodic tide.)

**Serial No. 404. Phillips Cove:** B. M. 33 (U. S. E.) is the top of a steel ringbolt fastened in middle of the south side of private yacht slip and approximately 100 feet northeast of the residence of J. G. Montgomery. It is marked  $\frac{US}{33Ed}$ . Elevation: 2.7 feet above mean low water. (There is practically no periodic tide.)

**Serial No. 405. Quogue:** B. M. 27 (U. S. E.) is a square cut on top on concrete monument, 170 feet southeast of grocery store and 500 feet southeast of bridge over Quantuck Bay. It is marked "U. S." Elevation: 10.6 feet above mean low water, Phillips Cove. (There is practically no periodic tide.)

**Serial No. 406. Quogue:** B. M. 28 (U. S. E.) is a square cut in the concrete sidewalk on the west side of main road, 30 feet southeast of corner of Catholic Church and 200 feet southwest of corner of Q. & W. H. B. fire house. It is marked "U. S." Elevation: 22.8 feet above mean low water, Phillips Cove. (There is practically no periodic tide.)

**Serial No. 407. Quogue:** B. M. 30 (U. S. E.) is two marks on the edge of water stop box at junction of Main Road, Back Road, and South Road to Quogue. The stop box is 50 feet southeast of lamp post and 50 feet north of fire hydrant. Elevation: 10.4 feet above mean low water, Phillips Cove. (There is practically no periodic tide.)

**Serial No. 408. West Hampton Beach:** B. M. 25 (U. S. E.) is a 1½-inch iron pipe with elbow driven almost flush with the ground, 50 feet northeast of small boathouse and 72 feet northeast of large boathouse. Elevation: 2.3 feet above local mean low water. (There is practically no periodic tide.)

**Serial No. 409. West Hampton:** B. M. B41 (B. W. S.) is a cross cut on top of bolt at base (west side) signal post in front of West Hampton railroad station. Elevation: 46.28 feet above standard sea level. (There is practically no periodic tide.)

**Serial No. 410. West Hampton:** B. M. B45 (B. W. S.) is a cross cut on east edge of pipe of center of well, 50 feet south of forks of roads, 3 miles south of Riverhead; roads southwest to West Hampton, southeast to Quogue. Elevation: 54.02 feet above standard sea level. (There is practically no periodic tide.)

**Serial No. 411. Eastport:** B. M. (B. W. S.) is center cover pipe sunk in ground 20 feet north of Eastport railroad station. B. M. is 40 feet east of oak tree and 27 feet south of road and 2 feet above ground. (Established by the Geological Survey.) Elevation: 30.10 feet above standard sea level. (There is practically no periodic tide.)

**Serial No. 412. Center Moriches:** B. M. B-36 (B. W. S.) is a knob on southwest corner of base of signal post in front of Center Moriches railroad station. Elevation: 31.75 feet above standard sea level. (There is practically no periodic tide.)

**Serial No. 413. Brook Haven:** B. M. 19 (B. W. S.) is a knob south end of third step of west abutment of highway bridge No. 81, Long Island railroad. It is 6 feet above South Country Road. Road 0.2 mile west of station. (Established by the U. S. Geological Survey.) Elevation: 19.9 feet above Bellport mean low water (U. S. E.); 20.24 feet above standard sea level.

**Serial No. 414. Brook Haven:** B. M. 19 (U. S. E.) is a bolt sunk in sandstone abutment at the west end of the Long Island railroad, over South Road 1,000 feet west of Brook Haven station. It is located on the south end of abutment and on the third course of stone, counting from the bottom, and is marked "U. S. E. D., B. M. 19." Elevation: 19.9 feet above Bellport mean low water (U. S. E.); 20.21 feet above standard sea level.

**Serial No. 415. Bellport:** B. M. 17 (U. S. E.) is a square cut in the concrete sidewalk at the northeast corner of grocery store of the southwest corner of junction of Bellport Avenue and Main Street, and is marked "U. S. 17." Elevation: 27.1 feet above local mean low water; 27.38 feet above standard sea level.

**Serial No. 416.** *Patchogue*: B. M. 2 (C. & G. S.) is the upper surface of a stone buried about 16 feet south of a cedar tree which is 80 yards from shore, and nearly south of Roe's Wharf. Elevation: 2.3 feet above mean low water; 1.77 feet above mean tide level.

**Serial No. 417.** *Patchogue*: B. M. (B. W. S.) is a bronze plate in the northeast corner of freight house about 700 feet west of Patchogue railroad station. Bench mark is about 4 feet above the ground. (Established by the U. S. Geological Survey.) Elevation: 15.4 feet above mean low water; 15.84 feet above standard sea level.

**Serial No. 418.** *Patchogue*: B. M. "Bridge" (U. S. E.) is a square cut in the south walk of small bridge at head of creek. This point is in a cement walk, marked with letters "U. S." It is 19.5 feet from the west side and 27 feet from the east piers. Elevation: 6.2 feet above mean low water; 6.61 feet above standard sea level.

**Serial No. 419.** *Patchogue*: B. M. 3 (U. S. E.) is the head of an old rusty bolt in an iron angle strap on the top of O. B. Smith's bulkhead at the southwest corner of his property. The bolt is marked thus, +, on top. The Smith property is on the east side of the creek at the foot of Patchogue Street. Elevation: 3.7 feet above mean low water; 4.15 feet above standard sea level.

**Serial No. 420.** *Patchogue*: B. M. 4 (U. S. E.) is a square cut in concrete top of west jetty around the head of a wire nail which projects about  $\frac{1}{4}$  inch from the surface of the concrete. The bench mark is 175 feet south of timber bulkhead and about 180 feet north of the present high-water mark west of the jetty, 1,320 feet north of light. Elevation: 3.9 feet above mean low water; 4.34 feet above standard sea level.

**Serial No. 421.** *Patchogue*: B. M. 5 (U. S. E.) is a square and the figure 5 on a  $\frac{1}{2}$ -inch center-line plug on concrete work of west jetty, 1,080 feet north of light. Elevation: 4.0 feet above mean low water; 4.37 feet above standard sea level.

**Serial No. 422.** *Patchogue*: B. M. 19 (U. S. E.) is the top of a 1-inch galvanized-iron pipe projecting 2 feet above the ground, 28.1 feet northwest of the north cedar tree on the west side of Dock Street, and 19 feet southwest of a small concrete monument marking the property line at the southwest corner of Dock and Patchogue Streets. The pipe is 22 feet west of the west tree line on Dock Street and 2 feet south of the line of the old wire fence. Elevation: 4.6 feet above mean low water; 5.00 feet above standard sea level.

**Serial No 423.** *Patchogue*: B. M. 20 (U. S. E.) is a small property monument projecting 3 inches above surface of the ground at the northwest corner of Dock and Patchogue Streets. Elevation: 4.6 feet above mean low water; 5.00 feet above standard sea level.

**Serial No. 424.** *Patchogue*: B. M. 21 (U. S. E.) is the small property monument projecting 3 inches above the surface of the ground on the northeast corner of Dock and Patchogue Streets. Both of these monuments set loosely. Elevation: 5.0 feet above mean low water; 5.44 feet above standard sea level.

**Serial No. 425.** *Patchogue*: B. M. 23 (U. S. E.) is the property monument at the northwest corner of Cedar Avenue and Patchogue Street. It is 8 feet east of the fence line and on the edge of the cinder walk. Elevation: 6.3 feet above mean low water; 6.70 feet above standard sea level.

**Serial No. 426.** *Patchogue*: B. M. B25 (B. W. S.) is a square cut on door sill of Patchogue railroad station: Cut is 5 feet east of northwest corner. Elevation: 18.0 feet above mean low water; 18.41 feet above standard sea level.

**Serial No. 427.** *Blue Point*: B. M. B24 (B. W. S.) is a knob on southwest corner of highway bridge, 300 feet west of Blue Point railroad station. Bench mark is 3 feet below rail. Elevation: 22.76 feet above standard sea level.

**Serial No. 428.** *Bayport*: B. M. B18 (B. W. S.) is a bolt at top of sill over pile at northeast corner of bridge over creek  $\frac{1}{4}$  mile west of Bayport railroad station. Bench mark is 28 feet below rail. Elevation: 6.68 feet above standard sea level.

**Serial No. 429.** *Sayville*: B. M. 1 (U. S. E.) is the top of a sunken bolt at the southeast corner of the old Town Dock, on the west side of Brown Creek. The bolt is 6 inches from corner and the letters "B. M." are cut into the wood near the bolt. Elevation: 3.6 feet above mean low water; 3.05 feet above mean tide level.

**Serial No. 430.** *Sayville*: B. M. 2 (U. S. E.) is the top of a sunken bolt at the northeast corner of the old Town Dock, west side of Brown Creek. Elevation: 3.5 feet above mean low water; 3.03 feet above mean tide level.

**Serial No. 431.** *Sayville*: B. M. 3 (U. S. E.) is the top of a sunken bolt at the southwest corner of the old Town Dock, east side of Brown Creek. Elevation: 3.3 feet above mean low water; 2.77 feet above mean tide level.

**Serial No. 432.** *Sayville:* B. M. 4 (U. S. E.) is the top of a sunken bolt at the north-west corner of the old Town Dock, east side of Brown Creek, northwest corner of dock. Elevation: 3.4 feet above mean low water; 2.88 feet above mean tide level.

**Serial No. 433.** *Sayville:* B. M. 5 (U. S. E.) is a square marked with the letters "U. S." on the northeast corner of concrete pedestal, on the north end of jetty, east side of Brown Creek. Elevation: 5.0 feet above mean low water; 4.48 feet above mean tide level.

**Serial No. 434.** *Sayville:* B. M. 6 (U. S. E.) is a square marked with the letters "U. S." on the southeast corner of concrete pedestal, on the north end of jetty east side of Brown Creek. Elevation: 5.0 feet above mean low water; 4.47 feet above mean tide level.

**Serial No. 435.** *Sayville:* B. M. 7 (U. S. E.) is a square marked with the letters "U. S." on the southwest corner of concrete pedestal on the north end of the jetty, east side of Brown Creek. Elevation: 4.9 feet above mean low water; 4.42 feet above mean tide level.

**Serial No. 436.** *Sayville:* B. M. 8 (U. S. E.) is a square marked with the letters "U. S." on the northwest corner of concrete pedestal on the north end of the jetty, east side of Brown Creek. Elevation: 5.0 feet above mean low water; 4.51 feet above mean tide level.

**Serial No. 437.** *Great River:* B. M. B-12 (B. W. S.) is a knob on the northwest corner of signal post No. 447, south side of track,  $\frac{1}{2}$  mile west of Great River railroad station. Elevation: 27.0 feet above mean low water; 26.49 feet above standard sea level.

**Serial No. 438.** *Great River:* B. M. B-14 (B. W. S.) is a knob on the southwest corner of bridge over Connetquot Brook. Knob is 3.6 feet south of rail. Elevation: 6.3 feet above mean low water; 5.79 feet above standard sea level.

**Serial No. 439.** *Fire Island Light:* B. M. 2 (C. & G. S.) is the top of a stone buried about 96 feet from the shore at one side of the walk from wharf to lighthouse, and about 563 feet from the northwest corner of the latter. A stake was set on each side of the stone. Elevation: 3.9 feet above mean low water; 2.94 feet above mean tide level.

**Serial No. 440.** *Fire Island Light:* B. M. 3 (C. & G. S.) is the top of the foundation of the lighthouse at its northwest corner. Elevation: 14.5 feet above mean low water; 13.50 feet above mean tide level.

**Serial No. 441.** *Fire Island Light:* B. M. 4 (C. & G. S.) is the top of a dressed granite stone about 12 by 12 inches tapering to a point at the top and extending about 2 feet above the ground. It is the most northerly of a row set to mark the eastern boundary of the Government Reservation on Fire Island Beach. B. M. No. 4 is 180 meters west-southwest from the tide staff of 1909 and 165 meters north-northeast from the north pole of the wireless station of the Navy Department and 335 meters N. 40° E. from Fire Island Light. Elevation: 6.4 feet above mean low water; 5.42 feet above mean tide level.

**Serial No. 442.** *Islip:* B. M. B-9 (B. W. S.) is a knob on the southeast corner of signal post No. 422, north side of track. Elevation: 11.5 feet above mean low water; 10.98 feet above standard sea level.

**Serial No. 443.** *Bay Shore:* B. M. B-6 (B. W. S.) is a knob on the northwest corner of signal post No. 397 of the Long Island Railroad, 0.3 mile west of mile post No. 40. Elevation: 23.8 feet above mean low water; 23.21 feet above standard sea level.

**Serial No. 444.** *Bay Shore:* B. M. B-7 (B. W. S.) is a knob on west end of concrete wall, 200 feet south of Bay Shore station and 30 feet east of Park Avenue. It is 3 feet above the ground. Elevation: 21.6 feet above mean low water; 21.01 feet above standard sea level.

**Serial No. 445.** *Babylon:* B. M. 1 (C. & G. S.) is a bronze plate cemented to northwest corner of Methodist Episcopal Church at east side of Deer Park Avenue. It is 3 feet above the ground. (Established by U. S. Geological Survey.) Elevation: 17.5 feet above mean low water; 16.86 feet above standard sea level.

**Serial No. 446.** *Babylon:* B. M. 2 (C. & G. S.) is the top of the western base connection of fire plug. First plug west of Darneley's house. Elevation: 6.0 feet above mean low water; 5.38 feet above standard sea level.

**Serial No. 447.** *Babylon:* B. M. 3 (C. & G. S.) is the top of nut of key box of water system on sidewalk in front of Dr. Jacoby's house. Elevation: 5.2 feet above mean low water; 4.65 feet above standard sea level.

**Serial No. 448.** *Babylon:* B. M. B-a (B. W. S.) is a knob on northeast corner of signal post No. 357 about 1,000 feet east of railroad junction, 1 mile west of Babylon

railroad station. Elevation: 17.4 feet above mean low water; 16.82 feet above standard sea level.

**Serial No. 449. Babylon:** B. M. B-130 (B. W. S.) is a railroad spike on northwest corner of bridge over Santopoque Creek about 1 mile of northwest intersection of railroads, West Babylon and 2 miles northwest of Babylon. It is 2 feet below rail. Elevation: 23.0 feet above mean low water; 22.43 feet above standard sea level.

**Serial No. 450. Babylon:** B. M. B-4 (B. W. S.) is a knob on northwest corner of signal post No. 381, Long Island Railroad, at S. S. track, 0.2 mile east of thirty-eighth mile post. Elevation: 25.0 feet above mean low water; 24.35 feet above standard sea level.

**Serial No. 451. Lindenhurst:** B. M. B-b (B. W. S.) is a knob on the southwest corner of signal post No. 346 about 0.8 mile east of Lindenhurst Railroad station. Elevation: 18.6 feet above mean low water; 18.01 feet above standard sea level.

**Serial No. 452. Copiaque:** B. M. B-c (B. W. S.) is a knob on northwest corner of signal post No. 323 about 350 feet west of Copiaque railroad station. Elevation: 25.8 feet above mean low water; 25.20 feet above standard sea level.

**Serial No. 453. Copiaque:** B. M. B-d (B. W. S.) is a knob on the northwest corner of signal post No. 329 about 40 feet west of Copiaque Road. It is about  $\frac{1}{4}$  mile east of Copiaque railroad station. Elevation: 23.1 feet above mean low water; 22.51 feet above standard sea level.

**Serial No. 454. Amityville:** B. M. B-f (B. W. S.) is a cross cut in northwest corner of Amityville railroad station, 2 feet east of corner. Elevation: 26.7 feet above mean low water; 26.14 feet above standard sea level.

**Serial No. 455. Amityville:** B. M. 1 (C. & G. S.) is the top of iron screw head in top of a cement post protruding about 8 inches above the ground and 40 meters west of south corner of Conklin's Hotel. In top of post are cut the letters "U. S. C. & G. S. B. M. 1." Elevation: 5.7 feet above mean low water; 5.10 feet above standard sea level.

**Serial No. 456. Amityville:** B. M. 2 (C. & G. S.) is the northeast corner of iron plate in ground 5 meters from southwest corner of dock used to take gasoline. It is located about 67 meters from B. M. No. 1. On the plate is the inscription "Texas Oil Company, Long Distance Storage Equipment." The bench mark is on the corner nearer the T in "Texas." Elevation: 4.6 feet above mean low water; 3.97 feet above standard sea level.

**Serial No. 457. Amityville:** B. M. 3 (C. & G. S.) is the top of the stone boundary post with painted top, at northeast corner of Conklin's lot at the bend in the road about 88 meters north of B. M. 2. The post is about 4 feet out of the ground. Elevation: 8.8 feet above mean low water; 8.22 feet above standard sea level.

**Serial No. 458. Amityville:** B. M. 4 (C. & G. S.) is the top of water plug No. 19 on road about 40 meters north of B. M. 3. Elevation: 7.4 feet above mean low water; 6.80 feet above standard sea level.

**Serial No. 459. Amityville:** B. M. B-G (B. W. S.) is a knob on the northwest corner of signal post No. 303, about 1,000 feet west of Carmans Creek. Bench mark is near road crossing. Elevation: 25.8 feet above mean low water; 25.19 feet above standard sea level.

**Serial No. 460. Massapequa:** B. M. B-h (B. W. S.) is a cross cut on door step of waiting room north of Massapequa railroad station and 20 feet west of northeast corner. Elevation: 21.1 feet above mean low water; 19.86 feet above standard sea level.

**Serial No. 461. Bellmore:** B. M. L (B. W. S.) is a knob on the southeast corner of signal post No. 256 of the Long Island Railroad, 300 feet west of Bellmore railroad station. Elevation: 19.9 feet above mean low water near head of Freeport Creek; 18.20 feet above standard sea level.

**Serial No. 462. Merrick:** B. M. (B. W. S.) is a bronze cap of pipe sunk in ground 300 feet west of Merrick railroad station. It is 37 feet west of road, 14 feet south of near rail and  $\frac{1}{4}$  feet above ground. (Established by the U. S. Geological Survey.) Elevation: 20.8 feet above mean low water near head of Freeport Creek; 19.13 feet above standard sea level.

**Serial No. 463. Freeport:** B. M. M (B. W. S.) is a knob on the southeast corner of signal post No. 228, 1,000 feet east of Freeport railroad station. Elevation: 19.2 feet above mean low water; 17.52 feet above standard sea level.

**Serial No. 464. Baldwin:** B. M. O (B. W. S.) is a knob on the southeast corner of signal post No. 202 of the Long Island Railroad. It is opposite Milburn Reservoir. Elevation: 29.3 feet above mean low water at Parsonage Creek; 27.68 feet above standard sea level.

**Serial No. 465. Baldwin:** B. M. N (B. W. S.) is a knob on the southeast corner of culvert, 400 feet west of Baldwin railroad station, 30 feet north of track. Elevation: 20.4 feet above mean low water at Parsonage Creek; 18.75 feet above standard sea level.

**Serial No. 466. Rockville Center:** B. M. (B. W. S.) is a square cut on east rim of pump well at pumping station, northwest corner of Smiths Pond. Elevation: 14.0 feet above mean low water at Parsonage Creek; 12.32 feet above standard sea level.

**Serial No. 467. Rockville Center:** B. M. (B. W. S.) is a bronze tablet on the northeast corner of Observer and Village Avenues, 20 feet north of corner of building and 1 foot above the ground. (Established by the U. S. Geological Survey.) Elevation: 28.3 feet above mean low water at Parsonage Creek; 26.62 feet above standard sea level.

**Serial No. 468. Oceanside:** B. M. 1 (U. S. E.) is a square cut near the north corner of shoulder on west end of north concrete side rail of bridge on Atlantic Avenue over small creek. Bridge is about  $\frac{1}{4}$  mile east of Atlantic Avenue station of Long Beach branch of the Long Island Railroad. Bench mark is marked with letters "U. S." cut just above it. Elevation: 8.1 feet above mean low water at Parsonage Creek; 6.48 feet above standard sea level.

**Serial No. 469. Lynbrook:** B. M. 86+12 (B. W. S.) is a quarter circle in southeast corner of manhole curb, D. W. S. station 59+62. Elevation: 22.1 feet above mean low water at Woodmere; 20.26 feet above standard sea level.

**Serial No. 470. Lynbrook:** B. M. 59+71 (B. W. S.) is a quarter circle in southeast corner of manhole curb D. W. S. station 33+21. Elevation: 22.6 feet above mean low water at Woodmere; 20.70 feet above standard sea level.

**Serial No. 471. Valley Stream:** B. M. 209+20 (B. W. S.) is half circle cut on back wall culvert P, south of conduit. Elevation: 14.2 feet above mean low water at Woodmere; 12.27 feet above standard sea level.

**Serial No. 472. Valley Stream:** B. M. 195+69 (B. W. S.) is half circle on back wall, culvert Q, south of conduit. Elevation: 18.0 feet above mean low water at Woodmere; 14.12 feet above standard sea level.

**Serial No. 473. Valley Stream:** B. M. 165+12 (B. W. S.) is a square cut in southeast corner of coping at the north end of culvert. Bench mark is about 30 feet northeast of Watts Creek gate house, culvert R. Elevation: 18.2 feet above mean low water at Woodmere; 16.30 feet above standard sea level.

**Serial No. 474. Valley Stream:** B. M. 132+32 (B. W. S.) is a quarter circle cut in the northwest corner of coping on back wall, culvert S, south of conduit. Elevation: 21.0 feet above mean low water at Woodmere; 19.14 feet above standard sea level.

**Serial No. 475. Valley Stream:** B. M. 125+66 (B. W. S.) is a quarter circle cut in southeast corner of manhole curb, D. W. S. station 99+16. Elevation: 22.0 feet above mean low water at Woodmere; 20.15 feet above standard sea level.

**Serial No. 476. East Rockaway:** B. M. 1 (U. S. E.) is a square cut in top of cement curb on west side of junction of Main Street and Ocean Avenue. It is 67.3 feet northwest of the northwest corner of White Common Hotel and 22.5 feet east of the southeast corner of Jewletts House. It is marked "U. S." Elevation: 9.2 feet above mean low water at Woodmere; 7.27 feet above standard sea level.

**Serial No. 477. East Rockaway:** B. M. 2 (U. S. E.) is a square cut in top of cement curb on the north side of Atlantic Avenue near junction with Ocean Avenue. It is 28.9 feet north of Q. B. G. & E. Co., pole No. 91 A, 42.75 feet north of the northwest corner of Davidson's Mill, 47.45 feet west of the west corner of north concrete side rail of first bridge east of Ocean Avenue on Atlantic Avenue, and 57.45 feet northwest of the west corner of south concrete side rail on the same bridge. It is marked "U. S." Elevation: 8.3 feet above mean low water at Woodmere; 6.45 feet above standard sea level.

**Serial No. 478. Post Lead Channel:** B. M. 1 (C. & G. S.) is four copper tacks on a white oak pile 5 $\frac{1}{2}$  feet long sawed up square at the top and driven down until its top was about 3 inches below the surface of the marsh. Another pile was laid horizontally on the side next to creek with one end against the perpendicular pile. Elevation: 3.6 feet above mean low water; 1.59 feet above mean tide level.

**Serial No. 479. Barnum Island:** B. M. 1 (U. S. E.) is a square marked "U. S." on the southwest corner of concrete box on the southeast side of Long Beach Road between Long Beach track and a dead rail and about 38.5 feet south of the center line of Long Beach Road. The bench mark is on Barnum Island where the Long Island Railroad crosses Long Beach Road the first time coming from Christian Hook. The

concrete cover must be removed to see the bench mark. Elevation: 10.8 feet above mean low water; 8.78 feet above standard sea level.

**Serial No. 480.** *Long Beach:* B. M. 2 (U. S. E.) is a square marked "U. S." on concrete foundation of large black water tower about 125 feet high. Tower is about 500 feet west of south end of Long Beach Road Bridge over Long Beach Channel and about 500 feet east of south end of Long Island Railroad bridge, over Long Beach Channel and about 200 feet south of south bulkhead of Long Beach Channel. Elevation: 8.9 feet above mean low water; 6.87 feet above standard sea level.

**Serial No. 481.** *Long Beach:* B. M. 3 (U. S. E.) is a square marked "U. S." cut in the northwest corner of top of doorstep on the east door in front face of the Long Beach Powerhouse. Elevation: 8.6 feet above mean low water; 6.51 feet above standard sea level.

**SECTION E.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 482 TO 659: ROCKAWAY POINT TO BARREN ISLAND.**

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
482	Rockaway Point.....	5.2	8.6	10.86	.....	13.2	16.7
483	.....do.....	-0.7	2.7	5.02	.....	7.3	10.8
484	.....do.....	4.7	8.1	.....	10.58	12.7	16.2
485	.....do.....	3.8	7.2	.....	9.64	11.8	15.3
486	.....do.....	5.4	8.8	.....	11.25	13.4	16.0
487	.....do.....	4.6	8.0	.....	10.47	12.6	16.1
488	Belle Harbor.....	4.4	7.6	10.04	.....	12.4	15.9
489	.....do.....	2.5	6.7	8.08	.....	10.5	14.0
490	.....do.....	2.1	5.3	7.70	.....	10.1	13.6
491	.....do.....	4.4	7.6	10.02	.....	12.4	15.0
492	.....do.....	4.2	7.4	9.85	.....	12.2	15.7
493	.....do.....	4.2	7.4	9.80	.....	12.2	15.7
494	.....do.....	5.4	8.6	11.05	.....	13.4	16.9
495	Rockaway Beach.....	4.6	7.8	10.22	.....	12.6	16.1
496	Rockaway Park.....	1.2	4.4	6.76	.....	9.2	12.7
497	.....do.....	4.2	7.4	9.77	.....	12.2	15.7
498	.....do.....	9.0	12.2	14.62	.....	17.0	20.5
499	.....do.....	5.0	8.2	10.55	.....	13.0	16.5
500	.....do.....	-1.4	1.8	4.24	.....	6.0	10.1
501	.....do.....	-2.7	0.5	2.91	.....	5.3	8.8
502	.....do.....	14.2	17.4	19.83	.....	22.2	25.7
503	.....do.....	13.8	17.0	19.44	.....	21.8	25.3
504	.....do.....	5.0	8.2	10.56	.....	13.0	16.5
505	Scasido.....	3.6	6.8	9.21	.....	11.6	15.1
506	.....do.....	1.9	5.1	7.47	.....	9.9	13.4
507	Hollands.....	2.3	5.5	7.91	.....	10.3	13.8
508	.....do.....	2.1	5.3	7.72	.....	10.1	13.6
509	Hammels.....	4.1	7.3	9.68	.....	12.1	15.6
510	.....do.....	-0.5	2.7	5.06	.....	7.5	11.0
511	.....do.....	4.1	7.3	9.72	.....	12.1	15.6
512	.....do.....	4.3	7.5	9.92	.....	12.3	15.8
513	.....do.....	2.8	6.0	8.36	.....	10.8	14.3
514	.....do.....	2.4	5.6	7.96	.....	10.4	13.9
515	.....do.....	3.3	6.5	8.91	.....	11.3	14.8
516	.....do.....	7.3	10.5	12.93	.....	15.3	18.8
517	.....do.....	5.0	8.2	10.56	.....	13.0	16.5
518	Arverne.....	2.1	5.3	7.07	.....	10.1	13.6
519	.....do.....	1.6	4.8	7.15	.....	9.6	13.1
520	.....do.....	3.8	7.0	9.36	.....	11.8	15.3
521	.....do.....	3.6	6.8	9.25	.....	11.0	15.1
522	.....do.....	1.5	4.7	7.13	.....	9.5	13.0
523	.....do.....	8.3	6.5	8.86	.....	11.3	14.8
524	.....do.....	3.6	6.8	9.16	.....	11.0	15.1
525	.....do.....	1.1	4.3	6.66	.....	9.1	12.6
526	Edgemere.....	1.0	4.2	6.56	.....	9.0	12.5
527	.....do.....	0.3	3.5	5.86	.....	8.3	11.8
528	.....do.....	1.4	4.6	6.06	.....	9.4	12.9
529	.....do.....	3.0	7.1	9.47	.....	11.9	15.4
530	.....do.....	1.0	4.8	7.25	.....	9.6	13.1
531	.....do.....	2.2	5.4	7.81	.....	10.2	13.7

## SECTION E.—Elevations of bench marks, serial Nos. 482 to 659: Rockaway Point to Barren Island—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
532	Far Rockaway.....	-1.4	1.8	4.17	4.33	6.6	10.1
533	.....do.....	20.1	23.3	25.74	25.90	28.1	31.6
534	.....do.....	22.7	25.9	28.29	28.45	30.7	34.2
535	.....do.....	23.2	26.4	28.79	28.95	31.2	34.7
536	.....do.....	27.0	30.2	32.55	32.71	35.0	38.5
537	.....do.....	20.4	23.6	26.05	26.21	28.4	31.9
538	.....do.....	25.9	29.1	31.48	31.64	33.9	37.4
539	.....do.....	18.3	21.5	23.92	24.08	26.3	29.8
540	.....do.....	23.3	26.5	28.91	29.07	31.3	34.8
541	Lawrence.....	24.2	27.4	29.75	29.91	32.2	35.7
542	.....do.....	20.4	23.6	26.03	26.19	28.4	31.9
543	.....do.....	20.4	23.6	25.90	26.15	28.4	31.9
544	.....do.....	19.9	23.1	25.54	25.70	27.9	31.4
545	.....do.....	21.8	25.0	27.38	27.64	29.8	33.3
546	Inwood.....	10.2	13.4	16.78	15.94	18.2	21.7
547	.....do.....	5.5	8.7	11.12	11.28	13.5	17.0
548	Cedarhurst.....	1.1	4.3	6.73	6.89	9.1	12.6
549	.....do.....	8.8	12.0	14.38	14.54	16.8	20.3
550	.....do.....	11.5	14.7	17.08	17.24	19.5	23.0
551	.....do.....	12.4	15.6	18.05	18.21	20.4	23.9
552	Bay Head.....	1.4	4.6	6.96	7.12	9.4	12.9
553	.....do.....	-1.1	2.1	4.53	4.69	6.9	10.4
554	.....do.....	-0.5	2.7	5.10	5.26	7.5	11.0
555	.....do.....	9.3	12.5	14.88	15.04	17.3	20.8
556	Nortons Point.....	0.5	3.7	6.12	6.28	8.5	12.0
557	.....do.....	0.4	3.6	0.05	6.21	8.4	11.9
558	Rosedale.....	15.7	18.9	21.26	21.42	23.7	27.2
559	.....do.....	15.9	19.1	21.54	21.70	23.9	27.4
560	.....do.....	13.4	16.6	18.99	19.15	21.4	24.9
561	.....do.....	13.5	16.7	19.09	19.25	21.5	25.0
562	Springfield.....	13.3	16.5	18.94	19.10	21.3	24.8
563	.....do.....	5.0	8.8	11.10	11.35	13.6	17.1
564	.....do.....	13.4	16.6	18.95	19.11	21.4	24.9
565	.....do.....	0.6	3.8	0.22	6.38	8.6	12.1
566	.....do.....	0.0	3.2	6.62	6.78	8.0	11.5
567	.....do.....	-1.0	1.3	3.68	3.84	6.1	9.6
568	.....do.....	0.1	9.3	11.71	11.87	14.1	17.6
569	.....do.....	0.6	9.8	12.17	12.33	14.6	18.1
570	.....do.....	4.4	7.6	10.01	10.17	12.4	15.9
571	.....do.....	14.7	17.9	20.27	20.43	22.7	26.2
572	.....do.....	8.8	10.0	12.41	12.60	14.8	18.3
573	.....do.....	9.5	12.7	15.10	15.26	17.5	21.0
574	.....do.....	12.9	16.1	18.49	18.65	20.9	24.4
575	.....do.....	10.0	22.9	25.22	25.38	27.6	31.1
576	.....do.....	19.6	22.8	25.22	25.38	27.6	31.1
577	Jamaica South.....	6.2	9.4	11.75	11.91	14.2	17.7
578	.....do.....	13.0	16.8	19.23	19.39	21.6	25.1
579	.....do.....	4.5	7.7	10.13	10.29	12.5	16.0
580	.....do.....	1.6	4.7	7.08	7.24	9.5	13.0
581	.....do.....	3.3	11.5	13.91	14.07	16.3	19.8
582	Ramblersville.....	0.3	12.5	14.91	15.07	17.3	20.8
583	.....do.....	7.6	10.8	13.15	13.31	15.6	19.1
584	.....do.....	7.7	10.9	13.29	13.45	15.7	19.2
585	.....do.....	1.0	4.2	0.59	6.75	9.0	12.5
586	Rockaway Road.....	1.1	4.3	6.72	6.89	9.1	12.6
587	Conduit.....	12.2	15.5	17.89	18.05	20.3	23.8
588	Three Mile Mill Road.....	15.0	18.2	20.55	20.72	23.0	26.5
589	Rockaway Boulevard.....	9.8	13.0	15.89	15.95	17.8	21.3
590	.....do.....	30.0	33.0	35.93	35.79	38.0	41.5
591	.....do.....	32.0	36.2	37.56	37.72	40.9	43.5
592	.....do.....	14.5	17.7	20.11	20.27	22.5	26.0
593	Ozone Park.....	32.5	35.7	38.14	38.30	40.5	44.0
594	.....do.....	32.7	35.9	38.34	38.50	40.7	44.2
595	.....do.....	31.0	34.2	36.55	36.71	39.0	42.5
596	Woodhaven.....	19.2	22.4	24.83	24.99	27.2	30.7

## SECTION E.—Elevations of bench marks, serial Nos. 482 to 659: Rockaway Point to Barren Island—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
587	Woodhaven.....	21.2	21.4	26.83	26.99	29.2	32.7
598	Aqueduct.....	18.1	21.3	23.70	22.86	26.1	29.0
599	.....do.....	16.0	19.2	22.17	22.33	24.6	28.1
600	Grant Avenue.....	28.1	31.3	33.67	33.83	36.1	39.6
601	.....do.....	28.6	31.8	34.16	34.32	36.6	40.1
602	Sheridan Street.....	25.8	29.0	31.43	31.50	33.9	37.3
603	Crescent Street.....	32.3	35.5	27.96	38.02	40.3	43.8
604	.....do.....	22.1	25.3	27.71	27.90	30.1	33.6
605	.....do.....	25.6	26.8	29.23	29.39	21.6	35.1
606	.....do.....	22.2	25.4	27.80	27.96	30.2	33.7
607	Berrinan Street.....	23.7	26.9	29.34	29.50	31.7	35.2
608	.....do.....	22.6	25.8	28.23	28.39	30.6	34.1
609	Belmont Avenue.....	18.8	22.0	24.36	24.52	26.8	30.3
610	Ashford Street.....	27.7	30.9	33.27	33.43	35.7	39.2
611	.....do.....	28.2	31.4	33.80	33.96	36.2	39.7
612	New Lots Road.....	15.9	19.1	21.54	21.70	23.9	27.4
613	.....do.....	20.3	23.5	25.88	26.04	28.3	31.8
614	.....do.....	15.8	19.0	21.45	21.61	23.8	27.3
615	.....do.....	15.9	19.1	21.47	21.63	23.9	27.4
616	.....do.....	16.3	19.5	21.89	22.05	24.3	27.8
617	Vermont Street.....	20.4	23.6	25.99	26.15	28.4	31.9
618	Atlantic Avenue.....	53.2	56.4	58.83	58.99	61.2	64.7
619	New Lots Road.....	30.4	33.6	36.00	36.16	38.4	41.9
620	.....do.....	19.9	23.1	25.46	25.62	27.9	31.4
621	.....do.....	31.5	34.7	37.06	37.22	39.5	43.0
622	.....do.....	28.9	32.1	34.54	34.70	36.9	40.4
623	.....do.....	33.7	36.9	39.31	39.47	41.7	45.2
624	.....do.....	19.9	23.1	25.54	25.70	27.9	31.4
625	.....do.....	19.9	23.1	25.50	25.66	27.9	31.4
626	Canarsie.....	21.9	25.1	27.60	27.76	29.9	33.4
627	.....do.....	10.9	14.1	16.53	16.69	18.9	22.4
628	.....do.....	11.7	14.9	17.33	17.49	19.7	23.2
629	.....do.....	2.8	6.0	8.43	8.59	10.8	14.3
630	.....do.....	16.8	20.0	22.35	22.51	24.8	28.3
631	Rugby.....	13.4	16.6	19.03	19.19	21.4	24.9
632	Canarsie.....	7.8	11.0	13.41	13.57	15.8	19.3
633	.....do.....	2.6	5.8	8.23	8.39	10.6	14.1
634	.....do.....	1.5	4.7	7.12	7.28	9.5	13.0
635	.....do.....	0.6	3.8	6.19	6.35	8.6	12.1
636	.....do.....	1.0	4.2	6.57	6.73	9.0	12.5
637	East Fifty-third Street.....	19.2	22.4	24.81	24.97	27.2	30.7
638	Utica Avenue.....	22.7	25.9	28.29	28.45	30.7	34.2
639	.....do.....	22.7	25.9	28.31	28.47	30.7	34.2
640	Avenue I.....	23.3	26.5	28.86	29.02	31.3	34.8
641	Avenue K.....	13.2	16.4	18.75	18.91	21.2	24.7
642	.....do.....	13.2	16.4	18.84	19.00	21.2	24.7
643	Flatbush Avenue.....	14.2	17.4	19.70	19.85	22.2	25.7
644	.....do.....	28.0	31.2	33.65	33.81	36.0	39.5
645	.....do.....	10.1	13.3	15.73	15.89	18.1	21.6
646	.....do.....	3.5	6.7	9.12	9.28	11.5	15.0
647	.....do.....	10.1	13.3	15.72	15.88	18.1	21.6
648	.....do.....	10.7	13.9	16.27	16.43	18.7	22.2
649	.....do.....	10.6	13.8	16.18	16.34	18.6	22.1
650	.....do.....	9.3	12.5	14.86	15.02	17.3	20.8
651	Neck Road.....	11.8	15.0	17.45	17.61	19.8	23.3
652	Avenue U.....	2.9	6.1	8.50	8.66	10.9	14.4
653	.....do.....	3.3	6.5	8.91	9.07	11.3	14.8
654	Flatbush Avenue.....	9.5	12.7	15.14	15.30	17.5	21.0
655	Plumb Island.....	3.5	6.9	9.16	.....	11.5	15.0
656	Barren Island.....	2.1	5.5	7.76	.....	10.1	13.0
657	.....do.....	-0.1	3.3	5.64	.....	7.9	11.4
658	.....do.....	2.6	6.0	8.33	.....	10.6	14.1
659	.....do.....	-0.2	3.2	5.47	.....	7.8	11.3

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 482 TO 659: ROCKAWAY POINT TO BARREN ISLAND.

**Serial No. 482. Rockaway Point:** B. M. 1 (C. & G. S.) is a square cut in concrete mark of  $\Delta$  Rockaway Point about 500 meters southeast from tide gauge of 1914. Elevation: 13.2 feet above mean low water; 10.86 feet above mean tide level.

**Serial No. 483. Rockaway Point:** B. M. 2 (C. & G. S.) is a nail in the top of foundation pile at the northeast corner of church, 460 meters from B. M. 1 (Rockaway Point  $\Delta$ ). Elevation: 7.3 feet above mean low water; 5.02 feet above mean tide level.

**Serial No. 484. Rockaway Point:** B. M. 14 (U. S. E.) is the top of marble monument at the southeast corner of Washington Avenue and Marginal Street. Elevation: 12.7 feet above mean low water; 10.58 feet above standard sea level.

**Serial No. 485. Rockaway Point:** B. M. 13 (U. S. E.) is the top of the marble monument at the southwest corner of the U. S. Life Saving Station property. Elevation: 11.8 feet above mean low water; 9.64 feet above standard sea level.

**Serial No. 486. Rockaway Point:** B. M. 12 (U. S. E.) is center of marble monument on the south side of Washington Avenue and West of Ocean Beach Hospital. Elevation: 13.4 feet above mean low water; 11.25 feet above standard sea level.

**Serial No. 487. Rockaway Point:** B. M. (U. S. E.) is the top of a copper bolt set in a concrete monument (24 inches square) at the north end of Marginal Street near the southeast corner of boathouse of the United States life saving station on the Jamaica Bay side of Rockaway Point. Elevation: 12.8 feet above mean low water; 10.47 feet above standard sea level.

**Serial No. 488. Belle Harbor:** B. M. 505 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, set horizontally into the northeasterly brick buttress of the tower of the St. Francis de Sales Roman Catholic Church, on the northwest corner of Beach One hundred and twenty-ninth Street (Chester Avenue) and Rockaway Beach Boulevard (Washington Avenue). The bolt is 1.5 feet above the ground. Elevation: 12.4 feet above mean low water; 10.20 feet above standard sea level.

**Serial No. 489. Belle Harbor:** B. M. 506 (B. E. & A.) is a square cut in the top of the northwest corner of the west sill at the gate entrance to Belle Harbor, on the northwest corner of Beach One hundred and twenty-sixth Street (Pelham Avenue) and Rockaway Beach Boulevard (Washington Avenue). Elevation: 10.5 feet above mean low water; 8.24 feet above standard sea level.

**Serial No. 490. Belle Harbor:** B. M. 507 (B. E. & A.) is a square lettered U. S., cut in the top of the north edge of the cement sidewalk on the northwest corner of Beach One hundred and twenty-eighth Street (Winthrop Avenue) and Rockaway Beach Boulevard (Washington Avenue). The bench mark is about 3 feet west of the west curb. Elevation: 10.1 feet above mean low water; 7.86 feet above standard sea level.

**Serial No. 491. Belle Harbor:** B. M. 79 (U. S. E.) is a square cut on the lower step of the Episcopal Church. Elevation: 12.4 feet above mean low water; 10.02 feet above mean tide level.

**Serial No. 492. Belle Harbor:** B. M. 80 (U. S. E.) is a square marked on the lower step of the eastern approach to the Roman Catholic Church. Elevation: 12.2 feet above mean low water; 9.85 feet above mean tide level.

**Serial No. 493. Belle Harbor:** B. M. 81 (U. S. E.) is a square cut on the lower step of the main approach to the Roman Catholic Church. Elevation: 12.2 feet above mean low water; 9.80 feet above mean tide level.

**Serial No. 494. Belle Harbor:** B. M. 82 (U. S. E.) is a square cut on the top step of the western approach to the Roman Catholic Church. Elevation: 13.4 feet above mean low water; 11.05 feet above mean tide level.

**Serial No. 495. Rockaway Beach:** B. M. 78 (U. S. E.) is a square cut on the concrete walk on the northwest corner of Fifth and Washington Avenue. Elevation: 12.6 feet above mean low water; 10.22 feet above mean tide level.

**Serial No. 496. Rockaway Park:** B. M. 508 (B. E. & A.) is a square lettered "U. S." cut in the top of the east end of the cement sidewalk on the northwest corner of Beach One hundred and seventeenth street (Sixth Avenue) and Rockaway Beach Boulevard (Washington Avenue). The bench mark is 6 inches from the west curb. Elevation: 9.2 feet above mean low water; 6.92 feet above standard sea level.

**Serial No. 497. Rockaway Park:** B. M. 508A (B. E. & A.) is a square with the letters "U. S.," cut in the top of the east end of the cement sidewalk, 6 inches from

the curb, at the northwest corner of Rockaway Beach Boulevard and One hundred and sixteenth Street. Elevation: 12.2 feet above mean low water; 9.93 feet above standard sea level.

**Serial No. 498. Rockaway Park:** B. M. 509 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{2}$ -inch copper bolt, lettered "B. M." and leaded horizontally into the red sandstone at the northeast corner of Public School No. 43, at Rockaway Beach Boulevard (Washington Avenue) and Beach One hundred and tenth Street (Eastern Avenue). The bolt is on the north side of the building and about 64 feet south of Rockaway Beach Boulevard. It is 4.5 feet above the ground and 1.25 feet from the east end of the building. Elevation: 17.0 feet above mean low water; 14.78 feet above standard sea level.

**Serial No. 499. Rockaway Park:** B. M. 510 (B. E. & A.) is a square cut in the top of the east edge of the curved portion of the first cement step at the main entrance to Public School No. 43, at Rockaway Beach Boulevard (Washington Avenue) and Beach One hundred and tenth Street (Eastern Avenue). The bench mark is 2 feet from the south end of the step. (Established by Queens Topographical Bureau.) Elevation: 13.0 feet above mean low water; 10.71 feet above standard sea level.

**Serial No. 500. Rockaway Park:** B. M. 46 (U. S. E.) is the top of an iron bolt in the southeast corner of the trestle work on Rockaway Turnpike where it crosses Thurston Creek. Elevation: 6.6 feet above mean low water; 4.24 feet above mean tide level.

**Serial No. 501. Rockaway Park:** B. M. 47 (U. S. E.) is marked by a nail in the east end of coping on the northwest corner of trestle work on Rockaway Turnpike where it crosses small creek a little to the east of Harbor Haben. (Nail bent in driving.) Elevation: 5.3 feet above mean low water; 2.91 feet above mean tide level.

**Serial No. 502. Rockaway Park:** B. M. 53 (U. S. E.) is a cross cut on the lower concrete step of approach to Stout's house. Elevation: 22.2 feet above mean low water; 19.33 feet above mean tide level.

**Serial No. 503. Rockaway Park:** B. M. 54 (U. S. E.) is a cross cut on the concrete step of the store of J. F. Weblacker, jr., at the corner of Mill Street and Lawrence Avenue. Elevation: 21.8 feet above mean low water; 19.44 feet above mean tide level.

**Serial No. 504. Rockaway Park:** B. M. 511 (B. E. & A.) is a square cut in the top of the first cement step at the main entrance to Public School No. 43, Rockaway Beach Boulevard (Washington Avenue) and Beach One hundred and tenth Street (East Avenue). The bench mark is about 6 feet from the south end of the step and 8 inches from the east edge. Elevation: 13.0 feet above mean low water; 10.72 feet above standard sea level.

**Serial No. 505. Seaside:** B. M. 512 (B. E. & A.) is a square cut in the top of the curved curb on the northeast corner of Beach One hundred and first Street (Hollywood Avenue), and Rockaway Beach Boulevard. Elevation: 11.3 feet above mean low water; 9.37 feet above standard sea level.

**Serial No. 506. Seaside:** B. M. 533 (B. E. & A.) is a square cut in the top of the backing log above the tide staff on the east side of the dock at the foot of Beach One hundred and second Street (Henry Street), in Jamaica Bay. Elevation: 9.9 feet above mean low water; 7.63 feet above standard sea level.

**Serial No. 507. Hollands:** B. M. 513 (B. E. & A.) is a square lettered "U. S.", cut in the top of the east end of the first cement step on the north side of the east wing of Public School No. 44, on the southeast corner of Beach Ninety-fourth Street (Academy Avenue) and Rockaway Beach Boulevard. The bench mark is 1 foot from the north edge of the step and 4 inches above the walk. Elevation: 10.3 feet above mean low water; 8.07 feet above standard sea level.

**Serial No. 508. Hollands:** B. M. 514 (B. E. & A.) is a square cut in the stone base between two pilasters on the west side of the boulevard entrance to Public School No. 44, on the southeast corner of Beach Ninety-fourth Street (Academy Avenue) and Rockaway Beach Boulevard. The bench mark is about 32 feet easterly from the west side of the building and  $4\frac{1}{2}$  inches above the walk. Elevation: 10.1 feet above mean low water; 7.88 feet above standard sea level.

**Serial No. 509. Hammels:** B. M. 515 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{2}$ -inch copper bolt leaded horizontally into the granite foundation at the northeast corner of Substation powerhouse No. 5 of the Long Island Railroad at Hammels station. The bolt is in the east side of the building, is 7 inches from the north side and 1.5 feet above the ground. Elevation: 12.1 feet above mean low water; 9.82 feet above standard sea level.

**Serial No. 510. Hammels:** B. M. 68 (U. S. E.) is a square cut in the top of timber on the west end of fender to draw pier of the Long Island Railroad trestle. Elevation: 7.5 feet above mean low water; 5.06 feet above mean tide level.

**Serial No. 511. Hammels:** B. M. 69 (U. S. E.) is an iron bolt in concrete post north of powerhouse, and is 4 feet away from fence of the branch of the Long Island Railroad going to Rockaway Park. This bench mark is also a triangulation  $\Delta$  station. Elevation: 12.1 feet above mean low water; 9.72 feet above mean tide level.

**Serial No. 512. Hammels:** B. M. 70 (U. S. E.) is a notch on the northwest corner of the granite water-table to substation powerhouse of the Long Island Railroad. Elevation: 12.3 feet above mean low water; 9.92 feet above mean tide level.

**Serial No. 513. Hammels:** B. M. 71 (U. S. E.) is a square cut on the bottom step of side entrance to Public School No. 44. Elevation: 10.8 feet above mean low water; 8.36 feet above mean tide level.

**Serial No. 514. Hammels:** B. M. 72 (U. S. E.) is a square cut in the stringer on dock. Elevation: 10.4 feet above mean low water; 7.96 feet above mean tide level.

**Serial No. 515. Hammels:** B. M. 74 (U. S. E.) is marked by the letter "R" in "Cory," written on top of hydrant in the east side of North Henry Street. Elevation: 11.3 feet above mean low water; 8.91 feet above mean tide level.

**Serial No. 516. Hammels:** B. M. 75 (U. S. E.) is a square cut on the outside edge of coping on side wall of steps leading into the Roman Catholic Church. Elevation: 15.3 feet above mean low water; 12.93 feet above mean tide level.

**Serial No. 517. Hammels:** B. M. 76 (U. S. E.) is the inside corner of the east end of iron frame to basin opening on the southeast corner of the Boulevard and South Henry Street. Elevation: 13.0 feet above mean low water; 10.56 feet above mean tide level.

**Serial No. 518. Arverne:** B. M. 64 (U. S. E.) is a square cut on concrete piazza of the Half Way House. Elevation: 10.1 feet above mean low water; 7.67 feet above mean tide level.

**Serial No. 519. Arverne:** B. M. 65 (U. S. E.) is a square cut on the west end of the doorsill of the station. Elevation: 9.6 feet above mean low water; 7.15 feet above mean tide level.

**Serial No. 520. Arverne:** B. M. 66 (U. S. E.) is a square cut on top of wall to the steps of Public School No. 42. Elevation: 11.8 feet above mean low water; 9.36 feet above mean tide level.

**Serial No. 521. Arverne:** B. M. 516 (B. E. & A.) is a square cut near the west end of the first step at the main or south entrance to Public School No. 42, on the north side of Rockaway Beach Boulevard, between Beach Sixty-eighth Street (Jessica Avenue) and Beach Sixty-seventh Street (Vernam Avenue). The bench mark is 8 inches from the west end of the step. (Established by the Queens Topographical Bureau.) Elevation: 11.6 feet above mean low water; 9.41 feet above standard sea level.

**Serial No. 522. Arverne:** B. M. 517 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{4}$ -inch copper bolt lettered "B. M." and leaded horizontally into the south face of a granite block near the southeast corner of the two-story stone building on the northwest corner of Beach Sixty-sixth Street (Gaston Avenue) and the Long Island Railroad. The bolt is 1.7 feet above the ground, is 15.3 feet from the north side of the building, and on the northeasterly side of the office entrance at the southeast corner of the building. Elevation: 9.5 feet above mean low water; 7.29 feet above standard sea level.

**Serial No. 523. Arverne:** B. M. 518 (B. E. & A.) is a square lettered "U. S.," cut in the top of the coping stone at the west side of the cellar entrance to Public School No. 42, on the north side of Rockaway Beach Boulevard, between Beach Sixty-eighth Street (Jessica Avenue) and Beach Sixty-seventh Street (Vernam Avenue). The bench mark is on the south side of the building east of main entrance. Elevation: 11.3 feet above mean low water; 9.02 feet above standard sea level.

**Serial No. 524. Arverne:** B. M. 519 (B. E. & A.) is a square cut in the top of the west end of the sill of cellar window on the south side of Public School No. 42, on the north side of Rockaway Beach Boulevard, between Beach Sixty-eighth Street (Jessica Avenue) and Beach Sixty-seventh Street (Vernam Avenue). The bench mark is 4.3 feet from the west side of the building. Elevation: 11.6 feet above mean low water; 9.32 feet above standard sea level.

**Serial No. 525. Arverne:** B. M. 520 (B. E. & A.) is a square lettered "B. E.," cut in the top of the west end of the bluestone doorsill on the south side of the Beach Sixtieth Street (Straiton Avenue) station of the Long Island Railroad and Arverne. Elevation: 9.1 feet above mean low water; 6.82 feet above standard sea level.

**Serial No. 526. Edgemere:** B. M. 521 (B. E. & A.) is a square cut in the concrete at the base of flagpole on the east side of the Half Way House, on the southwest cor-

ner of Beach Forty-fourth Street (Frank Avenue) and Rockaway Beach Boulevard. The bench mark is at the west side of the flagpole. Elevation: 9.0 feet above mean low water; 6.72 feet above standard sea level.

**Serial No. 527. Edgemere:** B. M. 522 (B. E. & A.) is the center of the top of a granite city monument on the north side of Rockaway Beach Boulevard, about 275 feet east of Beach Forty-fourth Street (Frank Avenue). Elevation: 8.3 feet above mean low water; 6.02 feet above standard sea level.

**Serial No. 528. Edgemere:** B. M. 523 (B. E. & A.) is the top of a  $\frac{1}{4}$ -inch copper bolt leaded vertically in the top of the east end of the bluestone step on the north side of the Long Island Railroad Station. The bolt is 3 feet from the east side of the building. Elevation: 9.4 feet above mean low water; 7.12 feet above standard sea level.

**Serial No. 529. Edgemere:** B. M. 524 (B. E. & A.) is the surface between two parallel lines cut in the top of the center of the bluestone sill of the double window of the telegraph office on the north side of the Long Island Railroad Station. Elevation: 11.9 feet above mean low water; 9.63 feet above standard sea level.

**Serial No. 530. Edgemere:** B. M. 525 (B. E. & A.) is a square lettered "U. S.," cut in the top of the west end of the bluestone doorsill at the west entrance on the north side of the Long Island Railroad Station. Elevation: 9.6 feet above mean low water; 7.41 feet above standard sea level.

**Serial No. 531. Edgemere:** B. M. 63 (U. S. E.) is a square cut on the west end of doorsill of the station. The door is in the front end on the west side. Elevation: 10.2 feet above mean low water; 7.81 feet above mean tide level.

**Serial No. 532. Far Rockaway:** B. M. 45 (U. S. E.) is a C. & G. Survey  $\Delta$  station near the junction of Rockaway Avenue and New York Avenue. Elevation: 6.6 feet above mean low water; 4.17 feet above mean tide level.

**Serial No. 533. Far Rockaway:** B. M. 57 (U. S. E.) is a cross on the concrete step of Montauk Hotel. Elevation: 23.1 feet above mean low water; 25.74 feet above mean tide level.

**Serial No. 534. Far Rockaway:** B. M. 526 (B. E. & A.) is a 2-inch square cut in the top of the west end of the bluestone sill on the east door on the south side of the Long Island Railroad Station. Elevation: 30.7 feet above mean low water; 28.45 feet above standard sea level.

**Serial No. 535. Far Rockaway:** B. M. 527 (B. E. & A.) is a square cut in the top of the westerly corner of the third bluestone step at the main entrance to the public library, on the southeasterly corner of Far Rockaway Boulevard (Central Avenue) and Mott Avenue. Elevation: 31.2 feet above mean low water; 28.95 feet above standard sea level.

**Serial No. 536. Far Rockaway:** B. M. 528 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{4}$ -inch copper bolt lettered "B. M." and set horizontally into a brick on the Far Rockaway Boulevard (Central Avenue) side of the public library building on the southeasterly corner of Mott Avenue. The bolt is 1.15 feet from the Mott Avenue side and 5 feet above the ground. Elevation: 35.0 feet above mean low water; 32.71 feet above standard sea level.

**Serial No. 537. Far Rockaway:** B. M. 529 (B. E. & A.) is a square cut in the top of the southwest corner of the wide bluestone doorsill at the house entrance to the Horton Building (four-story brick) at No. 337 Far Rockaway Boulevard (Central Avenue), about 127 feet west of Dinsmore Street (Cleveland Avenue). Elevation: 28.4 feet above mean low water; 26.21 feet above standard sea level.

**Serial No. 538. Far Rockaway:** B. M. 530 (B. E. & A.) is a cross, lettered "B. + M.," cut in the fifth course of brick above the walk, at the northwest corner of Public School No. 39, on the south side of State Street, between Dinamore Street (Cleveland Avenue) and Bayport Place (Nostrand Avenue). The cross faces State Street and is 7 inches from the corner of the building. Elevation: 33.9 feet above mean low water; 31.64 feet above standard sea level.

**Serial No. 539. Far Rockaway:** B. M. 531 (B. E. & A.) is the center of the top of a granite city monument on the southeast corner of Far Rockaway Boulevard (Central Avenue) and Bayport Place (Nostrand Avenue). The top of the monument is  $1\frac{1}{2}$  inches below the sidewalk. Elevation: 26.3 feet above mean low water; 24.08 feet above standard sea level.

**Serial No. 540. Far Rockaway:** B. M. 532 (B. E. & A.) is a square cut in the top of the northwest corner of the bluestone coping on the north balustrade of house at No. 1 Beach Ninth Street (Oak Street), on the southeast corner of Far Rockaway Boulevard

(Central Avenue). The bench mark is 3.6 feet above the sidewalk. Elevation: 31.3 feet above mean low water; 29.07 feet above standard sea level.

**Serial No. 541. Lawrence:** B. M. 534 (B. E. & A.) is a cross, lettered "B. + M.," cut in the south face of the bluestone sill of the east basement window, on the south side of the two-story and attic frame building known as the Lawrence Academy, about 150 feet north of Central Avenue and about 250 feet east of Winchester Place. The cross is 6 feet from the east side of the building and 8 inches above the ground. Elevation: 32.2 feet above mean low water; 29.91 feet above standard sea level.

**Serial No. 542. Lawrence:** B. M. 535 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, set horizontally into the limestone at the northwest corner of the four-story red brick building on the southeast corner of Rockaway Turnpike and Central Avenue. The bench mark faces Central Avenue, is 2 feet from the west side of the building and 6 inches above the sidewalk. Elevation: 28.4 feet above mean low water; 26.19 feet above standard sea level.

**Serial No. 543. Lawrence:** B. M. 536 (B. E. & A.) is a  $\frac{3}{8}$ -inch brass bolt set vertically in the east end of the bluestone doorsill at the east store entrance to the four-story red brick building on the southeast corner of Rockaway Turnpike and Central Avenue. The bolt is on the Central Avenue side and about 45 feet east of Rockaway Turnpike. Elevation: 28.4 feet above mean low water; 26.15 feet above standard sea level.

**Serial No. 544. Lawrence:** B. M. 537 (B. E. & A.) is a  $\frac{3}{8}$ -inch brass bolt set vertically in the northeast corner of the bluestone doorsill at the entrance to the Bank of Lawrence, on the south side of Central Avenue just south of Washington Avenue. The building is two-story and attic and built of stone. The bench mark is about 16 feet west of Washington Avenue. Elevation: 27.9 feet above mean low water; 25.70 feet above standard sea level.

**Serial No. 545. Lawrence:** B. M. 538 (B. E. & A.) is a cross cut in the top of a section of steel rail driven into the ground on the northeast corner of Rockaway Turnpike and the Far Rockaway branch of the Long Island Railroad. Elevation: 29.8 feet above mean low water; 27.54 feet above standard sea level.

**Serial No. 546. Inwood:** B. M. 55 (U. S. E.) is a cross on the concrete step of the store owned by P. M. Davenport at the corner of McNeil Avenue and Bay View Avenue. Elevation: 18.2 feet above mean low water; 15.78 feet above mean tide level.

**Serial No. 547. Inwood:** B. M. 56 (U. S. E.) is a square cut on concrete top of sewer basin on McNeil Avenue north of Remsen Avenue. Elevation: 13.5 feet above mean low water; 11.12 feet above mean tide level.

**Serial No. 548. Cedarhurst:** B. M. 542 (B. E. & A.) is the head of a twentypenny copper nail driven vertically in the top of the north end of the string piece on the east side of the highway bridge on Rockaway Turnpike over Motts Creek. This is the first creek crossing Rockaway Turnpike north of the Far Rockaway branch of the Long Island Railroad. Elevation: 9.1 feet above mean low water; 6.89 feet above standard sea level.

**Serial No. 549. Cedarhurst:** B. M. 541 (B. E. & A.) is a cross cut in the head of a railroad spike driven vertically in a flat surface on the exposed roof of the northerly side of a large willow tree on the westerly side of Rockaway Turnpike, about 250 feet south of Rugby Road. The tree containing the bench mark is about 50 feet south of the old toll gate house. Elevation: 16.8 feet above mean low water; 14.54 feet above standard sea level.

**Serial No. 550. Cedarhurst:** B. M. 540 (B. E. & A.) is a cross, lettered "B + M.," cut in the brick foundation at the southwest corner of the two-story and attic frame house on the south side of West Broadway, about 400 feet east of Rockaway Turnpike. The cross is on the west side of the house, is on the fifth course of brick above the cement walk and 4 inches from the corner. Elevation: 19.5 feet above mean low water; 17.24 feet above standard sea level.

**Serial No. 551. Cedarhurst:** B. M. 539 (B. E. & A.) is the center of a small bluestone monument on the northeast corner of Rockaway Turnpike and Pacific Street. The top of the monument is 4 inches above the ground. Elevation: 20.4 feet above mean low water; 18.21 feet above standard sea level.

**Serial No. 552. Bay Head:** B. M. 543 (B. E. & A.) is the head of a twentypenny copper nail driven vertically in the top of the north end of the stringpiece on the west side of the highway bridge on Rockaway Road over Hook Creek. This is the second creek north of the Far Rockaway branch of the Long Island Railroad and is about 100 feet south of Third Street, in Meadowmere Park. Elevation: 9.4 feet above mean low water; 7.12 feet above standard sea level.

**Serial No. 553. Bay Head:** B. M. 544 (B. E. & A.) is the head of a twentypenny copper nail driven vertically in the top of the south edge of a pile level with the roadway and on the east edge of the Rockaway Road about 22 feet north of the angle point, between the Bay Head Yacht Club and the Bay Head Hotel. The bench mark is 4 feet south of New York Telephone Co. pole No. 327. Elevation: 6.9 feet above mean low water; 4.69 feet above standard sea level.

**Serial No. 554. Bay Head:** B. M. 545 (B. E. & A.) is the center of the top of a granite city monument on the easterly side of Rockaway Road at the angle point, between the Bay Head Yacht Club and the Bay Head Hotel. The top of the monument is flush with the ground. (Established by the Queens Topographical Bureau.) Elevation: 7.5 feet above mean low water; 5.26 feet above standard sea level.

**Serial No. 555. Bay Head:** B. M. 546 (B. E. & A.) is the underside of north end of cap over saloon door in G. E. Warner's hotel, on the west side of Rockaway Turnpike, north side of Hook Creek. The bench mark is on the south side of the hotel (now occupied by William Schlott) and on the north end of the cap. The hotel is on the north side of the canal just east of Hook Creek, about 600 feet north of the angle point in Rockaway Road. (Queens Topographical Bureau B. M. 520.) Elevation: 17.3 feet above mean low water; 15.04 feet above standard sea level.

**Serial No. 556. Nortons Point:** B. M. 49 (U. S. E.) is an iron bolt set in concrete in lawn, southeast of Sheriff Baker's house. Elevation: 8.5 feet above mean low water; 6.12 feet above mean tide level.

**Serial No. 557. Nortons Point:** B. M. 50 (U. S. E.) is an iron bolt set in concrete in lawn, northeast of Sheriff Baker's house. Elevation: 8.4 feet above mean low water; 6.05 feet above mean tide level.

**Serial No. 558. Rosedale:** B. M. 559 (B. E. & A.) is a square cut in the top of the west end of the coping stone on the south end of the culvert connecting the storage reservoirs on both sides of Merrick Road, just west of Brookville Boulevard (Foster's Meadow Road). The bench mark is on the south side of Merrick Road, is south of the board fence and about 155 feet west of Brookville Boulevard. Elevation: 23.7 feet above mean low water; 21.42 feet above standard sea level.

**Serial No. 559. Rosedale:** B. M. 560 (B. E. & A.) is a square cut in the top of a granite city monument set in concrete 3 by 3 by 4 feet on the southeast corner of Merrick Road and Brookville Boulevard (Foster's Meadow Road). It is 41.8 feet from the corner of the fence on the southwest corner of both roads and 59.75 feet from the corner of the fence on the northwest corner. The top of the monument is 1.2 feet below the ground. The monument was established by the Queens Topographical Bureau. Elevation: 23.9 feet above mean low water; 21.70 feet above standard sea level.

**Serial No. 560. Rosedale:** B. M. 561 (B. E. & A.) is a quadrant cut in the top of the southeast corner of the granite curb of manhole on conduit line, about 310 feet east of Rosedale Boulevard (Rosedale Avenue) and about 25 feet north of Montauk Division of the Long Island Railroad. Elevation: 21.4 feet above mean low water; 19.15 feet above standard sea level.

**Serial No. 561. Rosedale:** B. M. 247+6 (B. W. S.) is a quarter circle on southeast corner of manhole curb 100 feet east of Rosedale railroad station. Elevation: 21.5 feet above mean low water; 19.25 feet above standard sea level.

**Serial No. 562. Springfield:** B. M. 299+83 (B. W. S.) is a quarter circle on southwest corner of manhole curb. Elevation: 21.3 feet above mean low water; 19.10 feet above standard sea level.

**Serial No. 563. Springfield:** B. M. 287+67 (B. W. S.) is a quarter circle on northwest corner of back wall of culvert N, on south of conduit. Elevation: 13.6 feet above mean low water; 11.35 feet above standard sea level.

**Serial No. 564. Springfield:** B. M. 260+18 (B. W. S.) is a quarter circle on southeast corner of manhole curb, 255 feet west of Far Rockaway Road. Elevation: 21.4 feet above mean low water; 19.11 feet above standard sea level.

**Serial No. 565. Springfield:** B. M. 547 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{4}$ -inch copper bolt leaded horizontally into the brick foundation at the northerly corner of the two-story frame house occupied by John Dooley, on the south-westerly side of Rockaway Road about 225 feet southeasterly from Springfield Road. The bolt faces Rockaway Road, is on the sixth course of brick above the ground and 6 inches from the corner. Elevation: 8.6 feet above mean low water; 6.38 feet above standard sea level.

**Serial No. 566. Springfield:** B. M. 548 (B. E. & A.) is the head of a railroad spike driven vertically in the exposed root on the west side of a large willow tree on the

southeast corner of Springfield Road and Rockaway Turnpike. Elevation: 8.0 feet above mean low water; 5.78 feet above standard sea level.

**Serial No. 567.** *Springfield:* B. M. 549 (B. E. & A.) is the center of a brass bolt marking the U. S. C. & G. S. triangulation station Jaeger, on the southwesterly side of Rockaway Road at New York Avenue. The bolt is exposed, is about 10 feet west of the center line of New York Avenue and about 25 feet southerly from Rockaway Road. Elevation: 6.1 feet above mean low water; 3.84 feet above standard sea level.

**Serial No. 568.** *Springfield:* B. M. 550 (B. E. & A.) is a cross lettered "B. M.," cut in the east face of the brick foundation at the southeast corner of the two-story and attic frame house near the southwest corner of New York Avenue and Cherry Avenue. The bench mark is about 130 feet south of Cherry Avenue, is 6 inches above the ground and 2 inches from the corner of the house. Elevation: 14.1 feet above mean low water; 11.87 feet above standard sea level.

**Serial No. 569.** *Springfield:* B. M. 551 (B. E. & A.) is a quadrant cut in the top of the east end of the bluestone coping of the old pump well just south of the Springfield Pumping Station, on the west side of Springfield Road, north of Cherry Avenue and about 1,000 feet south of the conduit. Elevation: 14.6 feet above mean low water; 12.33 feet above standard sea level.

**Serial No. 570.** *Springfield:* B. M. 552 (B. E. & A.) is a  $\frac{7}{8}$ -inch brass bolt set vertically in the top of the northwest corner of the brick vault or suction gate chamber about 59 feet south of the Springfield Pumping Station, on the west side of Springfield Road, north of Cherry Avenue and about 1,000 feet south of the conduit. The bolt is on the west side of the road and about 2 feet below grade. Elevation: 12.4 feet above mean low water; 10.17 feet above standard sea level.

**Serial No. 571.** *Springfield:* B. M. 553 (B. E. & A.) is the underside of a square cut into the pilaster cap on the south side of the pilaster on north side of main entrance to pumping station on Springfield Road, north of Cherry Avenue. Elevation: 22.7 feet above mean low water; 20.43 feet above standard sea level.

**Serial No. 572.** *Springfield:* B. M. 554 (B. E. & A.) is a horizontal line in the end of a  $\frac{9}{16}$ -inch copper bolt lettered "B. M." and set horizontally into the limestone base of the yellow-brick pilaster on the north side of the main entrance to the Springfield Pumping Station, on the west side of Springfield Road north of Cherry Avenue and about 1,000 feet south of conduit. The bolt faces the east, is 12 feet from the north side of the building and 3 inches above the ground. The letters "B. M." are also cut in the stone. Elevation: 14.8 feet above mean low water; 12.60 feet above standard sea level.

**Serial No. 573.** *Springfield:* B. M. 555 (B. E. & A.) is a square cut in the top of the northeast corner of the granite coping of parapet wall on the north end of the culvert crossing the conduit, about 200 feet west of Springfield Road and about 60 feet south of the center line of the Freeport trolley line. The bench mark is on the north side of the conduit and at the foot of the iron railing. Elevation: 17.5 feet above mean low water; 15.20 feet above standard sea level.

**Serial No. 574.** *Springfield:* B. M. 556 (B. E. & A.) is a quadrant cut in the top of the northeast corner of the granite curb of the manhole on the conduit line, about 216 feet west of Springfield Road. Elevation: 20.9 feet above mean low water; 18.65 feet above standard sea level.

**Serial No. 575.** *Springfield:* B. M. 557 (B. E. & A.) is a 2-inch cross, lettered "B+M," cut in the brick foundation at the southwest corner of the First Presbyterian Church, on the northeast corner of Springfield Boulevard (Springfield Road) and Carson Street (Park Avenue), just north of Montauk Division of the Long Island Railroad. The cross faces Park Avenue, is 1 foot from the concrete block at the corner of the church and 1 foot above the ground. Elevation: 27.6 feet above mean low water; 25.38 feet above standard sea level.

**Serial No. 576.** *Springfield:* B. M. 558 (B. E. & A.) is a cross cut in the top of the west nut on the fixed rim of the fire hydrant on the southwest corner of Springfield Boulevard (Springfield Road) and Merrick Road. The bench mark is 1.4 feet above the ground. Elevation: 27.6 feet above mean low water; 25.38 feet above standard sea level.

**Serial No. 577.** *Jamaica South:* B. M. 451+65 (B. W. S.) is a quarter circle on southwest corner of back wall of culvert II on south of conduit. Elevation: 14.2 feet above mean low water; 11.91 feet above standard sea level.

**Serial No. 578.** *Jamaica South:* B. M. 426+20 (B. W. S.) is a quarter circle on southwest corner of manhole curb. Elevation: 21.6 feet above mean low water; 19.39 feet above standard sea level.

**Serial No. 579. Jamaica South:** B. M. 413+00 (B. W. S.) is a quarter circle on southwest corner back wall of culvert I on south of conduit. Elevation: 12.5 feet above mean low water; 10.29 feet above standard sea level.

**Serial No. 580. Jamaica South:** B. M. 379+71 (B. W. S.) is a half circle on back wall of culvert K on south of conduit. Elevation: 9.5 feet above mean low water; 7.24 feet above standard sea level.

**Serial No. 581. Jamaica South:** B. M. 348+34 (B. W. S.) is a square cut on northwest corner of east wing wall of culvert north of conduit and 50 feet east of New York Avenue. Elevation: 16.3 feet above mean low water; 14.07 feet above standard sea level.

**Serial No. 582. Ramblersville:** B. M. 33 (U. S. E.) is a square cut on the rim of water manhole near second pumping station of aqueduct near Ramblersville. Elevation: 17.3 feet above mean low water; 14.91 feet above mean tide level.

**Serial No. 583. Ramblersville:** B. M. 34 (U. S. E.) is a square cut on the concrete base of abandoned semaphore, the latter being on the east side of the track. Elevation: 15.6 feet above mean low water; 13.15 feet above mean tide level.

**Serial No. 584. Ramblersville:** B. M. 35 (U. S. E.) is the top of an iron bolt on the northeast corner of abandoned semaphore, the latter being on the west side of track. Elevation: 15.7 feet above mean low water; 13.29 feet above mean tide level.

**Serial No. 585. Ramblersville:** B. M. 36 (U. S. E.) is the top of an iron bolt on the trestle work of trestle over creek 1,100 feet north of Ramblersville station on the north side of creek and east side of railroad track. Elevation: 9.0 feet above mean low water; 6.59 feet above mean tide level.

**Serial No. 586. Rockaway Road:** B. M. 565 (B. E. & A.) is a railroad spike driven vertically in the root on the northwesterly side of a large maple tree on the west side of Rockaway Road, about 30 feet north of Farmers Avenue. Elevation: 9.1 feet above mean low water; 6.89 feet above standard sea level.

**Serial No. 587. Conduit:** B. M. 566 (B. E. & A.) is a quadrant cut in the top of the southeast corner of the 5-inch wide granite manhole curb on the southerly side of the conduit line and about 500 feet west of Rockaway Road. Elevation: 20.3 feet above mean low water; 18.05 feet above standard sea level.

**Serial No. 588. Three Mile Mill Road:** B. M. 567 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{2}$ -inch copper bolt set horizontally into the brick foundation at the northeast corner of Public School No. 45, on the west side of Three Mile Mill Road, about 375 feet south of Rockaway Boulevard. The bolt is on the east side of the building, is 9 inches above the ground and  $11\frac{1}{2}$  inches from the north side of the building. The letters "B. M." are cut in the brick. Elevation: 23.0 feet above mean low water; 20.72 feet above standard sea level.

**Serial No. 589. Rockaway Boulevard:** B. M. 568 (B. E. & A.) is a square cut in the top of the northwest corner of the 6-inch brownstone curb of manhole on the Baisleys Pond branch conduit, about 100 feet south of Rockaway Boulevard and about 90 feet east of Three Mile Mill Road. Elevation: 17.8 feet above mean low water; 15.55 feet above standard sea level.

**Serial No. 590. Rockaway Boulevard:** B. M. 569 (B. E. & A.) is a horizontal line in the end of a  $\frac{1}{2}$ -inch copper bolt set horizontally into the brick foundation near the southwest corner of the three-story frame dwelling owned by J. R. Fredericks, on the north side of Rockaway Boulevard about 150 feet east of Frost Avenue (Lincoln Avenue). The bolt is on the west side of the house, is 11 inches from the corner and 1 foot above the ground. The letters "B. M." are cut in the brick above. Elevation: 38.0 feet above mean low water; 35.79 feet above standard sea level.

**Serial No. 591. Rockaway Boulevard:** B. M. 570 (B. E. & A.) is the center of main entrance on threshold under main front door when closed, at James Frederick's house north side of Rockaway Road, just east of Lincoln Avenue. A brass nail was driven into the threshold at the bench mark. (Established by Queens Topographical Bureau.) Elevation: 40.0 feet above mean low water; 37.72 feet above standard sea level.

**Serial No. 592. Rockaway Boulevard:** B. M. 571 (B. E. & A.) is the center of the top of a granite city monument set in concrete 3 by 3 by 4 feet on the northwest corner of Rockaway Boulevard and Neosho Street (Hawtree Creek Road). It is 3 feet east of the end of the cement sidewalk and the top is 1 foot below the ground. (Established by the Queens Topographical Bureau.) Elevation: 22.5 feet above mean low water; 20.27 feet above standard sea level.

**Serial No. 593. Ozone Park:** B. M. 572 (B. E. & A.) is a square cut in the northeast corner of the small I-beam on the east side of the base of the steel transmission tower

on the west side of the Rockaway Beach Division of the Long Island Railroad and about 8 feet south of Rockaway Boulevard (Rockaway Plank Road). The bench mark is 1 foot above the concrete base of the tower. Elevation: 40.5 feet above mean low water; 38.30 feet above standard sea level.

**Serial No. 594. Ozone Park:** B. M. 573 (B. E. & A.) is the intersection of a cross cut in the top of the 14-inch anchor bolt on the east side of the base of steel transmission tower on the west side of the Rockaway Beach Division of the Long Island Railroad and about 8 feet south of Rockaway Boulevard (Rockaway Plank Road.) The bench mark is 5 inches from the north end of the I-beam. Elevation: 40.7 feet above mean low water; 38.50 feet above standard sea level.

**Serial No. 595. Ozone Park:** B. M. 574 (B. E. & A.) is a cross cut in the top of the 7-inch anchor bolt on the east side of the base of the northeasterly steel column supporting the overhead switch tower over the tracks of the Rockaway Beach Division of the Long Island Railroad at Ocean Avenue and Liberty Avenue. The bolt is about 15 feet south of Liberty Avenue and on the east side of the railroad. Elevation: 39.0 feet above mean low water; 36.71 feet above standard sea level.

**Serial No. 596. Woodhaven:** B. M. 575 (B. E. & A.) is a square cut in the top of the southwest corner of the monolithic bluestone doorsill at the main entrance to Public School No. 64, on the north side of Jerome Avenue (Broadway) between Weymouth Street and Culloden Street. Elevation: 27.2 feet above mean low water; 24.99 feet above standard sea level.

**Serial No. 597. Woodhaven:** B. M. 576 (B. E. & A.) is a 7/8-inch copper bolt set vertically in the center of the top of the bluestone sill of double window on the south side of Public School No. 64, on the north side of Jerome Avenue (Broadway) between Weymouth Street and Culloden Street. The bench mark is about 300 feet east of Halifax Street, is about 10 feet west of the main entrance, and 2.8 feet above the ground. Elevation: 29.2 feet above mean low water; 26.99 feet above standard sea level.

**Serial No. 598. Aqueduct:** B. M. 577 (B. E. & A.) is a square cut in the top of the southwest corner of the 20-inch square bluestone block under the southwest corner of the frame stable at the Aqueduct Race Track. The bench mark is about 32 feet east of the east rail of the Rockaway Beach Division of the Long Island Railroad and about 185 feet north of the north side of North Conduit Avenue (Old South Road).

It is 6 inches above the ground. Elevation: 26.1 feet above mean low water; 23.86 feet above standard sea level.

**Serial No. 599. Aqueduct:** B. M. 578 (B. E. & A.) is a square cut in the top of a granite city monument set in concrete 3 by 3 by 4 feet on the northeast corner of North Conduit Avenue (Old South Road) and the Rockaway Beach Division of the Long Island Railroad. It is 7.55 feet south of the porch of the two-story and attic frame hotel on the corner, measured at a point 10.5 feet east of the southwest corner of the porch. The top of the monument is 8 inches below the ground. (Established by the Queens Topographical Bureau.) Elevation: 24.6 feet above mean low water; 22.33 feet above standard sea level.

**Serial No. 600. Grant Avenue:** B. M. 441 (B. E. & A.) is a square cut in the top of the northeast corner of the bluestone sill of the side-door entrance to the store on the northwest corner of Grant Avenue and Liberty Avenue. The bench mark is about 19 feet north of Liberty Avenue. (Established by Queens Topographical Bureau.) Elevation: 36.1 feet above mean low water; 33.83 feet above standard sea level.

**Serial No. 601. Grant Avenue:** B. M. 440 (B. E. & A.) is a square cut in the top of the northwest corner of the wide concrete step or platform in front of store on the southeast corner of Grant Avenue and Liberty Avenue. The bench mark is on line with the east line of Grant Avenue. Elevation: 36.6 feet above mean low water; 34.32 feet above standard sea level.

**Serial No. 602. Sheridan Street:** B. M. 439 (B. E. & A.) is the center of the top of a granite city monument on the southeast corner of Sheridan Street and Liberty Avenue. The top of the monument is 1 inch above the sidewalk. Elevation: 33.8 feet above mean low water; 31.59 feet above standard sea level.

**Serial No. 603. Crescent Street:** B. M. 438 (B. E. & A.) is the center of the top of a granite city monument on the southeast corner of Crescent Street and Liberty Avenue. The top of the monument is 2 inches below the sidewalk. Elevation: 40.3 feet above mean low water; 38.02 feet above standard sea level.

**Serial No. 604. Crescent Street:** B. M. 435 (B. E. & A.) is a cross, lettered "B+M," cut in the granite base course on the west side of Public School No. 159, on the northeast corner of Crescent Street and Pitkin Avenue. The cross is 7 inches from

the south side of the building and 4 inches above the ground. Elevation: 30.1 feet above mean low water; 27.90 feet above standard sea level.

**Serial No. 605.** *Crescent Street:* B. M. 436 (B. E. & A.) is the center of a V-shaped mark, cut in the center of the top of the south edge of the sill of the most westerly window on the south side of Public School No. 159, on the northeast corner of Crescent Street and Pitkin Avenue. (Established by the Brooklyn Sewer Bureau.) Elevation: 31.6 feet above mean low water; 29.39 feet above standard sea level.

**Serial No. 606.** *Crescent Street:* B. M. 437 (B. E. & A.) is the top of a galvanized-iron bolt in the granite base course on the south side of Public School No. 159, on the northeast corner of Crescent Street and Pitkin Avenue. The bench mark is on the east side of a small buttress about 34 feet from the west side of the building and 10 inches above the ground. Elevation: 30.2 feet above mean low water; 27.96 feet above standard sea level.

**Serial No. 607.** *Berriman Street:* B. M. 432 (B. E. & A.) is a square cut in the top of the northerly corner of the granite basin head on the northeast corner of Berriman Street and Pitkin Avenue. Elevation: 31.7 feet above mean low water; 29.50 feet above standard sea level.

**Serial No. 608.** *Berriman Street:* B. M. 433 (B. E. & A.) is a  $\frac{3}{8}$ -inch copper bolt in the top of the northeast corner of the limestone plinth of limestone column on the north side of the main entrance to Public School No. 64, on the east side of Berriman Street between Belmont Avenue and Pitkin Avenue. The bolt is about 135 feet north of Belmont Avenue. Elevation: 30.6 feet above mean low water; 28.39 feet above standard sea level.

**Serial No. 609.** *Belmont Avenue:* B. M. 434 (B. E. & A.) is a brass bracket in the bluestone base course on the south side of Public School No. 64, on the north side of Belmont Avenue between Berriman Street and Atkins Avenue. The bench mark is about 3.5 feet from the southeast corner of the building and about 30 feet from Atkins Avenue. Elevation: 26.8 feet above mean low water; 24.52 feet above standard sea level.

**Serial No. 610.** *Ashford Street:* B. M. 429 (B. E. & A.) is the top of a galvanized-iron bolt in the granite foundation on the north side of the main entrance to Public School No. 158, on the west side of Ashford Street, between Belmont Avenue and Pitkin Avenue. The bolt is 1.5 feet above the area. Elevation: 35.7 feet above mean low water; 33.43 feet above standard sea level.

**Serial No. 611.** *Ashford Street:* B. M. 430 (B. E. & A.) is the center of the horizontal bar of a T cut in the granite foundation on the north side of the main entrance to Public School No. 158, on the west side of Ashford Street, between Belmont Avenue and Pitkin Avenue. Elevation: 36.2 feet above mean low water; 33.96 feet above standard sea level.

**Serial No. 612.** *New Lots Road:* B. M. 424 (B. E. & A.) is a brass bracket on the south side of Public School No. 72, on the north side of New Lots Road, between Schenck Avenue and Barbey Street. The bracket is 13.5 feet from the east side of the building and 7 inches above the area. Elevation: 23.9 feet above mean low water; 21.70 feet above standard sea level.

**Serial No. 613.** *New Lots Road:* B. M. 425 (B. E. & A.) is the center of the horizontal bar of a T cut in the coping stone on the south side of Public School No. 72, on the north side of New Lots Road between Schenck Avenue and Barbey Street. The bench mark is 13.5 feet from the east side of the building and 4.9 feet above the area. Elevation: 28.3 feet above mean low water; 26.04 feet above standard sea level.

**Serial No. 614.** *New Lots Road:* B. M. 426 (B. E. & A.) is a square cut in the top of the lowest step of stoop at the main entrance to Public School No. 72, on the north side of New Lots Road between Schenck Avenue and Barbey Street. The bench mark is  $1\frac{1}{2}$  inches from the south edge of the step and 1.25 feet from the west end. It is about 70 feet east of Schenck Avenue. (Established by the department of docks and ferries.) Elevation: 23.8 feet above mean low water; 21.61 feet above standard sea level.

**Serial No. 615.** *New Lots Road:* B. M. 427 (B. E. & A.) is a rude cross cut on top of the west end of the lowest step of stoop at the main entrance to Public School No. 72, on the north side of New Lots Road between Schenck Avenue and Barbey Street. The cross is 1 inch west of the westerly iron post. (Established by the department of docks and ferries.) Elevation: 23.9 feet above mean low water; 21.63 feet above standard sea level.

**Serial No. 616.** *New Lots Road:* B. M. 428 (B. E. & A.) is a square cut in the top of the northwest corner of the granite basin head on the northeast corner of New Lots

Road and Schenck Avenue. Elevation: 24.3 feet above mean low water; 22.05 feet above standard sea level.

**Serial No. 617.** *Vermont Street:* B. M. 423 (B. E. & A.) is a cross cut in the top of the southeast corner of the fixed rim or cover flange on top of the fire hydrant on the east side of Vermont Street about 100 feet north of New Lots Road. The cross is on the south side of the flange at the hinge. Elevation: 28.4 feet above mean low water; 26.15 feet above standard sea level.

**Serial No. 618.** *Atlantic Avenue:* B. M. 431 (B. E. & A.) is a square cut in the top of the granite base block supporting two granite columns at the northwest corner of the East New York Savings Bank, on the southeast corner of Atlantic Avenue and Pennsylvania Avenue. The bench mark is between the two columns on the Atlantic Avenue side. Elevation: 61.2 feet above mean low water; 58.99 feet above standard sea level.

**Serial No. 619.** *New Lots Road:* B. M. 333 (B. E. & A.) is a square cut in the top of the northwest corner of the bridge seat of the south abutment of Manhattan Beach Railroad Bridge No. 82, over New Lots Road near Van Sinderen Avenue. The bench mark is about 105 feet east of Junius Street and was established by the Long Island Railroad. Elevation: 38.4 feet above mean low water; 36.16 feet above standard sea level.

**Serial No. 620.** *New Lots Road:* B. M. 334 (B. E. & A.) is a square cut in the top of the southwest corner of a small I-beam at the base of the elevated railroad column on the west side of the Canarsie branch of the Brooklyn Rapid Transit and on the south side of New Lots Road at Van Sinderen Avenue. The bench mark is in front of the west window of the one-story brick ticket office and 1.4 feet above the sidewalk. (Established by the Brooklyn Highway Bureau.) Elevation: 27.9 feet above mean low water; 25.62 feet above standard sea level.

**Serial No. 621.** *New Lots Road:* B. M. 335 (B. E. & A.) is the center of the top of a 2-inch brass tablet bolt in the top of the southwest corner of the concrete retaining wall on the northeast corner of New Lots Road and Junius Street. The bolt is 3 feet from the extreme southwest corner of the wall. Elevation: 39.5 feet above mean low water; 37.22 feet above standard sea level.

**Serial No. 622.** *New Lots Road:* B. M. 336 (B. E. & A.) is a square cut in the top of the bluestone coping on top of the one-story brick ticket office of the Canarsie Railroad on the south side of New Lots Road at Van Sinderen Avenue. The bench mark is above the west window. Elevation: 36.9 feet above mean low water; 34.70 feet above standard sea level.

**Serial No. 623.** *New Lots Road:* B. M. 337 (B. E. & A.) is a square cut in the top of the northeast corner of the west girder of Manhattan Beach Railroad Bridge No. 82 over New Lots Road between Junius Street and Van Sinderen Avenue. The bench mark is 3.3 feet above the bridge seat of the north abutment and about 150 feet east of Junius Street. Elevation: 41.7 feet above mean low water; 39.47 feet above standard sea level.

**Serial No. 624.** *New Lots Road:* B. M. 338 (B. E. & A.) is a square cut in the top of the northwest corner of the south abutment of concrete retaining wall on the southeast corner of New Lots Road and Junius Street. The bench mark is about 3 feet above the sidewalk. (Established by the department of docks and ferries.) Elevation: 27.9 feet above mean low water; 25.70 feet above standard sea level.

**Serial No. 625.** *New Lots Road:* B. M. 339 (B. E. & A.) is a square cut in the top of the northeast corner of a small I-beam at the base of the elevated railroad column on the east side of the Canarsie Railroad and on the south side of New Lots Road at Van Sinderen Avenue. The bench mark is in front of the east window of the one-story brick ticket office and 1.7 feet above the sidewalk. (Established by the department of docks and ferries.) Elevation: 27.9 feet above mean low water; 25.66 feet above standard sea level.

**Serial No. 626.** *Canarsie:* B. M. 327 (B. E. & A.) is a square cut in the top of the northwest corner of the bridge seat of the east abutment of Manhattan Beach Railroad Bridge No. 88, over Rockaway Avenue, between Avenue D and Stanley Avenue. Elevation: 29.9 feet above mean low water; 27.66 feet above standard sea level.

**Serial No. 627.** *Canarsie:* B. M. 328 (B. E. & A.) is a square cut in the top of the southeast corner of the west abutment of Manhattan Beach Railroad Bridge No. 88, over Rockaway Avenue, between Avenue D and Stanley Avenue. The bench mark is 2.5 feet above the sidewalk. (Established by the department of docks and ferries.) Elevation: 18.9 feet above mean low water; 16.69 feet above standard sea level.

**Serial No. 628.** *Canarsie:* B. M. 329 (B. E. & A.) is a  $\frac{7}{8}$ -inch copper bolt in the center of a surface 2 feet by 2 feet 9 inches on top of the north end of the east abutment

of Manhattan Beach Railroad Bridge No. 88, over Rockaway Avenue, between Avenue D and Stanley Avenue. The bolt is 2.7 feet above the sidewalk. Elevation: 19.7 feet above mean low water; 17.49 feet above standard sea level.

**Serial No. 629. Canarsie:** B. M. 330 (B. E. & A.) is a square cut in the northwest corner of the toe of the east abutment of Manhattan Beach Railroad Bridge No. 88, over Rockaway Avenue between Avenue D and Stanley Avenue. (Established by the Brooklyn Highway Bureau.) Elevation: 10.8 feet above mean low water; 8.59 feet above standard sea level.

**Serial No. 630. Canarsie:** B. M. 331 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the granite foundation in front of Engine House No. 157, on the southeast corner of Rockaway Parkway and Farragut Road (Avenue F). The bolt is  $3\frac{1}{2}$  inches from the face of the stone, is about 55 feet south of Farragut Road and 1.3 feet above the sidewalk. Elevation: 24.8 feet above mean low water; 22.51 feet above standard sea level.

**Serial No. 631. Rugby:** B. M. 326 (B. E. & A.) is the center of a brass bolt marking the U. S. C. & G. S. triangulation station Rugby, on the west side of East Eighty-fifth Street, between Avenue C and Avenue D. The bench mark is 4 feet below the present ground surface. Elevation: 21.4 feet above mean low water; 19.19 feet above standard sea level.

**Serial No. 632. Canarsie:** B. M. 332 (B. E. & A.) is the center of a brass bolt marking the U. S. C. & G. S. triangulation station Canarsie, in the northeasterly side of Canarsie Park. The bench mark is about 20 feet from the iron fence and about 203 feet from the easterly corner of the park. Elevation: 15.8 feet above mean low water; 13.57 feet above standard sea level.

**Serial No. 633. Canarsie:** B. M. 26 (U. S. E.) is a 1-inch pipe set flush with the ground about 2 feet to the right of the gravel walk approach to the band stand, Golden Gate Park. Elevation: 10.6 feet above mean low water; 8.23 feet above mean tide level.

**Serial No. 634. Canarsie:** B. M. 28 (U. S. E.) is a square cut in concrete sidewalk at southeast corner of vending stand on Rockaway Avenue at the terminus of Broadway "L." The letters "U. S." are also cut in concrete near it. Elevation: 9.5 feet above mean low water; 7.12 feet above mean tide level.

**Serial No. 635. Canarsie:** B. M. 29 (U. S. E.) is a square cut on the water vent in the Y of the electric trolley line at the terminus on Rockaway Avenue, about 250 feet south of Schenck Avenue and about 300 feet north of Bulkhead line. Elevation: 8.6 feet above mean low water; 6.19 feet above mean tide level.

**Serial No. 636. Canarsie:** B. M. 30 (U. S. E.) is a square cut on the south side of a city water manhole on Schenck Avenue, just west of Rockaway Avenue, near a road house known as Forrester's Inn. Elevation: 9.0 feet above mean low water; 6.57 feet above mean tide level.

**Serial No. 637. East Fifty-third Street:** B. M. 325 (B. E. & A.) is a square cut in the top of the southeast corner of the bridge seat of the west abutment of Manhattan Beach Railroad Bridge No. 102 at East Fifty-third Street (Kouwenhoven Place), just north of Farragut Road (Avenue F). Elevation: 27.2 feet above mean low water; 24.97 feet above standard sea level.

**Serial No. 638. Utica Avenue:** B. M. 324 (B. E. & A.) is a square cut in the top of the southeast corner of the bridge seat of the west abutment of Manhattan Beach Railroad Bridge No. 104 at Utica Avenue, just south of Farragut Road (Avenue F). Elevation: 30.7 feet above mean low water; 28.45 feet above standard sea level.

**Serial No. 639. Utica Avenue:** B. M. 323 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the bridge seat of the west abutment of Manhattan Beach Railroad Bridge No. 104 at Utica Avenue, just south of Farragut Road (Avenue F). The bolt is 6 inches from the south edge of the south girder and 6 inches from the east face of the abutment. Elevation: 30.7 feet above mean low water; 28.47 feet above standard sea level.

**Serial No. 640. Avenue I:** B. M. 315 (B. E. & A.) is the center of the top of a granite city monument on the northwest corner of Avenue I and New York Avenue (East Thirty-third Street). The top of the monument is 2 inches below the ground. Elevation: 31.3 feet above mean low water; 29.02 feet above standard sea level.

**Serial No. 641. Avenue K:** B. M. 229 (B. E. & A.) is the intersection of a cross cut in the end of a  $\frac{3}{4}$ -inch copper bolt leaded horizontally into the granite base course at the southwest corner of Public School No. 119, on the north side of Avenue K, between East Thirty-eighth Street and East Thirty-ninth Street. The bench mark is on the south side of the building, 1 foot from the southwest corner and 6 inches above the ground. Elevation: 21.2 feet above mean low water; 18.91 feet above standard sea level.

**Serial No. 642. Avenue K:** B. M. 230 (B. E. & A.) is a brass bracket in the granite base course on the west side of Public School No. 119, on the north side of Avenue K, between East Thirty-eighth Street and East Thirty-ninth Street. The bench mark is on the west side of the building, 19.8 feet from the southwest corner and 200 feet north of Avenue K. Elevation: 21.2 feet above mean low water; 19.00 feet above standard sea level.

**Serial No. 643. Flatbush Avenue:** B. M. 231 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the east end of the concrete pier wall along the center line of the Manhattan Beach Railroad at Flatbush Avenue. The bolt is in the center of the wall; is  $4\frac{1}{2}$  inches from the east end and 5 feet above the bottom of the railroad cut. Elevation: 22.2 feet above mean low water; 19.95 feet above standard sea level.

**Serial No. 644. Flatbush Avenue:** B. M. 232 (B. E. & A.) is the center of a square lettered "B. M." cut in the west edge of the cement sidewalk on the west side of the highway bridge over the Manhattan Beach Railroad on Flatbush Avenue, just south of Avenue H. The bench mark is 32.5 feet south of the extreme northwest corner of the bridge. Elevation: 36.0 feet above mean low water; 33.81 feet above standard sea level.

**Serial No. 645. Flatbush Avenue:** B. M. 228 (B. E. & A.) is a square cut in the top of the northeast corner of a granite city monument in the center of the cement sidewalk on the northeast corner of Flatbush Avenue and Avenue N. The top of the monument is 1 inch below the sidewalk. Elevation: 18.1 feet above mean low water; 15.89 feet above standard sea level.

**Serial No. 646. Flatbush Avenue:** B. M. 20 (U. S. E.) is a copper plug in the U. S. C. & G. S. station (U) near Avenue U and between Flatbush Avenue and Gerritsens Creek. Elevation: 11.5 feet above mean low water; 9.12 feet above mean tide level.

**Serial No. 647. Flatbush Avenue:** B. M. 21 (U. S. E.) is a square cut on stone sewer cap at entrance to Flatbush Gardens. Elevation: 18.1 feet above mean low water; 15.72 feet above mean tide level.

**Serial No. 648. Flatbush Avenue:** B. M. 22 (U. S. E.) is a square cut on stone sewer cap on the northwest corner of Flatbush and Flatlands Avenues. Elevation: 18.7 feet above mean low water; 16.27 feet above mean tide level.

**Serial No. 649. Flatbush Avenue:** B. M. 23 (U. S. E.) is a square cut on the stone sewer cap on the southeast corner of Flatbush and Flatlands Avenues. Elevation: 18.6 feet above mean low water; 16.18 feet above mean tide level.

**Serial No. 650. Flatbush Avenue:** B. M. 24 (U. S. E.) is a square cut on the corner of a monument on the south side of Flatlands Avenue and east of Falconhook Road. Elevation: 17.3 feet above mean low water; 14.86 feet above mean tide level.

**Serial No. 651. Neck Road:** B. M. 224 (B. E. & A.) is the intersection of a cross cut in the end of a  $\frac{1}{2}$ -inch copper bolt leaded horizontally into the brick foundation at the southwest corner of Hector Frisbie's frame house (Gerritsen's homestead), on the northwesterly side of Neck Road, about 1,200 feet east of its intersection with Avenue U. The bench mark is on the tenth course of brick above the ground. Elevation: 19.8 feet above mean low water; 17.61 feet above standard sea level.

**Serial No. 652. Avenue U:** B. M. 225 (B. E. & A.) is the center of a brass bolt marking the U. S. C. & G. S. triangulation station Avenue U, on the north side of Avenue U, between East Thirty-fifth Street and East Thirty-sixth Street. The bench mark is on the monument line on the north side of Avenue U, and 86.5 feet west of East Thirty-sixth Street. The bolt is flush with the sidewalk. Elevation: 10.9 feet above mean low water; 8.66 feet above standard sea level.

**Serial No. 653. Avenue U:** B. M. 226 (B. E. & A.) is the center of a granite city monument on the northeasterly corner of Kimball Road and Avenue U. The top of the monument is 3 inches below the ground. Elevation: 11.3 feet above mean low water; 9.07 feet above standard sea level.

**Serial No. 654. Flatbush Avenue:** B. M. 227 (B. E. & A.) is a square lettered "U. S." cut in the north end of the basin head on the northwest corner of Flatbush Avenue and Avenue Q. Elevation: 17.5 feet above mean low water; 15.80 feet above standard sea level.

**Serial No. 655. Plumb Island:** B. M. 15 (U. S. E.) is a square cut on the iron rim of a cover over the U. S. C. & G. S. station Point Breeze. Elevation: 11.5 feet above mean low water; 9.16 feet above mean tide level.

**Serial No. 656. Barren Island:** B. M. 90 (U. S. E.) is the top of an iron pin in concrete post 144.8 feet at right angles from bulkhead line, and 157.6 feet from corner of wharf

and bulkhead. Elevation: 10.1 feet above mean low water; 7.76 feet above mean tide level.

Serial No. 657. *Barren Island*: B. M. 91 (U. S. E.) is the top of an iron pin in concrete post and is 194.6 feet from B. M. 90, and 188.6 feet from bulkhead line at right angles to same. Elevation: 7.9 feet above mean low water; 5.64 feet above mean tide level.

Serial No. 658. *Barren Island*: B. M. 92 (U. S. E.) is a square cut in the timber over the tide staff. Elevation: 10.6 feet above mean low water; 8.33 feet above mean tide level.

Serial No. 659. *Barren Island*: B. M. "Pipe" (U. S. E.) is the top of a 4-inch iron pipe set flush with the ground on Barren Island. The pipe marks also station "Bulkhead." Elevation: 7.8 feet above mean low water; 5.47 feet above mean tide level.

**SECTION F.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 660 TO 805: AVENUE U TO ERIE BASIN, BROOKLYN.**

Serial No.	Locality.	Elevations of bench marks above—					Lowest tide.
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
660	Avenue U	15.5	18.8		21.20	23.5	27.0
661	do	9.6	12.9		15.27	17.6	21.1
662	do	12.0	15.3		17.64	20.0	23.5
663	Ocean Parkway	6.4	9.7		12.06	14.4	17.9
664	do	1.2	4.5		6.89	9.2	12.7
665	do	2.6	5.9		8.29	10.6	14.1
666	do	6.0	9.3		11.65	14.0	17.5
667	do	4.5	7.8		10.15	12.5	16.0
668	Sheepshead Bay	1.5	4.8		7.12	9.5	13.0
669	do	0.8	4.1		6.48	8.8	12.3
670	do	1.3	4.6		6.93	9.3	12.8
671	do	2.0	5.3		7.64	10.0	13.5
672	Manhattan Beach	3.3	6.6		9.00	11.3	14.8
673	do	3.3	6.6		8.95	11.3	14.8
674	do	2.8	6.1		8.43	10.8	14.3
675	do	7.3	10.6		12.97	15.3	18.8
676	do	10.9	14.2		16.55	18.9	22.4
677	do	10.9	14.2		16.55	18.9	22.4
678	Brighton Beach	4.2	7.5		9.90	12.2	15.7
679	do	2.5	5.8	8.11		10.5	14.0
680	do	7.1	10.4	12.75		15.1	18.6
681	Coney Island	3.3	6.6		8.96	11.3	14.8
682	do	4.9	8.2		10.57	12.9	16.4
683	do	5.8	9.1		11.49	13.8	17.3
684	do	4.1	7.4		9.72	12.1	15.6
685	do	2.0	5.3		7.66	10.0	13.5
686	do	1.7	5.0		7.35	9.7	13.2
687	do	1.5	4.8		7.19	9.5	13.0
688	do	5.6	8.9		11.29	13.6	17.1
689	do	7.4	10.7		13.02	15.4	18.9
690	Harway Avenue Bridge	4.4	7.7		10.08	12.4	15.9
691	do	4.4	7.7		10.08	12.4	15.9
692	do	2.9	6.2		8.55	10.9	14.4
693	do	2.9	6.2		8.55	10.9	14.4
694	Coney Island	2.0	5.3		7.66	10.0	13.5
695	do	1.3	4.5		6.86	9.2	12.7
696	do	4.6	7.9		10.23	12.6	16.1
697	do	4.7	8.0		10.35	12.7	16.2
698	Sea Gate	6.6	9.9		12.25	14.6	18.1
699	Norton Point	7.9	11.6		14.14	16.4	19.9
700	do	2.0	5.7		8.24	10.5	14.0
701	do	4.8	8.0		10.47	12.8	16.3
702	do	11.3	15.0		17.35	19.8	23.3
703	do	5.1	8.8		11.16	13.6	17.1
704	Romer Shoal Light	4.4	8.2	10.69		12.9	16.9
705	do	3.0	6.8	9.11		11.5	15.5
706	Ewinburn Island	6.7	10.5	12.88		15.2	19.2
707	Hoffman Island	5.2	9.0		11.35	13.7	17.7
708	do	15.1	18.9		21.25	23.6	27.6
709	Bensonhurst	0.1	3.8		6.19	8.6	12.1

## SECTION F.—Elevations of bench marks, serial Nos. 660 to 805; Avenue U to Erie Basin, Brooklyn—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
710	Bensonhurst.....	2.3	6.0	.....	8.42	10.8	14.3
711	.....do.....	17.5	21.2	.....	23.64	26.0	29.5
712	.....do.....	15.1	18.8	.....	21.16	23.6	27.1
713	.....do.....	16.8	20.5	.....	22.90	25.3	28.8
714	Bath Beach.....	16.1	19.8	.....	22.25	24.6	28.1
715	.....do.....	15.5	19.2	.....	21.64	24.0	27.5
716	.....do.....	18.1	21.8	.....	24.17	26.6	30.1
717	.....do.....	21.2	24.9	.....	27.33	29.7	33.2
718	.....do.....	2.3	6.0	.....	8.38	10.8	14.3
719	.....do.....	17.9	21.6	.....	24.06	26.4	29.9
720	.....do.....	20.9	24.6	.....	27.04	29.4	32.0
721	Dyker Heights.....	18.0	21.7	.....	24.12	26.5	30.0
722	Fort Hamilton.....	2.7	6.5	.....	8.86	11.2	15.2
723	.....do.....	6.5	10.3	.....	12.67	15.0	19.0
724	.....do.....	6.4	10.2	.....	12.69	14.9	18.9
725	.....do.....	3.2	7.0	.....	9.35	11.7	15.7
726	.....do.....	22.6	26.4	.....	28.77	31.1	35.1
727	.....do.....	33.1	36.9	.....	39.26	41.6	45.6
728	.....do.....	36.3	40.1	.....	42.45	44.8	48.8
729	.....do.....	33.6	37.4	.....	39.78	42.1	46.1
730	.....do.....	33.0	36.8	.....	39.17	41.5	45.5
731	.....do.....	2.9	6.7	.....	9.02	11.4	15.4
732	.....do.....	19.7	23.5	.....	25.90	28.2	32.2
733	.....do.....	20.0	23.8	.....	26.19	28.5	32.5
734	.....do.....	42.3	46.1	.....	48.51	50.8	54.8
735	.....do.....	33.7	37.5	.....	39.80	42.2	46.2
736	.....do.....	2.9	6.7	.....	9.03	11.4	15.4
737	.....do.....	2.9	6.7	.....	9.02	11.4	15.4
738	Bay Ridge.....	63.6	67.6	.....	69.87	72.1	76.1
739	.....do.....	56.8	60.8	.....	63.00	65.3	69.3
740	.....do.....	58.0	62.0	.....	64.21	66.5	70.5
741	.....do.....	62.4	66.4	.....	68.66	70.9	74.9
742	.....do.....	64.8	68.8	.....	70.99	73.3	77.3
743	.....do.....	75.5	79.5	.....	81.77	84.0	88.0
744	.....do.....	78.3	82.3	.....	84.50	86.8	90.8
745	.....do.....	21.8	25.8	.....	27.66	29.8	33.8
746	.....do.....	18.1	22.1	.....	24.36	26.6	30.6
747	.....do.....	59.4	63.4	.....	65.06	67.9	71.9
748	.....do.....	44.0	48.0	.....	50.22	52.6	56.6
749	.....do.....	44.1	48.1	.....	50.81	52.6	56.6
750	.....do.....	67.6	71.6	.....	73.85	76.1	80.1
751	.....do.....	69.9	73.9	.....	76.14	78.4	82.4
752	.....do.....	79.0	83.0	.....	85.87	88.1	92.1
753	.....do.....	79.4	83.4	.....	85.90	87.9	91.9
754	.....do.....	79.6	83.6	.....	85.86	88.1	92.1
755	.....do.....	74.4	78.4	.....	80.61	82.9	86.9
756	.....do.....	90.4	94.4	.....	96.63	98.9	102.9
757	.....do.....	69.3	73.3	.....	75.55	77.8	81.8
758	.....do.....	69.5	73.5	.....	75.68	78.0	82.0
759	.....do.....	59.6	63.6	.....	65.82	68.1	72.1
760	.....do.....	66.5	70.5	.....	72.70	75.0	79.0
761	.....do.....	65.9	69.9	.....	72.11	74.4	78.4
762	.....do.....	66.4	70.4	.....	72.64	74.9	78.9
763	.....do.....	62.4	66.4	.....	68.62	70.9	74.9
764	.....do.....	81.0	85.0	.....	87.27	89.5	93.5
765	.....do.....	82.4	86.4	.....	88.67	90.9	94.9
766	.....do.....	59.3	63.3	.....	65.60	67.8	71.8
767	.....do.....	6.0	10.0	.....	12.85	15.1	19.1
768	.....do.....	2.4	6.4	.....	8.63	10.9	14.9
769	.....do.....	4.4	8.4	.....	10.06	12.9	16.9
770	.....do.....	8.7	7.7	.....	9.96	12.2	16.2
771	.....do.....	0.1	4.1	.....	5.88	8.0	12.0
772	.....do.....	37.4	41.4	.....	43.64	45.9	49.9
773	.....do.....	62.7	66.7	.....	68.91	71.2	75.2
774	.....do.....	110.7	114.7	.....	116.96	119.2	123.2

## SECTION F.—Elevations of bench marks, serial Nos. 660 to 805: Avenue U to Erie Basin, Brooklyn—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
775	Bay Ridge.....	91.5	95.5	97.72	100.0	104.0	104.0
776	do.....	86.7	90.7	92.92	95.2	99.2	99.2
777	do.....	84.4	88.4	90.64	92.9	96.9	96.9
778	Gowanus Bay.....	73.4	77.5	79.66	81.9	85.9	85.9
770	do.....	94.7	98.8	101.03	103.2	107.2	107.2
780	do.....	79.9	84.0	86.15	88.4	92.4	92.4
781	do.....	16.0	20.1	22.26	24.5	28.5	28.5
782	do.....	18.1	22.2	24.38	26.6	30.6	30.6
783	do.....	71.9	76.0	78.13	80.4	84.4	84.4
784	do.....	59.6	63.7	65.84	68.1	72.1	72.1
785	do.....	59.5	63.6	65.78	68.0	72.0	72.0
786	do.....	58.2	62.3	64.50	66.7	70.7	70.7
787	do.....	45.3	49.4	51.58	53.8	57.8	57.8
788	do.....	46.0	50.1	52.24	54.5	58.5	58.5
789	do.....	47.9	52.0	54.18	56.4	60.4	60.4
790	do.....	20.5	24.6	26.80	29.0	33.0	33.0
791	do.....	55.6	59.7	61.91	64.1	68.1	68.1
792	do.....	56.5	60.6	62.78	65.0	69.0	69.0
793	do.....	82.0	86.1	88.32	90.5	94.5	94.5
794	do.....	96.5	100.6	102.78	105.0	109.0	109.0
795	do.....	130.8	134.4	136.56	138.8	142.8	142.8
796	do.....	141.6	145.7	147.91	150.1	154.1	154.1
797	do.....	92.3	96.4	98.63	100.8	104.8	104.8
798	do.....	79.7	83.8	86.01	88.2	92.2	92.2
799	do.....	79.3	83.4	85.66	87.8	91.8	91.8
800	do.....	15.1	19.2	21.43	23.6	27.6	27.6
801	do.....	7.7	11.8	13.97	16.2	20.2	20.2
802	do.....	6.8	10.9	13.04	15.3	19.3	19.3
803	do.....	1.6	5.7	7.88	10.1	14.1	14.1
804	do.....	3.4	7.5	9.72	11.9	15.9	15.9
805	do.....	2.7	6.8	8.97	11.2	15.2	15.2

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 660 TO 805: AVENUE U TO ERIE BASIN, BROOKLYN.

**Serial No. 660. Avenue U:** B. M. 221 (B. E. & A.) is the top of a  $\frac{1}{2}$ -inch copper bolt in the large limestone block supporting the lamp at the east side of the main entrance to the Sixty-eighth Precinct Police Station on the northwest corner of Avenue U and East Fifteenth Street. The bolt is 12 inches from the south face of the building. Elevation: 23.5 feet above mean low water; 21.20 feet above standard sea level.

**Serial No. 661. Avenue U:** B. M. 222 (B. E. & A.) is the center of the top of the concrete city monument on the northeast corner of Avenue U and East Fifteenth Street. The monument is flush with the sidewalk. Elevation: 17.6 feet above mean low water; 15.27 feet above standard sea level.

**Serial No. 662. Avenue U:** B. M. 223 (B. E. & A.) is a square lettered U. S., cut in the east end of the sidewalk on the southwest corner of Avenue U and Ocean Avenue. Elevation: 20.0 feet above mean low water; 17.64 feet above standard sea level.

**Serial No. 663. Ocean Parkway:** B. M. 220 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in section stone III of the Ocean Parkway base line. The bolt is in a granite block 6 by 6 inches by 3 feet set in concrete 3 by 3 by 4 feet, is on the monument line on the east side of Ocean Parkway and 257 feet south of the north line of Avenue U. Elevation: 14.4 feet above mean low water; 12.06 feet above standard sea level.

**Serial No. 664. Ocean Parkway:** B. M. 219 (B. E. & A.) is a square cut in the north end of the bluestone coping of culvert wall on the east side of Ocean Parkway about 60 feet south of Avenue Y. Elevation: 9.2 feet above mean low water; 6.89 feet above standard sea level.

**Serial No. 665. Ocean Parkway:** B. M. 218 (B. E. & A.) is a square cut in the top of the northwest corner of the  $\frac{1}{2}$  milestone post on the west side of the center drive-

way of Ocean Parkway, between Avenue Y and Avenue Z. Elevation: 10.6 feet above mean low water; 8.29 feet above standard sea level.

Serial No. 666. *Ocean Parkway*: B. M. 217 (B. E. & A.) is a square cut in the top of the northwest corner of the square limestone block at the northwest corner of the Coney Island Hospital, on the southeast corner of Avenue Z and Ocean Parkway. Elevation: 14.0 feet above mean low water; 11.65 feet above standard sea level.

Serial No. 667. *Ocean Parkway*: B. M. 216 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter leaded horizontally into the yellow brick at the northwest corner of the Coney Island Hospital, on the southeast corner of Avenue Z and Ocean Parkway. The bench mark is 12 inches above the ground. Elevation: 12.5 feet above mean low water; 10.15 feet above standard sea level.

Serial No. 668. *Sheepshead Bay*: B. M. "A" (U. S. E.) is a square cut in the concrete base of water fountain on the northwest corner of Ocean Avenue and Emmons Avenue. Elevation: 9.5 feet above mean low water; 7.12 feet above standard sea level.

Serial No. 669. *Sheepshead Bay*: B. M. "B" (U. S. E.) is a square cut in the southwest corner of city monument located on the northwest corner of Ocean Avenue and Emmons Avenue at about 5 feet from the north building line of Emmons Avenue and about 5 feet from the west building line of Ocean Avenue and about in the middle of the sidewalk. Elevation: 8.8 feet above mean low water; 6.48 feet above standard sea level.

Serial No. 670. *Sheepshead Bay*: B. M. (U. S. E.) is the top of an 80-pound rail monument about 10 feet east of south abutment of bridge carrying Manhattan Beach railroad across Emmons Avenue. Elevation: 9.3 feet above mean low water; 6.93 feet above standard sea level.

Serial No. 671. *Sheepshead Bay*: B. M. (U. S. E.) is a square cut into concrete on the northwest corner of southeast pedestal of bridge carrying Brighton Beach Railroad over Coney Island Creek. Elevation: 10.0 feet above mean low water; 7.64 feet above standard sea level.

Serial No. 672. *Manhattan Beach*: B. M. (U. S. E.) is a "U" cut on the curbstone on the south side of shore boulevard, 60 feet west of Thornhill Street. Elevation: 11.3 feet above mean low water; 9.00 feet above standard sea level.

Serial No. 673. *Manhattan Beach*: B. M. (U. S. E.) is the letter "J" on the manhole cover of the New York & New Jersey Telephone Co., near the east end of Manhattan Beach estate and about 75 feet north of Commercial Cable Co.'s frame building. Elevation: 11.3 feet above mean low water; 8.95 feet above standard sea level.

Serial No. 674. *Manhattan Beach*: B. M. (U. S. E.) is a "U" cut into the iron on the west side of base holding cover of manhole and near north one of two lugs in casting. Elevation: 10.8 feet above mean low water; 8.43 feet above standard sea level.

Serial No. 675. *Manhattan Beach*: B. M. "Corbin Pl." (U. S. E.) is the northeast nut on hydrant on the west side of Corbin Place, Ocean End. Elevation: 15.3 feet above mean low water; 12.97 feet above standard sea level.

Serial No. 676. *Manhattan Beach*: B. M. (U. S. E.) is an "H" scratched in top of brick under the west edge of middle window on the south side of Long Island Railroad passenger station building. Elevation: 18.9 feet above mean low water; 16.55 feet above standard sea level.

Serial No. 677. *Manhattan Beach*: B. M. (U. S. E.) is a "U" cut on top of brick foundation twenty-second brick east of the east side of large door of the railroad station directly under the south window. Elevation: 18.9 feet above mean low water; 16.55 feet above standard sea level.

Serial No. 678. *Brighton Beach*: B. M. (U. S. E.) is an "L" cut on the base of electric lamp-post on the southeast corner of the Brighton Beach Hotel. Elevation: 12.2 feet above mean low water; 9.90 feet above standard sea level.

Serial No. 679. *Brighton Beach*: B. M. 5 (D. D.) is a cut in top of stringer on north edge of main bulkhead. The cut is about 2 inches square and is marked by a nail in each corner. Elevation: 10.5 feet above mean low water; 8.11 feet above mean tide level.

Serial No. 680. *Brighton Beach*: B. M. 6 (C. & G. S.) is a ringbolt at the west New Steamboat Pier. Elevation: 15.1 feet above mean low water; 12.75 feet above mean tide level.

Serial No. 681. *Coney Island*: B. M. 215 (B. E. & A.) is the top of the north nut on the top flange of the fire hydrant on the northwest corner of Neptune Avenue and Ocean Parkway. (Established by the Brooklyn Highway Bureau.) Elevation: 11.3 feet above mean low water; 8.96 feet above standard sea level.

**Serial No. 682.** *Coney Island:* B. M. 214 (B. E. & A.) is a square cut in the top of the northeast corner of the 5 $\frac{1}{2}$ -milestone post at the south edge of the sidewalk on the north side of Surf Avenue, about 200 feet west of Ocean Parkway. Elevation: 12.9 feet above mean low water; 10.57 feet above standard sea level.

**Serial No. 683.** *Coney Island:* B. M. 213 (B. E. & A.) is the bottom of a 2-inch square cut in the center of a square capstone on top of the granite wall on the south side of Surf Avenue, in front of the Public Bath House. The bench mark is 25 feet east of the West Fifth Street end of the wall and 3.7 feet above the sidewalk. Elevation: 13.8 feet above mean low water; 11.49 feet above standard sea level.

**Serial No. 684.** *Coney Island:* B. M. 211 (B. E. & A.) is the top of the small center nut on top of the high-pressure fire hydrant on the southwest corner of West Fifth Street and Surf Avenue. Elevation: 12.1 feet above mean low water; 9.72 feet above standard sea level.

**Serial No. 685.** *Coney Island:* B. M. 212 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in a city monument in the southwest corner of Seaside Park, on the northeast corner of Surf Avenue and West Fifth Street. The bench mark is 4 feet east of the iron railing on West Fifth Street and 75 feet north of the north curb line of Surf Avenue. Elevation: 10.0 feet above mean low water; 7.66 feet above standard sea level.

**Serial No. 686.** *Coney Island:* B. M. 210 (B. E. & A.) is a square cut in the top of the large bluestone basin head on the south side of Surf Avenue about 45 feet north-easterly from the corner of Henderson's Restaurant on Stratton-Henderson Walk. The bench mark is opposite the Mardi Gras Hotel. Elevation: 9.7 feet above mean low water; 7.35 feet above standard sea level.

**Serial No. 687.** *Coney Island:* B. M. 209 (B. E. & A.) is a square cut in the top of the southeast corner of a granite city monument on the northwest corner of West Seventeenth Street and Mermaid Avenue. The top of the monument is flush with the ground. Elevation: 9.5 feet above mean low water; 7.19 feet above standard sea level.

**Serial No. 688.** *Coney Island:* B. M. 208 (B. E. & A.) is a brass bracket in the bluestone base course on the east side of Public School No. 80, on the west side of West Seventeenth Street between Neptune Avenue and Mermaid Avenue. The bracket is 1 foot south of the main entrance. Elevation: 13.8 feet above mean low water; 11.29 feet above standard sea level.

**Serial No. 689.** *Coney Island:* B. M. 207 (B. E. & A.) is the center of the top of a brass tablet bolt 2 inches in diameter, in the northwest corner of the top step at the main entrance to Public School No. 80, on the west side of West Seventeenth Street, between Neptune Avenue and Mermaid Avenue. Elevation: 15.4 feet above mean low water; 13.02 feet above standard sea level.

**Serial No. 690.** *Harway Avenue Bridge:* B. M. 206 (B. E. & A.) is a 1-inch square cut in the top of the southwest corner of the 3-foot-square capstone supporting the steel incline on top of the south pier on the east side of the highway bridge over the Gravesend Drainage Canal (Coney Island Creek) at West Seventeenth Street. Elevation: 12.4 feet above mean low water; 10.08 feet above standard sea level.

**Serial No. 691.** *Harway Avenue Bridge:* B. M. 205 (B. E. & A.) is a 1-inch square cut in the top of the southeast corner of the 3-foot-square capstone supporting the steel incline on top of the south pier on the east side of the highway bridge over the Gravesend Drainage Canal (Coney Island Creek) at West Seventeenth Street. Elevation: 12.4 feet above mean low water; 10.08 feet above standard sea level.

**Serial No. 692.** *Harway Avenue Bridge:* B. M. 204 (B. E. & A.) is a square cut in the top of the southeast corner of the south pier on the east side of the highway bridge over the Gravesend Drainage Canal (Coney Island Creek) at West Seventeenth Street. Elevation: 10.9 feet above mean low water; 8.55 feet above standard sea level.

**Serial No. 693.** *Harway Avenue Bridge:* B. M. 203 (B. E. & A.) is a square cut in the top of the northwest corner of the south pier on the west side of the highway bridge over the Gravesend Drainage Canal (Coney Island Creek) at West Seventeenth Street. Elevation: 10.9 feet above mean low water; 8.55 feet above standard sea level.

**Serial No. 694.** *Coney Island:* B. M. "Rosso" (U. S. E.) is on the ledge of a small window in a building on the northeast corner of Neptune Avenue and West Twenty-third Street. The small window is about 33 feet from the corner stone. Elevation: 10.0 feet above mean low water; 7.64 feet above standard sea level.

**Serial No. 695.** *Coney Island:* B. M. 86 (U. S. E.) is a cut in the northwest corner of catch basin at the northwest corner of West Twenty-second Street and Surf Avenue. Elevation: 9.2 feet above mean low water; 6.86 feet above standard sea level.

**Serial No. 696. Coney Island:** B. M. 89 (U. S. E.) is the north nut on hydrant at the northwest corner of West Thirtieth Street and Surf Avenue. Elevation: 12.6 feet above mean low water; 10.23 feet above standard sea level.

**Serial No. 697. Coney Island:** B. M. 92 (U. S. E.) is a "U" cut on the west end of the west window sill on the south side of building on the northeast corner of West Thirty-seventh Street and Surf Avenue. Elevation: 12.7 feet above mean low water; 10.35 feet above standard sea level.

**Serial No. 698. Sea Gate:** B. M. 99 (U. S. E.) is the top of north nut on hydrant on west side of Surf Avenue and just south of Beach Fifty-first Street. Elevation: 14.6 feet above mean low water; 12.25 feet above standard sea level.

**Serial No. 699. Norton Point:** B. M. 97 (U. S. E.) is a square cut in east iron base at the northeast corner of Norton Point Lighthouse foundation. It is 7 $\frac{1}{2}$  inches from an anchor bolt in the east iron base and 10 inches from adjacent anchor bolt. Elevation: 16.4 feet above mean low water; 14.14 feet above standard sea level.

**Serial No. 700. Norton Point:** B. M. 101 (U. S. E.) is a square cut in a 12 by 12 stringer southeast corner of Norton Point Dock. Elevation: 10.5 feet above mean low water; 8.24 feet above standard sea level.

**Serial No. 701. Norton Point:** B. M. 102 (U. S. E.) is a square cut in southeast corner of stone monument set in the brick sidewalk near old passenger station of the P. P. & C. I. R. R., at Norton Point Dock. Elevation: 12.8 feet above mean low water; 10.47 feet above standard sea level.

**Serial No. 702. Norton Point:** B. M. 1 (C. & G. S.) is the upper right-hand corner, viewed from seaward (northwest corner), of a bronze tablet firmly secured to tall steel flagpole standing in front of Atlantic Yacht Club. Tablet is about 7 feet from bottom and bears following inscription: "Mast of America's cup challenger, Shamrock III, presented by Sir Thomas Lipton, Bart. K. C. V. O., to the Atlantic Yacht Club, 1909." This flagpole was located by triangulation in 1919 by same party and in records is named Coney Island Yacht Flagpole. It is 83.4 feet from B. M. 2. Elevation: 19.8 feet above mean low water; 17.35 feet above standard sea level.

**Serial No. 703. Norton Point:** B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set in a drill hole and embedded in cement in concrete block under rain spout on the northeast corner of Atlantic Yacht Club House. Lower surface of disk rests flush with top of block. It is 83.4 meters from B. M. 1. Elevation: 13.6 feet above mean low water; 11.16 feet above standard sea level.

**Serial No. 704. Romer Shoal Light:** B. M. (U. S. E.) is the bottom of the second brace of lower balcony to eastward of brace immediately in front of door. Elevation: 12.9 feet above mean low water; 10.59 feet above mean tide level.

**Serial No. 705. Romer Shoal Light:** B. M. (U. S. E.) is a "U" cut in the cement pier alongside of the staff on the south side of the pier. The elevation was obtained by measuring from a 15-foot mark on the side of the tide staff support to the top of the pier. The 15-foot mark was established by leveling from bench mark described above. Elevation: 11.5 feet above mean low water; 9.11 feet above mean tide level.

**Serial No. 706. Swinburn Island:** B. M. 2 (U. S. E.) is an "L" cut in stone at the south corner of limestone border about lawn in front of building. Elevation: 15.2 feet above mean low water at Sandy Hook; 12.88 feet above mean tide level.

**Serial No. 707. Hoffman Island:** B. M. 1 (U. S. E.) is a square cut in the center of sea wall on the west side of the island. It is on the fourth stone from the pier. This pier is the middle one of 3 piers on the west side of the island. Elevation: 13.7 feet above mean low water; 11.35 feet above standard sea level.

**Serial No. 708. Hoffman Island:** B. M. 2 (U. S. E.) is the base of the brick arch over the most northerly window of first floor of two-story red brick building. This building is the second one in the southerly group directly out from the middle pier. Elevation: 23.6 feet above mean low water; 21.25 feet above standard sea level.

**Serial No. 709. Bensonhurst:** B. M. 35 (U. S. E.) is an "L" cut on the sidewalk on southwest corner of Bay Forty-third Street and Harway Avenue. Elevation: 8.6 feet above mean low water; 6.19 feet above standard sea level.

**Serial No. 710. Bensonhurst:** B. M. 32 (U. S. E.) is the north nut on hydrant on north side of Cropsey Avenue just east of Bay Thirty-sixth Street. Elevation: 10.8 feet above mean low water; 8.42 feet above standard sea level.

**Serial No. 711. Bensonhurst:** B. M. 23 (U. S. E.) is a cut on southwest corner of catch basin on the northeast corner of Cropsey Avenue and Bay Twenty-fifth Street. Elevation: 26.0 feet above mean low water; 23.64 feet above standard sea level.

**Serial No. 712. *Bensonhurst*:** B. M. 29A (U. S. E.) is a cut on the southwest corner of catch basin on the northwest corner of Cropsey Avenue and Bay Twenty-second Street. Elevation: 23.6 feet above mean low water; 21.16 feet above standard sea level.

**Serial No. 713. *Bensonhurst*:** B. M. 26 (U. S. E.) is the west nut on hydrant north side of Cropsey Avenue just west of Bay Twentieth Street. Elevation: 25.3 feet above mean low water; 22.90 feet above standard sea level.

**Serial No. 714. *Bath Beach*:** B. M. 25A (U. S. E.) is a cut on the southeast corner of catch basin on the northwest corner of Bay Eighteenth Street and Cropsey Avenue. Elevation: 24.6 feet above mean low water; 22.25 feet above standard sea level.

**Serial No. 715. *Bath Beach*:** B. M. 25 (U. S. E.) is an "L" cut on the southwest corner of catch basin on the northeast corner of Bay Seventeenth Street and Cropsey Avenue. Elevation: 24.0 feet above mean low water; 21.64 feet above standard sea level.

**Serial No. 716. *Bath Beach*:** B. M. 24 A (U. S. E.) is a cut on the southwest corner of catch basin on the northwest corner of New Utrecht and Cropsey Avenue. Elevation: 26.6 feet above mean low water; 24.17 feet above standard sea level.

**Serial No. 717. *Bath Beach*:** B. M. 1 (C. & G. S.), known as B. M. K, is a copper bolt  $\frac{1}{4}$ -inch by 2 inches leaded horizontally in the fifth brick above the window ledge and on the north side of the window east side of the house. It is situated on the north side of the second house (chalet style) from the corner of Bay Thirteenth Street and Cropsey Avenue. Elevation: 29.7 feet above mean low water; 27.33 feet above standard sea level.

**Serial No. 718. *Bath Beach*:** B. M. 2 (C. & G. S.) is a large galvanized spike driven into the southwest corner of wooden bulkhead around the grounds of the Children's Summer Home. Three copper tacks were driven in the form of a triangle about the nail and one tack was driven on each side of it. The bulkhead has since been extended and the wharf rebuilt but the mark is still there and has radial lines cut in the wood converging toward the mark. Elevation: 10.8 feet above mean low water; 8.38 feet above standard sea level.

**Serial No. 719. *Bath Beach*:** B. M. 23 (U. S. E.) is the north nut on hydrant north side of Cropsey Avenue just east of Sixteenth Avenue. Elevation: 26.4 feet above mean low water; 24.06 feet above standard sea level.

**Serial No. 720. *Bath Beach*:** B. M. 21 (U. S. E.) is the north nut on hydrant on the north side of Cropsey Avenue between Bay Eighth Street and Fifteenth Avenue. Elevation: 29.4 feet above mean low water; 27.04 feet above standard sea level.

**Serial No. 721. *Dyker Heights*:** B. M. 16 (U. S. E.) is an "L" cut in the northeast corner of stone monument on the south side of driveway in Dyker Heights Park, half-way between third and fourth lamp-post west of bridge. Elevation: 26.5 feet above mean low water; 24.12 feet above standard sea level.

**Serial No. 722. *Fort Hamilton*:** B. M. 2 (C. & G. S.), known as B. M. A, is a cross cut on capstone on the western edge of the old stone pier about 7 feet from its southwest corner. Elevation: 11.2 feet above mean low water; 8.86 feet above standard sea level.

**Serial No. 723. *Fort Hamilton*:** B. M. 3 (C. & G. S.) known as B. M. B, is the top of an iron-mooring post at the southwest corner of the old stone pier. Elevation: 15.0 feet above mean low water; 12.67 feet above standard sea level.

**Serial No. 724. *Fort Hamilton*:** B. M. 4 (C. & G. S.), known as B. M. C, is the top of an iron mooring post near the southeast corner of the widened end of the old stone pier. It is 3.75 feet above the surface of the wharf. Elevation: 14.9 feet above mean low water; 12.59 feet above standard sea level.

**Serial No. 725. *Fort Hamilton*:** B. M. 6 (C. & G. S.) is known as B. M. 1 of 1904 and is the top of bolt in west end of the fourth timber from shore on south side of old stone pier. Elevation: 11.7 feet above mean low water; 9.35 feet above standard sea level.

**Serial No. 726. *Fort Hamilton*:** B. M. 9 (C. & G. S.) is known as B. M. H and also as B. M. Delta, is the highest point of notch 4 inches long and 1.5 inches deep cut in the vertical face of a stone in the retaining wall on the west side of Fort Hamilton, nearly in line of the axis of the old stone pier, and six feet south of a drain with which it is nearly on the same level. Elevation: 31.1 feet above mean low water; 28.77 feet above standard sea level.

**Serial No. 727. *Fort Hamilton*:** B. M. 12 (C. & G. S.), known as B. M. M, is a horizontal cut in a brass bolt set in the concrete wall at northwest corner of fortification. It is at the intersection of shore road and Fort Hamilton Avenue. Elevation: 41.6 feet above mean low water; 39.26 feet above standard sea level.

**Serial No. 728.** *Fort Hamilton:* B. M. 14 (C. & G. S.), known as B. M. X, is the surface of the chasis or gun carriage of a 20-inch Parrott gun in Battery Park, west of the military reservation. The rod was held just back of two holes, in the lower part of the rear end on left-hand side of gun carriage. Elevation: 44.8 feet above mean low water; 42.45 feet above standard sea level.

**Serial No. 729.** *Fort Hamilton:* B. M. 191 (B. E. & A.) is the top of a  $\frac{3}{4}$ -inch iron rod inside of a wrought-iron pipe casing in the grass plot at the northwest corner of Fort Hamilton Park. The bench mark is 21 feet from the east curb of the Shore Road and 33 feet southeast of the southeast curb of Fourth Avenue. Elevation: 42.1 feet above mean low water; 39.78 feet above standard sea level.

**Serial No. 780.** *Fort Hamilton:* B. M. 16 (C. & G. S.) is the top of a stone monument several inches below the surface of the ground and near the southwest corner of Fort Hamilton Park, about 30 feet easterly from B. M. 191 and 27 feet from the curb line of Shore Road. Access to the bench mark is obtained by raising an iron cover 9 inches square and flush with the ground and inscribed "Monument Topographical Bureau Brooklyn." Elevation: 41.5 feet above mean low water; 39.17 feet above standard sea level.

**Serial No. 781.** *Fort Hamilton:* B. M. 17 (C. & G. S.) is a small cross in the top of new sea wall, near the southwest corner of the capstone adjoining stone pier on north side. It is nearly opposite B. M. 6. Elevation: 11.4 feet above mean low water; 9.02 feet above standard sea level.

**Serial No. 782.** *Fort Hamilton:* B. M. 304 (U. S. E.) is a cut in the iron manhole top near the top of the hill on road to Quartermaster Pier at Fort Hamilton. Elevation: 28.2 feet above mean low water; 25.90 feet above standard sea level.

**Serial No. 788.** *Fort Hamilton:* B. M. 305 (U. S. E.) is an "L" cut on the concrete block at base of northwest corner of Battery Burk, Fort Hamilton. Elevation: 38.5 feet above mean low water; 36.19 feet above standard sea level.

**Serial No. 784.** *Fort Hamilton:* B. M. 308 (U. S. E.) is a cut on the southeast corner of catch basin on the Shore Road opposite Third Avenue Elevated. Elevation: 50.8 feet above mean low water; 48.51 feet above standard sea level.

**Serial No. 785.** *Fort Hamilton:* B. M. N-19 (B. W. S.) is a pipe casing at southwest corner of Fort Hamilton Park, 50 feet north of Shore Road, 58 feet east of Fourth Avenue, 21 feet north and 33 feet east of curbs. Elevation: 42.2 feet above mean low water; 39.80 feet above standard sea level.

**Serial No. 786.** *Fort Hamilton:* B. M. 20 (C. & G. S.) is a C. & G. Survey standard disk set in cement in top of granite sea wall, 1 meter from south end at road leading to stone dock. Elevation: 11.4 feet above mean low water; 9.03 feet above standard sea level.

**Serial No. 787.** *Fort Hamilton:* B. M. 21 (C. & G. S.) is a C. & G. Survey standard disk set in cement in top of granite sea wall 50 meters from south end at road leading to stone dock. Elevation: 11.4 feet above mean low water; 9.02 feet above standard sea level.

**Serial No. 788.** *Ninety-ninth Street and Shore Road:* B. M. 310 (U. S. E.) is on the northwest corner of the lower step leading to Italian Villa on the south corner of Ninety-ninth Street and Shore Road. Elevation: 72.1 feet above mean low water; 69.87 feet above standard sea level.

**Serial No. 789.** *Ninety-seventh Street and Shore Road:* B. M. 311 (U. S. E.) is the top of the north nut on hydrant at the northwest corner of Ninety-seventh Street and Shore Road. Elevation: 65.3 feet above mean low water; 63.00 feet above standard sea level.

**Serial No. 740.** *Ninety-sixth Street and Shore Road:* B. M. 312 (U. S. E.) is on the northwest corner of lower step of Adelina Villa, the second house from Ninety-sixth Street on the Shore Road. Elevation: 66.5 feet above mean low water; 64.21 feet above standard sea level.

**Serial No. 741.** *Ridge Boulevard:* B. M. 314 (U. S. E.) is the arrowhead on hydrant, north side of Ridge Boulevard, half way between Marine Avenue and Shore Road. Elevation: 70.9 feet above mean low water; 68.66 feet above standard sea level.

**Serial No. 742.** *Ninetieth Street and Ridge Boulevard:* B. M. 317 (U. S. E.) is an "L" cut in sidewalk at the southeast corner of Ninetieth Street and Ridge Boulevard. Elevation: 73.3 feet above mean low water; 70.99 feet above standard sea level.

**Serial No. 748.** *Eighty-sixth Street:* B. M. 248 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, cemented horizontally into the 12-inch brownstone coping of the Seventy-first Precinct Police Station, on the northeast corner of Eighty-sixth Street and Fifth Avenue. The bench mark is on the

Fifth Avenue side of the building about 70 feet northeasterly from Eighty-sixth Street, and 4.5 feet above sidewalk. Elevation: 84.0 feet above mean low water; 81.77 feet above standard sea level.

**Serial No. 744.** *Eighty-sixth Street:* B. M. 249 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt leaded vertically in the top of the 6-inch brownstone water table at the southeast corner of the Seventy-first Precinct Police Station on the northeast corner of Eighty-sixth Street and Fifth Avenue. The bench mark is 4.5 feet above the sidewalk. Elevation: 86.8 feet above mean low water; 84.50 feet above standard sea level.

**Serial No. 745.** *Eighty-sixth Street and Shore Road:* B. M. 103 (U. S. E.) is the north nut on the hydrant on the northeast corner of Eighty-sixth Street and Shore Road. Elevation: 29.8 feet above mean low water; 27.56 feet above standard sea level.

**Serial No. 746.** *Eighty-sixth Street and Shore Road:* B. M. 104 (U. S. E.) is an "L" cut on the northwest corner of catch basin on the northeast corner of Eighty-sixth Street and Shore Road. Elevation: 26.6 feet above mean low water; 24.35 feet above standard sea level.

**Serial No. 747.** *Eighty-fifth Street and Ridge Boulevard:* B. M. 318 (U. S. E.) is an "L" cut on the northwest corner of bottom step of stairway leading to house on southeast corner of Eighty-fifth Street and Ridge Boulevard. Elevation: 67.9 feet above mean low water; 65.66 feet above standard sea level.

**Serial No. 748.** *Eightieth Street and Ridge Boulevard:* B. M. 320 (U. S. E.) is the top of the west edge of south guard rail of south stairway on the west side of the Dutch Reform Church, corner of Eightieth Street and Ridge Boulevard. Elevation: 52.5 feet above mean low water; 50.22 feet above standard sea level.

**Serial No. 749.** *Eightieth Street and Ridge Boulevard:* B. M. 51 (U. S. E.) is a cut on southwest corner of west brownstone guard rail on Eightieth Street side of Dutch Reform Church, corner of Eightieth Street and Ridge Boulevard. Elevation: 52.6 feet above mean low water; 50.31 feet above standard sea level.

**Serial No. 750.** *Seventy-ninth Street and Fourth Avenue:* B. M. 54A (U. S. E.) is an "L" cut on the southeast corner of catch basin on the southwest corner of Seventy-ninth Street and Fourth Avenue. Elevation: 76.1 feet above mean low water; 73.85 feet above standard sea level.

**Serial No. 751.** *Seventy-seventh Street and Fourth Avenue:* B. M. 55 (U. S. E.) is an "L" cut on the southeast corner of catch basin on the southwest corner of Seventy-seventh Street and Fourth Avenue. Elevation: 78.4 feet above mean low water; 76.14 feet above standard sea level.

**Serial No. 752.** *Seventy-ninth Street and Fort Hamilton Avenue:* B. M. PS-127 (B. W. S.) is a brass bracket on the south side of the entrance to Public School No. 127 at Seventy-ninth Street and Fort Hamilton Avenue, on the west face of the building, and 1 foot above the ground. Highway elevation: 83.355 feet. Elevation: 88.1 feet above mean low water; 85.87 feet above standard sea level.

**Serial No. 753.** *Seventy-ninth Street:* B. M. 260 (B. E. & A.) is a cross, lettered "B+M" cut in the granite base course on the west side of Public School No. 127, on the northeast corner of Seventy-ninth Street and Seventh Avenue. The cross is on the south side of the buttress, is 13 feet from Seventy-ninth Street, and 6 inches above the ground. Elevation: 87.9 feet above mean low water; 85.60 feet above standard sea level.

**Serial No. 754.** *Seventy-ninth Street:* B. M. 261 (B. E. & A.) is a brass bracket in the granite base course on the west side of Public School No. 127, on the northeast corner of Seventy-ninth Street and Seventh Avenue. The bench mark is about 38 feet from Seventy-ninth Street. Elevation: 88.1 feet above mean low water; 85.86 feet above standard sea level.

**Serial No. 755.** *Seventy-ninth Street:* B. M. 262 (B. E. & A.) is a square cut in the top of the northeast corner of the granite city monument on the southeast corner of Seventy-ninth Street and Seventh Avenue. The top of the monument is flush with the sidewalk. Elevation: 82.9 feet above mean low water; 80.61 feet above standard sea level.

**Serial No. 756.** *Seventy-second Street and Fort Hamilton Avenue:* B. M. N-18 (B. W. S.) is a pipe casing 5 feet west of wall line of McKinley Park on the west side of Fort Hamilton Avenue, 41 feet north of entrance and 92 feet north of Seventy-second Street. Elevation: 98.9 feet above mean low water; 96.63 feet above standard sea level.

**Serial No. 757.** *Seventy-first Street:* B. M. 256 (B. E. & A.) is a brass bracket in the granite base course on the north side of Public School No. 102, on the southeast

corner of Seventy-first Street and Ridge Boulevard (Second Avenue). The bench mark is 1.6 feet from the northwest corner of the building. Elevation: 77.8 feet above mean low water; 75.55 feet above standard sea level.

**Serial No. 758. Seventy-first Street:** B. M. 257 (B. E. & A.) is a horizontal line in the end of a 5.8-inch copper bolt leaded horizontally into the granite base course on the north side of Public School No. 102, on the southeast corner of Seventy-first Street and Ridge Boulevard (Second Avenue). The bench mark is about 128 feet east of Ridge Boulevard and 2 feet from the east corner of the buttress. Elevation: 78.0 feet above mean low water; 75.68 feet above standard sea level.

**Serial No. 759. Bay Ridge Avenue:** B. M. 255 (B. E. & A.) is the center of the top of a granite city monument in the center of the sidewalk on the northeast corner of Bay Ridge Avenue and Second Avenue. The top of the monument is 8 inches below the sidewalk. Elevation: 68.1 feet above mean low water; 65.82 feet above standard sea level.

**Serial No. 760. Sixty-eighth Street and Ridge Boulevard:** B. M. 254 (B. E. & A.) is the center of the top of a granite city monument in the center of the sidewalk on the northeast corner of Sixty-eighth Street and Ridge Boulevard (Second Avenue). The top of the monument is 4 inches below the sidewalk. Elevation: 75.0 feet above mean low water; 72.70 feet above standard sea level.

**Serial No. 761. Sixty-eighth Street and Ridge Boulevard:** B. M. 66 (U. S. E.) is on the southwest corner of first cement step (no mark) in front of house on southeast corner of Sixty-eighth Street and Ridge Boulevard. Elevation: 74.4 feet above mean low water; 72.11 feet above standard sea level.

**Serial No. 762. Sixty-eighth Street and Ridge Boulevard:** B. M. 65 (U. S. E.) is on the southwest corner of second cement step (no mark) in front of house on the southwest corner of Sixty-eighth Street and Ridge Boulevard. Elevation: 74.9 feet above mean low water; 72.64 feet above standard sea level.

**Serial No. 763. Sixty-seventh Street and Ridge Boulevard:** B. M. 65A (U. S. E.) is center stone monument D. H. B. set in sidewalk on the northeast corner of Sixty-seventh Street and Ridge Boulevard. Elevation: 70.9 feet above mean low water; 68.62 feet above standard sea level.

**Serial No. 764. Sixty-seventh Street and Fourth Avenue:** B. M. 25 (C. & G. S.) is a square and cross on the upper surface of a granite post 6 by 6 and projecting about 3 inches above the ground, at the southeast corner of Fourth Avenue and Sixty-seventh Street, 2 blocks below the Brooklyn city line. The post is inside the sidewalk at the northwest corner of Lumbey's lot. Elevation: 89.5 feet above mean low water; 87.27 feet above standard sea level.

**Serial No. 765. Wakeman Place and First Avenue:** B. M. 71A (U. S. E.) is an "L" cut on the southwest corner of catch basin on the northeast corner of Wakeman Place and First Avenue. Elevation: 40.9 feet above mean low water; 38.67 feet above standard sea level.

**Serial No. 766. Bay Ridge Avenue and Ridge Boulevard:** B. M. 63 (U. S. E.) is center of stone monument D. H. B. set in sidewalk on the southeast corner of Bay Ridge Avenue and Ridge Boulevard. Elevation: 67.8 feet above mean low water; 65.60 feet above standard sea level.

**Serial No. 767. Shore Road and Bay Ridge Avenue:** B. M. 113 (U. S. E.) is a cut on the southwest corner of catch basin on the northeast corner of Shore Road and Bay Ridge Avenue. Elevation: 15.1 feet above mean low water; 12.85 feet above standard sea level.

**Serial No. 768. Bay Ridge Avenue Pier:** B. M. 115 (U. S. E.) is a square with nails in corners cut on the west guard timber of Bay Ridge Avenue Dock about 20 feet south of north side. Elevation: 10.9 feet above mean low water; 8.68 feet above standard sea level.

**Serial No. 769. Bay Ridge Avenue Pier:** B. M. 112 (U. S. E.) is the north nut on hydrant at the Bay Ridge Avenue (City) Dock. Elevation: 12.9 feet above mean low water; 10.66 feet above standard sea level.

**Serial No. 770. Sixty-fifth Street:** B. M. "Cowanus 8" (U. S. E.) is a cut on the north end of sill of north window on the west end of Edison Powerhouse at the foot of Sixty-fifth Street. Elevation: 12.2 feet above mean low water; 9.96 feet above standard sea level.

**Serial No. 771. Bay Ridge:** B. M. 2 (C. & G. S.) is a cross on the northwest corner of bluestone slab forming the top of the lowest of the 6 stone steps leading from Mr. Langley's place to the bay shore. Elevation: 8.6 feet above mean low water; 6.88 feet above standard sea level.

**Serial No. 772. *Sixty-fifth Street and Second Avenue:*** B. M. "J" (C. & G. S.) is a cross cut in the top of the northwest corner of the bluestone coping on the west side of the old highway bridge at Second Avenue and Sixty-fifth Street over the tracks of the Manhattan Beach Division of the Long Island Railroad. Elevation: 45.9 feet above mean low water; 43.64 feet above standard sea level.

**Serial No. 773. *Third Avenue:*** B. M. 274 (B. E. & A.) is a cross cut in the top of the  $\frac{1}{2}$ -inch iron anchor bolt on the southerly corner of the base of the elevated railroad column on the easterly corner of Third Avenue and Sixty-first Street. The cross is 2 feet above the sidewalk. Elevation: 71.2 feet above mean low water; 68.91 feet above standard sea level.

**Serial No. 774. *Fifty-ninth Street:*** B. M. 272 (B. E. & A.) is a square lettered "B. M." cut in the sidewalk on the southerly corner of Fifty-ninth Street and Fifth Avenue. The bench mark is 1.3 feet north of the corner of the low retaining wall. Elevation: 119.2 feet above mean low water; 116.96 feet above standard sea level.

**Serial No. 775. *Sixtieth Street:*** B. M. 273 (B. E. & A.) is a square cut in the top of the northerly corner of the brownstone doorsill at the house entrance to the three-story brick dwelling at No. 406 Sixtieth Street, on the southerly corner of Fourth Avenue. The bench mark is about 50 feet from Fourth Avenue. Elevation: 100.0 feet above mean low water; 97.72 feet above standard sea level.

**Serial No. 776. *Sixtieth Street:*** B. M. 275 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the limestone water table on the westerly side of the main entrance to Public School No. 140, on the northerly side of Sixtieth Street, about 190 feet westerly from Fourth Avenue. The bench mark is 6 inches westerly from the projecting limestone pilaster on the westerly side of the entrance. Elevation: 95.2 feet above mean low water; 92.92 feet above standard sea level.

**Serial No. 777. *Sixtieth Street:*** B. M. 276 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, cemented horizontally into the limestone on the easterly side of the main entrance to Public School No. 140, on the northerly side of Sixtieth Street, about 180 feet westerly from Fourth Avenue. The bench mark is 11 inches above the ground and 1 foot easterly from the projecting limestone pilaster on the easterly side of the entrance. Elevation 92.9 feet above mean low water; 90.64 feet above standard sea level.

**Serial No. 778. *Sixty-third Street and Fourth Avenue:*** B. M. (U. S. E.) is an "L" cut on the northeast corner of catch basin at the southeast corner of Sixty-third Street and Fourth Avenue. Elevation: 81.9 feet above mean low water; 79.66 feet above standard sea level.

**Serial No. 779. *Fifty-eighth Street:*** B. M. 271 (B. E. & A.) is the center of the top of a granite city monument on the northerly corner of Fifty-eighth Street and Seventh Avenue. The top of the monument is 6 inches below the ground. Elevation: 103.2 feet above mean low water; 101.03 feet above standard sea level.

**Serial No. 780. *Fifty-sixth Street and Fourth Avenue:*** B. M. (U. S. E.) is an "L" cut on the southeast corner of catch basin on the northeast corner of Fifty-sixth Street and Fourth Avenue. Elevation: 88.4 feet above mean low water; 86.15 feet above standard sea level.

**Serial No. 781. *Fifty-eighth Street and First Avenue:*** B. M. 81 (U. S. E.) is an "L" cut on the southwest corner of catch basin on the southeast corner of Fifty-eighth Street and First Avenue. Elevation: 24.5 feet above mean low water; 22.26 feet above standard sea level.

**Serial No. 782. *Fifty-second Street and First Avenue:*** B. M. 84 (U. S. E.) is an "L" cut on the north end of stone door sill of north door on east side of B. H. R. R. Powerhouse, southwest corner of Fifty-second Street and First Avenue. Elevation: 26.6 feet above mean low water; 24.38 feet above standard sea level.

**Serial No. 783. *Forty-eighth and Fourth Avenue:*** B. M. (U. S. E.) is an "L" cut on the northeast corner of catch basin on the southeast corner of Forty-eighth Street and Fourth Avenue. Elevation: 80.4 feet above mean low water; 78.13 feet above standard sea level.

**Serial No. 784. *Forty-third Street and Fourth Avenue:*** B. M. (U. S. E.) is the northwest corner of big stone step on the northeast steps to St. Michael's School. Elevation: 68.1 feet above mean low water; 65.84 feet above standard sea level.

**Serial No. 785. *Forty-third and Fourth Avenue:*** B. M. "Primary A" (C. & G. S.) is a cross cut in the northwest corner of the large stone step at the door on the southeast corner of St. Michael's School on Fourth Avenue just north of Forty-third Street. Elevation: 68.0 feet above mean low water; 65.78 feet above standard sea level.

**Serial No. 786.** *Forty-second Street and Fourth Avenue:* B. M. 279 (B. E. & A.) is a 2-inch square cut in the top of the westerly corner of the seventh or wide landing step at the Fourth Avenue entrance to St. Michaels Church, about 25 feet southwest-erly from Forty-second Street. Elevation: 66.7 feet above mean low water; 64.50 feet above standard sea level.

**Serial No. 787.** *Forty-first Street and Fourth Avenue:* B. M. 280 (B. E. & A.) is a horizontal line in the end of a  $\frac{3}{4}$ -inch copper bolt leaded horizontally into the granite base course at the westerly corner of Public School No. 136, on the northwesterly corner of Fourth Avenue and Forty-first Street. The bench mark faces Forty-first Street, is  $5\frac{1}{2}$  inches above the walk, and about 65 feet westerly from Fourth Avenue. Elevation: 53.8 feet above mean low water; 51.58 feet above standard sea level.

**Serial No. 788.** *Forty-first Street and Fourth Avenue:* B. M. 281 (B. E. & A.) is the highest point within a quadrant cut in the top of the southerly corner of the base of the limestone coping on the easterly side of steps at the main entrance to Public School No. 136, on the northwesterly corner of Fourth Avenue and Forty-first Street. The bench mark is about 35 feet westerly from Fourth Avenue and 1 foot above the sidewalk. Elevation: 54.5 feet above mean low water; 52.24 feet above standard sea level.

**Serial No. 789.** *Forty-first Street and Fourth Avenue:* B. M. 282 (B. E. & A.) is a square cut in the top of the northwesterly corner of the bluestone coping on the south-erly side of the second basement window from Forty-first Street, on the Fourth Ave-nue side of Public School No. 136, on the northwesterly corner of Forty-first Street and Fourth Avenue. Elevation: 56.4 feet above mean low water; 54.18 feet above standard sea level.

**Serial No. 790.** *Thirty-sixth Street and Fourth Avenue:* B. M. 283 (B. E. & A.) is a square cut in the top of the curved bluestone coping at the base of iron railing in front of the easterly corner of Public School No. 82, on the southwest-erly corner of Fourth Avenue and Thirty-sixth Street. Elevation: 29.0 feet above mean low water; 26.80 feet above standard sea level.

**Serial No. 791.** *Thirty-sixth Street and Fifth Avenue:* B. M. 295 (B. E. & A.) is a level triangular surface on the top of the northerly corner of the red sandstone coping at the northerly corner of the two-story brick elevated shop of the Brooklyn Rapid Transit, on the southerly corner of Fifth Avenue and Thirty-sixth Street. A corner of the curved coping above the bench mark was cut away, leaving the triangular surface, which is 3.1 feet above the ground. The letters "B. M." are cut in the curved coping above the bench mark. Elevation: 64.1 feet above mean low water; 61.91 feet above standard sea level.

**Serial No. 792.** *Thirty-sixth Street and Fifth Avenue:* B. M. 296 (B. E. & A.) is a cross lettered "B. M." cut in the top of the westerly corner of the bluestone water table on the Fifth Avenue side of the two-story brick elevated shop of the Brooklyn Rapid Transit, on the southerly corner of Fifth Avenue and Twenty-sixth Street. The cross is about 77 feet southwest of the corner. Elevation: 65.0 feet above mean low water; 62.78 feet above standard sea level.

**Serial No. 793.** *Thirty-sixth Street and Seventh Avenue:* B. M. 294 (B. E. & A.) is the center of the top of granite city monument at the corner of the fence, on the westerly corner of Seventh Avenue and Thirty-sixth Street. The top of the monument is 4 inches above the ground. Elevation: 90.5 feet above mean low water; 88.32 feet above standard sea level.

**Serial No. 794.** *Thirty-seventh Street:* B. M. 293 (B. E. & A.) is a square cut in the top of the southerly corner of an 8 by 8 inch granite post under the iron fence on the Thirty-seventh Street side of Greenwood Cemetery, between Seventh and Eighth Avenues. The bench mark is about 420 feet northwesterly from Eighth Avenue. Elevation: 105.0 feet above mean low water; 102.78 feet above standard sea level.

**Serial No. 795.** *Fortieth Street and Seventh Avenue:* B. M. 1205 (B. W. S.) is a cut on the north side of door step of entrance to building at northeast corner of Seventh Avenue and Fortieth Street. Elevation: 138.8 feet above mean low water; 136.56 feet above standard sea level.

**Serial No. 796.** *Forty-first Street and Seventh Avenue:* B. M. "N-17" (B. W. S.) is a pipe casing 4 feet south of wall of Sunset Park on south side of Forty-first Street, 21 feet west of beginning of wall and 100 feet west of Seventh Avenue. Elevation: 150.1 feet above mean low water; 147.91 feet above standard sea level.

**Serial No. 797.** *Fortieth Street and Ninth Avenue:* B. M. 1207 (B. W. S.) is a cut in the southeast corner of first step of stoop entrance at 3912 Ninth Avenue, near Fortieth Street. Elevation: 100.8 feet above mean low water; 98.63 feet above standard sea level.

**Serial No. 798. Fortieth Street and Utrecht Avenue:** B. M. 1208 (B. W. S.) is a cut at the southeast corner of step at stoop entrance at 969 Utrecht Avenue at Fortieth Street. Elevation: 88.2 feet above mean low water; 86.01 feet above standard sea level.

**Serial No. 799. Thirty-seventh Street and Tenth Avenue:** B. M. "NT" (B. W. S.) is a cross cut in top of bolt at southwest corner of signal tower at Thirty-seventh Street and Tenth Avenue. Elevation: 87.8 feet above mean low water; 85.56 feet above standard sea level.

**Serial No. 800. Twenty-eighth Street and Fourth Avenue:** B. M. (U. S. E.) is the top of the north bolt on the second hydrant counting from Fourth Avenue, on the north side of Twenty-eighth Street. Elevation: 23.6 feet above mean low water; 21.43 feet above standard sea level.

**Serial No. 801. Twenty-eighth Street and Third Avenue:** B. M. (U. S. E.) is an "L" cut in the southwest corner of catch basin at the southeast corner of Third Avenue and Twenty-eighth Street. Elevation: 16.2 feet above mean low water; 13.97 feet above standard sea level.

**Serial No. 802. Twenty-sixth Street and Third Avenue:** B. M. 1 (U. S. E.) is a square cut in the middle of the top of catch basin on the southwest corner of Twenty-sixth Street and Third Avenue. Elevation: 15.3 feet above mean low water; 13.04 feet above standard sea level.

**Serial No. 803. Erie Basin:** B. M. (U. S. E.) is a cross cut on top of the stationary part of bottom of the three hinges on west side of door which is on south end of long brick building (Beard's Stores) on the north side of entrance to Erie Basin. Elevation: 10.1 feet above mean low water; 7.88 feet above standard sea level.

**Serial No. 804. Erie Basin:** B. M. (U. S. E.) is a right angle cut on the southwest corner of cast-iron plate on the base of the column supporting the corner of the building at northeast corner of Richard and Van Dyke Streets near Erie Basin. Elevation: 11.9 feet above mean low water; 9.72 feet above standard sea level.

**Serial No. 805. Erie Basin:** B. M. (U. S. E.) is a "U" cut in the granite sill at the east end of the middle doorway of 124 Beard Street. The building faces the long pier leading to Erie Basin entrance. Elevation: 11.2 feet above mean low water; 8.97 feet above standard sea level.

**SECTION G.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 806 TO 944: ATLANTIC BASIN, BROOKLYN, TO LAWRENCE POINT.**

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>
806	Atlantic Dock.....	3.2	7.3	9.50	11.7	15.7
807	South of Montague Street.....	2.4	6.2	8.29	10.4	14.4
808	Boerum Place.....	50.1	53.9	55.97	58.1	62.1
809	do.....	50.0	53.8	55.91	58.0	62.0
810	do.....	50.0	53.8	55.88	58.0	62.0
811	do.....	48.4	52.0	54.06	56.2	60.2
812	Court Street.....	62.4	66.2	68.32	70.4	74.4
813	do.....	61.3	65.1	67.24	69.3	73.3
814	Borough Hall.....	60.3	64.6	66.71	68.8	72.8
815	Court Street.....	65.9	69.7	71.78	73.9	77.9
816	Fulton Street.....	69.3	73.1	75.16	77.3	81.3
817	North of Montague Street.....	2.8	6.6	8.75	10.8	14.8
818	do.....	2.9	6.7	8.76	10.9	14.9
819	Clinton Street.....	72.3	76.1	78.22	80.3	84.3
820	Prospect Street.....	41.3	45.1	47.21	49.3	53.3
821	Brooklyn Bridge.....	84.9	88.7	90.84	92.9	96.9
822	do.....	61.0	64.8	66.94	69.0	73.0
823	Water Street.....	6.1	9.9	12.00	14.1	18.1
824	do.....	5.3	9.1	11.21	13.3	17.3
825	Lawrence Street.....	38.3	42.6	44.68	46.8	50.8
826	Water Street.....	2.9	6.7	8.82	10.9	14.9
827	do.....	3.5	7.3	9.41	11.5	15.5
828	Washington Street.....	5.0	8.8	10.96	13.0	17.0
829	do.....	6.3	10.1	12.18	14.3	18.3
830	Pearl Street.....	11.1	14.9	17.03	19.1	23.1

## SECTION G.—Elevations of bench marks, serial Nos. 806 to 944: Atlantic Basin, Brooklyn, to Lawrence Point—Continued.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
831	Pearl Street .....	6.6	10.4	12.50	14.6	18.6
832	Bridge Street.....	44.5	48.5	50.50	52.5	56.5
833	Hudson Avenue.....	2.5	6.5	8.52	10.5	14.5
834	do.....	15.5	10.5	21.55	23.5	27.5
835	Brooklyn Navy Yard.....	10.9	14.9	16.86	18.9	22.9
836	do.....	0.7	4.7	6.68	8.7	12.7
837	City Park.....	7.2	11.2	13.25	15.2	19.2
838	do.....	6.7	10.7	12.74	14.7	18.7
839	Brooklyn Navy Yard.....	7.5	11.5	13.50	15.5	19.5
840	Cumberland Street.....	7.3	11.3	13.29	15.3	19.3
841	do.....	50.6	54.6	56.65	58.6	62.6
842	Fort Green Park.....	64.4	68.4	70.35	72.4	76.4
843	Grand Avenue.....	49.8	53.8	55.80	57.8	61.8
844	Wythe Avenue.....	24.0	28.0	29.99	32.0	36.0
845	South Sixth Street.....	24.1	28.1	30.12	32.1	36.1
846	do.....	30.0	34.0	36.00	38.0	42.0
847	do.....	24.8	28.8	30.82	32.8	36.8
848	do.....	21.0	25.0	26.98	29.0	33.0
849	Williamsburg Bridge.....	48.4	50.4	52.37	54.4	58.4
850	Driggs Avenue.....	43.4	47.4	49.35	51.4	55.4
851	do.....	6.5	10.5	12.53	14.5	18.5
852	Berry Street.....	10.0	14.0	15.98	18.0	22.0
853	do.....	9.9	13.9	15.91	17.9	21.9
854	do.....	8.4	12.4	14.42	16.4	20.4
855	Kent Street.....	0.1	10.1	12.08	14.1	18.1
856	Nassau Street.....	8.5	12.5	14.53	16.5	20.5
857	do.....	9.3	13.3	15.28	17.3	21.3
858	Franklin Street.....	8.4	12.4	14.30	16.4	20.4
859	do.....	8.3	12.3	14.30	16.3	20.3
860	do.....	8.3	12.3	14.28	16.3	20.3
861	Greenpoint Avenue.....	17.2	21.2	23.10	25.2	29.2
862	do.....	29.3	33.3	35.30	37.3	41.3
863	do.....	30.1	34.1	36.05	38.1	42.1
864	do.....	30.1	34.1	36.07	38.1	42.1
865	Kent Street.....	25.4	29.4	31.42	33.4	37.4
866	Dupont Street.....	12.8	16.8	18.76	20.8	24.8
867	do.....	10.4	14.4	16.39	18.4	22.4
868	Manhattan Avenue.....	12.4	16.4	18.35	20.4	24.4
869	do.....	2.4	6.4	8.42	10.4	14.4
870	Paidge Avenue.....	4.6	8.5	10.59	12.6	16.6
871	do.....	4.8	8.7	10.79	12.8	16.8
872	Newtown Creek.....	4.8	8.7	10.76	12.8	16.8
873	do.....	5.0	8.9	10.95	13.0	17.0
874	do.....	3.0	6.9	9.00	11.0	15.0
875	Greenpoint Avenue Bridge.....	4.4	8.3	10.32	12.4	16.4
876	do.....	4.4	8.3	10.40	12.4	16.4
877	Meeker Avenue Bridge.....	8.6	12.5	14.54	16.6	20.6
878	Metropolitan Bridge.....	3.5	7.4	9.49	11.5	15.5
879	do.....	3.7	7.6	9.68	11.7	15.7
880	Borden Avenue Bridge.....	10.9	14.8	16.81	18.9	22.9
881	do.....	10.6	14.5	16.84	18.6	22.6
882	do.....	10.6	14.5	16.65	18.6	22.6
883	Borden Avenue.....	10.7	14.6	16.69	18.7	22.7
884	do.....	10.6	14.5	16.55	18.6	22.6
885	do.....	11.0	14.9	16.93	19.0	23.0
886	do.....	10.6	14.5	16.63	18.6	22.6
887	do.....	10.6	14.5	16.53	18.6	22.6
888	do.....	10.7	14.6	16.62	18.7	22.7
889	do.....	7.0	10.9	12.96	15.0	19.0
890	Front Street.....	0.0	3.9	5.96	8.0	12.0
891	Vernon Avenue.....	2.4	6.3	8.35	10.4	14.4
892	do.....	3.3	7.2	9.25	11.3	15.3
893	Vernon Avenue Bridge.....	4.6	8.5	10.59	12.6	16.6
894	Vernon Avenue.....	7.3	11.2	13.22	15.3	19.3
895	Vernon Avenue Bridge.....	6.7	10.6	12.63	14.7	18.7

## SECTION G.—Elevations of bench marks, serial Nos. 806 to 944: Atlantic Basin, Brooklyn, to Lawrence Point—Continued.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
896	Borden Avenue.....	6.8	10.7	12.77	14.8	18.8
897	do.....	1.9	5.8	7.88	9.9	13.9
898	Vernon Avenue Bridge.....	12.3	16.1	18.19	20.2	24.2
899	Vernon Avenue.....	6.0	9.9	11.95	14.0	18.0
900	do.....	7.9	12.0	14.18	16.4	20.4
901	Foot of Nott Avenue.....	2.3	6.4	8.61	10.8	14.8
902	do.....	2.1	6.2	8.41	10.6	14.6
903	Vernon Avenue.....	5.3	9.4	11.57	13.8	17.8
904	do.....	7.8	11.4	13.57	15.8	19.8
905	Queensboro Bridge.....	12.0	16.1	18.25	20.5	24.5
906	do.....	0.9	5.0	7.21	9.4	13.4
907	do.....	10.7	14.8	17.03	19.2	23.2
908	do.....	14.1	18.2	20.43	22.6	26.6
909	do.....	14.5	18.6	20.53	23.0	27.0
910	do.....	22.8	26.9	29.12	31.5	35.3
911	Ravenswood.....	1.4	5.8	8.11	10.4	14.4
912	do.....	3.2	7.6	9.96	12.2	16.2
913	do.....	6.9	11.3	13.68	15.9	19.9
914	do.....	20.8	25.2	27.53	29.8	33.8
915	Astoria.....	26.3	30.7	33.02	35.3	39.3
916	do.....	25.7	30.1	32.41	34.7	38.7
917	do.....	25.3	29.7	32.03	34.3	38.3
918	do.....	22.7	27.1	29.44	31.7	35.7
919	do.....	7.0	11.4	13.67	16.0	20.0
920	do.....	2.5	6.9	9.20	11.5	15.5
921	do.....	3.2	7.4	9.78	12.2	16.2
922	do.....	10.1	14.3	16.67	19.1	23.1
923	do.....	1.6	6.0	8.56	11.1	15.1
924	do.....	2.5	6.9	9.40	12.0	16.0
925	do.....	2.8	6.8	9.56	12.3	16.3
926	do.....	6.5	10.5	12.26	16.0	20.0
927	do.....	3.8	7.8	10.53	13.3	17.3
928	do.....	1.4	5.4	8.18	10.9	14.9
929	do.....	0.9	4.9	7.66	10.4	14.4
930	do.....	2.1	6.1	8.35	11.6	15.6
931	do.....	7.0	11.0	12.74	16.5	20.5
932	do.....	6.9	10.9	12.63	16.4	20.4
933	do.....	55.5	59.5	62.27	65.0	69.0
934	do.....	60.9	64.0	67.17	70.4	74.4
935	do.....	60.5	63.6	66.35	70.0	74.0
936	do.....	39.1	42.2	45.45	48.6	52.6
937	do.....	10.4	13.5	16.69	19.9	23.9
938	do.....	0.5	3.6	6.76	10.0	14.0
939	do.....	6.6	9.7	12.90	16.1	20.1
940	do.....	4.1	7.2	10.36	13.6	17.6
941	do.....	5.5	8.6	11.76	15.0	19.0
942	do.....	8.6	6.5	9.82	13.1	17.1
943	do.....	2.5	5.4	8.68	12.0	16.0
944	do.....	2.1	5.0	8.25	11.6	15.6

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 806 TO 944: ATLANTIC BASIN, BROOKLYN, TO LAWRENCE POINT.

Serial No. 806. *Atlantic Dock*: B. M. G. (C. & G. S.) is a cross cut in on the seaward face on one of the stone store buildings on Atlantic Dock facing Buttermilk Channel. It is on the south end of the fourth stone above the foundation in the space between the two iron doors of store No. 22, and directly under the number. Elevation: 11.7 feet above mean low water; 9.50 feet above standard sea level.

Serial No. 807. *South of Montague Street*: B. M. JS-11 (U. S. E.) is a square cut on top of bolt in iron mooring post at intersection of bulkhead and the north side of

Pier 17, New York Dock Co. Elevation: 10.4 feet above mean low water; 8.29 feet above standard sea level.

Serial No. 808. *Boerum Place*: B. M. C (C. & G. S.) is the top of the inclined water table, 5.67 feet south of the extreme northeast corner, on the east side of the Kings County Hall of Records, on the southwest corner of Boerum Place and Fulton Street. The stone above the point is lettered "C, U. S. C. S.," and an arrow on the water table points to the bench mark. Elevation: 58.1 feet above mean low water; 55.97 feet above standard sea level.

Serial No. 809. *Boerum Place*: B. M. 398 (B. E. & A.) is the bottom of a square cut in the top of the extreme northeast corner of the granite water table on the Kings County Hall of Records, on the southwest corner of Boerum Place and Fulton Street. The corner of the inclined water table was cut away, leaving a 2-inch level square plate which is the bench mark. It is 1.25 feet above the sidewalk and lettered "B. M.," Elevation: 58.0 feet above mean low water; 55.91 feet above standard sea level.

Serial No. 810. *Boerum Place*: B. M. 399 (B. E. & A.) is the bottom of a square cut in the top of the extreme southeast corner of the granite water table on the Kings County Hall of Records, on the northwest corner of Boerum Place and Livingston Street. The bench mark is 2.65 feet above the sidewalk. Elevation: 58.0 feet above mean low water; 55.88 feet above standard sea level.

Serial No. 811. *Boerum Place*: B. M. 400 (B. E. & A.) is a small square cut in the edge of the granite sill of the most southerly basement window on the Boerum Place side of the Kings County Hall of Records, between Livingston and Fulton Streets. The bench mark is 10.5 feet north of the Livingston Street corner of the building. Elevation: 66.2 feet above mean low water; 54.06 feet above standard sea level.

Serial No. 812. *Court Street*: B. M. 442 (B. E. & A.) is a square cut in the top of the southeast corner of the granite pedestal of column on the south side of the main entrance to the Old Dime Savings Bank, now the United States Title Insurance Co., on the southwest corner of Court and Remsen Streets. The bench mark is about 38 feet south of Remsen Street and 2 feet above the sidewalk. (Established by the public service commission.) Elevation: 70.4 feet above mean low water; 68.32 feet above standard sea level.

Serial No. 818. *Court Street*: B. M. 443 (B. E. & A.) is a square cut in the southeast corner of a monolithic flagstone on the southwest corner of Court and Remsen Streets. The bench mark is 13.8 feet from the Court Street curb and 12.9 feet from the Remsen Street curb. Elevation: 69.3 feet above mean low water; 67.24 feet above standard sea level.

Serial No. 814. *Borough Hall*: B. M. 444 (B. E. & A.) is a square cut in the top of the south end of the sill of the south window on the west side of the Brooklyn Borough Hall. The bench mark is 7 feet from the south side of the building and 2.3 feet above the ground. Elevation: 68.8 feet above mean low water; 66.71 feet above standard sea level.

Serial No. 815. *Court Street*: B. M. 445 (B. E. & A.) is a 2-inch square cut in the top of the north end of the lowest step at the Court Street entrance to the Mechanic's Bank, on the northwest corner of Court Street and Montague Street. The bench mark is 12 feet from the south side of the building and 6 inches above the sidewalk. Elevation: 78.9 feet above mean low water; 71.78 feet above standard sea level.

Serial No. 816. *Fulton Street*: B. M. 446 (B. E. & A.) is a 1/2-inch copper bolt in the top of the northwest corner of the limestone column base on the east side of the entrance to No. 338 Fulton Street, just west of Court Street. The bolt is in the base of the third column from the west end of the building on Fulton Street, and about 2 feet above the sidewalk. Elevation: 77.8 feet above mean low water; 75.16 feet above standard sea level.

Serial No. 817. *North of Montague Street*: B. M. JS-10 (U. S. E.) is a square cut in doorstep on warehouse No. 37 on the water front. It is the southerly door of the warehouse, and is 4 feet from the roof drain leader and 116.4 feet from the intersection of the north side of the new pier 9 and the bulkhead. Elevation: 10.8 feet above mean low water; 8.75 feet above standard sea level.

Serial No. 818. *North of Montague Street*: B. M. JS-9 (U. S. E.) is a square cut on top of bolt in mooring post at bulkhead between new Pier 9 and Pier 10. It is 20.8 feet from intersection of bulkhead and the south side of new Pier 9 and 49.7 feet from intersection of north side of Pier 10 and bulkhead. Elevation: 10.9 feet above mean low water; 8.76 feet above standard sea level.

**Serial No. 819.** *Clinton Street:* B. M. 447 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt in the top of the northeast corner of the granite base of the Hamilton Monument in front of the Hamilton Club, on the southwest corner of Clinton and Remsen Streets. Elevation: 80.3 feet above mean low water; 78.22 feet above standard sea level.

**Serial No. 820.** *Prospect Street:* B. M. 448 (B. E. & A.) is a 2 $\frac{1}{2}$ -inch square cut in the top of a large base block of the Brooklyn Bridge, on the northeast corner of Prospect Street and Main Street. The bench mark is on the easterly line of Main Street about 40 feet north of the north line of Prospect Street, and 2.25 feet above the sidewalk. The letters "B. M." are cut in the base of the pyramid-shaped block above the bench mark. Elevation: 49.3 feet above mean low water; 47.21 feet above standard sea level.

**Serial No. 821.** *Brooklyn Bridge:* B. M. 449 (B. E. & A.) is a square cut in the top of the anchorage on the Brooklyn side of the Brooklyn Bridge. The bench mark is on the westerly edge of the anchorage at the north roadway, between Front Street and Mercein Street, and near post No. 122. It is 8 feet west of the fender post. Elevation: 92.9 feet above mean low water; 90.84 feet above standard sea level.

**Serial No. 822.** *Brooklyn Bridge:* B. M. 450 (B. E. & A.) is a square cut in the top of the northeast corner of the granite base of elevated railroad column on the west side of the north roadway of the Brooklyn Bridge and about 27 feet north of Sand Street. (Established by the department of bridges.) Elevation: 69.0 feet above mean low water; 66.94 feet above standard sea level.

**Serial No. 823.** *Water Street:* B. M. JS-8 (U. S. E.) is a square cut in the top of hose connection of a fire hydrant on Water Street at Fulton Ferry and is near the break of curb line of Water Street. It is 15.7 feet from trolley-wire pole and 29.9 feet from trolley pole near the break of street line. Elevation: 14.1 feet above mean low water; 12.00 feet above standard sea level.

**Serial No. 824.** *Water Street:* B. M. JS-7 (U. S. E.) is a square cut on stone step near the entrance to a café, 10.6 feet from the corner of the café and hotel brick building, 24 feet from a trolley pole near the intersection curb line of Fulton and Water Streets and 7.6 feet from the center of a fire hydrant on Water Street near Fulton Street. Elevation: 13.3 feet above mean low water; 11.21 feet above standard sea level.

**Serial No. 825.** *Lawrence Street:* B. M. 464 (B. E. & A.) is a square cut near the north end of the granite basin head on the northeast corner of Lawrence and Willoughby Streets. Elevation: 46.8 feet above mean low water; 44.68 feet above standard sea level.

**Serial No. 826.** *Water Street:* B. M. JS-5 (U. S. E.) is a square cut in concrete under iron pipe railing at Sweeney Building at southeast corner of Main and Water Streets. It is 3.2 feet from corner of building and 27 feet from the center of fire hydrant on Water near Main Street. Elevation: 10.9 feet above mean low water; 8.82 feet above standard sea level.

**Serial No. 827.** *Water Street:* B. M. JS-6 (U. S. E.) is a square cut in concrete door step of R. Gair building No. 6 at the northeast corner of Main and Water Streets, 20.5 feet from corner of building. Elevation: 11.5 feet above mean low water; 9.41 feet above standard sea level.

**Serial No. 828.** *Washington Street:* B. M. JS-4 (U. S. E.) is a square cut on the stone coping under the iron pipe railing at the northeast corner of Plymouth and Washington Streets. It is 11 feet from the corner of Charles Williams Building No. 7 and 45.1 feet from the center of fire hydrant on the west side of Washington Street, near Plymouth Street. Elevation: 13.0 feet above mean low water; 10.96 feet above standard sea level.

**Serial No. 829.** *Washington Street:* B. M. JS-3 (U. S. E.) is a square cut in the second step from the sidewalk on the right-hand side going up, of the concrete steps and stoop of Chas. Williams's stores, Building No. 7, on the northwest corner of Washington and Plymouth Streets. Elevation: 14.3 feet above mean low water; 12.18 feet above standard sea level.

**Serial No. 830.** *Pearl Street:* B. M. JS-2 (U. S. E.) is a square cut in the corner of the sill of the first window on Plymouth and Pearl Streets of E. W. Eliss Building. It is 3.3 feet from the corner of the building. Elevation: 19.1 feet above mean low water; 17.03 feet above standard sea level.

**Serial No. 831.** *Pearl Street:* B. M. JS-1 (U. S. E.) is a square cut in iron plating 0.5 foot wide on the sidewalk elevation and is 1 foot from the corner of Arbuckle Bros., concrete building, which is on the northwest corner of Pearl and Plymouth Streets and is 40.3 feet from an electric street lamp-post on the northeast corner and 38.4

feet from center of fire hydrant on the southwest corner of Pearl and Plymouth Streets. Elevation: 14.6 feet above mean low water; 12.50 feet above standard sea level.

**Serial No. 882. Bridge Street:** B. M. 451 (B. E. & A.) is a square cut in the top of the southwest corner of the bluestone doorsill at the house entrance to tenement No. 137 Bridge Street, and about 55 feet north of Sands Street. Elevation: 52.5 feet above mean low water; 50.50 feet above standard sea level.

**Serial No. 883. Hudson Avenue:** B. M. 453 (B. E. & A.) is a square cut in the top of the south end of the granite basin head on the east side of Hudson Avenue, about 105 feet north of the north line of Marshall Street. Elevation: 10.5 feet above mean low water; 8.52 feet above standard sea level.

**Serial No. 884. Hudson Avenue:** B. M. 454 (B. E. & A.) is the bottom of a square cut in the top of the corner of the brownstone water table at the corner of the four-story brick tenement on the southeast corner of Hudson Avenue and John Street. Elevation: 23.5 feet above mean low water; 21.55 feet above standard sea level.

**Serial No. 885. Brooklyn Navy Yard:** B. M. 455 (B. E. & A.) is a 2-inch square cut in the top of the west end of the second granite step at the Sands Street entrance to the one-story stone and brick guardhouse in the Brooklyn Navy Yard, on the north side of the Sands Street entrance. The bench mark is about 16 feet east of the gate. Elevation: 18.9 feet above mean low water; 16.86 feet above standard sea level.

**Serial No. 886. Brooklyn Navy Yard:** B. M. 456 (B. E. & A.) is a square cut in the southwest corner of Dry Dock No. 1, at the foot of Third Street, in the Brooklyn Navy Yard. The bench mark is on the massive coping stone and 5 inches from the inner corner of the dry dock. It is about 13 feet west of the center line of Third Street. Elevation: 8.7 feet above mean low water; 6.68 feet above standard sea level.

**Serial No. 887. City Park:** B. M. 457 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in a concrete city monument in the westerly side of City Park. The bench mark is 10 feet east of the iron railing on the east side of Navy Street, and 65.5 feet south of the iron railing on the south side of Flushing Avenue. Elevation: 15.2 feet above mean low water; 13.25 feet above standard sea level.

**Serial No. 888. City Park:** B. M. 458 (B. E. & A.) is a square cut in the top of the westerly end of the large granite gate sill at the entrance to City Park, on the southeast corner of Flushing Avenue and Navy Street. Elevation: 14.7 feet above mean low water; 12.74 feet above standard sea level.

**Serial No. 889. Brooklyn Navy Yard:** B. M. D (C. & G. S.) is a square cavity of 1 inch side and of half an inch depth, cut in the stone sill of the double door at south end of south front of United States Machine Shop No. 28 (in 1870) in the navy yard, close to the gate on Flushing Avenue. It is about 1 foot from the front edge of the sill, and the bottom of the cavity is the mark. Elevation: 15.5 feet above mean low water; 13.50 feet above standard sea level.

**Serial No. 840. Cumberland Street:** B. M. 466 (B. E. & A.) is a square cut in the top of the south end of the iron basin head on the southwest corner of Flushing Avenue and Cumberland Street. Elevation: 15.3 feet above mean low water; 13.29 feet above standard sea level.

**Serial No. 841. Cumberland Street:** B. M. 460 (B. E. & A.) is a square cut in the top of the southwest corner of the iron base of elevated railroad column on the southwest corner of Cumberland Street and Myrtle Avenue. The square is 3 inches above the sidewalk. Elevation: 58.6 feet above mean low water; 56.65 feet above standard sea level.

**Serial No. 842. Fort Green Park:** B. M. 472 (B. E. & A.) is the top of a  $\frac{3}{4}$ -inch iron rod inside of a wrought-iron-pipe casing in the southeasterly corner of Fort Green Park. The bench mark is 5 feet west of the center of the park wall on Cumberland Street and about 46 feet from the line of the park wall on De Kalb Avenue. Elevation: 72.4 feet above mean low water; 70.38 feet above standard sea level.

**Serial No. 843. Grand Avenue:** B. M. 461 (B. E. & A.) is a square cut in the top of the southwest corner of the bluestone coping on the northeast corner of Grand Avenue and Willoughby Avenue. Elevation: 57.8 feet above mean low water; 55.80 feet above standard sea level.

**Serial No. 844. Wythe Avenue:** B. M. 468 (B. E. & A.) is a quadrant cut in the top of the southwest corner of the granite basin head on the northwest corner of Wythe Avenue and South Eighth Street. Elevation: 32.0 feet above mean low water; 29.99 feet above standard sea level.

**Serial No. 845. South Sixth Street:** B. M. 469 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt leaded horizontally into a granite block forming part of the anchorage on the south side of the Williamsburg Bridge. The bolt faces South Sixth Street and is just east

of the westerly line of Durham Place. It is 21 feet west of the southeast corner of the anchorage and 1.1 feet above the ground. Elevation: 32.1 feet above mean low water; 30.12 feet above standard sea level.

**Serial No. 846.** *South Sixth Street:* B. M. 470 (B. E. & A.) is a square cut in the top of the southeast corner of the 1-foot high granite coping on the northwest corner of South Sixth Street and Wythe Avenue. The bench mark is at the east end of the iron railing and about 16 feet from the west curb of Wythe Avenue. Elevation: 38.0 feet above mean low water; 36.00 feet above standard sea level.

**Serial No. 847.** *South Sixth Street:* B. M. 471 (B. E. & A.) is a cross cut in the south face of a granite block forming part of the anchorage on the south side of the Williamsburg Bridge. The cross is just east of the westerly line of Durham Place, is 21 feet west of the southeast corner of the anchorage, and 1.9 feet above the ground. Elevation: 32.8 feet above mean low water; 30.82 feet above standard sea level.

**Serial No. 848.** *South Sixth Street:* B. M. "Window Sill" (U. S. E.) is a square cut in west end of stone window sill, on South Sixth Street, fourth window from corner of brick building on corner of Kent Avenue and South Sixth Street. Elevation: 29.0 feet above mean low water; 26.98 feet above standard sea level.

**Serial No. 849.** *Williamsburg Bridge:* B. M. NR (B. W. S.) is a square cut on water table 1 foot south of corner of masonry of Williamsburg Bridge at southeast corner of Bedford Avenue and South Fifth Street. Elevation: 54.4 feet above mean low water; 52.37 feet above standard sea level.

**Serial No. 850.** *Driggs Avenue:* B. M. 1026 (B. W. S.) is a square cut in southeast corner of stone base of "L" column of northwest corner of Broadway and Driggs Avenue. Elevation: 51.4 feet above mean low water; 49.35 feet above standard sea level.

**Serial No. 851.** *Driggs Avenue:* B. M. 1328 (B. W. S.) is knob southwest corner basin head northwest corner Driggs Avenue and North Tenth Street. Elevation: 14.5 feet above mean low water; 12.53 feet above standard sea level.

**Serial No. 852.** *Berry Street:* B. M. 7 (U. S. E.) is a square cut on catch basin on southwest corner of North Thirteenth and Berry Streets. Elevation: 18.0 feet above mean low water; 15.98 feet above standard sea level.

**Serial No. 853.** *Berry Street:* B. M. 8 (U. S. E.) is a square cut on catch basin about 7 feet west of southeast corner of North Thirteenth and Berry Streets. Elevation: 17.9 feet above mean low water; 15.91 feet above standard sea level.

**Serial No. 854.** *Berry Street:* B. M. 6 (U. S. E.) is a square cut on corner of catch basin on northwest corner of North Fourteenth and Berry Streets. Elevation: 16.4 feet above mean low water; 14.42 feet above standard sea level.

**Serial No. 855.** *Kent Avenue:* B. M. 493 (B. E. & A.) is a quadrant cut in the west end of the south abutment of old highway bridge on Kent Avenue at North Fourteenth Street. Elevation: 14.1 feet above mean low water; 12.08 feet above standard sea level.

**Serial No. 856.** *Nassau Street:* B. M. 4 (U. S. E.) is a square cut on catch basin on southwest corner of Nassau Street and Manhattan Avenue. Elevation: 16.5 feet above mean low water; 14.53 feet above standard sea level.

**Serial No. 857.** *Nassau Street:* B. M. 5 (U. S. E.) is a square cut on catch basin on southeast corner of Nassau Street and Manhattan Avenue. Elevation: 17.3 feet above mean low water; 15.26 feet above standard sea level.

**Serial No. 858.** *Franklin Street:* B. M. 494 (B. E. & A.) is a quadrant cut in the top of the east end of the granite head on the southeast corner of Franklin and Oak Streets. Elevation: 16.4 feet above mean low water; 14.36 feet above standard sea level.

**Serial No. 859.** *Franklin Street:* B. M. 495 (B. E. & A.) is a square cut in the top of the east end of the granite basin head on the northeast corner of Franklin and Oak Streets. Elevation: 16.3 feet above mean low water; 14.30 feet above standard sea level.

**Serial No. 860.** *Oak Street & Franklin Street:* B. M. "Oak Street" (B. W. S.) is a cut on east end of basin head, northeast corner of Franklin and Oak Streets. Elevation: 16.3 feet above mean low water; 14.28 feet above standard sea level.

**Serial No. 861.** *Greenpoint Avenue:* B. M. "Greenpoint Avenue" (B. W. S.) is a cross cut at base of railing northeast corner of Greenpoint Avenue and Franklin Street. Bench mark is 1 foot north of angle in stone wall. Elevation: 25.2 feet above mean low water; 23.16 feet above standard sea level.

**Serial No. 862.** *Greenpoint Avenue:* B. M. 499 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt in the top of the large granite block on the west side of the wide entrance to No. 124

Greenpoint Avenue, between Manhattan Avenue and Franklin Street. The building is a two-story limestone structure, occupied by Hook and Ladder Company No. 106. The bolt is 6 feet east of the west side of the building and 4.4 feet above the sidewalk. Elevation: 37.3 feet above mean low water; 35.30 feet above standard sea level.

**Serial No. 868.** *Greenpoint Avenue:* B. M. 3 (U. S. E.) is a square cut on stone base of iron railing around the bank on the southeast corner of Manhattan and Greenpoint Avenues. Elevation: 38.1 feet above mean low water; 36.05 feet above standard sea level.

**Serial No. 864.** *Greenpoint Avenue:* B. M. 2 (U. S. E.) is a square cut on stone base of brass railing on stairway leading to underground toilet at Manhattan and Greenpoint Avenues. Elevation: 38.1 feet above mean low water; 36.07 feet above standard sea level.

**Serial No. 865.** *Kent Street:* B. M. 1 (U. S. E.) is a square cut on curb at southeast corner of Kent Street and Manhattan Avenue. Elevation: 33.4 feet above mean low water; 31.42 feet above standard sea level.

**Serial No. 866.** *Dupont Street:* B. M. 501 (B. E. & A.) is a brass bracket in the bluestone base course on the north side of Public School No. 31, on the south side of Dupont Street, between Franklin Street and Manhattan Avenue. The bracket is about 15 feet west of the main entrance. Elevation: 20.8 feet above mean low water; 18.76 feet above standard sea level.

**Serial No. 867.** *Dupont Street:* B. M. 502 (B. E. & A.) is a square cut in the top of the southwest corner of the lowest bluestone step at the house entrance to the three-story frame tenement at No. 131 Dupont Street, about 110 feet east of Manhattan Avenue. (Established by the public service commission.) Elevation: 18.4 feet above mean low water; 16.39 feet above standard sea level.

**Serial No. 868.** *Manhattan Avenue:* B. M. 503 (B. E. & A.) is a square cut in the top of the southeast corner of the granite coping stone on the east side of the approach to the highway bridge (Jackson Avenue Bridge) over Newtown Creek at Manhattan Avenue. The bench mark is at the south end of the iron railing and almost exactly on line with the north line of Ash Street. Elevation: 20.4 feet above mean low water; 18.35 feet above standard sea level.

**Serial No. 869.** *Manhattan Avenue:* B. M. 504 (B. E. & A.) is a 2-inch square cut in the top of the granite coping of the bulkhead on the south side of Newtown Creek at Manhattan Avenue. The bench mark is 5.5 feet west of the east line of Manhattan Avenue. Elevation: 10.4 feet above mean low water; 8.42 feet above standard sea level.

**Serial No. 870.** *Paidge Avenue:* B. M. 9 (U. S. E.) is a square cut on curb on southwest corner of Provost Street and Paidge Avenue. Elevation: 12.6 feet above mean low water; 10.59 feet above standard sea level.

**Serial No. 871.** *Paidge Avenue:* B. M. 10 (U. S. E.) is a square cut in curb alongside of catch basin on southeast corner of Provost Street and Paidge Avenue. Elevation: 12.8 feet above mean low water; 10.79 feet above standard sea level.

**Serial No. 872.** *Newtown Creek:* B. M. 27 (U. S. E.) is a square cut on west end of sill of window west of little door on north side of building belonging to J. D. Leary Co., south of Newtown Creek and west of Whale Creek, marked "U. S." Elevation: 12.8 feet above mean low water; 10.76 feet above standard sea level.

**Serial No. 873.** *Newtown Creek:* B. M. 28 (U. S. E.) is a square cut on center of window sill of most easterly window on north side of building belonging to J. D. Leary Co., south of Newtown Creek and west of Whale Creek, marked "U. S." Elevation: 13.0 feet above mean low water; 10.95 feet above standard sea level.

**Serial No. 874.** *Newtown Creek:* B. M. 29 (U. S. E.) is a square cut on northeast corner of masonry block forming foundation for northeast steel support of water tank. This tank is west of building belonging to J. D. Leary & Co., on south side of Newtown Creek and west of Whale Creek. Elevation: 11.0 feet above mean low water; 9.00 feet above standard sea level.

**Serial No. 875.** *Greenpoint Avenue Bridge:* B. M. 14 (U. S. E.) is a square cut on southeast corner of west pier of Greenpoint Avenue Bridge, marked "U. S." Elevation: 12.4 feet above mean low water; 10.32 feet above standard sea level.

**Serial No. 876.** *Greenpoint Avenue Bridge:* B. M. 15 (U. S. E.) is a square cut on southwest corner of east pier of the Greenpoint Avenue Bridge, marked "U. S." Elevation: 12.4 feet above mean low water; 10.40 feet above standard sea level.

**Serial No. 877.** *Meeker Avenue Bridge:* B. M. 30 (U. S. E.) is a square cut on southwest corner of west back wall of Meeker Avenue Bridge over Newtown Creek. Elevation: 16.6 feet above mean low water; 14.54 feet above standard sea level.

**Serial No. 878. Metropolitan Bridge:** B. M. 32 (U. S. E.) is a square cut in north-west corner of stone base supporting iron fence post at northeast corner of the Metropolitan Bridge, at the head of Newtown Creek. Elevation: 11.5 feet above mean low water; 9.49 feet above standard sea level.

**Serial No. 879. Metropolitan Bridge:** B. M. 33 (U. S. E.) is a square cut on northeast corner of stone base supporting iron fence post at northeast corner of the Metropolitan Bridge, at the head of Newtown Creek. Elevation: 11.7 feet above mean low water; 9.68 feet above standard sea level.

**Serial No. 880. Borden Avenue Bridge:** B. M. 22 (U. S. E.) is a square cut on north-west corner of base of iron fence post (nearest to bridge) supporting fence on south side of Borden Avenue Bridge, east approach near Dutch Kills Creek. Elevation: 18.9 feet above mean low water; 16.81 feet above standard sea level.

**Serial No. 881. Borden Avenue Bridge:** B. M. 23 (U. S. E.) is a square cut in southwest corner of concrete abutment adjacent west side of Borden Avenue Bridge, over Dutch Kills Creek alongside Long Island City, N. Y. Elevation: 18.6 feet above mean low water; 16.54 feet above standard sea level.

**Serial No. 882. Borden Avenue Bridge:** B. M. 25 (U. S. E.) is a square cut on southwest corner of concrete abutment adjacent northeast corner of Borden Avenue Bridge over Dutch Kills Creek, marked "U. S." Elevation: 18.6 feet above mean low water; 16.55 feet above standard sea level.

**Serial No. 883. Borden Avenue:** B. M. 636 (B. E. & A.) is a square cut in the granite coping stone on top of the easterly abutment of the highway bridge on Borden Avenue over Dutch Kills Creek. The bench mark is on the south side of Borden Avenue about 12 feet south of the south curb, and 6 inches east of the east edge of the iron railing. Elevation: 18.7 feet above mean low water; 16.68 feet above standard sea level.

**Serial No. 884. Borden Avenue:** B. M. 637 (B. E. & A.) is a square cut in the top of the northeast corner of the 3.7 feet wide granite coping stone on the south end of the east abutment of the highway bridge on Borden Avenue, over Dutch Kills Creek. The bench mark is on line with the south curb of the bridge. (Established by the department of bridges.) Elevation: 18.6 feet above mean low water; 16.55 feet above standard sea level.

**Serial No. 885. Borden Avenue:** B. M. 638 (B. E. & A.) is a cross cut in the top of the southeasterly anchor bolt at the base of electric light pole on the north end of the easterly abutment of the highway bridge on Borden Avenue, over Dutch Kills Creek. The bench mark is on line with the north side of the bridge and 3 feet west of the bridge tender's house. (Established by the Queens Topographical Bureau.) Elevation: 19.0 feet above mean low water; 16.93 feet above standard sea level.

**Serial No. 886. Borden Avenue:** B. M. 639 (B. E. & A.) is a square lettered "U. S." cut in the top of the north end of the east abutment of the highway bridge on Borden Avenue, over Dutch Kills Creek. The bench mark is on the southwest corner of 3.7-foot wide coping stone, is on the west end of the abutment, and on line with the north curb. Elevation: 18.6 feet above mean low water; 16.53 feet above standard sea level.

**Serial No. 887. Borden Avenue:** B. M. 640 (B. E. & A.) is a square lettered "U. S." cut in the top of the southeast corner of the 2.5-foot wide granite coping stone on the north end of the west abutment of the highway bridge on Borden Avenue, over Dutch Kills Creek. The bench mark is on the east edge of the west abutment and on line with the north curb. Elevation: 18.6 feet above mean low water; 16.53 feet above standard sea level.

**Serial No. 888. Borden Avenue:** B. M. 641 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt set vertically in the granite coping stone on the north end of the west abutment of the highway bridge on Borden Avenue, over Dutch Kills Creek. The bolt is at the east corner of the iron railing, is 11 inches from the north end of the abutment and  $3\frac{1}{4}$  inches from the east end. Elevation: 18.7 feet above mean low water; 16.62 feet above standard sea level.

**Serial No. 889. Borden Avenue:** B. M. 20 (C. & G. S.), and known as B. M. 9, is a triangle  $\Delta$  cut in the extreme southern end of the coping of the south abutment of the wagon bridge where Borden Avenue crosses the arm of Newtown Creek. Elevation: 15.0 feet above mean low water; 12.96 feet above standard sea level.

**Serial No. 890. Front Street:** B. M. 21 (C. & G. S.), and known as tidal B. M. 8, is on the curbing on the west side of Front Street close to where the Long Island railroad track crosses the street in reaching the Annex Pier. The bench mark is at the extreme southeast end of the fence that surrounds the triangular space between the office of the Long Island News Co. and the Annex Pier. Elevation: 8.0 feet above mean low water; 5.96 feet above standard sea level.

**Serial No. 891.** *Vernon Avenue:* B. M. 642 (B. E. & A.) is a square cut in the top of the southwest corner of a granite coping stone on top of the masonry bulkhead on the north side of Newtown Creek at Vernon Avenue. The bench mark is about 11 feet east of the west curb line of Vernon Avenue. Elevation: 10.4 feet above mean low water; 8.35 feet above standard sea level.

**Serial No. 892.** *Vernon Avenue:* B. M. 643 (B. E. & A.) is a square cut in the top of the southwest corner of the granite base block of the most southerly steel column under the westerly side of the highway bridge (Jackson Avenue Bridge) over Newtown Creek at Vernon Avenue. The bench mark is about 41 feet north of the north side of Newtown Creek and about 19 feet east of the west curb line of Vernon Avenue. Elevation: 11.3 feet above mean low water; 9.25 feet above standard sea level.

**Serial No. 893.** *Vernon Avenue Bridge:* B. M. 24 (U. S. E.) is a square cut in the northwest corner of the bedplate of the eighth column south of Borden Avenue under the west side of the Vernon Avenue Bridge approach. Elevation: 12.6 feet above mean low water; 10.59 feet above standard sea level.

**Serial No. 894.** *Vernon Avenue:* B. M. 644 (B. E. & A.) is a square cut in the top of the south edge of the granite base block of steel column under the east side of the approach to the highway bridge over Newtown Creek (Jackson Avenue Bridge) at Vernon Avenue. The bench mark is about 5 feet north of the north line of Borden Avenue on the east side of Vernon Avenue. Elevation: 15.3 feet above mean low water; 13.22 feet above standard sea level.

**Serial No. 895.** *Vernon Avenue Bridge:* B. M. 1A (U. S. E.) is a square cut in the northwest corner of bedplate of the first column south of Borden Avenue on west side of Vernon Avenue Bridge approach. Elevation: 14.7 feet above mean low water; 12.63 feet above standard sea level.

**Serial No. 896.** *Borden Avenue:* B. M. 645 (B. E. & A.) is a square cut in the top of the east end of the bluestone doorsill at the main entrance to the Y. M. C. A. building on the north side of Borden Avenue about 27 feet west of West Avenue. Elevation: 14.8 feet above mean low water; 12.77 feet above standard sea level.

**Serial No. 897.** *Borden Avenue:* B. M. 22 (C. & G. S.) is a cross within a square cut in the top of the bluestone sill at the northwest corner of the space, about 1 inch from the west edge of the sill and 3¼ inches from the south end of the brick wall on Millers Long Island City Hotel on the northeast corner of Borden Avenue and Front Street. The entrance to the building is at the southwest corner, there being a triangular space or vestibule before the door. It is also known as B. M. B. Elevation: 9.9 feet above mean low water; 7.88 feet above standard sea level.

**Serial No. 898.** *Vernon Avenue Bridge:* B. M. 2 (U. S. E.) is a square cut on west side of retaining wall of west walk of north approach of Vernon Avenue Bridge near end of wall and near Fourth Street. Elevation: 20.2 feet above mean low water; 18.19 feet above standard sea level.

**Serial No. 899.** *Vernon Avenue:* B. M. 3 (U. S. E.) is a square cut on southwest corner of catch basin on west side of Vernon Avenue and about 25 feet south of Ninth Street. Elevation: 14.0 feet above mean low water; 11.95 feet above standard sea level.

**Serial No. 900.** *Vernon Avenue:* B. M. 4 (U. S. E.) is a square cut on west end of stone window sill next to office door on south side of C. A. Willey & Co.'s factory on Nott Avenue and Vernon Avenue. Elevation: 16.4 feet above mean low water; 14.18 feet above standard sea level.

**Serial No. 901.** *Foot of Nott Avenue:* B. M. 55 (U. S. E.) is a square cut, with a copper tack in each corner, in cap log on north side of end of Nott Avenue Dock. It is 104.4 feet from point where fence meets cap log and is 2.7 feet from inside of cap log. It is 36.95 feet from B. M. 56. Elevation: 10.8 feet above mean low water; 8.61 feet above standard sea level.

**Serial No. 902.** *Foot of Nott Avenue:* B. M. 56 (U. S. E.) is a square cut, with a copper tack in each corner, in the cap log on south side of end of Nott Avenue Dock. It is 2.14 feet from inside face of cap log and 36.95 feet from B. M. 55. Elevation: 10.6 feet above mean low water; 8.41 feet above standard sea level.

**Serial No. 903.** *Vernon Avenue:* B. M. 5 (U. S. E.) is in center of monument, iron covered with "Toppl. Bureau of Bor. Queens" on cover, in center of sidewalk on east side of Vernon Avenue and about 50 feet north of Fourteenth Street. Elevation: 18.3 feet above mean low water; 11.57 feet above standard sea level.

**Serial No. 904.** *Vernon Avenue:* B. M. 6 (U. S. E.) is in center of a stone monument (covered with an iron lid) in center of sidewalk on northeast corner of Bodine Street and Vernon Avenue. Elevation: 15.8 feet above mean low water; 13.57 feet above standard sea level.

**Serial No. 905.** *Queensboro Bridge:* B. M. 7 (U. S. E.) is a square cut on shelf of rock projecting from face of west side of Queensboro Bridge anchor pier east of Vernon Avenue, on south leg of pier about 3 feet above level of sidewalk. The letters "U. S." are cut over the bench mark. Elevation: 20.5 feet above mean low water; 18.25 feet above standard sea level.

**Serial No. 906.** *Queensboro Bridge:* B. M. "Monument" (U. S. E.) is center of stone monument about 1.5 feet under surface of ground and under center of Queensboro Bridge about 12 feet east of eighth column E of pier on east side of Vernon Avenue. Elevation: 9.4 feet above mean low water; 7.21 feet above standard sea level.

**Serial No. 907.** *Queensboro Bridge:* B. M. 8 (U. S. E.) is a cross cut on the E pier of the Queensboro Bridge anchor pier east of Vernon Avenue. It is about 9 feet from the south side of north leg and is about 1 foot above the ground in second stone from south edge. It is about 6 feet above the surrounding ground in general. Elevation: 19.2 feet above mean low water; 17.03 feet above standard sea level.

**Serial No. 908.** *Queensboro Bridge:* B. M. 654 (B. E. & A.) is a horizontal line in the end of a  $\frac{7}{8}$ -inch copper bolt set horizontally into the center of the second course of dressed granite on the west side of the Long Island City abutment of the Queensboro Bridge. The bench mark is on the east side of Ely Avenue and on the axis of the bridge. It is 1.42 feet above the sidewalk and sets back three-eighths of an inch. Elevation: 22.6 feet above mean low water; 20.43 feet above standard sea level.

**Serial No. 909.** *Queensboro Bridge:* B. M. 655 (B. E. & A.) is the center of a level square cut in the top of the concave coping on the west side of the Long Island City abutment of the Queensboro Bridge. The bench mark is on the east side of Ely Avenue and on the axis of the bridge. It is 1.83 feet above the sidewalk. Elevation: 23.0 feet above mean low water; 20.83 feet above standard sea level.

**Serial No. 910.** *Queensboro Bridge:* B. M. 656 (B. E. & A.) is a square cut in the top of the northwesterly corner of the base block of the square granite booth on the northerly side of the Queensboro Bridge, between William and Crescent Streets. The bench mark is on the most westerly of two small booths on the northerly side of the bridge, is about 100 feet east of William Street and 1.94 feet above the sidewalk. Elevation: 31.3 feet above mean low water; 29.12 feet above standard sea level.

**Serial No. 911.** *Ravenswood:* B. M. 1 (C. & G. S.) is the lower edge of a square cut in the vertical face of a granite gatepost situated about 300 feet along the shore to the eastward from Hopkins Wharf. Elevation: 10.4 feet above mean low water; 8.11 feet above standard sea level.

**Serial No. 912.** *Ravenswood:* B. M. 7 (C. & G. S.) is a small square cut on the flagstone top at the lowest step of the entrance to A. Fisher's beer garden on Webster Avenue. The mark is on the corner nearest the street and the river. Elevation: 12.2 feet above mean low water; 9.96 feet above standard sea level.

**Serial No. 913.** *Ravenswood:* B. M. 1 (U. S. E.) is a square cut on the north side of second stone leading into main front door of William Bradley's white stone building on Vernon Avenue, one-half mile north of Queensboro Bridge. Elevation: 15.9 feet above mean low water; 13.68 feet above standard sea level.

**Serial No. 914.** *Ravenswood:* B. M. 2 (U. S. E.) is a square cut on catch basin at northwest corner of Pierce and Vernon Avenues. Elevation: 29.8 feet above mean low water; 27.53 feet above standard sea level.

**Serial No. 915.** *Astoria:* B. M. 666 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter set horizontally into the limestone at the northwesterly corner of Public School No. 83, on the easterly side of Vernon Avenue between Graham Avenue and Pierce Avenue. The bolt is on the Vernon Avenue side of the building, is 6 inches from the northerly side, and 1.25 feet above the walk. Elevation: 35.3 feet above mean low water; 33.02 feet above standard sea level.

**Serial No. 916.** *Astoria.* B. M. 667 (B. E. & A.) is a square cut in the top of the easterly end of the lowest blue stone step at the northerly side of the main entrance to Public School No. 83, on the easterly side of Vernon Avenue between Graham Avenue and Pierce Avenue. Elevation: 34.7 feet above mean low water; 32.41 feet above standard sea level.

**Serial No. 917.** *Astoria:* B. M. 668 (B. E. & A.) is a cross cut in the westerly side of the granite base course at the northwesterly corner of Public School No. 83, on the easterly side of Vernon Avenue between Graham and Pierce Avenues. The cross is 6 inches from the northerly side of the building and  $3\frac{7}{8}$  inches above the walk. Elevation: 34.3 feet above mean low water; 32.03 feet above standard sea level.

**Serial No. 918.** *Astoria:* B. M. 665 (B. E. & A.) is the top of a  $\frac{7}{8}$ -inch iron rod inside of a wrought-iron pipe casing in the public park on the westerly side of Vernon

Avenue at the foot of Graham Avenue. The bench mark is on line with the southerly side of Graham Avenue and about 15 feet westerly from Vernon Avenue. The top of the casing is now 2 feet above the ground. Elevation: 31.7 feet above mean low water; 29.44 feet above standard sea level.

**Serial No. 919.** *Sanford Street:* B. M. 3 (U. S. E.) is a square cut on catch basin at southwest corner of Sanford Street and Vernon Avenue. Elevation: 16.0 feet above mean low water; 13.67 feet above standard sea level.

**Serial No. 920.** *Astoria:* B. M. 70 (U. S. E.) is a square cut on top of wooden stringer on bulkhead and is 6.35 feet south of corner intersection of outside faces of stringers of bulkheads. The bulkhead corner is 2.9 feet north of curb intersection, northwest corner of Sanford Street and Vernon Avenue measured parallel to latter curb and 575 feet west of curb of Vernon Avenue measured parallel of bulkhead line. Elevation: 11.5 feet above mean low water; 9.20 feet above standard sea level.

**Serial No. 921.** *Astoria:* B. M. 664 (B. E. & A.) is the center of the top of the granite city monument on the northeasterly corner of Broadway and Vernon Avenue. The top of the monument is 2 inches below the sidewalk. Elevation: 12.2 feet above mean low water; 9.78 feet above standard sea level.

**Serial No. 922.** *Astoria:* B. M. 663 (B. E. & A.) is the center of the top of the granite city monument on the northeasterly corner of Broadway and Ely Avenue. The top of the monument is 3 inches below the sidewalk. Elevation: 19.1 feet above mean low water; 16.67 feet above standard sea level.

**Serial No. 923.** *Astoria:* B. M. 71 (U. S. E.) is a cut on granite catch-basin head, near the southeast corner of same. It is 4 feet from the east curb of Mills Street and 98.5 feet from Fulton Avenue. Elevation: 11.1 feet above mean low water; 8.56 feet above standard sea level.

**Serial No. 924.** *Astoria:* B. M. 72 (U. S. E.) is a square cut on top of wooden stringer on second wooden dock south of Fulton Avenue. Four copper tacks are driven in corners of square cut. It is 1.15 feet from the end of the dock and is on the south side of the dock. Elevation: 12.0 feet above mean low water; 9.40 feet above standard sea level.

**Serial No. 925.** *Astoria:* B. M. 4 (U. S. E.) is a square cut on outside edge of catch basin on northwest corner of Boulevard and Main Street. Elevation: 12.3 feet above mean low water; 9.56 feet above standard sea level.

**Serial No. 926.** *Astoria:* B. M. 669 (B. E. & A.) is a square lettered "B. W. S.," cut in the top of the northeasterly corner of the second blue stone step at the main entrance to the Astoria Branch of the Corn Exchange Bank, on the northwesterly corner of Fulton Avenue and Boulevard. The bench mark is at the southwesterly corner of the building, which is a four-story red brick. Elevation: 16.0 feet above mean low water; 13.26 feet above standard sea level.

**Serial No. 927.** *Astoria:* B. M. 4-"K" (U. S. E.) is a square cut in window sill of brick building. It is the window to the west of the porch on the north side of building used by keeper of the playground. Elevation: 13.3 feet above mean low water; 10.53 feet above standard sea level.

**Serial No. 928.** *Astoria:* B. M. 670 (B. E. & A.) is the top of a  $\frac{3}{4}$ -inch iron rod inside of a wrought-iron pipe casing in the north end of the Astoria Athletic Field (property of board of education). The bench mark is just south of Hell Gate Light and 21 feet east of the concrete sea wall. Elevation: 10.9 feet above mean low water; 8.18 feet above standard sea level.

**Serial No. 929.** *Astoria:* B. M. ELT (U. S. E.) is a bolt, 1 inch in diameter, leaded in the northwest corner of the concrete foundation of the old electric light tower on Halletts Point. It is 6.5 feet from the northwest corner of brick building. Elevation: 10.4 feet above mean low water; 7.66 feet above standard sea level.

**Serial No. 930.** *Astoria:* B. M. C (C. & G. S.) is the horizontal line of a cross cut on a rock which projects about 1 foot above the ground, and is a short distance east of the "Cove." The bench mark is on the side of the rock facing the "Cove." The letters "F. W." are cut in the top of the rock. Elevation: 11.6 feet above mean low water; 8.85 feet above standard sea level.

**Serial No. 931.** *Astoria:* B. M. 2 (C. & G. S.) is a cross cut in the coping of the wall that divides the properties of Morrison and Whetmore at Pot Cove, Astoria. It is the northeast end of the wall where an iron fence comes to an end. The wall at the beach makes a step of about 10 feet when it descends perpendicularly to the water, abutting against the boathouse. Elevation: 16.5 feet above mean low water; 13.74 feet above standard sea level.

**Serial No. 932.** *Astoria:* B. M. G. (C. & G. S.) is a cross cut in the inscription (U. S. + C. S.) cut in the brick foundation of Fisk, Clark & Flagg's, Kid Leather

Factory, situated on the northeast corner of Wardell Street and Boulevard. The mark was 21 inches above the ground and 8 inches from northwest corner of ell which extends toward the water. Bench mark is under highest part of building surrounded by flagstaff. Elevation: 16.4 feet above mean low water; 13.63 feet above standard sea level.

**Serial No. 933.** *Astoria:* B. M. 671 (B. E. & A.) is a square cut in the top of the west end of the bluestone doorsill at the house entrance to the four-story yellow brick tenement at No. 385 Astoria Avenue (Flushing Avenue). The bench mark is on the north side of Astoria Avenue just west of Twelfth Avenue. Elevation: 65.0 feet above mean low water; 62.27 feet above standard sea level.

**Serial No. 934.** *Astoria:* B. M. 672 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt set vertically in the top of the granite sill of basement window at the southwest corner of Public School No. 84, on the easterly side of Eleventh Avenue, between Potter and Ditmars Avenues. The bolt is 6 inches from the northerly end of the sill, is on the westerly side of the building, and 11.2 feet from the southerly side. Elevation: 70.4 feet above mean low water; 67.17 feet above standard sea level.

**Serial No. 935.** *Astoria:* B. M. 673 (B. E. & A.) is a cross cut in the granite foundation at the southwest corner of Public School No. 84, on the easterly side of Eleventh Avenue between Potter and Ditmars Avenues. The cross is on the westerly side of the building, is 6 inches north of the corner and 6 inches above the ground. Elevation: 70.0 feet above mean low water; 66.85 feet above standard sea level.

**Serial No. 936.** *Astoria:* B. M. 674 (B. E. & A.) is a square cut in the top of the center of the outer edge of the bluestone sill of the most easterly of three blind windows on the southerly side of the three-story brick tenement on the northeast corner of Wolcott Avenue and Steinway Avenue (Tenth Avenue). The bench mark is about 27 feet east of Tenth Avenue. Elevation: 48.6 feet above mean low water; 45.45 feet above standard sea level.

**Serial No. 937.** *Astoria:* B. M. 3 (C. & G. S.) is on the Boulevard (River Road) between Ditmars and Wolcott Avenues. The bench mark is a  $\Delta$  triangle cut in the lowest bluestone step or landing at the entrance to the Ditmar's estate, formerly Barclay's. Two iron gate posts rest on this step and the bench mark is 6 inches from the most easterly one and about 200 feet northeasterly, from the northeasterly line of Ditmars Avenue. (B. of E. & A. B. M. 676.) Elevation: 19.9 feet above mean low water; 16.69 feet above standard sea level.

**Serial No. 938:** *Astoria:* B. M. 4a (C. & G. S.) is a  $\Delta$  triangle cut in the top stone of the northerly corner of old Polhemus Dock on the Boulevard (River Road) about 255 feet northeasterly from the northeasterly line of Wolcott Avenue. The bench mark is now covered by an additional course of masonry. (B. of E. & A. B. M. 675.) Elevation: 10.0 feet above mean low water; 6.76 feet above standard sea level.

**Serial No. 939.** *Astoria:* B. M. "Wolcott" (U. S. E.) is a square cut in concrete wall surrounding property at the northeast corner of Wolcott Avenue and Boulevard. This concrete wall is about 2 feet high and is surmounted by a wire fence on the Boulevard and by a picket fence on Wolcott Avenue. The bench mark is on the corner of the concrete wall and is 0.4 foot from the corner and 0.9 foot from the corner post. It is 17.3 feet from first small tree on Wolcott Avenue, 32.5 feet from nail in blaze of telegraph pole across the Boulevard. Elevation: 16.1 feet above mean low water; 12.90 feet above standard sea level.

**Serial No. 940.** *Astoria:* B. M. "Gate" (U. S. E.) is a square cut in sea wall at the corner of the Boulevard and Winthrop Avenue. It is 14.6 feet from junction of sea wall and dock of the Astoria Light, Heat & Power Co., and 21.8 feet from the outer gate-post leading to the plant and 15.1 feet from outer lamp-post. Elevation: 13.6 feet above mean low water; 10.36 feet above standard sea level.

**Serial No. 941.** *Astoria:* B. M. Flagpole (U. S. E.) is the top of eyebolt embedded in concrete base of flagpole in yard of the Astoria Light, Heat & Power Co. It is 0.6 foot west of flagpole and 12.75 feet and 13.20 feet, respectively, from eyebolts embedded in concrete to which guys for flagpole are fastened. Elevation: 15.0 feet above mean low water; 11.76 feet above standard sea level.

**Serial No. 942.** *Astoria:* B. M. "Lawrence Pt." (U. S. E.) is a square cut in concrete base of second telegraph pole southwest of powerhouse at Lawrence Point. It is on the river side and 0.45 foot from the telegraph pole and 24.2 feet from and at right angles to inner rail of railroad running between bench mark and river. It is also 65.5 feet from switch signal and 195.4 feet from inner corner of powerhouse. Elevation: 13.1 feet above mean low water; 9.82 feet above standard sea level.

**Serial No. 943.** *Astoria:* B. M.  $\Delta$  40 (U. S. E.) is a concrete monument with brass plug in center on the property of the Astoria Heat, Light & Power Co., at Lawrence

Point near the northwest corner of dock marked in cement, "Old No. 2A". Elevation: 12.0 feet above mean low water; 8.68 feet above standard sea level.

Serial No. 944. Astoria: B. M. "Ringbolt" (U. S. E.) is top of iron bar holding a ring which is driven into the cap log of the upper dock of the Astoria Light, Heat & Power Co., at Lawrence Point. It is 0.45 feet from the top of the cap log and flush with the ground. It is 3 feet from the snubbing post in angle of dock and 3.95 feet from the angle of the dock. Elevation: 11.6 feet above mean low water; 8.35 feet above standard sea level.

**SECTION H.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 945 TO 1035: BRONX KILL TO SPUYTEN DUYVIL.**

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
945	Bronx Kill.....	5.3	9.2	12.40	15.8	19.8
946	.....do.....	2.3	6.2	9.47	12.8	16.8
947	.....do.....	-0.3	3.0	6.80	10.2	14.2
948	.....do.....	0.7	4.6	7.94	11.2	15.2
949	.....do.....	4.6	8.5	11.83	15.1	19.1
950	.....do.....	-3.6	0.3	3.59	6.9	10.9
951	.....do.....	5.1	9.0	11.80	14.6	18.6
952	.....do.....	4.2	8.1	10.94	13.7	17.7
953	Brown Place.....	32.3	36.2	38.95	41.8	45.8
954	Willis Avenue and Southern Boulevard.....	19.3	23.2	26.05	28.8	32.8
955	Willis Avenue Bridge.....	3.8	7.7	10.48	13.3	17.3
956	.....do.....	0.5	4.4	7.21	10.0	14.0
957	.....do.....	3.7	7.6	10.39	13.2	17.2
958	.....do.....	6.8	10.7	13.49	16.3	20.3
959	.....do.....	1.8	5.7	8.50	11.3	15.3
960	.....do.....	3.7	7.6	10.39	13.2	17.2
961	East One hundred twenty-fifth Street and First Avenue.....	5.2	0.1	11 92	14.7	18.7
962	.....do.....	5.8	9.7	12.53	15.3	19.3
963	Near Willis Avenue Bridge.....	1.1	5.0	7.84	10.6	14.6
964	Second Avenue Bridge.....	-0.7	3.2	6.02	8.8	12.8
965	East One hundred thirtieth Street and Third Avenue.....	3.0	6.9	9.70	12.5	16.5
966	East One hundred thirtieth Street.....	4.0	7.9	10.07	13.5	17.5
967	.....do.....	3.5	7.4	10.17	13.0	17.0
968	.....do.....	3.5	7.4	10.10	13.0	17.0
969	.....do.....	8.3	12.2	15.00	17.8	21.8
970	Thrd Avenue Bridge.....	2.3	6.2	8.98	11.8	15.8
971	.....do.....	5.6	9.5	12.28	16.1	19.1
972	.....do.....	3.9	7.8	10.60	13.4	17.4
973	.....do.....	1.9	5.8	8.59	11.4	15.4
974	.....do.....	2.8	6.7	9.46	12.3	16.3
975	.....do.....	5.1	9.0	11.79	14.6	18.6
976	East One hundred thirty-fifth Street.....	4.8	8.4	11.06	13.8	17.8
977	.....do.....	4.8	8.4	11.10	13.8	17.8
978	.....do.....	5.2	8.8	11.51	14.2	18.2
979	Mott Avenue.....	9.5	13.1	15.79	18.5	22.5
980	Gerard Avenue.....	13.7	17.3	19.99	22.7	26.7
981	One hundred forty-ninth Street Bridge.....	5.1	8.7	11.36	14.1	18.1
982	South of Central Bridge.....	-1.3	2.0	4.64	7.2	11.2
983	.....do.....	-2.1	1.2	3.78	6.4	10.4
984	.....do.....	-0.8	2.5	5.12	7.7	11.7
985	Central Bridge.....	2.0	6.2	8.75	11.4	15.4
986	.....do.....	2.9	6.2	8.80	11.4	15.4
987	.....do.....	3.7	7.0	9.55	12.2	16.2
988	German-American Boat Club.....	0.0	3.3	5.90	8.5	12.5
989	One hundred fifty-fifth Street and Eighth Avenue.....	1.5	14.8	17.39	20.0	24.0
990	Metropolitan Boat Club.....	2.5	5.8	8.43	11.0	15.0
991	.....do.....	2.5	5.8	8.36	11.0	15.0
992	Near High Bridge.....	3.0	6.8	9.12	11.5	15.5
993	.....do.....	3.0	6.8	9.12	11.5	15.5
994	.....do.....	3.5	7.3	9.62	12.0	16.0

## SECTION H.—Elevations of bench marks, serial Nos. 945 to 1035: Bronx Kill to Spuyten Duyvil—Continued.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
995	Near High Bridge .....	8.2	20.0	22.39	24.7	28.7
996	do.....	2.5	6.3	8.66	11.0	15.0
997	High Bridge.....	2.3	6.1	8.41	10.8	14.8
998	High Bridge water tower.....	196.0	199.8	202.15	204.5	208.5
999	do.....	197.1	200.9	203.25	205.6	209.6
1000	do.....	195.6	199.4	201.79	204.1	208.1
1001	North of High Bridge .....	2.3	6.1	8.40	10.8	14.8
1002	South of Washington Bridge.....	2.9	6.7	9.09	11.4	15.4
1003	do.....	2.9	6.7	9.07	11.4	15.4
1004	do.....	0.7	4.5	6.88	9.2	13.2
1005	West One hundred and eighty-first Street.....	160.9	164.7	167.02	169.4	173.4
1006	do.....	163.4	167.2	169.53	171.9	175.9
1007	Near Washington Bridge.....	18.8	22.6	24.94	27.3	31.3
1008	Washington Bridge.....	1.9	5.7	8.07	10.4	14.4
1009	do.....	135.5	139.3	141.63	144.0	148.0
1010	Near Fort Wendell.....	2.4	6.2	8.55	10.9	14.9
1011	Dyckman Street and Nagle Avenue.....	6.8	10.7	12.75	14.8	18.8
1012	Tenth Avenue and West Two hundred and seventh Street.....	17.4	21.3	23.35	25.4	29.4
1013	Ninth Avenue and West Two hundred and seventh Street.....	7.0	10.9	12.93	15.0	19.0
1014	West Two hundred and seventh Street.....	8.4	12.3	14.35	16.4	20.4
1015	do.....	3.3	7.2	9.29	11.3	15.3
1016	do.....	24.0	27.9	29.96	32.0	36.0
1017	Ninth Avenue and West Two hundred and sixteenth Street.....	7.3	11.4	13.32	15.3	19.3
1018	Broadway.....	26.6	30.7	32.64	34.6	38.6
1019	West Two hundred and sixteenth Street.....	13.2	17.3	19.22	21.2	25.2
1020	do.....	7.9	12.0	13.96	15.9	19.9
1021	Tenth Avenue.....	24.9	29.0	30.95	32.9	36.9
1022	U. S. Ship Canal Bridge.....	37.8	31.9	33.90	35.8	39.8
1023	do.....	26.6	30.7	32.60	34.6	38.6
1024	Broadway Bridge.....	1.2	5.3	7.20	9.2	13.2
1025	do.....	4.4	8.5	10.40	12.4	16.4
1026	U. S. Ship Canal Bridge.....	14.3	18.4	20.32	22.3	26.3
1027	Broadway.....	13.5	17.6	19.58	21.5	25.5
1028	do.....	13.5	17.6	19.57	21.5	25.5
1029	do.....	11.6	15.7	17.61	19.6	23.6
1030	Spuyten Duyvil.....	14.9	18.6	20.46	22.4	26.4
1031	do.....	5.5	9.2	11.08	13.0	17.0
1032	do.....	4.5	8.2	10.07	12.0	16.0
1033	do.....	3.5	7.2	9.06	11.0	15.0
1034	do.....	0.6	4.3	6.17	8.1	12.1
1035	do.....	5.4	9.1	10.97	12.9	16.9

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 945 TO 1035: BRONX KILL TO SPUYTEN DUYVIL.

**Serial No. 945.** *Bronx Kill:* B. M. 15 (U. S. E.) is marked by a square outlined by center punch marks on the northeast corner of iron pedestal of the corner column of store at the southwest corner of Willow Avenue and East One hundred and thirty-third Street. Letters "U. S." and figure "15" center punched in square. Elevation: 15.8 feet above mean low water; 12.49 feet above standard sea level.

**Serial No. 946.** *Bronx Kill:* B. M. 16 (U. S. E.) is a square cut on sewer basin on the northwest corner of Willow Avenue and East One hundred and thirty-second Street. Elevation: 12.8 feet above mean low water; 9.47 feet above standard sea level.

**Serial No. 947.** *Bronx Kill:* B. M. 17 (U. S. E.) is a copper bolt in a marble monument on the east side of Willow Avenue near One hundred and thirtieth Street. Elevation: 10.2 feet above mean low water; 6.86 feet above standard sea level.

**Serial No. 948. Bronx Kill:** B. M. 18 (U. S. E.) is a copper bolt in the center of a marble monument on the east side of Willow Avenue and One hundred and thirtieth Street, and 260 feet south of B. M. 17. Elevation: 11.2 feet above mean low water; 7.94 feet above standard sea level.

**Serial No. 949. Bronx Kill:** B. M. 91 (U. S. E.) is a square cut on southwest corner of stone door step of No. 927 East One hundred and thirty-second Street. Elevation: 15.1 feet above mean low water; 11.83 feet above standard sea level.

**Serial No. 950. Bronx Kill:** B. M. N-5 (B. W. S.) is the top of a  $\frac{3}{4}$ -inch iron rod inclosed in the board of water supply standard pipe casing located on a ledge 22 feet south of near rail of railroad yard, about 160 feet east of St. Ann's Avenue, on north shore of Bronx Kill opposite Randall Island. Elevation: 6.9 feet above mean low water; 3.59 feet above standard sea level.

**Serial No. 951. Bronx Kill:** B. M. 24 (U. S. E.) is a square cut on an iron post at the northwest corner of St. Ann's Avenue and One hundred and thirty-second Street. Elevation: 14.6 feet above mean low water; 11.80 feet above standard sea level.

**Serial No. 952. Bronx Kill:** B. M. 23 (U. S. E.) is a square cut on the catch basin at the southeast corner of St. Ann's Avenue and the Southern Boulevard. Elevation: 13.7 feet above mean low water; 10.94 feet above standard sea level.

**Serial No. 953. Brown Place:** B. M. 966 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the granite water-table at the southeast corner of Public School No. 43, on the northwest corner of Brown Place and East One hundred and thirty-fifth Street. The bolt is 3.33 feet above the area. Elevation: 41.8 feet above mean low water; 38.95 feet above standard sea level.

**Serial No. 954. Willis Avenue and Southern Boulevard:** B. M. 22 (U. S. E.) is a square cut on a catch basin at the northeast corner of Willis Avenue and Southern Boulevard. Elevation: 28.8 feet above mean low water; 26.05 feet above standard sea level.

**Serial No. 955. Willis Avenue Bridge:** B. M. 70 (U. S. E.) is on the outside and west side of third stone of foundation for turn table in Willis Avenue Bridge. It is marked "B. M." to distinguish it from B. M. 1A which is marked "U. S." Elevation: 13.3 feet above mean low water; 10.48 feet above standard sea level.

**Serial No. 956. Willis Avenue Bridge:** B. M. 1 (U. S. E.) is a copper bolt in the first arched pier of the Willis Avenue Bridge, on the north side of the Harlem River. Elevation: 10.0 feet above mean low water; 7.21 feet above standard sea level.

**Serial No. 957. Willis Avenue Bridge:** B. M. 1a (U. S. E.) is a square cut on the outer edge of the center or pivot stone pier of Willis Avenue Bridge, on the north side, 4.6 feet from the base of drum and 1.6 feet from southeast corner of coal pocket. Elevation: 13.2 feet above mean low water; 10.39 feet above standard sea level.

**Serial No. 958. Willis Avenue Bridge:** B. M. 1 (C. & G. S.) is the horizontal mark  
C  
of the inscription U+S cut on the north face of the granite base of the men's comfort  
G

station on the east side of the First Avenue approach to the Willis Avenue Bridge. The mark is cut 2.2 feet above the ground. Elevation: 16.3 feet above mean low water; 13.49 feet above standard sea level.

**Serial No. 959. Willis Avenue Bridge:** B. M. 2 (C. & G. S.) is a square cut on the top in the southwest corner of stone base of first steel column north of main abutment on the Manhattan side of the Willis Avenue Bridge. Elevation: 11.3 feet above mean low water; 8.50 feet above standard sea level.

**Serial No. 960. Willis Avenue Bridge:** B. M. 3 (C. & G. S.) is the right angle of the inscription (C  $\nearrow$  G) cut on the top, on north side, is the center pivot pier of the Willis Avenue Bridge near the outer edge. Elevation: 13.2 feet above mean low water; 10.39 feet above standard sea level.

**Serial No. 961. East One hundred and twenty-fifth Street and First Avenue:** B. M. A. (C. & G. S.) is a square cut on sewer basin on the southwest corner of One hundred and twenty-fifth Street and First Avenue. (Square was found already cut on sewer basin.) Elevation: 14.7 feet above mean low water; 11.92 feet above standard sea level.

**Serial No. 962. East One hundred and twenty-fifth Street and First Avenue:** B. M. 1b (D. D.) is a square cut on a sewer basin on the northwest corner of One hundred and twenty-fifth Street and First Avenue. (Established by the department of docks and ferries.) Elevation: 15.3 feet above mean low water; 12.53 feet above standard sea level.

**Serial No. 963.** *Near Willis Avenue Bridge:* B. M. 69 (U. S. E.) is a square cut in top of west side of concrete base of First Street trolley pole south of railroad tracks west of Willis Avenue Bridge. Elevation: 10.6 feet above mean low water; 7.84 feet above standard sea level.

**Serial No. 964.** *Second Avenue Bridge:* B. M. 2 (U. S. E.) is a  $\frac{1}{4}$ -inch copper bolt leaded into the southwest corner of the first arch north of the Harlem River on the Second Avenue Bridge. A number "2" is stamped into the bolt and the letters "U. S." cut into the stone. Elevation: 8.8 feet above mean low water; 6.02 feet above standard sea level.

**Serial No. 965.** *East One hundred and thirtieth Street and Third Avenue:* B. M. 3b (U. S. E.) is a square cut on sewer basin on the southwest corner of One hundred and thirtieth Street and Third Avenue. Elevation: 12.5 feet above mean low water; 9.70 feet above standard sea level.

**Serial No. 966.** *East One hundred and thirtieth Street:* B. M. 906 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt in the top of the easterly corner of the granite base of a steel column on the northerly side of the easterly approach to the Third Avenue Bridge over the Harlem River at East One hundred and thirtieth Street. The bolt is at the base of the first column east of the bridge, it is about 28 feet east of the east side of the bridge, and about 21 feet south of the Harlem River bulkhead. Elevation: 13.5 feet above mean low water; 10.67 feet above standard sea level.

**Serial No. 967.** *East One hundred and thirtieth Street:* B. M. 907 (B. E. & A.) is a square cut in the top of a granite base of the most easterly column on the south side of the east approach to the Third Avenue Bridge over the Harlem River at East One hundred and thirtieth Street. The bench mark is about 55 feet east of the east line of Third Avenue and 4 inches above the sidewalk. Elevation: 13.0 feet above mean low water; 10.17 feet above standard sea level.

**Serial No. 968.** *East One hundred and thirtieth Street:* B. M. 908 (B. E. & A.) is a square cut in the top of the west side of the semicircular granite base of watering trough on the south side of the approach to the Third Avenue Bridge over the Harlem River. The bench mark is about on the north line of East One hundred and thirtieth Street and about 5 feet west of the center line of Third Avenue. Elevation: 13.0 feet above mean low water; 10.19 feet above standard sea level.

**Serial No. 969.** *East One hundred and thirtieth Street:* B. M. 909 (B. E. & A.) is a cross cut in the dressed edge of the granite masonry at the east end of the south abutment of the Third Avenue Bridge over the Harlem River at East One hundred and thirtieth Street. The cross is on the north face of the stone, is about 10 feet east of the east side of the bridge and about 35 feet south of the Harlem River bulkhead. It is 5 feet above the ground and the letter "B" is cut in the stone under the cross. Elevation: 17.8 feet above mean low water; 15.00 feet above standard sea level.

**Serial No. 970.** *Third Avenue Bridge:* B. M. 953 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt leaded vertically in a semicircular granite block on the northeasterly side of the northeasterly abutment of the Third Avenue Bridge over the Harlem River. The bolt is 3.3 feet westerly from the easterly side of the abutment, is on line with the westerly curb of Third Avenue and about 130 feet south of the south line of East One hundred and thirty-third Street. An arrow cut in the abutment points down to the bench mark. Elevation: 11.8 feet above mean low water; 8.98 feet above standard sea level.

**Serial No. 971.** *Third Avenue Bridge:* B. M. 954 (B. E. & A.) is a cross cut in the dressed edge on the northeasterly side of the northeasterly abutment of the Third Avenue Bridge over the Harlem River. The cross is on the corner of the abutment, is on the westerly side of the easterly stairway and 3.6 feet above the sidewalk. The letter "B" is cut in the abutment below the bench mark. Elevation: 15.1 feet above mean low water; 12.28 feet above standard sea level.

**Serial No. 972.** *Third Avenue Bridge:* B. M. 955 (B. E. & A.) is a square cut in the top of the granite coping below the balustrade on the easterly side of the easterly stairway on the Bronx side of the Third Avenue Bridge over the Harlem River. The bench mark is about 135 feet south of the south line of East One hundred and thirty-third Street, is  $3\frac{1}{2}$  inches from the northeasterly end of the coping and 1.5 feet above the ground. The arrowhead on the easterly side of the coping points to the bench mark. Elevation: 13.4 feet above mean low water; 10.60 feet above standard sea level.

**Serial No. 973.** *Third Avenue Bridge:* B. M. 956 (B. E. & A.) is a square cut in the top of the northwesterly end of the granite base block at the northerly end of the arch on the westerly side of the Third Avenue Bridge over the Harlem River. The bench

mark is about 50 feet north of the bulkhead on the north side of the Harlem River and the figure "11.437" is cut in the base block on the easterly side of the point. Elevation 11.4 feet above mean low water; 8.59 feet above standard sea level.

**Serial No. 974.** *Third Avenue Bridge:* B. M. 957 (B. E. & A.) is a square lettered B. W. S., N. Y., cut in the top of the northeasterly corner of the granite base block of granite pier on the easterly side of the northerly approach to the Third Avenue Bridge over the Harlem River. The bench mark is about 6 feet north of the north side of East One hundred and thirty-third Street and 8 inches above the street. Elevation: 12.3 feet above mean low water; 9.46 feet above standard sea level.

**Serial No. 975.** *Third Avenue:* B. M. 958 (B. E. & A.) is the top of a  $\frac{7}{8}$ -inch iron bolt leaded horizontally into the granite water table on the easterly side of the five-story red brick building of the J. L. Mott Iron Works, on the westerly side of Third Avenue about 50 feet south of the prolongation of the center line of East One hundred and thirty-third Street. The bolt is 1.2 feet south of the north side of the building and 2.6 feet above the sidewalk. (Established by the department of bridges in 1894.) Elevation: 14.6 feet above mean low water; 11.79 feet above standard sea level.

**Serial No. 976.** *East One hundred and thirty-fifth Street:* B. M. 959 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the marble city monument on the northeast corner of East One hundred and thirty-fifth and Exterior Streets. The top of the monument is 2 inches above the ground. Elevation: 13.8 feet above mean low water; 11.06 feet above standard sea level.

**Serial No. 977.** *East One hundred and thirty-fifth Street:* B. M. 4 (U. S. E.) is the top of street line monument under railroad bridge at East One hundred and thirty-fifth and Exterior Streets. Elevation: 13.8 feet above mean low water; 11.10 feet above standard sea level.

**Serial No. 978.** *East One hundred and thirty-eighth Street:* B. M. 960 (B. E. & A.) is a square cut near the southeasterly corner of large platform stone at the east turnstile exit from the Mott Haven Station of the New York & Harlem Railroad. The bench mark is at the foot of the southeasterly iron post supporting the shed, is on the northerly side of East One hundred and thirty-eighth Street and about 30 feet west of the west line of Park Avenue. Elevation: 14.2 feet above mean low water; 11.51 feet above standard sea level.

**Serial No. 979.** *Mott Avenue:* B. M. 961 (B. E. & A.) is the top of a  $\frac{3}{4}$ -inch square iron bolt near the southwest corner of the large bluestone slab at the west entrance to the Mott Haven Station (two-story red brick) of the New York & Harlem Railroad on Mott Avenue. The bolt is 4.7 feet west of the building, is 4 inches from the south edge of the slab and 59 feet north of the extreme south end of the red brick arch facing East One hundred and thirty-eighth Street. Elevation: 18.5 feet above mean low water; 15.79 feet above standard sea level.

**Serial No. 980.** *Gerard Avenue:* B. M. 5A (U. S. E.) is a square cut on window sill of S. Trimmer & Sons coal office on west side of Gerard Avenue near Madison Avenue Bridge. Elevation: 22.7 feet above mean low water; 19.99 feet above standard sea level.

**Serial No. 981.** *One Hundred and Forty-ninth Street Bridge:* B. M. 6 (U. S. E.) is a copper bolt leaded into the water table of the eastern side of the base of the granite buttress at the northwest corner of the Bronx approach to the One hundred and forty-ninth Street Bridge. A number "6" is stamped into the bolt and the letters "U. S." are cut into the stone underneath bolt. Elevation: 14.1 feet above mean low water; 11.36 feet above standard sea level.

**Serial No. 982.** *South of Central Bridge:* B. M. 66 (U. S. E.) is a niche cut in the concrete foundation for iron fence. It is on the first foundation north of where fence makes a turn parallel to river. It is 6.5 feet north of corner and 12.5 feet from post where fence turns parallel to river, marked with square and "U. S. B. M." by red paint. Elevation: 7.2 feet above mean low water; 4.64 feet above standard sea level.

**Serial No. 983.** *South of Central Bridge:* B. M. 67 (U. S. E.) is the highest point in a square cut in a boulder embedded in the first dock below Central Bridge. The letters "U. S." are cut in the rock alongside of bench mark. It is 2.6 feet from north face and 6.2 feet from corner in stringer marked with an arrow and "U. S. B. M." by red paint. Elevation: 6.4 feet above mean low water; 3.78 feet above standard sea level.

**Serial No. 984.** *South of Central Bridge:* B. M. 68 (U. S. E.) is a cross cut on iron bolt in cap log of first dock below Central Bridge. It is 69.6 feet from south face of dock and 37.1 feet from mooring post, and is inclosed in a square of red marked "U. S. B. M." Elevation: 7.7 feet above mean low water; 5.12 feet above standard sea level.

**Serial No. 985.** *Central Bridge:* B. M. 7A (U. S. E.) is a cross cut in the center of the top step under arch of the east draw pier on the Central Bridge. The letters "U. S." are cut under the bench mark. Elevation: 11.4 feet above mean low water; 8.75 feet above standard sea level.

**Serial No. 986.** *Central Bridge:* B. M. 7B (U. S. E.) is a cross cut in the center of the top step under arch of the west draw pier on the Central Bridge. The letters "U. S." are cut under the bench mark. Elevation: 11.4 feet above mean low water; 8.80 feet above standard sea level.

**Serial No. 987.** *Central Bridge:* B. M. 7 (U. S. E.) is a  $\frac{1}{4}$ -inch copper bolt leaded into the southwest corner of the top stone of the foundation pier under the extreme southwest iron column of the Sedgwick Avenue approach to Central Bridge. A number 7 is stamped into the bolt and the letters "U. S." are cut into the stone south of the bolt. Elevation: 12.2 feet above mean low water; 9.55 feet above standard sea level.

**Serial No. 988.** *German-American Boat Club:* B. M. 65 (U. S. E.) is the highest point in a square cut in a concrete foundation post about  $1\frac{1}{2}$  feet in diameter. B. M. is surrounded by a square of red paint and the letters "U. S." are cut in the concrete. It is 15.7 feet from the northwest corner of the German-American Boat Club. Elevation: 8.5 feet above mean low water; 5.90 feet above standard sea level.

**Serial No. 989.** *Eighth Avenue and One hundred and fifty-fifth Street:* B. M. 8A (U. S. E.) is a square cut on sewer basin at the southeast corner of Eighth Avenue and One hundred and fifty-fifth Street. Elevation: 20.0 feet above mean low water; 17.39 feet above standard sea level.

**Serial No. 990.** *Metropolitan Boat Club:* B. M. 63 (U. S. E.) is a square cut on the brick water table of the Metropolitan Boat Club. It is on the southeast corner and is about 5.6 feet from the ground. A small "U. S." is cut in the brick. Elevation: 11.0 feet above mean low water; 8.43 feet above standard sea level.

**Serial No. 991.** *Metropolitan Boat Club:* B. M. 64 (U. S. E.) is a square with the letters "U. S." cut on the brick water table in southwest of Metropolitan Boat Club about  $2\frac{1}{2}$  feet from the ground. Elevation: 11.0 feet above mean low water; 8.36 feet above standard sea level.

**Serial No. 992.** *Near Highway Bridge:* B. M. 60 (U. S. E.) is a square bolt on inside of stringer of old dock south of High Bridge railroad station. Elevation: 11.5 feet above mean low water; 9.12 feet above standard sea level.

**Serial No. 993.** *Near High Bridge:* B. M. 61 (U. S. E.) is a cross cut on a square bolt in the stringer on south side of old dock. Elevation: 11.5 feet above mean low water; 9.12 feet above standard sea level.

**Serial No. 994.** *Near High Bridge:* B. M. 62 (U. S. E.) is a square cut on concrete retaining wall of road, leading from Harlem River over tracks to One hundred and sixty-ninth Street, south of New York Central Railroad Station. Elevation: 12.0 feet above mean low water; 9.62 feet above standard sea level.

**Serial No. 995.** *Near High Bridge:* B. M. 9A (U. S. E.) is a square cut on end of coping on top of stairway at the subway entrance on the east side of the Speedway, 100 feet north of High Bridge. Elevation: 24.7 feet above mean low water; 22.39 feet above standard sea level.

**Serial No. 996.** *Near High Bridge:* B. M. 51 (U. S. E.) is a square cut on the coping of the platform at the foot of the stairs leading to the subway under Speedway first above High Bridge. Elevation: 11.0 feet above mean low water; 8.66 feet above standard sea level.

**Serial No. 997.** *High Bridge:* B. M. 52 (U. S. E.) is a cross cut on a  $1\frac{1}{4}$ -inch iron bolt fastened horizontally into the first stone pier of High Bridge (Manhattan side) outside of Speedway. It is about 1 foot above the old dock at this point and nearly in the center of the pier. Elevation: 10.8 feet above mean low water; 8.41 feet above standard sea level.

**Serial No. 998.** *High Bridge water tower:* B. M. 926 (B. E. & A.) is the top of a  $\frac{3}{8}$ -inch iron bolt set horizontally into the granite water table on the northwesterly side of High Bridge water tower, about 540 feet east of Amsterdam Avenue and about 75 feet south of West One hundred and seventy-fourth Street. The bolt is 5 inches above the ground. Elevation: 204.5 feet above mean low water; 202.15 feet above standard sea level.

**Serial No. 999.** *High Bridge water tower:* B. M. 927 (B. E. & A.) is a square cut in the top of the north edge of the granite door sill at the entrance to High Bridge water tower. The bench mark is on the north side of the tower and 4 inches from the east

end of the step. Elevation: 205.6 feet above mean low water; 203.25 feet above standard sea level.

**Serial No. 1000.** *High Bridge water tower:* B. M. 928 (B. E. & A.) is the top of a 2-inch hemispherical brass bolt set vertically in the stone foundation of High Bridge water tower. The bolt is on the northwesterly side of the tower just west of the entrance. Elevation: 204.1 feet above mean low water; 201.79 feet above standard sea level.

**Serial No. 1001.** *North of High Bridge:* B. M. 53 (U. S. E.) is a round hole inside of a circle on north side of concrete outlet of twin sewers on east bank of river about 300 feet north of High Bridge. Elevation: 10.8 feet above mean low water; 8.46 feet above standard sea level.

**Serial No. 1002.** *South of Washington Bridge:* B. M. 55 (U. S. E.) is a cross cut on a square iron bolt at the south side of dock on east bank of river, south of Washington Bridge. Elevation: 11.4 feet above mean low water; 9.09 feet above standard sea level.

**Serial No. 1003.** *South of Washington Bridge:* B. M. 56 (U. S. E.) is a cross cut on a square bolt on inside stringer  $\frac{1}{2}$  inch below top of stringer on dock on east bank of river, south of Washington Bridge. Elevation: 11.4 feet above mean low water; 9.07 feet above standard sea level.

**Serial No. 1004.** *South of Washington Bridge:* B. M. 57 (U. S. E.) is a square cut on concrete sewer outlet near the southeast corner. Sewer is about 25 feet north of dock and just south of Washington Bridge. Elevation: 9.2 feet above mean low water; 6.88 feet above standard sea level.

**Serial No. 1005.** *West One hundred and eighty-first Street:* B. M. 929 (B. E. & A.) is a square cut in the top of the northwesterly corner of the bluestone basin head on the northeast corner of West One hundred and eighty-first Street and Amsterdam Avenue. Elevation: 169.4 feet above mean low water; 167.02 feet above standard sea level.

**Serial No. 1006.** *West One hundred and eighty-first Street:* B. M. 930 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the marble city monument on the northeast corner of West One hundred and eighty-first Street and Audubon Avenue. The top of the monument is 4 inches below the sidewalk. Elevation: 171.9 feet above mean low water; 169.53 feet above standard sea level.

**Serial No. 1007.** *Near Washington Bridge:* B. M. 10A (U. S. E.) is a square cut on top of north end of coping wall on the east side of Speedway just north of bridge. Elevation: 27.3 feet above mean low water; 24.94 feet above standard sea level.

**Serial No. 1008.** *Washington Bridge:* B. M. 10 (U. S. E.) is a  $\frac{1}{2}$ -inch copper bolt leaded into and near river edge of stone walk in front of the west corner of the intermediate pier of Washington Bridge. It is at the head of the highest flight of stone steps leading down to the water. A figure 10 is stamped into the bolt and the letters "U. S." cut in the stone. Elevation: 10.4 feet above mean low water; 8.07 feet above standard sea level.

**Serial No. 1009.** *Washington Bridge:* B. M. 1050 (B. E. & A.) is a square cut in the top of the extreme northeast corner of the large granite coping stone at the southeast corner of the east approach to Washington Bridge. The coping stone containing the bench mark is also the base of the massive granite block 4 feet high at the east end of the south railing, and is on the west side of University Avenue (Aqueduct Avenue). Elevation: 144.0 feet above mean low water; 141.63 feet above standard sea level.

**Serial No. 1010.** *Near Fort Wendell:* B. M. 11 A (U. S. E.) is a square cut on stone sewer basin on the east side of Speedway opposite Fort Wendell. Elevation: 10.9 feet above mean low water, at Washington Bridge; 8.55 feet above standard sea level.

**Serial No. 1011.** *Dyckman Street and Nagle Avenue:* B. M. 11B (U. S. E.) is a square cut in stone sewer basin on the northeast corner of Dyckman Street and Nagle Avenue. Elevation: 14.8 feet above mean low water; 12.75 feet above standard sea level.

**Serial No. 1012.** *Tenth Avenue and West Two hundred and seventh Street:* B. M. 11C (U. S. E.) is the center of top of a street-line monument at the northeast corner of Tenth Avenue and West Two hundred and seventh Street. Elevation: 25.4 feet above mean low water; 23.35 feet above standard sea level.

**Serial No. 1013.** *Ninth Avenue and West Two hundred and seventh Street:* B. M. 12A (U. S. E.) is a hole in the center of a street-line monument at the northwest corner of

Ninth Avenue and West Two hundred and seventh Street. Elevation: 15.0 feet above mean low water; 12.93 feet above standard sea level.

**Serial No. 1014.** *West Two hundred and seventh Street:* B. M. 941 (B. E. & A.) is the bottom of a square cut in the top of the northeast corner of the granite base block at the west end of the north side of the west approach to University Bridge over the Harlem River, at West Two hundred and seventh Street. The bench mark is just east of the east line of Ninth Avenue and 1.6 feet above the street. Elevation: 16.4 feet above mean low water; 14.35 feet above standard sea level.

**Serial No. 1015.** *West Two hundred and seventh Street:* B. M. 942 (B. E. & A.) is the bottom of a square cut in the top of the northwest corner of the granite base block at the north end of the west abutment of University Bridge over the Harlem River, at West Two hundred and seventh Street. The bench mark is at the base of the abutment and 6 inches above the street. Elevation: 11.3 feet above mean low water; 9.29 feet above standard sea level.

**Serial No. 1016.** *West Two hundred and seventh Street:* B. M. 943 (B. E. & A.) is a  $\frac{7}{8}$ -inch copper bolt in the top of the southwest corner of the granite water table on top of the north end of the west abutment of University Bridge over the Harlem River, at West Two hundred and seventh Street. The bolt is about 400 feet east of the east line of Ninth Avenue, is on the north side of the north footpath and 6 inches from the south side of the water table. Elevation: 32.0 feet above mean low water; 29.96 feet above standard sea level.

**Serial No. 1017.** *Ninth Avenue and West Two hundred and sixteenth Street:* B. M. 12B (U. S. E.) is on a street monument on the northwest corner of Ninth Avenue and West Two hundred and sixteenth Street. Elevation: 15.3 feet above mean low water; 13.32 feet above standard sea level.

**Serial No. 1018.** *Broadway:* B. M. 944 (B. E. & A.) is a quadrant cut in the top of the northeast corner of the bluestone basin head on the westerly side of Broadway and on line with the south curb line of West Two hundred and fifteenth Street. Elevation: 34.6 feet above mean low water; 32.64 feet above standard sea level.

**Serial No. 1019.** *West Two hundred and sixteenth Street:* B. M. 946 (B. E. & A.) is the center of the horizontal bar of a T cut in the granite water table at the southwest corner of the powerhouse of the Metropolitan Street Railway Co., on the northeast corner of West Two hundred and sixteenth Street and Ninth Avenue. The bench mark is on the south side of the building, is 6 feet above the sidewalk and 1 foot from the corner. Elevation: 21.2 feet above mean low water; 19.22 feet above standard sea level.

**Serial No. 1020.** *West Two hundred and sixteenth Street:* B. M. 947 (B. E. & A.) is the top of a  $\frac{1}{2}$ -inch iron bolt set horizontally into the granite masonry at the southwest corner of the powerhouse of the Metropolitan Street Railway Co., on the northeast corner of West Two hundred and sixteenth Street and Ninth Avenue. The bolt is on the west side of the building, is 3.5 feet from the south side, and 9 inches above the sidewalk. Elevation: 15.9 feet above mean low water; 13.96 feet above standard sea level.

**Serial No. 1021.** *Tenth Avenue:* B. M. 945 (B. E. & A.) is a square cut in the top of the southwest corner of the lowest granite step at the office entrance to the old car barn of the Third Avenue Railroad Co. (two-story red brick), on the east side of Tenth Avenue and about 100 feet south of West Two hundred and eighteenth Street. The bench mark is about 1.3 feet above the sidewalk. Elevation: 32.9 feet above mean low water; 30.95 feet above standard sea level.

**Serial No. 1022.** *U. S. Ship Canal Bridge:* B. M. 948 (B. E. & A.) is a small rounded summit within a circle, cut in the top of the granite coping on the west side of the south approach to the United States Ship Canal Bridge on Broadway. The bench mark is 1.9 feet from the south end of the coping, is under the iron railing and about 55 feet north of the center line of Ninth Avenue. Elevation: 35.8 feet above mean low water; 33.90 feet above standard sea level.

**Serial No. 1023.** *U. S. Ship Canal Bridge:* B. M. 949 (B. E. & A.) is the bottom of a square cut in the top of the south end of the curved granite coping on the west side of the north approach to the United States Ship Canal Bridge on Broadway. The bench mark is above the west end of the bridge seat of the north abutment and about 1.3 feet below the west footpath. The letter "B" is cut in the coping on the north side of the point, which is about 50 feet south of the center line of West Two hundred and twenty-fifth Street. Elevation: 34.6 feet above mean low water; 32.60 feet above standard sea level.

**Serial No. 1024. Broadway Bridge:** B. M. 950 (B. E. & A.) (same as B. M. 13 of U. S. E.) is a  $\frac{1}{2}$ -inch copper bolt leaded vertically into the top of the sea wall on the south side of the United States Ship Canal at Broadway. It is 15.4 feet from the eastern end of the wall. The number "13" is stamped into the bolt and the letters "U. S." are cut on the land side of a square which is cut around the bolt. Elevation: 9.2 feet above mean low water; 7.20 feet above standard sea level.

**Serial No. 1025. Broadway Bridge:** B. M. 13A (U. S. E.) is a square cut on top of concrete wall on north side of river at Broadway Bridge. Elevation: 12.4 feet above mean low water; 10.40 feet above standard sea level.

**Serial No. 1026. United States Ship Canal Bridge:** B. M. 951 (B. E. & A.) is a cross cut in the west side of the granite water table at the west end of the north abutment of the United States Ship Canal Bridge on Broadway. The cross is about 12 feet below the roadway of the bridge and 3.3 feet from the south face of the abutment. Elevation: 22.3 feet above mean low water; 20.32 feet above standard sea level.

**Serial No. 1027. Broadway:** B. M. 952 (B. E. & A.) is a square cut in the top of the southwest corner of the granite coping stone on the top of the west end of the south abutment of the highway bridge on Broadway, over Spuyten Duyvil Creek. The bench mark is about 78 feet south of West Two hundred and thirtieth Street. Elevation: 21.5 feet above mean low water; 19.58 feet above standard sea level.

**Serial No. 1028. Broadway:** B. M. 1107 (B. E. & A.) is a square cut in the top of the northwest corner of the granite coping stone on top of the west end of the north abutment of the highway bridge on Broadway, over Spuyten Duyvil Creek. The bench mark is about 30 feet south of West Two hundred and thirtieth Street. (Established by the Bronx Highway Bureau.) Elevation: 21.5 feet above mean low water; 19.57 feet above standard sea level.

**Serial No. 1029. Broadway:** B. M. 1108 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the marble city monument on the southwest corner of Broadway and Kingsbridge Avenue. The top of the monument is  $\frac{1}{2}$  inch above the sidewalk. Elevation: 19.6 feet above mean low water; 17.61 feet above standard sea level.

**Serial No. 1030. Spuyten Duyvil:** B. M. 13B (U. S. E.) is a square cut in a point of ledge opposite the gate of Johnson's Foundry Yard and is marked with the letters "U. S." Elevation: 22.4 feet above mean low water; 20.46 feet above standard sea level.

**Serial No. 1031. Spuyten Duyvil:** B. M. X (U. S. E.) is a square cut in upper surface of southwest corner of stone abutment under Spuyten Duyvil railroad bridge on north bank. Elevation: 13.0 feet above mean low water; 11.80 feet above standard sea level.

**Serial No. 1032. Spuyten Duyvil:** B. M. 14A (U. S. E.) is a square cut in concrete foundation for steel electric wire pole (steel wire pole now removed) on west side of track between passenger and freight station. Elevation: 12.0 feet above mean low water; 10.07 feet above standard sea level.

**Serial No. 1033. Spuyten Duyvil:** B. M. 14B (U. S. E.) is an iron bolt cemented into side of ledge on east side of track, 1 foot above rail, at Spuyten Duyvil. Elevation: 11.0 feet above mean low water; 9.06 feet above standard sea level.

**Serial No. 1034. Spuyten Duyvil:** B. M. 14 (U. S. E.) is a copper bolt leaded into the southern corner of the north shore abutment of the Spuyten Duyvil bridge. The bolt is surrounded by a square cut into the granite; the letters "U. S." are also cut into the stone. Elevation: 8.1 feet above mean low water; 6.17 feet above standard sea level.

**Serial No. 1035. Spuyten Duyvil:** B. M. 14D (U. S. E.) is the upper surface of stone abutment under Spuyten Duyvil railroad bridge at northeast corner of north bank. Elevation: 12.9 feet above mean low water; 10.97 feet above standard sea level.

## SECTION I.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 1036 TO 1324: RANDALLS ISLAND TO GOVERNORS ISLAND.

Serial No.	Locality.	Elevations of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1036	Randalls Island.....	33.5	37.3	.....	40.13	43.0	47.0
1037	do.....	11.1	14.9	.....	17.76	20.6	24.6
1038	do.....	9.1	12.9	.....	15.75	18.6	22.6
1039	do.....	1.9	5.7	.....	8.58	11.4	15.4
1040	do.....	8.4	12.2	.....	15.11	17.9	21.9
1041	do.....	-0.1	3.7	.....	6.53	9.4	13.4
1042	Wards Island.....	0.2	4.0	.....	6.82	9.7	13.7
1043	do.....	3.3	7.1	.....	9.90	12.8	16.8
1044	do.....	3.4	7.2	.....	10.01	12.9	16.9
1045	do.....	18.8	22.7	.....	25.52	28.3	32.3
1046	do.....	2.3	6.2	.....	8.98	11.8	15.8
1047	do.....	-0.1	3.8	.....	6.59	9.4	13.4
1048	do.....	0.6	4.6	.....	7.37	10.1	14.1
1049	do.....	-0.1	3.9	.....	6.64	9.4	13.4
1050	do.....	-0.8	3.2	.....	5.94	8.7	12.7
1051	do.....	-0.6	3.4	.....	6.17	8.9	12.9
1052	do.....	-0.8	3.2	.....	5.91	8.7	12.7
1053	do.....	-1.6	2.4	.....	5.18	7.9	11.9
1054	do.....	17.7	21.7	.....	24.44	27.2	31.2
1055	do.....	20.0	23.5	.....	26.47	29.5	33.5
1056	do.....	2.7	5.8	.....	8.99	12.2	16.2
1057	do.....	6.4	9.5	.....	12.73	15.9	19.9
1058	do.....	6.4	9.5	.....	12.71	15.9	19.9
1059	Great Mill Rock.....	-0.3	3.7	.....	6.44	9.2	13.2
1060	do.....	0.8	4.8	.....	7.52	10.3	14.3
1061	Blackwells Island.....	7.0	11.5	.....	14.00	16.5	20.5
1062	do.....	8.4	12.9	.....	15.39	17.9	21.9
1063	do.....	1.6	6.0	.....	8.34	10.6	14.6
1064	do.....	1.8	6.2	.....	8.54	10.8	14.8
1065	do.....	1.0	5.4	.....	7.69	10.0	14.0
1066	do.....	3.5	7.9	.....	10.17	12.5	16.5
1067	East One hundred and twenty-fourth Street.....	1.6	5.5	.....	8.28	11.1	15.1
1068	East One hundred and twenty-second Street.....	2.4	6.3	.....	9.09	11.9	15.9
1069	East One hundred and twentieth Street.....	6.5	10.4	.....	13.18	16.0	20.0
1070	East One hundred and eighteenth Street.....	8.9	12.8	.....	15.57	18.4	22.4
1071	East One hundred and sixteenth Street.....	8.1	11.9	.....	14.76	17.6	21.6
1072	East One hundred and fourteenth Street.....	6.7	10.5	.....	13.32	16.2	20.2
1073	do.....	4.9	8.7	.....	11.56	14.4	18.4
1074	East One hundred and thirteenth Street.....	5.4	9.2	.....	12.01	14.9	18.9
1075	Jefferson Park.....	2.6	6.4	.....	9.21	12.1	16.1
1076	do.....	2.7	6.5	.....	9.36	12.2	16.2
1077	East One hundred and eleventh Street.....	0.4	4.2	.....	7.04	9.9	13.9
1078	do.....	5.0	8.8	.....	11.03	14.5	18.5
1079	East One hundred and tenth Street.....	3.5	7.3	.....	10.12	13.0	17.0
1080	East One hundred and eighth Street.....	4.0	7.8	.....	10.61	13.5	17.5
1081	East One hundred and sixth Street.....	4.1	7.9	.....	10.77	13.6	17.6
1082	East One hundred and fourth Street.....	3.8	7.6	.....	10.49	13.3	17.3
1083	East One hundred and second Street.....	4.6	8.6	.....	11.31	14.1	18.1
1084	East Ninety-ninth street.....	8.9	7.9	.....	10.60	13.4	17.4
1085	Foot of East Ninety-sixth Street.....	1.0	5.0	.....	7.77	10.5	14.5
1086	First Avenue and East Ninety-sixth Street.....	3.5	7.5	.....	10.30	13.0	17.0
1087	do.....	4.6	8.6	.....	11.38	14.1	18.1

TIDAL BENCH MARKS, STATE OF NEW YORK.

SECTION I.—Elevations of bench marks, serial Nos. 1086 to 1324: Randalls Island to Governors Island—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
1088	East Ninety-sixth Street.....	3.3	7.3	.....	10.09	12.8	16.8
1089	East Ninety-fifth Street.....	2.3	6.3	.....	9.10	11.8	15.8
1090	East Ninety-second Street.....	8.8	13.0	.....	15.63	18.3	22.3
1091	Avenue A and East Ninety-first Street.....	11.2	15.4	.....	18.06	20.7	24.7
1092	.....do.....	10.2	14.4	.....	17.03	19.7	23.7
1093	.....do.....	10.1	14.3	.....	16.99	19.6	23.6
1094	East Ninety-first Street.....	1.6	5.8	.....	8.48	11.1	15.1
1095	.....do.....	2.2	6.4	.....	9.06	11.7	15.7
1096	East Eighty-seventh Street.....	29.5	34.0	.....	36.45	39.0	43.0
1097	East Eighty-sixth Street.....	44.3	48.8	.....	51.33	53.8	57.8
1098	.....do.....	44.8	49.3	.....	51.76	54.3	58.3
1099	.....do.....	33.3	37.8	.....	40.32	42.8	46.8
1100	.....do.....	29.4	33.9	.....	36.42	38.9	42.9
1101	.....do.....	22.2	26.7	.....	29.24	31.7	35.7
1102	.....do.....	1.8	6.3	.....	8.84	11.3	15.3
1103	Foot of East Eighty-sixth Street.....	3.3	7.8	.....	10.29	12.8	16.8
1104	.....do.....	2.4	6.9	.....	9.39	11.9	15.9
1105	Carl Schurz Park.....	1.7	6.2	.....	8.67	11.2	15.2
1106	.....do.....	0.5	5.0	.....	7.54	10.0	14.0
1107	East Eighty-fourth Street.....	-1.1	3.4	.....	5.86	8.4	12.4
1108	.....do.....	-1.6	2.9	.....	5.37	7.9	11.9
1109	Carl Schurz Park.....	1.6	6.1	.....	8.58	11.1	15.1
1110	East Eighty-first Street.....	31.5	36.0	.....	38.46	41.0	45.0
1111	East Eightieth Street.....	31.8	36.0	.....	38.43	40.8	44.8
1112	East Seventy-ninth Street.....	31.6	35.8	.....	38.24	40.6	44.6
1113	East Seventy-eighth Street.....	27.8	32.0	.....	34.43	36.8	40.8
1114	.....do.....	28.7	32.9	.....	35.29	37.7	41.7
1115	.....do.....	28.3	32.5	.....	34.89	37.3	41.3
1116	East Seventy-seventh Street.....	24.8	29.0	.....	31.45	33.8	37.8
1117	East Seventy-sixth Street.....	21.8	26.0	.....	28.41	30.8	34.8
1118	.....do.....	22.0	26.2	.....	28.62	31.0	35.0
1119	.....do.....	4.0	8.2	.....	10.65	13.0	17.0
1120	East Seventy-fifth Street.....	18.8	23.0	.....	25.40	27.8	31.8
1121	.....do.....	9.8	14.0	.....	16.39	18.8	22.8
1122	East Seventy-fourth Street.....	16.3	20.7	.....	23.00	25.3	29.3
1123	.....do.....	4.5	8.9	.....	11.22	13.6	17.6
1124	East Seventy-third Street.....	23.2	27.6	.....	29.92	32.2	36.2
1125	.....do.....	6.0	10.4	.....	12.67	15.0	19.0
1126	East Seventy-second Street.....	29.6	34.0	.....	36.33	38.6	42.6
1127	East Seventy-first Street.....	29.6	34.0	.....	36.31	38.6	42.6
1128	.....do.....	32.2	36.6	.....	38.86	41.2	45.2
1129	East Seventieth Street.....	29.6	34.0	.....	36.30	38.6	42.6
1130	East Sixty-ninth Street.....	27.8	32.2	.....	34.46	36.8	40.8
1131	East Sixty-eighth Street.....	25.2	29.6	.....	31.90	34.2	38.2
1132	East Sixty-seventh Street.....	23.7	28.1	.....	30.44	32.7	36.7
1133	East Sixty-sixth Street.....	21.7	26.1	.....	28.41	30.7	34.7
1134	East Sixty-fifth Street.....	20.2	24.3	.....	26.51	28.7	32.7
1135	East Sixty-fourth Street.....	2.8	6.9	.....	9.11	11.3	15.3
1136	East Sixty-third Street.....	14.8	18.9	.....	21.07	23.3	27.3
1137	East Sixty-second Street.....	7.7	11.8	.....	13.98	16.2	20.2
1138	East Sixty-first Street.....	6.6	10.7	.....	12.94	15.1	19.1
1139	East Sixtieth Street.....	20.2	24.3	.....	26.46	28.7	32.7
1140	Queensboro Bridge.....	52.6	56.7	.....	58.87	61.1	65.1
1141	.....do.....	52.6	56.7	.....	58.87	61.1	65.1
1142	.....do.....	44.9	49.0	.....	51.15	53.4	57.4
1143	.....do.....	43.0	47.1	.....	49.20	51.5	55.5
1144	.....do.....	39.7	43.8	.....	45.98	48.2	52.2
1145	East Fifty-ninth Street.....	41.4	45.5	.....	47.68	49.9	53.9
1146	East Fifty-eighth Street.....	42.2	46.3	.....	48.48	50.7	54.7
1147	East Fifty-seventh Street.....	40.9	45.0	.....	47.20	49.4	53.4
1148	East Fifty-sixth Street.....	32.0	36.1	.....	38.33	40.5	44.5
1149	.....do.....	47.4	51.5	.....	53.60	55.9	59.9
1150	East Fifty-fifth Street.....	21.8	25.9	.....	28.08	30.3	34.3

## SECTION I.—Elevations of bench marks, serial Nos. 1036 to 1224: Randalls Island to Governors Island—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
1151	East Fifty-fourth Street.....	12.1	16.2	.....	18.44	20.6	24.6
1152	East Fifty-first Street.....	42.4	46.5	.....	48.70	50.9	54.9
1153	.....do.....	41.8	45.9	.....	48.06	50.3	54.3
1154	.....do.....	42.4	46.5	.....	48.69	50.9	54.9
1155	East Fiftieth Street.....	37.3	41.7	.....	43.71	45.8	49.8
1156	East Forty-ninth Street.....	10.6	15.0	.....	17.09	19.1	23.1
1157	Foot of East Forty-ninth Street.....	3.0	7.4	.....	9.42	11.5	15.5
1158	East Forty-eighth Street.....	6.9	11.3	.....	13.36	15.4	19.4
1159	East Forty-seventh Street.....	2.1	6.5	.....	8.55	10.6	14.6
1160	Foot of East Forty-seventh Street.....	2.2	6.6	.....	8.63	10.7	14.7
1161	East Forty-sixth Street.....	28.3	32.7	.....	34.74	36.8	40.8
1162	.....do.....	28.3	32.7	.....	34.72	36.8	40.8
1163	.....do.....	22.6	27.0	.....	29.02	31.1	36.1
1164	East Forty-fifth Street.....	32.3	37.7	.....	39.70	41.8	45.8
1165	East Forty-fourth Street.....	30.5	40.9	.....	42.93	45.0	49.0
1166	East Forty-second Street.....	31.9	36.3	.....	38.37	40.4	44.4
1167	West Forty-second Street.....	68.3	72.7	.....	74.76	76.8	80.8
1168	.....do.....	76.9	81.3	.....	83.32	85.4	89.4
1169	West Forty-first Street.....	75.1	79.5	.....	81.60	83.6	87.6
1170	First Avenue and East Forty-first Street.....	31.9	36.3	38.39	.....	40.4	44.4
1171	East Fortieth Street.....	23.1	27.5	.....	29.59	31.6	35.6
1172	.....do.....	23.8	28.2	.....	30.24	32.3	36.3
1173	East Thirty-ninth Street.....	20.7	25.1	.....	27.20	29.2	33.2
1174	East Thirty-eighth Street.....	10.6	15.0	.....	17.04	19.1	23.1
1175	East Thirty-seventh Street.....	9.9	14.3	.....	16.32	18.4	22.4
1176	.....do.....	6.5	10.9	.....	12.96	15.0	19.0
1177	East Thirty-sixth Street.....	6.0	10.4	.....	12.45	14.5	18.5
1178	East Thirty-fourth Street.....	4.6	8.6	.....	10.58	12.6	16.6
1179	East Thirty-third Street.....	6.4	10.4	.....	12.39	14.4	18.4
1180	East Thirty-second Street.....	9.7	13.7	.....	15.66	17.7	21.7
1181	East Thirtieth Street.....	20.8	24.8	.....	26.82	28.8	32.8
1182	First Avenue and East Twenty-eighth Street.....	13.6	17.6	.....	19.60	21.6	25.6
1183	Cornell University.....	14.9	18.9	.....	20.84	22.9	26.9
1184	.....do.....	14.8	18.8	.....	20.82	22.8	26.8
1185	.....do.....	16.1	20.1	.....	22.11	24.1	28.1
1186	East Twenty-seventh Street.....	14.6	18.6	.....	20.55	22.6	26.6
1187	East Twenty-sixth Street.....	27.6	31.6	.....	33.60	35.6	39.6
1188	.....do.....	31.8	35.8	.....	37.80	39.8	43.8
1189	Foot of East Twenty-fifth Street.....	2.2	6.2	.....	8.17	10.2	14.2
1190	East Twenty-fourth Street.....	2.3	6.3	.....	8.28	10.3	14.3
1191	.....do.....	2.3	6.3	.....	8.30	10.3	14.3
1192	.....do.....	11.3	15.3	.....	17.30	19.3	23.3
1193	East Twenty-third Street.....	2.2	6.2	.....	8.18	10.2	14.2
1194	East Twenty-second Street.....	5.2	9.2	.....	11.21	13.2	17.2
1195	East Twenty-first Street.....	5.5	9.5	.....	11.60	13.5	17.5
1196	East Twentieth Street.....	5.5	9.5	.....	11.53	13.5	17.5
1197	.....do.....	2.2	6.2	.....	8.25	10.2	14.2
1198	East Nineteenth Street.....	1.9	5.9	.....	7.94	9.9	13.9
1199	East Eighteenth Street.....	2.9	6.9	8.94	.....	10.9	14.9
1200	.....do.....	3.3	7.3	9.31	.....	11.3	15.3
1201	East Seventeenth Street.....	7.5	11.5	.....	13.46	15.5	19.5
1202	.....do.....	8.4	12.4	.....	14.35	16.4	20.4
1203	.....do.....	7.4	11.4	.....	13.37	15.4	19.4
1204	.....do.....	1.0	5.0	.....	6.95	9.0	13.0
1205	East Sixteenth Street.....	4.2	8.2	.....	10.23	12.2	16.2
1206	East Fourteenth Street.....	4.0	8.0	.....	9.99	12.0	16.0
1207	East Twelfth Street.....	4.4	8.4	.....	10.40	12.4	16.4
1208	East Tenth Street.....	5.3	9.3	.....	11.30	13.3	17.3
1209	.....do.....	13.5	17.5	.....	19.49	21.5	25.5
1210	.....do.....	12.5	16.5	.....	18.48	20.5	24.5

SECTION I.—Elevations of bench marks, serial Nos. 1056 to 1324: *Randalls Island to Governors Island*—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1211	East Tenth Street.....	13.9	17.9	.....	19.87	21.9	25.9
1212	Broadway.....	39.0	43.0	.....	45.01	47.0	51.0
1213	do.....	37.2	41.2	.....	43.21	45.2	49.2
1214	Great Jones Street.....	40.3	44.3	.....	46.33	48.3	52.3
1215	do.....	40.3	44.3	.....	46.27	48.3	52.3
1216	Astor Place.....	33.8	37.8	.....	39.81	41.8	45.8
1217	do.....	37.0	41.0	.....	43.01	45.0	49.0
1218	Fourth Avenue.....	38.8	42.8	.....	44.78	46.8	50.8
1219	East Seventh Street.....	39.5	43.5	.....	45.52	47.5	51.5
1220	East Eighth Street.....	3.7	7.7	.....	9.70	11.7	15.7
1221	East Sixth Street.....	4.7	8.7	.....	10.70	12.7	16.7
1222	East Fifth Street.....	8.2	12.2	.....	14.19	16.2	20.2
1223	do.....	7.7	11.7	.....	13.66	15.7	19.7
1224	do.....	6.8	10.8	.....	12.84	14.8	18.8
1225	do.....	7.2	11.2	.....	13.18	15.2	19.2
1226	East Fourth Street.....	3.2	7.2	.....	9.19	11.2	15.2
1227	East Third Street.....	5.2	9.2	.....	11.17	13.2	17.2
1228	do.....	8.3	12.3	.....	14.34	16.3	20.3
1229	do.....	7.8	11.8	.....	13.77	15.8	19.8
1230	do.....	8.2	12.2	.....	14.20	16.2	20.2
1231	do.....	1.4	5.4	.....	7.38	9.4	13.4
1232	East Houston and Mangin Streets.	0.1	4.1	.....	0.13	8.1	12.1
1233	Rivington and Mangin Streets.....	2.2	6.2	.....	8.18	10.2	14.2
1234	Mangin and Delancey Streets.....	4.0	8.0	.....	10.02	12.0	16.0
1235	Mangin Street.....	4.0	8.0	.....	9.06	12.0	16.0
1236	do.....	2.9	6.9	.....	8.88	10.9	14.9
1237	Broome and East Streets.....	2.3	6.3	.....	8.27	10.3	14.3
1238	Foot of Broome Street.....	3.7	7.7	.....	9.72	11.7	15.7
1239	East and Cherry Streets.....	1.6	5.6	.....	7.65	9.6	13.6
1240	Cherry Street.....	1.6	5.6	.....	7.58	9.6	13.6
1241	Water and East Streets.....	5.7	9.6	.....	11.63	13.7	17.7
1242	Water Street.....	0.7	4.6	.....	6.62	8.7	12.7
1243	Jackson Street.....	4.0	8.8	.....	10.87	12.9	16.9
1244	do.....	3.9	7.8	.....	9.82	11.9	15.9
1245	Corlears Hook Park.....	18.8	22.7	.....	24.78	26.8	30.8
1246	Jackson and Water Streets.....	9.9	13.8	.....	15.89	17.9	21.9
1247	Madison Street.....	26.2	30.1	.....	32.10	34.2	38.2
1248	do.....	27.9	31.8	.....	33.88	35.9	39.9
1249	do.....	31.2	35.1	.....	37.20	39.2	43.2
1250	Governour and Water Streets.....	10.7	14.6	.....	16.63	18.7	22.7
1251	Governour Slip.....	3.1	7.0	.....	9.03	11.1	15.1
1252	Jefferson Street.....	2.2	6.1	.....	8.14	10.2	14.2
1253	Rutgers Slip.....	2.4	6.2	.....	8.27	10.4	14.4
1254	do.....	3.7	7.5	.....	9.60	11.7	15.7
1255	Pike Slip.....	2.3	6.1	.....	8.23	10.3	14.3
1256	Manhattan Bridge.....	3.2	7.0	.....	9.09	11.2	15.2
1257	Pike Slip and Water Street.....	2.4	6.2	.....	8.31	10.4	14.4
1258	do.....	4.4	8.2	.....	10.31	12.4	16.4
1259	Market Slip and Water Street.....	2.7	6.5	.....	8.61	10.7	14.7
1260	Water Street.....	4.9	8.7	.....	10.81	12.9	16.9
1261	Water and Catherine Streets.....	0.7	4.5	.....	6.64	8.7	12.7
1262	Oliver Street.....	1.8	5.0	.....	7.74	9.8	13.8
1263	Roosevelt Street.....	1.8	5.6	.....	7.67	9.8	13.8
1264	Cherry Street.....	11.8	15.6	.....	17.72	19.8	23.8
1265	Franklin Square.....	19.9	23.7	.....	25.85	27.9	31.9
1266	City Hall.....	38.8	42.6	.....	44.74	46.8	50.8
1267	Chambers Street.....	34.8	38.6	.....	40.72	42.8	46.8
1268	do.....	34.4	38.2	.....	40.29	42.4	46.4
1269	Municipal Building.....	35.7	39.5	.....	41.61	43.7	47.7
1270	Brooklyn Bridge.....	21.7	25.5	.....	27.59	29.7	33.7
1271	Dover and South Streets.....	0.4	4.2	.....	6.34	8.4	12.4
1272	Peck slip.....	3.4	7.2	.....	9.33	11.4	15.4

## SECTION I.—Elevations of bench marks, serial Nos. 1036 to 1324: Randalls Island to Governors Island—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1273	Beakman Street.....	0.2	4.0	.....	6.14	8.2	12.2
1274	Fulton Street.....	0.5	4.3	.....	6.37	8.5	12.5
1275	Burling Slip.....	1.7	5.5	.....	7.56	9.7	13.7
1276	Fletcher Station.....	1.5	5.0	.....	7.78	10.0	14.0
1277	Malden Lane.....	1.2	5.3	.....	7.53	9.7	13.7
1278	Pine Street.....	2.7	6.8	.....	8.99	11.2	15.2
1279	Wall Street.....	0.5	4.6	.....	6.84	9.0	13.0
1280	.....do.....	2.1	6.2	.....	8.38	10.6	14.6
1281	Jones Lane.....	0.8	4.9	.....	7.07	9.3	13.3
1282	Gouverneur Lane.....	1.1	5.2	.....	7.41	9.6	13.6
1283	Pier 10.....	1.7	5.8	.....	7.95	10.2	14.2
1284	.....do.....	2.7	6.8	.....	9.02	11.2	15.2
1285	Water Street and Old Slip.....	3.0	7.1	.....	9.32	11.5	15.6
1286	Old Slip.....	0.4	4.5	.....	6.75	8.9	12.9
1287	Cuylers Lane.....	4.3	8.4	.....	10.64	12.8	16.8
1288	Pier 7.....	2.3	6.4	.....	8.60	10.8	14.8
1289	.....do.....	2.6	6.7	.....	8.94	11.1	15.1
1290	Coenties Slip.....	3.0	7.1	.....	9.29	11.5	15.6
1291	.....do.....	0.7	4.8	.....	7.02	9.2	13.2
1292	.....do.....	-0.6	3.5	.....	5.69	7.9	11.9
1293	Broad and Stone Streets.....	2.4	6.5	.....	8.69	10.9	14.9
1294	Broad Street.....	-1.1	3.0	.....	5.23	7.4	11.4
1295	Pier 4.....	2.6	6.7	.....	8.87	11.1	15.1
1296	.....do.....	2.5	6.6	.....	8.80	11.0	15.0
1297	.....do.....	3.0	7.1	.....	9.32	11.5	15.5
1298	.....do.....	2.8	6.9	.....	9.15	11.3	15.3
1299	.....do.....	2.9	7.0	.....	9.24	11.4	15.4
1300	Pier 3.....	3.1	7.2	.....	9.42	11.6	15.6
1301	.....do.....	4.7	8.8	.....	11.03	13.2	17.2
1302	Moore Street.....	-0.7	3.4	.....	5.55	7.8	11.8
1303	Whitehall Street.....	1.2	5.3	.....	7.54	9.7	13.7
1304	.....do.....	2.8	6.9	.....	9.10	11.3	15.3
1305	.....do.....	4.7	8.8	.....	11.00	13.2	17.2
1306	Whitehall and State Streets.....	0.6	4.7	.....	6.90	9.1	13.1
1307	Broadway and Battery Place.....	11.0	15.1	.....	17.30	19.5	23.5
1308	Battery Park.....	0.7	4.8	.....	7.00	9.2	13.2
1309	.....do.....	0.7	4.8	.....	7.04	9.2	13.2
1310	.....do.....	4.2	8.3	.....	10.48	12.7	16.7
1311	.....do.....	2.8	6.9	.....	9.08	11.3	15.3
1312	.....do.....	6.8	10.9	.....	13.13	15.3	19.3
1313	.....do.....	6.1	10.2	.....	12.37	14.6	18.6
1314	.....do.....	0.4	4.5	.....	6.66	8.9	12.9
1315	.....do.....	10.8	14.9	.....	17.06	19.3	23.3
1316	.....do.....	10.7	14.8	.....	16.95	19.2	23.2
1317	Governors Island.....	5.9	9.0	.....	12.12	14.3	18.3
1318	.....do.....	1.7	5.8	.....	8.00	10.2	14.2
1319	.....do.....	2.2	6.3	.....	8.54	10.7	14.7
1320	.....do.....	0.9	5.0	.....	7.23	9.4	13.4
1321	.....do.....	1.7	5.8	.....	7.99	10.2	14.2
1322	.....do.....	0.8	4.0	.....	7.11	9.3	13.3
1323	.....do.....	0.8	4.0	.....	7.13	9.3	13.3
1324	.....do.....	10.2	14.3	.....	16.54	18.7	22.7

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 1036 TO 1324: RANDALLS ISLAND TO GOVERNORS ISLAND.

Serial No. 1036. *Randalls Island*: B. M. "NL" (B. W. S.) is a square cut on the northwest corner of main entrance, facing *Port Morris*, of the Children's Hospital. Bench mark is 5 feet above road at north side of *Randalls Island*. Elevation: 43.0 feet above mean low water; 40.13 feet above standard sea level.

**Serial No. 1037.** *Randalls Island:* B. M. 27 (U. S. E.) is marked by a square cut in the sill of the north window on west side of the boiler house on the northern end of Randalls Island. Elevation: 20.6 feet above mean low water; 17.76 feet above standard sea level.

**Serial No. 1038.** *Randalls Island:* B. M. "DY" (B. W. S.) is a square cut on stone on north side of steps to entrance to male dormitory. Bench mark is in line of white posts, 6 feet west of south post. Building is on Randalls Island opposite One hundred and twenty-first Street, New York. Elevation: 18.6 feet above mean low water; 15.75 feet above standard sea level.

**Serial No. 1039.** *Randalls Island:* B. M. 28 (U. S. E.) is a cross cut on a marble slab situated in a quadrangle in front of the House of Refuge, south end of Randalls Island. Elevation: 11.4 feet above mean low water; 8.58 feet above standard sea level.

**Serial No. 1040.** *Randalls Island:* B. M. "Refuge" (B. W. S.) is a square cut on the southwest corner of the doorsill of entrance to southwest corner of House of Refuge. Bench mark is at water-table elevation opposite center line of One hundred and sixteenth Street, New York. Elevation: 17.9 feet above mean low water; 15.11 feet above standard sea level.

**Serial No. 1041.** *Randalls Island:* B. M. 29 (U. S. E.) is marked by a square cut in the sea wall on the south end of Randalls Island. Elevation: 9.4 feet above mean low water; 6.53 feet above standard sea level.

**Serial No. 1042.** *Wards Island:* B. M. 30 (U. S. E.) is marked by a square cut on sea wall on the north end of Wards Island. Elevation: 9.7 feet above mean low water; 6.82 feet above standard sea level.

**Serial No. 1043.** *Wards Island:* B. M. 31 (U. S. E.) is marked by a square cut on concrete steps on north end of Wards Island. Elevation: 12.8 feet above mean low water; 9.90 feet above standard sea level.

**Serial No. 1044.** *Wards Island:* B. M. NM (B. W. S.) is a square cut in second step of flight of steps at northwest shore of Wards Island. Bench mark is opposite House of Refuge entrance. Elevation: 12.9 feet above mean low water; 10.01 feet above standard sea level.

**Serial No. 1045.** *Wards Island:* B. M. "Wards" (B. W. S.) is a square cut at southwest corner entrance to photographer, 18 feet north of southwest corner of building which is on east side of road about 150 feet south of intersection of roads, about 800 feet east of west shore of island opposite One hundred and ninth Street, New York. Elevation: 28.3 feet above mean low water; 25.52 feet above standard sea level.

**Serial No. 1046.** *Wards Island:* B. M. 32 (U. S. E.) is marked by a square cut on concrete walk on main dock, Wards Island. Elevation: 11.8 feet above mean low water; 8.98 feet above standard sea level.

**Serial No. 1047.** *Wards Island:* B. M. 33 (U. S. E.) is marked by a square cut in wall on the south end of Wards Island. Elevation: 9.4 feet above mean low water 6.59 feet above standard sea level.

**Serial No. 1048.** *Wards Island:* B. M.  $\triangle$ 33 (U. S. E.) is the top of a copper bolt in the concrete monument on the southwest side of Wards Island. It is 44.5 feet from east end of wall and 12 feet from the face of wall. It is triangulation station No. 33. Elevation: 10.1 feet above mean low water; 7.37 feet above standard sea level.

**Serial No. 1049.** *Wards Island:* B. M. 85 (U. S. E.) is a square on top of the wall on the southwest side of Wards Island. It is 1.8 feet from face of wall and 273.5 feet from extreme end of wall. This is a Harlem River bench. Elevation: 9.4 feet above mean low water; 6.64 feet above standard sea level.

**Serial No. 1050.** *Wards Island:* B. M.  $\triangle$ 35 (U. S. E.) is a copper plug in concrete monument on the south side of Wards Island. It is triangulation station No. 35. It is about 48 feet from southwest corner of concrete house and 2.5 feet from face of wall. Elevation: 8.7 feet above mean low water; 5.94 feet above standard sea level.

**Serial No. 1051.** *Wards Island:* B. M. 86 (U. S. E.) is a square cut on top of wall on the southwest side of Wards Island. It is 3.7 feet from face and 410.7 feet from east end of the wall. Elevation: 8.9 feet above mean low water; 6.17 feet above standard sea level.

**Serial No. 1052.** *Wards Island:* B. M. 1 (U. S. E.) is a square cut in ledge rock spur at east end of the swimming pool on Wards Island. It is marked "U. S." Elevation: 8.7 feet above mean low water; 5.91 feet above standard sea level.

**Serial No. 1053.** *Wards Island:* B. M. 2 (U. S. E.) is a square cut in ledge rock spur at west end of the swimming pool on Wards Island. It is marked "U. S. E." Elevation: 7.9 feet above mean low water; 5.18 feet above standard sea level.

**Serial No. 1054.** *Wards Island:* B. M. NN (B. W. S.) is a square cut on northeast top step at entrance to ward 15. Bench mark is 130 feet west of main road and 700 feet north of south shore of island. Elevation: 27.2 feet above mean low water; 24.44 feet above standard sea level.

**Serial No. 1055.** *Wards Island:* B. M. 5 (B. W. S.) is on northeast corner of boiler house near bakery east shore of Wards Island. L is cut on corner stone 4 feet from ground. El. N. Y. and Conn. R. R. =28.524. Elevation: 29.5 feet above mean low water; 26.47 feet above standard sea level.

**Serial No. 1056.** *Wards Island:* B. M. 89 (U. S. E.) is a square cut on top of concrete bulkhead on the east side of Wards Island Dock. It is 26.27 feet from southwest corner of dock. It is 57.52 feet from nearest bolt in the base of snubbing post on southeast corner of dock, and 27.65 feet from end of cap log on the opposite side of opening for roadway. It is north of the railroad bridge. Elevation: 12.2 feet above mean low water; 8.99 feet above standard sea level.

**Serial No. 1057.** *Wards Island:* B. M. 88 (U. S. E.) is a square cut on the corner of the concrete base on  $\Delta$  station 39, northeast corner of Wards Island. It is 88.3 feet east of five copper tacks in a poplar about 6 feet above ground. It is 46 feet north of five copper tacks in the top of wooden fence post opposite, and 62.85 feet from post at the corner of pipe fence. Elevation: 15.9 feet above mean low water; 12.73 feet above standard sea level.

**Serial No. 1058.** *Wards Island:* B. M. 87 (U. S. E.) is a circular brass triangulation plug in concrete station  $\Delta$  39, northeast corner of Wards Island. It is 88.67 feet east of five copper tacks in a poplar about 6 feet above ground. It is 45.78 feet north of five tacks in top of wooden fence post opposite, and is 62.44 feet from post at the corner of pipe fence. Elevation: 15.9 feet above mean low water; 12.71 feet above standard sea level.

**Serial No. 1059.** *Great Mill Rock:* B. M.  $\Delta$ Ds (U. S. E.) is a bolt  $1\frac{1}{4}$  inches in diameter leaded in ledge rock on south end of Great Mill Rock. It is 22.16 feet from a hole inclosed in a square cut in ledge. Elevation: 9.2 feet above mean low water; 6.44 feet above standard sea level.

**Serial No. 1060.** *Great Mill Rock:* B. M.  $\Delta$ D (U. S. E.) is a bolt  $1\frac{1}{4}$  inches in diameter leaded in ledge rock on south end of Great Mill Rock. The bolt is about 6 inches long and is bent. Elevation: 10.3 feet above mean low water; 7.52 feet above standard sea level.

**Serial No. 1061.** *Blackwells Island:* B. M. NQ (B. W. S.) is a square cut on southeast corner of top step at entrance to red brick building, on west side of Blackwells Island. Bench mark is 3 feet north of southeast corner of building, about 75 feet north of East Seventy-ninth Street, N. Y. Elevation: 16.5 feet above mean low water; 14.00 feet above standard sea level.

**Serial No. 1062.** *Blackwells Island:* B. M. NP (B. W. S.) is a square cut in southwest corner of doorsill 20 feet south of northwest corner of building "Ward T. S." Building is on east side of Blackwells Island opposite Seventy-eighth Street, and 400 feet from B. M. NQ. Elevation: 17.9 feet above mean low water; 15.39 feet above standard sea level.

**Serial No. 1063.** *Blackwells Island:* B. M. 1 (D. D.) is a square cut on the parapet wall, north side of stone boat landing in front of the main entrance to workhouse prison. Elevation: 10.6 feet above mean low water; 8.34 feet above standard sea level.

**Serial No. 1064.** *Blackwells Island:* B. M. 2 (D. D.) is a square cut on the east curb of roadway north of storehouse in line of south side of waiting room. Elevation: 10.8 feet above mean low water; 8.54 feet above standard sea level.

**Serial No. 1065.** *Blackwells Island:* B. M. 3 (D. D.) is a square cut in stone guard at intersection of roadways north of storehouse opposite storehouse dock platform. Elevation: 10.0 feet above mean low water; 7.69 feet above standard sea level.

**Serial No. 1066.** *Blackwells Island:* B. M. 5 (D. D.) is a square cut on old transit point at intersection of roadways just south of Metropolitan Hospital. Elevation: 12.5 feet above mean low water; 10.17 feet above standard sea level.

**Serial No. 1067.** *East One hundred and twenty-fourth Street:* B. M. (D. D.), is a square cut on curb at the southwest corner of East One hundred and twenty-fourth

Street and Pleasant Avenue. Elevation: 11.1 feet above mean low water; 8.28 feet above standard sea level.

**Serial No. 1068.** *East One hundred and twenty-second Street:* B. M. (D. D.) is a square cut on the sewer basin on the northeast corner of East One hundred and twenty-second Street and Pleasant Avenue. Elevation: 11.9 feet above mean low water; 9.09 feet above standard sea level.

**Serial No. 1069.** *East One hundred and twentieth Street:* B. M. (D. D.) is a square cut on the sewer basin on the northwest corner of East One hundred and twentieth Street and Pleasant Avenue. Elevation: 16.0 feet above mean low water; 13.18 feet above standard sea level.

**Serial No. 1070.** *East One hundred and eighteenth Street:* B. M. (D. D.) is a square cut on the curb on the northwest corner of East One hundred and eighteenth Street and Pleasant Avenue. Elevation: 18.4 feet above mean low water; 15.57 feet above standard sea level.

**Serial No. 1071.** *East One hundred and sixteenth Street:* B. M. (D. D.) is a square cut on the sewer basin on the northwest corner of East One hundred and sixteenth Street and Pleasant Avenue. Elevation: 17.6 feet above mean low water; 14.76 feet above standard sea level.

**Serial No. 1072.** *East One hundred and fourteenth Street:* B. M. 615 (D. D.) is a square cut on the sewer basin on the northwest corner of East One hundred and fourteenth Street and Pleasant Avenue. Elevation: 16.2 feet above mean low water; 13.32 feet above standard sea level.

**Serial No. 1073.** *East One hundred and fourteenth Street:* B. M. (D. D.) is a square cut in the curb near first lamp-post east from First Avenue on East One hundred and fourteenth Street. Elevation: 14.4 feet above mean low water; 11.56 feet above standard sea level.

**Serial No. 1074.** *East One hundred and Thirteenth Street:* B. M. (D. D.) is a square cut on the curb on southeast corner of East One hundred and thirteenth Street and First Avenue. Elevation: 14.9 feet above mean low water; 12.01 feet above standard sea level.

**Serial No. 1075.** *Jefferson Park:* B. M. 73 (U. S. E.) is the center nail of five in cap log on bulkhead along the front of Jefferson Park, East One hundred and twelfth Street. It is 6.8 feet from the corner of south side of One hundred and twelfth Street Pier. Elevation: 12.1 feet above mean low water; 9.21 feet above standard sea level.

**Serial No. 1076.** *Jefferson Park:* B. M. 72 (U. S. E.) is a square cut on the curb at the middle of the curve on the west side of the walk at the south end of Jefferson Park. It is 43.7 feet from face of the bulkhead and 139.4 feet from the corner of the south side of East One hundred and twelfth Street Pier. Elevation: 12.2 feet above mean low water; 9.36 feet above standard sea level.

**Serial No. 1077.** *East One hundred and eleventh Street and Pleasant Avenue:* B. M. 71 (U. S. E.) is a square on the northeast corner of stone basin cover on north side of East One hundred and eleventh Street, on the center of Pleasant Avenue. Elevation: 9.9 feet above mean low water; 7.04 feet above standard sea level.

**Serial No. 1078.** *East One hundred and eleventh Street:* B. M. (D. D.) is a square cut on the curb on the southeast corner of East One hundred and eleventh Street and First Avenue. Elevation: 14.5 feet above mean low water; 11.63 feet above standard sea level.

**Serial No. 1079.** *East One hundred and tenth Street:* B. M. (D. D.) is a square cut on the curb on the southeast corner of East One hundred and tenth Street and First Avenue. Elevation: 13.0 feet above mean low water; 10.12 feet above standard sea level.

**Serial No. 1080.** *East One hundred and eighth Street:* B. M. (D. D.) is a square cut on sewer basin on the southeast corner of East One hundred and eighth Street and First Avenue. Elevation: 13.5 feet above mean low water; 10.61 feet above standard sea level.

**Serial No. 1081.** *East One hundred and sixth Street:* B. M. 611 (D. D.) is a square cut on sewer basin on the southeast corner of One hundred and sixth Street and First Avenue. Elevation: 13.6 feet above mean low water; 10.77 feet above standard sea level.

**Serial No. 1082.** *East One hundred and fourth Street:* B. M. 610 (D. D.) is a square cut on the sewer basin on the northeast corner of East One hundred and fourth Street and First Avenue. Elevation: 13.3 feet above mean low water; 10.49 feet above standard sea level.

**Serial No. 1083.** *East One hundred and second Street:* B. M. 609 (D. D.) is a square cut on the sewer basin on the southeast corner of East One hundred and second Street and First Avenue. Elevation: 14.1 feet above mean low water; 11.31 feet above standard sea level.

**Serial No. 1084.** *East Ninety-ninth Street:* B. M. 608 (D. D.) is a square cut on the sewer basin on the northwest corner of Ninety-ninth Street and First Avenue. Elevation: 13.4 feet above mean low water; 10.60 feet above standard sea level.

**Serial No. 1085.** *Foot of East Ninety-sixth Street:* B. M. 2 (U. S. E.) is a cross cut on south tie bolt of mooring post on the northeast corner of pier at foot of East Ninety-sixth Street and 7.55 feet from north face of wharf and 7.4 feet from east face of wharf. Elevation: 10.5 feet above mean low water; 7.77 feet above standard sea level.

**Serial No. 1086.** *First Avenue and East Ninety-sixth Street:* B. M. 3 (U. S. E.) is a square cut on corner of iron plate under corner of column of car barns, northwest corner of First Avenue and East Ninety-sixth Street. Elevation: 13.0 feet above mean low water; 10.30 feet above standard sea level.

**Serial No. 1087.** *First Avenue and East Ninety-sixth Street:* B. M. 4 (U. S. E.) is a square cut on the corner of stone cap under iron column supporting corner of building, southwest corner of First Avenue and East Ninety-sixth Street. Elevation: 14.1 feet above mean low water; 11.38 feet above standard sea level.

**Serial No. 1088.** *East Ninety-sixth Street:* B. M. 607 (D. D.) is a square cut on car stable on the northwest corner of East Ninety-sixth Street and First Avenue. Elevation: 12.8 feet above mean low water; 10.09 feet above standard sea level.

**Serial No. 1089.** *East Ninety-fifth Street:* B. M. 606 (D. D.) is a square cut on the sewer basin on the southwest corner of East Ninety-fifth Street and First Avenue. Elevation: 11.8 feet above mean low water; 9.10 feet above standard sea level.

**Serial No. 1090.** *East Ninety-second Street:* B. M. 605 (D. D.) is a square cut on an iron plate on southwest corner of Ninety-second Street and Avenue A. Elevation: 18.3 feet above mean low water; 15.63 feet above standard sea level.

**Serial No. 1091.** *Avenue A and East Ninety-first Street:* B. M. 5 (U. S. E.) is a square cut on northeast corner of stone step of entrance to No. 444 East Ninety-first Street. The building is on the southwest corner of East Ninety-first Street and Avenue A. Elevation: 20.7 feet above mean low water; 18.06 feet above standard sea level.

**Serial No. 1092.** *Avenue A and East Ninety-first Street:* B. M. 6 (U. S. E.) is a square cut on stone step in front of door entrance to No. 1745 Avenue A. Building is same one mentioned in description of B. M. 5. Elevation: 19.7 feet above mean low water; 17.03 feet above standard sea level.

**Serial No. 1093.** *Avenue A and East Ninety-first Street:* B. M. 7 (U. S. E.) is a square cut on southeast corner of stone step to entrance to apartments to No. 1743 Avenue A. Building is the same as mentioned in description of B. M. 5. Elevation: 19.6 feet above mean low water; 16.99 feet above standard sea level.

**Serial No. 1094.** *East Ninety-first Street:* B. M. 1 (U. S. E.) is a cross cut on north tie bolt of mooring post on northeast corner of pier at foot of East Ninety-first Street, and 5.87 feet from north face of wharf. Elevation: 11.1 feet above mean low water; 8.48 feet above standard sea level.

**Serial No. 1095.** *Foot of East Ninetieth Street:* B. M. 69 (U. S. E.) is four tacks in the southeast corner of East Ninetieth Street Dock and is marked "U. S." It is 3.34 feet from end of the dock. It is 1.8 feet from outside face of cap log and 10.7 feet from center of iron mooring post. Elevation: 11.7 feet above mean low water; 9.06 feet above standard sea level.

**Serial No. 1096.** *East Eighty-seventh Street:* B. M. 604 (D. D.) is a square cut on sewer basin on southwest corner of East Eighty-seventh Street and Avenue A. Elevation: 39.0 feet above mean low water; 36.45 feet above standard sea level.

**Serial No. 1097.** *East Eighty-sixth Street:* B. M. 863 (B. E. & A.) is the top of a galvanized-iron bolt in the granite water table on the north side of Public School No. 77, on the southeast corner of East Eighty-sixth Street and First Avenue. The bolt is 2.5 feet from the west side of the building and 1.4 feet above the area. Elevation: 53.8 feet above mean low water; 51.33 feet above standard sea level.

**Serial No. 1098.** *East Eighty-sixth Street:* B. M. 864 (B. E. & A.) is the center of the horizontal bar of a "T" cut in the granite water table on the north side of Public School No. 77, on the southeast corner of East Eighty-sixth Street and First Avenue. The bench mark is 2.5 feet from the west side of the building and 1.8 feet above the area. Elevation: 54.3 feet above mean low water; 51.76 feet above standard sea level.

**Serial No. 1099.** *East Eighty-sixth Street:* B. M. 865 (B. E. & A.) is a square cut in the bluestone sidewalk on the southeast corner of East Eighty-sixth Street and Avenue A. Elevation: 42.8 feet above mean low water; 40.32 feet above standard sea level.

**Serial No. 1100.** *East Eighty-sixth Street:* B. M. 866 (B. E. & A.) is a square cut in the center of the sidewalk on the south side of East Eighty-sixth Street, about 277 feet east of Avenue A. Elevation: 38.9 feet above mean low water; 36.42 feet above standard sea level.

**Serial No. 1101.** *East Eighty-sixth Street:* B. M. 867 (B. E. & A.) is a square cut in the center of the sidewalk on the south side of East Eighty-sixth Street, about 540 feet east of Avenue A. Elevation: 31.7 feet above mean low water; 29.24 feet above standard sea level.

**Serial No. 1102.** *East Eighty-sixth Street:* B. M. 868 (B. E. & A.) is a square cut in the top of a large bowlder on the south side of East Eighty-sixth Street and on the west side of the river promenade on the east side of Carl Schurz Park. Elevation: 11.3 feet above mean low water; 8.84 feet above standard sea level.

**Serial No. 1103.** *Foot of East Eighty-sixth Street:* B. M. 68 (U. S. E.) is five nails on the cap log on the north side of East Eighty-sixth Street Dock. It is 1.6 feet from north face of dock and 0.25 foot from inside face of dock. It is 49.55 feet from west end of cap log. Elevation: 12.8 feet above mean low water; 10.29 feet above standard sea level.

**Serial No. 1104.** *Foot of East Eighty-sixth Street:* B. M. A. (U. S. E.) is a spike surrounded by eight nails on the south side of the pier at the foot of East Eighty-sixth Street. It is 6.1 feet from the nearest pile on the southeast corner of dock; 1.6 feet from the inside edge, and 0.25 foot from the outside edge of cap log. Elevation: 11.9 feet above mean low water; 9.39 feet above standard sea level.

**Serial No. 1105.** *Carl Schurz Park:* B. M. 873 (B. E. & A.) is a square cut in the granite coping of the sea wall on the east side of Carl Schurz Park. The bench mark is about on line with the center line of East Eighty-fifth Street or about 230 feet north of the south end of the sea wall. It is 2 inches from the west edge of the coping. Elevation: 11.2 feet above mean low water; 8.67 feet above standard sea level.

**Serial No. 1106.** *Carl Schurz Park:* B. M. 5 (C. & G. S.) is on the extreme southeast corner of the sea wall on the east side of Carl Schurz Park, and is on the top course of masonry under the 1-foot granite coping. Elevation: 10.0 feet above mean low water; 7.54 feet above standard sea level.

**Serial No. 1107.** *East Eighty-fourth Street:* B. M. 869 (B. E. & A.) is the top of a heavy iron ringbolt leaded vertically in the natural rock at the foot of East Eighty-fourth Street. The ringbolt is 8.5 feet south of the south end of the sea wall on the east side of Carl Schurz Park and about 35.7 feet east of the high retaining wall at the foot of the street. Elevation: 8.4 feet above mean low water; 5.86 feet above standard sea level.

**Serial No. 1108.** *East Eighty-fourth Street:* B. M. 870 (B. E. & A.) is a 1-inch copper bolt leaded vertically in the natural rock at the foot of East Eighty-fourth Street. The bolt is 8 feet south of the south end of the sea wall on the east side of Carl Schurz Park, and about 36 feet east of the high retaining wall at the foot of the street. The bench mark is 7 inches northeast of the iron ringbolt. Elevation: 7.9 feet above mean low water; 5.37 feet above standard sea level.

**Serial No. 1109.** *Carl Schurz Park:* B. M. 872 (B. E. & A.) is the bottom of a square cut near the southeast corner of the granite coping stone on the southwest corner of the sea wall on the east side of Carl Schurz Park. The bench mark is at the south end of the promenade and about on line with the north line of East Eighty-fourth Street. An arrowhead cut in the south side of the coping points to the bench mark. Elevation: 11.1 feet above mean low water; 8.58 feet above standard sea level.

**Serial No. 1110.** *East Eighty-first Street:* B. M. 603 (D. D.) is a square cut on sewer basin on the northwest corner of East Eighty-first Street and Avenue A. Elevation: 41.0 feet above mean low water; 38.46 feet above standard sea level.

**Serial No. 1111.** *East Eightieth Street:* B. M. 602 (D. D.) is a square cut on sewer basin on the northwest corner of East Eightieth Street and Avenue A. Elevation: 40.8 feet above mean low water; 38.43 feet above standard sea level.

**Serial No. 1112.** *East Seventy-ninth Street:* B. M. 601 (D. D.) is a square cut on sewer basin on northwest corner of East Seventy-ninth Street and Avenue A. Elevation: 40.6 feet above mean low water; 38.24 feet above standard sea level.

**Serial No. 1113.** *East Seventy-eighth Street:* B. M. 600 (D. D.) is a square cut on the sewer basin on northwest corner of East Seventy-eighth Street and Avenue A. Elevation: 36.8 feet above mean low water; 34.43 feet above standard sea level.

**Serial No. 1114.** *East Seventy-eighth Street:* B. M. 848 (B. E. & A.) is the center of the horizontal bar of a "T" cut in the granite water table on the west side of Public School No. 158, on the southeast corner of East Seventy-eighth Street and Avenue A. The bench mark is 6.7 feet south of East Seventy-eighth Street and 11 $\frac{1}{4}$  inches above the area. Elevation: 37.7 feet above mean low water; 35.29 feet above standard sea level.

**Serial No. 1115.** *East Seventy-eighth Street:* B. M. 847 (B. E. & A.) is the top of a galvanized-iron bolt in the granite water table on the west side of Public School No. 158, on the southeast corner of East Seventy-eighth Street and Avenue A. The bench mark is 6.7 feet south of East Seventy-eighth Street and 6 $\frac{1}{2}$  inches above the area. Elevation: 37.3 feet above mean low water; 34.89 feet above standard sea level.

**Serial No. 1116.** *East Seventy-seventh Street:* B. M. 599 (D. D.) is a square cut on the sewer basin on northwest corner of East Seventy-seventh Street and Avenue A. Elevation: 33.8 feet above mean low water; 31.45 feet above standard sea level.

**Serial No. 1117.** *East Seventy-sixth Street:* B. M. 598 (D. D.) is a square cut on the sewer basin on the northwest corner of East Seventy-sixth Street and Avenue A. Elevation: 30.8 feet above mean low water; 28.41 feet above standard sea level.

**Serial No. 1118.** *East Seventy-sixth Street:* B. M. 845 (B. E. & A.) is the top of a  $\frac{3}{4}$ -inch square iron bolt in the granite basin head on the northwest corner of East Seventy-sixth Street and Avenue A. Elevation: 31.0 feet above mean low water; 28.62 feet above standard sea level.

**Serial No. 1119.** *East Seventy-sixth Street:* B. M. 844 (B. E. & A.) is a square cut in the top of the northeast corner of the lowest cement step at the basement entrance to the "East Side House Settlement," on the southwest corner of East Seventy-sixth Street and Avenue B (Exterior Street). The bench mark is under the brick porch, is about 68 feet south of East Seventy-sixth Street, and 7 $\frac{1}{4}$  inches above the sidewalk. Elevation: 13.0 feet above mean low water; 10.65 feet above standard sea level.

**Serial No. 1120.** *East Seventy-fifth Street:* B. M. 597b (D. D.) is a square cut on the sewer basin on the northwest corner of East Seventy-fifth Street and Avenue A. Elevation: 27.8 feet above mean low water; 25.40 feet above standard sea level.

**Serial No. 1121.** *East Seventy-fifth Street:* B. M. 597a (D. D.) is a square cut on the granite sill of wagon entrance to Blumer's new five-story factory on north side of East Seventy-fifth Street, about 150 feet west of H. W. L. Elevation: 18.8 feet above mean low water; 16.39 feet above standard sea level.

**Serial No. 1122.** *East Seventy-fourth Street:* B. M. 595 (D. D.) is a square cut on the sewer basin on southwest corner of East Seventy-fourth Street and Avenue A. Elevation: 25.3 feet above mean low water; 23.00 feet above standard sea level.

**Serial No. 1123.** *East Seventy-fourth Street:* B. M. 843 (B. E. & A.) is a square cut in the top of the granite fender post on the north side of the south wagon entrance to the powerhouse of the Manhattan Railway Co., on the northwest corner of East Seventy-fourth Street and Avenue B (Exterior Street). The bench mark is on the east side of the building, about 57 feet north of East Seventy-fourth Street. Elevation: 13.5 feet above mean low water; 11.22 feet above standard sea level.

**Serial No. 1124.** *East Seventy-third Street:* B. M. 594b (D. D.) is a square cut on sewer basin on southwest corner of East Seventy-third Street and Avenue A. Elevation: 32.2 feet above mean low water; 29.92 feet above standard sea level.

**Serial No. 1125.** *East Seventy-third Street:* B. M. 594a (D. D.) is a square cut on north curb near lamp-post, about 150 feet west of face of high rock on East Seventy-third Street. Elevation: 15.0 feet above mean low water; 12.67 feet above standard sea level.

**Serial No. 1126.** *East Seventy-second Street:* B. M. 594 (D. D.) is a square cut on sewer basin on southwest corner of Seventy-second Street and Avenue A. Elevation: 38.6 feet above mean low water; 36.33 feet above standard sea level.

**Serial No. 1127.** *East Seventy-first Street:* B. M. 593 (D. D.) is a square cut on the sewer basin on northwest corner of East Seventy-first Street and Avenue A. Elevation: 38.6 feet above mean low water; 36.31 feet above standard sea level.

**Serial No. 1128.** *East Seventy-first Street:* B. M. 842 (B. E. & A.) is a square cut in the southwest corner of the stone base of the iron column on the west side of the six-story red brick factory building on the southeast corner of East Seventy-first Street and Avenue A. The bench mark is about 38 feet south of East Seventy-first

Street and on the north side of the entrance. Elevation: 41.2 feet above mean low water; 38.86 feet above standard sea level.

**Serial No. 1129.** *East Seventieth Street:* B. M. 592 (D. D.) is a square cut on the sewer basin on northwest corner of East Seventieth Street and Avenue A. Elevation: 38.6 feet above mean low water; 36.30 feet above standard sea level.

**Serial No. 1130.** *East Sixty-ninth Street:* B. M. 590B (D. D.) is a square cut on the sewer basin on northeast corner of East Sixty-ninth Street and Avenue A. Elevation: 36.8 feet above mean low water; 34.46 feet above standard sea level.

**Serial No. 1131.** *East Sixty-eighth Street:* B. M. 590A (D. D.) is a square cut on sewer basin on northeast corner of East Sixty-eighth Street and Avenue A. Elevation: 34.2 feet above mean low water; 31.90 feet above standard sea level.

**Serial No. 1132.** *East Sixty-seventh Street:* B. M. 590 (D. D.) is a square cut on the sewer basin on northeast corner of East Sixty-seventh Street and Avenue A. Elevation: 32.7 feet above mean low water; 30.44 feet above standard sea level.

**Serial No. 1133.** *East Sixty-sixth Street:* B. M. 589A (D. D.) is a square cut on the sewer basin on the northeast corner of East Sixty-sixth Street and Avenue A. Elevation: 30.7 feet above mean low water; 28.41 feet above standard sea level.

**Serial No. 1134.** *East Sixty-fifth Street:* B. M. 589 (D. D.) is a square cut on sewer basin on the northeast corner of East Sixty-fifth Street and Avenue A. Elevation: 28.7 feet above mean low water; 26.51 feet above standard sea level.

**Serial No. 1135.** *East Sixty-fourth Street:* B. M. 588 (D. D.) is a square cut on the lower step of brewery on the south side foot of East Sixty-fourth Street. Elevation: 11.3 feet above mean low water; 9.11 feet above standard sea level.

**Serial No. 1136.** *East Sixty-third Street:* B. M. 587b (D. D.) is a square cut on the sewer basin on northwest corner of East Sixty-third Street and Avenue A. Elevation: 23.3 feet above mean low water; 21.07 feet above standard sea level.

**Serial No. 1137.** *East Sixty-second Street:* B. M. 587A (D. D.) is a square cut on the sewer basin on southwest corner of East Sixty-second Street and Avenue A. Elevation: 16.2 feet above mean low water; 13.98 feet above standard sea level.

**Serial No. 1138.** *East Sixty-first Street:* B. M. 587 (D. D.) is a square cut on the sewer basin on southeast corner of East Sixty-first Street and Avenue A. Elevation: 15.1 feet above mean low water; 12.94 feet above standard sea level.

**Serial No. 1139.** *East Sixtieth Street:* B. M. 585B (D. D.) is a square cut on the sewer basin on the southwest corner of East Sixtieth Street and Avenue A. Elevation: 28.7 feet above mean low water; 26.46 feet above standard sea level.

**Serial No. 1140.** *Queensboro Bridge:* B. M. A (U. S. E.) is a "W" cut on the southeast corner of top layer of granite pedestal on south side of Queensboro Bridge and on west side of First Avenue between Fifty-ninth and Sixtieth Streets. Elevation: 61.1 feet above mean low water; 58.87 feet above standard sea level.

**Serial No. 1141.** *Queensboro Bridge:* B. M. B (U. S. E.) is a "W" cut on southwest corner of top layer of granite pedestal on south side of Queensboro Bridge and on the east side of First Avenue and between Fifty-ninth and Sixtieth Streets. Elevation: 61.1 feet above mean low water; 58.87 feet above standard sea level.

**Serial No. 1142.** *Queensboro Bridge:* B. M. 26 (U. S. E.) is a square cut in bottom step of south entrance to first anchor pier east of bridge approach (Manhattan side) Queensboro Bridge. Elevation: 53.4 feet above mean low water; 51.15 feet above standard sea level.

**Serial No. 1143.** *Queensboro Bridge:* B. M. 27 (U. S. E.) is a cross cut in a small ledge at east face of Queensboro Bridge anchor pier, about 33 feet north from southeast corner of pier, 2 feet above sidewalk. Pier is bounded by Fifty-ninth and Sixtieth Streets, Sutton Place and First Avenue. Elevation: 51.5 feet above mean low water; 49.26 feet above standard sea level.

**Serial No. 1144.** *Queensboro Bridge:* B. M. 28 (U. S. E.) is a cross cut in east face of Queensboro Bridge anchor pier (Manhattan side) between Fifty-ninth and Sixtieth Streets, Sutton Place and First Avenue. Bench mark is about 24 feet south of northeast pier and about 3.5 feet above sidewalk. The letters "U. S." are cut alongside of bench mark. Elevation: 48.2 feet above mean low water; 45.98 feet above standard sea level.

**Serial No. 1145.** *East Fifty-ninth Street:* B. M. 585 A (D. D.) is a square cut on the sewer basin on southwest corner of East Fifty-ninth Street and Avenue A. Elevation: 49.9 feet above mean low water; 47.68 feet above standard sea level.

**Serial No. 1146.** *East Fifty-eighth Street:* B. M. 585 (D. D.) is a square cut on the sewer basin on the southwest corner of East Fifty-eighth Street and Avenue A. Elevation: 50.7 feet above mean low water; 48.48 feet above standard sea level.

**Serial No. 1147.** *East Fifty-seventh Street:* B. M. 584 (D. D.) is a square cut on the southeast corner of East Fifty-seventh Street and Avenue A, 10 feet east of Avenue A. Elevation: 49.4 feet above mean low water; 47.20 feet above standard sea level.

**Serial No. 1148.** *East Fifty-sixth Street:* B. M. 583 B (D. D.) is a square cut on the sewer basin on the northwest corner of East Fifty-sixth Street and Avenue A. Elevation: 40.5 feet above mean low water; 38.33 feet above standard sea level.

**Serial No. 1149.** *East Fifty-sixth Street:* B. M. 29 (U. S. E.) is a square cut on capstone of retaining wall supporting iron fence around the St. John's Evangelist Church at the southwest corner of First Avenue and East Fifty-sixth Street. Elevation: 55.9 feet above mean low water; 53.66 feet above standard sea level.

**Serial No. 1150.** *East Fifty-fifth Street:* B. M. 583 A (D. D.) is a square cut on the sewer basin on northwest corner of East Fifty-fifth Street and Avenue A. Elevation: 30.3 feet above mean low water; 28.08 feet above standard sea level.

**Serial No. 1151.** *East Fifty-fourth Street:* B. M. 583 (D. D.) is a square cut on the sewer basin on southwest corner of East Fifty-fourth Street and Avenue A. Elevation: 20.6 feet above mean low water; 18.44 feet above standard sea level.

**Serial No. 1152.** *East Fifty-first Street:* B. M. 25 (U. S. E.) is a square cut in west end of stone doorstep leading into cigar store at northeast corner of East Fifty-first Street and First Avenue. Elevation: 50.9 feet above mean low water; 48.70 feet above standard sea level.

**Serial No. 1153.** *East Fifty-first Street:* B. M. 24 (U. S. E.) is a square cut in stone step leading into (boys') entrance of School No. 135 at East Fifty-first Street. Bench mark is about 60 feet west of B. M. 23. Elevation: 50.3 feet above mean low water; 48.06 feet above standard sea level.

**Serial No. 1154.** *East Fifty-first Street:* B. M. 23 (U. S. E.) is a square cut in stone base of iron railing in front of Public School No. 135 at corner of East Fifty-first Street and First Avenue. Elevation: 50.9 feet above mean low water; 48.69 feet above standard sea level.

**Serial No. 1155.** *East Fiftieth Street:* B. M. 581 (D. D.) is a square cut on wall at the foot of East Fiftieth Street. Elevation: 45.8 feet above mean low water; 43.71 feet above standard sea level.

**Serial No. 1156.** *East Forty-ninth Street:* B. M. 579 (D. D.) is a square cut on the south side of doorsill of stable on East Forty-ninth Street, 175 feet from East River. Elevation: 19.1 feet above mean low water; 17.09 feet above standard sea level.

**Serial No. 1157.** *Foot of East Forty-ninth Street:* B. M. 52 (U. S. E.) is four nails on the cap log of northeast corner of East Forty-ninth Street Dock. It is marked "U. S." It is 0.9 foot from north side of the dock and 0.47 foot from inside face and 1 foot from outside face of dock. Elevation: 11.5 feet above mean low water; 9.42 feet above standard sea level.

**Serial No. 1158.** *East Forty-eighth Street:* B. M. 577 (D. D.) is a square cut on the house No. 441 East Forty-eighth Street, on north side, 40.5 feet from East River. Elevation: 15.4 feet above mean low water; 13.36 feet above standard sea level.

**Serial No. 1159.** *Foot of East Forty-seventh Street:* B. M. 4B (U. S. E.) is a square cut on south concrete base for Shear Legs south of East Forty-seventh Street Pier. Cut is marked "U. S." Elevation: 10.6 feet above mean low water; 8.55 feet above standard sea level.

**Serial No. 1160.** *Foot of East Forty-seventh Street:* B. M. 3B (U. S. E.) is a square cut on north concrete base for Shear Legs, south of East Forty-seventh Street. Cut is marked "U. S. E. D." Elevation: 10.7 feet above mean low water; 8.63 feet above standard sea level.

**Serial No. 1161.** *East Forty-sixth Street:* B. M. 2B (U. S. E.) is a square cut on sewer basin on southeast corner of Forty-sixth Street and First Avenue. Bench mark is marked "U. S." Elevation: 36.8 feet above mean low water; 34.74 feet above standard sea level.

**Serial No. 1162.** *East Forty-sixth Street:* B. M. 1B (U. S. E.) is a square cut on sewer basin at southwest corner of East Forty-sixth Street and First Avenue. Bench mark is marked "U. S." Elevation: 36.8 feet above mean low water; 34.72 feet above standard sea level.

**Serial No. 1168.** *East Forty-sixth Street:* B. M. 575 (D. D.) is the horizontal line of a T cut on the north side of East Forty-sixth Street, 175 feet east of First Avenue. Elevation: 31.1 feet above mean low water; 29.02 feet above standard sea level.

**Serial No. 1164.** *East Forty-fifth Street:* B. M. (D. D.) is a square cut on the sewer basin on northwest corner of East Forty-fifth Street and First Avenue. Elevation: 41.8 feet above mean low water; 39.70 feet above standard sea level.

**Serial No. 1165.** *East Forty-third Street:* B. M. 573 (D. D.) is a square cut on step on north side of East Forty-third Street, 70 feet west of First Avenue. Elevation: 45.0 feet above mean low water; 42.93 feet above standard sea level.

**Serial No. 1166.** *East Forty-second Street:* B. M. 572 (D. D.) is a square cut on coping on southeast corner of East Forty-second Street and First Avenue, 20 feet east. Elevation: 40.4 feet above mean low water; 38.37 feet above standard sea level.

**Serial No. 1167.** *West Forty-second Street:* B. M. 812 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the north end of the lowest granite step at the Fifth Avenue and West Forty-second Street entrance to the New York Public Library. The bolt is about 25 feet from the south curb of West Forty-second Street and about 25 feet from the west curb of Fifth Avenue. Elevation: 76.8 feet above mean low water; 74.76 feet above standard sea level.

**Serial No. 1168.** *West Forty-second Street:* B. M. 813 (B. E. & A.) is the center of the horizontal bar of an ornamental cross with bars  $1\frac{1}{2}$  inches long, near the east end of the corner stone of the New York Public Library at West Forty-second Street and Fifth Avenue. The bench mark is on the north side of the building, is 1.33 feet west of the east side and 6.67 feet above the area. The corner stone contains the inscription +MDCCCII+ and the cross adjacent to the letter "M" is the bench mark. Elevation: 85.4 feet above mean low water; 83.32 feet above standard sea level.

**Serial No. 1169.** *West Forty-first Street:* B. M. 814 (B. E. & A.) is the center of a horizontal bar of a T cut in the north side of a massive granite block surmounted by the figure of a lion, on the north side of the Fifth Avenue entrance to the New York Public Library opposite East Forty-first Street. The bench mark is 2.5 feet above the walk and  $3\frac{1}{2}$  inches from the east side of the block. Elevation: 83.6 feet above mean low water; 81.60 feet above standard sea level.

**Serial No. 1170.** *First Avenue and East Forty-first Street:* B. M. 2 (C. & G. S.) is the inner part of the beveled granite water table close to the brick wall of the building on the northeast corner of East Forty-first Street and First Avenue. The bench mark is on East Forty-first Street, at the west end of the first stone, to the west of the middle doorway. Elevation: 40.1 feet above mean low water; 38.39 feet above mean tide level.

**Serial No. 1171.** *First Avenue and East Fortieth Street:* B. M. 20 (U. S. E.) is a square cut in north end of step of the north door of the New York Edison Co.'s building, First Avenue near East Fortieth Street. Elevation: 31.6 feet above mean low water; 29.59 feet above standard sea level.

**Serial No. 1172.** *East Fortieth Street:* B. M. 21 (U. S. E.) is a square cut in south end of step of the north door of the New York Edison Co.'s building, First Avenue near East Fortieth Street. Elevation: 32.3 feet above mean low water; 30.24 feet above standard sea level.

**Serial No. 1173.** *East Thirty-ninth Street:* B. M. 22 (U. S. E.) is a square cut in south end of doorstep, south door of the New York Edison Co.'s building on First Avenue, near East Thirty-ninth Street. Elevation: 29.2 feet above mean low water; 27.20 feet above standard sea level.

**Serial No. 1174.** *East Thirty-eighth Street:* B. M. 571 (D. D.) is the horizontal line of a T cut on the northeast corner of Malt House on south side of East Thirty-eighth Street, 125 feet east of First Avenue. Elevation: 19.1 feet above mean low water; 17.04 feet above standard sea level.

**Serial No. 1175.** *East Thirty-seventh Street:* B. M. 570 (D. D.) is a square cut on the step of Malt House on north side of East Thirty-seventh Street, east of First Avenue. Elevation: 18.4 feet above mean low water; 16.32 feet above standard sea level.

**Serial No. 1176.** *East Thirty-seventh Street:* B. M. 569 (D. D.) is the horizontal line of a T cut on the south side of East Thirty-seventh Street, 58 feet east of First Avenue. Elevation: 15.0 feet above mean low water; 12.96 feet above standard sea level.

**Serial No. 1177.** *East Thirty-sixth Street:* B. M. 568 (D. D.) is the horizontal line of a T cut on East Thirty-sixth Street, 11 feet north of northeast corner of First Avenue. Elevation: 14.5 feet above mean low water; 12.45 feet above standard sea level.

**Serial No. 1178.** *East Thirty-fourth Street:* B. M. 566 (D. D.) is a square cut on an iron plate, on southeast corner of East Thirty-fourth Street and First Avenue. Elevation: 12.6 feet above mean low water; 10.58 feet above standard sea level.

**Serial No. 1179.** *East Thirty-third Street:* B. M. 565 (D. D.) is a square cut on an iron plate on southeast corner of East Thirty-third Street and First Avenue. Elevation: 14.4 feet above mean low water; 12.39 feet above standard sea level.

**Serial No. 1180.** *East Thirty-second Street:* B. M. 564 (D. D.) is a square cut on northeast corner of East Thirty-second Street and First Avenue. Elevation: 17.7 feet above mean low water; 15.66 feet above standard sea level.

**Serial No. 1181.** *East Thirtieth Street:* B. M. 562 (D. D.) is a square cut on the door-sill of No. 516 First Avenue near East Thirtieth Street. Elevation: 28.8 feet above mean low water; 26.82 feet above standard sea level.

**Serial No. 1182.** *First Avenue and East Twenty-eighth Street:* B. M. 19 (U. S. E.) is a square cut in stone base of iron fence on northeast corner of First Avenue and East Twenty-eighth Street. Elevation: 21.6 feet above mean low water; 19.60 feet above standard sea level.

**Serial No. 1183.** *Cornell University—First Avenue:* B. M. 18 (U. S. E.) is a square cut in the southeast corner of south stone base to north entrance to Cornell University on First Avenue, between East Twenty-seventh and East Twenty-eighth Streets. Elevation: 22.9 feet above mean low water; 20.84 feet above standard sea level.

**Serial No. 1184.** *Cornell University:* B. M. 17 (U. S. E.) is a square cut in southeast corner of south stone base to south entrance to Cornell University on First Avenue, between East Twenty-seventh and East Twenty-eighth Streets. Elevation: 22.8 feet above mean low water; 20.82 feet above standard sea level.

**Serial No. 1185.** *East Twenty-seventh Street:* B. M. 806 (B. E. & A.) is a square cut in the top of the corner of the granite base block or plinth at the extreme southeast corner of the Cornell Medical College, on the northwest corner of East Twenty-seventh Street and First Avenue. The bench mark is 1.25 feet above the area. Elevation: 24.1 feet above mean low water; 22.11 feet above standard sea level.

**Serial No. 1186.** *East Twenty-seventh Street:* B. M. 805 (B. E. & A.) is a 1-inch copper bolt set in the center of the top of a granite monument in the grounds of the Bellevue Hospital. The bolt is about 6 feet north of the center line of East Twenty-seventh Street and 2.5 feet east of the iron railing on the east side of First Avenue. The top of the monument is 3 inches above the ground. Elevation: 22.6 feet above mean low water; 20.55 feet above standard sea level.

**Serial No. 1187.** *East Twenty-sixth Street:* B. M. 804 (B. E. & A.) is a  $\frac{3}{4}$ -inch iron bolt set horizontally into the brownstone water table of the four-story brick tenement on the southeast corner of East Twenty-sixth Street and Second Avenue. The bolt is on the north side of the building about 33 feet east of Second Avenue and 1.1 feet above the sidewalk. Elevation: 35.6 feet above mean low water; 33.60 feet above standard sea level.

**Serial No. 1188.** *East Twenty-sixth Street:* B. M. 803 (B. E. & A.) is a  $\frac{3}{4}$ -inch iron bolt set horizontally into the water table of the four-story brick tenement on the southwest corner of East Twenty-sixth Street and Third Avenue. The bolt is on the north side of the building, is 23.8 feet west of Third Avenue and 8 inches above the sidewalk. Elevation: 39.8 feet above mean low water; 37.80 feet above standard sea level.

**Serial No. 1189.** *Foot of East Twenty-fifth Street:* B. M. (U. S. E.) is a square cut in cap log of pier at foot of East Twenty-fifth Street, used by the Department of Docks and Ferries. Bench mark is marked "U. S. E. D." Elevation: 10.2 feet above mean low water; 8.17 feet above standard sea level.

**Serial No. 1190.** *East Twenty-fourth Street:* B. M. 15 (U. S. E.) is a square cut in lower step on the northwest corner of public baths on Avenue A, between East Twenty-third and East Twenty-fourth Streets. Elevation: 10.3 feet above mean low water; 8.28 feet above standard sea level.

**Serial No. 1191.** *East Twenty-fourth Street:* B. M. 16 (U. S. E.) is a square cut in the lower step on the southwest corner of the public baths on Avenue A, between East Twenty-third and East Twenty-fourth Streets. Elevation: 10.3 feet above mean low water; 8.30 feet above standard sea level.

**Serial No. 1192.** *East Twenty-fourth Street:* B. M. 561 (D. D.) is the horizontal line of a T cut on northwest corner of East Twenty-fourth Street and First Avenue. Elevation: 19.3 feet above mean low water; 17.30 feet above standard sea level.

**Serial No. 1193.** *East Twenty-third Street:* B. M. 557C (D. D.) is a square cut on an iron plate on southeast corner of East Twenty-third Street and Avenue A. Elevation: 10.2 feet above mean low water; 8.18 feet above standard sea level.

**Serial No. 1194.** *East Twenty-second Street:* B. M. 557B (D. D.) is a square cut on the brownstone water table of the gas house, on the southeast corner of East Twenty-second Street and Avenue A. Elevation: 13.2 feet above mean low water; 11.21 feet above standard sea level.

**Serial No. 1195.** *East Twenty-first Street:* B. M. 557A (D. D.) is a square cut on the east end of top-step entrance to Consolidated Gas Co.'s office on northeast corner of East Twenty-first Street and Avenue A. Elevation: 13.5 feet above mean low water; 11.50 feet above standard sea level.

**Serial No. 1196.** *East Twentieth Street:* B. M. 557 (D. D.) is a square cut on No. 326 Avenue A, 12 feet from corner of East Twentieth Street. Elevation: 13.5 feet above mean low water; 11.53 feet above standard sea level.

**Serial No. 1197.** *East Twentieth Street:* B. M. 556 (D. D.) is a square cut on the sewer basin on southeast corner of East Twentieth Street and Avenue B. Elevation: 10.2 feet above mean low water; 8.25 feet above standard sea level.

**Serial No. 1198.** *East Nineteenth Street:* B. M. 555a (D. D.) is a square cut on the sewer basin on northwest corner of East Nineteenth Street and Avenue B. Elevation: 9.9 feet above mean low water; 7.94 feet above standard sea level.

**Serial No. 1199.** *East Eighteenth Street:* B. M. 1 (C. & G. S.) is on the granite sill of red brick building at corner of East Eighteenth Street and Avenue C, on the Eighteenth Street side. The first two stones of the sill are granite and the rest sandstone. The bench mark is on the extreme corner of granite stone and 1 foot 3 $\frac{3}{4}$  inches from the corner of the doorway. Elevation: 10.9 feet above mean low water; 8.94 feet above mean tide level.

**Serial No. 1200.** *East Eighteenth Street:* B. M. 2 (C. & G. S.) is on the sandstone sill of brick shed which adjoins the house containing B. M. 1 on the Eighteenth Street side. The bench mark is 1 foot 8 $\frac{1}{4}$  inches from the corner of the shed. Elevation: 11.3 feet above mean low water; 9.31 feet above mean tide level.

**Serial No. 1201.** *East Seventeenth Street:* B. M. 12 (U. S. E.) is a square cut in corner of iron base of column at entrance of drug store on northwest corner of Avenue A and East Seventeenth Street. Elevation: 15.5 feet above mean low water; 13.46 feet above standard sea level.

**Serial No. 1202.** *East Seventeenth Street:* B. M. 13 (U. S. E.) is a square cut in iron base of column at entrance of store on the northeast corner of Avenue A and East Seventeenth Street. Elevation: 16.4 feet above mean low water; 14.35 feet above standard sea level.

**Serial No. 1203.** *East Seventeenth Street:* B. M. 14 (U. S. E.) is a square cut in angle of lower step at the entrance of store on the northeast corner of Avenue A and East Seventeenth Street. Elevation: 15.4 feet above mean low water; 13.37 feet above standard sea level.

**Serial No. 1204.** *East Seventeenth Street:* B. M. 552 (D. D.) is a square cut on the sewer basin on southwest corner of East Seventeenth Street and Avenue C. Elevation: 9.0 feet above mean low water; 6.95 feet above standard sea level.

**Serial No. 1205.** *East Sixteenth Street:* B. M. 551 (D. D.) is a square cut on covered market on northeast corner of East Sixteenth Street and Avenue C. Elevation: 12.2 feet above mean low water; 10.23 feet above standard sea level.

**Serial No. 1206.** *East Fourteenth Street:* B. M. 550 (D. D.) is a square cut on the brick gas house on northwest corner of East Fourteenth Street and Avenue D. Elevation: 12.0 feet above mean low water; 9.99 feet above standard sea level.

**Serial No. 1207.** *East Twelfth Street:* B. M. 549 (D. D.) is a square cut on the sewer basin on southwest corner of East Twelfth Street and Avenue D. Elevation: 12.4 feet above mean low water; 10.40 feet above standard sea level.

**Serial No. 1208.** *East Tenth Street:* B. M. 548 (D. D.) is a square cut on the iron plate on northeast corner of East Tenth Street and Avenue D. Elevation: 13.3 feet above mean low water; 11.30 feet above standard sea level.

**Serial No. 1209.** *East Tenth Street:* B. M. 9 (U. S. E.) is a square cut in base of iron fence at the corner of fence around the Boys' Club on northwest corner of Avenue A and East Tenth Street. Elevation: 21.5 feet above mean low water; 19.49 feet above standard sea level.

**Serial No. 1210.** *East Tenth Street:* B. M. 10 (U. S. E.) is a square cut in concrete walk near electric light pole on northeast corner of Avenue A and East Tenth Street. Elevation: 20.5 feet above mean low water; 18.48 feet above standard sea level.

**Serial No. 1211.** *East Tenth Street:* B. M. 11 (U. S. E.) is a square cut in base of iron fence at corner of fence around St. Marks Chapel on southwest corner of Avenue A and East Tenth Street. Elevation: 21.9 feet above mean low water; 19.87 feet above standard sea level.

**Serial No. 1212.** *Broadway:* B. M. 784 (B. E. & A.) is a  $\frac{3}{8}$ -inch copper bolt in the center of the top of the granite base of the granite column on the south side of the main entrance to Nos. 594-596 Broadway, between East Houston Street and Prince Street. The bolt is behind the column and 1.3 feet above the sidewalk. Elevation: 47.0 feet above mean low water; 45.01 feet above standard sea level.

**Serial No. 1213.** *Broadway:* B. M. 785 (B. E. & A.) is a 3-inch square cut in the top of the southeast corner of the red granite step at the main entrance to No. 611 Broadway, corner of West Houston Street. The bench mark is about 41 feet north of West Houston Street and 4 inches above the sidewalk. Elevation: 45.2 feet above mean low water; 43.21 feet above standard sea level.

**Serial No. 1214.** *Great Jones Street:* B. M. 788 (B. E. & A.) is a square cut in the top of the southeast corner of the large granite block at the southwest corner of the 12-story loft building on the northeast corner of Great Jones Street and Broadway. The bench mark is 5.3 feet above the sidewalk and 5.54 feet east of Broadway. Elevation: 48.3 feet above mean low water; 46.33 feet above standard sea level.

**Serial No. 1215.** *Great Jones Street:* B. M. 789 (B. E. & A.) is a square cut in the top of the southwest corner of the large granite block at the southeast corner of the 12-story loft building on the northeast corner of Great Jones Street and Broadway. The bench mark is about 132 feet east of Broadway, on the east side of the stone entrance. It is 4.6 feet above the sidewalk. Elevation: 48.3 feet above mean low water; 46.27 feet above standard sea level.

**Serial No. 1216.** *Astor Place:* B. M. 790 (B. E. & A.) is a square cut in the top of the cement curb on the south side of Astor Place, about 3 feet west of the east line of Broadway. Elevation: 41.8 feet above mean low water; 39.81 feet above standard sea level.

**Serial No. 1217.** *Astor Place:* B. M. 791 (B. E. & A.) is a square cut in the top of the granite block at the base of the iron column at the northwest corner of Cooper Union, on the southeast corner of Astor Place and Fourth Avenue. The bench mark is on the Fourth Avenue side of the building, is about 2 feet from the corner and 6 inches above the sidewalk. Elevation: 45.0 feet above mean low water; 43.01 feet above standard sea level.

**Serial No. 1218.** *Fourth Avenue:* B. M. 792 (B. E. & A.) is the center of a square cut in the top of the brownstone water table at the southwest corner of Cooper Union, on the northeast corner of Fourth Avenue and East Seventh Street. Elevation: 46.8 feet above mean low water; 44.78 feet above standard sea level.

**Serial No. 1219.** *East Seventh Street:* B. M. 793 (B. E. & A.) is a square cut in the top of the northwest corner of the third granite step at the base of the Peter Cooper Monument, on the south side of East Seventh Street, between Third Avenue and Fourth Avenue. Elevation: 47.5 feet above mean low water; 45.52 feet above standard sea level.

**Serial No. 1220.** *East Eighth Street:* B. M. 547 (D. D.) is a square cut on the sewer basin on the southwest corner of East Eighth Street and Lewis Street. Elevation: 11.7 feet above mean low water; 9.70 feet above standard sea level.

**Serial No. 1221.** *East Sixth Street:* B. M. 546 (D. D.) is a square cut on foundation stone on southwest corner of East Sixth and Lewis Streets. Elevation: 12.7 feet above mean low water; 10.70 feet above standard sea level.

**Serial No. 1222.** *East Fifth Street:* B. M. 545 (D. D.) is the horizontal line of a T cut in stone on southeast corner of East Fifth and Lewis Streets, 4 feet above pavement. Elevation: 16.2 feet above mean low water; 14.19 feet above standard sea level.

**Serial No. 1223.** *East Fifth Street:* B. M. 6 (U. S. E.) is a square cut in iron base of column on doorstep at entrance of saloon on northeast corner of East Fifth Street and Avenue C. Elevation: 15.7 feet above mean low water; 13.66 feet above standard sea level.

**Serial No. 1224.** *East Fifth Street:* B. M. 7 (U. S. E.) is a square cut on the corner of stone step at entrance to saloon on northeast corner of East Fifth Street and Avenue C. Elevation: 14.8 feet above mean low water; 12.84 feet above standard sea level.

**Serial No. 1225.** *East Fifth Street:* B. M. 8 (U. S. E.) is a square cut in corner of stone step at entrance to saloon on southeast corner of East Fifth Street and Avenue C. Elevation: 15.2 feet above mean low water; 13.18 feet above standard sea level.

**Serial No. 1226.** *East Fourth Street:* B. M. 544 (D. D.) is a square cut on south curb of East Fourth Street and lamp-post, 365 feet east of east line of Lewis Street. Elevation: 11.2 feet above mean low water; 9.19 feet above standard sea level.

**Serial No. 1227.** *East Third Street:* B. M. 541 (D. D.) is a square cut on an iron plate on northeast corner of East Third and Lewis Streets. Elevation: 13.2 feet above mean low water; 11.17 feet above standard sea level.

**Serial No. 1228.** *East Third Street:* B. M. 3 (U. S. E.) is a square cut in the iron base of column in front of doorway of drug store on northeast corner of Avenue D and East Third Street. Elevation: 16.3 feet above mean low water; 14.34 feet above standard sea level.

**Serial No. 1229.** *East Third Street:* B. M. 4 (U. S. E.) is a square cut on inside edge of walk on lower step at entrance of drug store on northwest corner of Avenue D and East Third Street. Elevation: 15.8 feet above mean low water; 13.77 feet above standard sea level.

**Serial No. 1230.** *East Third Street:* B. M. 5 (U. S. E.) is a square cut in base of iron column at entrance of grocery store on northeast corner of Avenue D and East Third Street. Elevation: 16.2 feet above mean low water; 14.20 feet above standard sea level.

**Serial No. 1231.** *East Third Street:* B. M. 540 (D. D.) is a square cut on north curb line of East Third Street and lamp-post, about 100 feet west of pier. Elevation: 9.4 feet above mean low water; 7.38 feet above standard sea level.

**Serial No. 1232.** *East Houston and Mangin Streets:* B. M. 2 (U. S. E.) is a square cut in corner of catch basin on the southeast corner of Mangin and East Houston Streets. Elevation: 8.1 feet above mean low water; 6.13 feet above standard sea level.

**Serial No. 1233.** *Rivington and Mangin Streets:* B. M. 1 (U. S. E.) is a square cut on lower step of entrance to saloon corner of Mangin and Rivington Streets. Elevation: 10.2 feet above mean low water; 8.18 feet above standard sea level.

**Serial No. 1234.** *Mangin and Delancey Streets:* B. M. 13 (U. S. E.) is a square cut in southeast corner of south stone base of row of four, supporting first row of iron columns west of Manhattan anchor pier of Williamsburg Bridge, west of Mangin and south of Delancey Streets. Elevation: 12.0 feet above mean low water; 10.02 feet above standard sea level.

**Serial No. 1235.** *Mangin Street:* B. M. 778 (B. E. & A.) is a square, lettered "U. S. E.," cut in the top of the southeast corner of the granite base block of the most southerly column of the Williamsburg Bridge on the west side of Mangin Street, about 95 feet south of Delancey Street. Elevation: 12.0 feet above mean low water; 9.96 feet above standard sea level.

**Serial No. 1236.** *Mangin Street:* B. M. 777 (B. E. & A.) is a square cut in the top of the south side of the granite base block of the most northerly column of the Williamsburg Bridge, on the west side of Mangin Street, corner of Delancey Street. Elevation: 10.9 feet above mean low water; 8.86 feet above standard sea level.

**Serial No. 1237.** *Broom and East Streets:* B. M. E (U. S. E.) is a square cut on top of water table supporting iron column, supporting corner of Broom Street Hotel at entrance to bar on the corner of Broom and East Streets. Elevation: 10.3 feet above mean low water; 8.27 feet above standard sea level.

**Serial No. 1238.** *Foot of Broom Street:* B. M. 12 (U. S. E.) is a square cut on top face of stringer of wharf at the foot of Broom Street. Elevation: 11.7 feet above mean low water; 9.72 feet above standard sea level.

**Serial No. 1239.** *East and Cherry Streets:* B. M. 11A (U. S. E.) is a square cut out of water table in the northeast corner of E. Schloss & Co's building on the southwest corner of East and Cherry Streets. Elevation: 9.6 feet above mean low water; 7.65 feet above standard sea level.

**Serial No. 1240.** *Cherry Street:* B. M. 776 (B. E. & A.) is the bottom of a square cut in the top of the southeast corner of the water table of the four-story yellow brick loft building on the northwest corner of Cherry Street and East Street. The bench mark is 4 inches above the sidewalk. Elevation: 9.6 feet above mean low water; 7.58 feet above standard sea level.

**Serial No. 1241. Water and East Streets:** B. M. E. (C. & G. S.) is on the southwest corner of Coe's bonded warehouse corner of Water and East Streets. It is a cross cut in the granite door jamb, first door from the southwest corner and about 5 feet from the ground. The cross is about 285 feet east of Corlears Street and 4.8 feet above the sidewalk and  $1\frac{1}{2}$  inches from the west side of the building. Elevation: 13.7 feet above mean low water; 11.63 feet above standard sea level.

**Serial No. 1242. Water Street:** B. M. 774 (B. E. & A.) is a square cut in the top of the southwest corner of the granite sill of the wide door on the south side of Coe's warehouse (five-story brick) on the north side of Water Street between Corlears Street and East Street. The bench mark is at the most westerly door, about 287 feet east of Corlears Street, and about 2 feet from the west side of the building. Elevation: 8.7 feet above mean low water; 6.62 feet above standard sea level.

**Serial No. 1243. Jackson Street:** B. M. 772 (B. E. & A.) is a square cut in the top of the southwest corner of the granite watering trough on the east side of Jackson Street, about 60 feet north of South Street. Elevation: 12.9 feet above mean low water; 10.87 feet above standard sea level.

**Serial No. 1244. Jackson Street:** B. M. 771 (B. E. & A.) is the highest point within a square cut in the top of the southwest corner of the bluestone coping on the north side of the south cellar entrance to the six-story tenement at No. 91 Jackson Street. The bench mark is about 11 feet north of South Street. Elevation: 11.9 feet above mean low water; 9.82 feet above standard sea level.

**Serial No. 1245. Corlears Hook Park:** B. M. 770 (B. E. & A.) is a square cut in the top of the southwest corner of the limestone balustrade on the west side of the stone steps at the south entrance to the summer house in Corlears Hook Park. The bench mark is just south of Cherry Street, is between Jackson and Corlears Streets, and 2.5 feet above the sidewalk. Elevation: 26.8 feet above mean low water; 24.78 feet above standard sea level.

**Serial No. 1246. Jackson and Water Streets:** B. M. 11 (U. S. E.) is a square cut in southeast corner of catch basin on northwest corner of Water and Jackson Streets. Elevation: 17.9 feet above mean low water; 15.89 feet above standard sea level.

**Serial No. 1247. Madison Street:** B. M. 769 (B. E. & A.) is a cross cut in the east face of the buttress on the west side of the girl's entrance to Public School No. 12, on the northwest corner of Madison and Jackson Streets. The cross is on the Madison Street side of the building in the first course of granite, is about 57 feet west of Jackson Street and about  $6\frac{1}{2}$  inches above the area. Elevation: 34.2 feet above mean low water; 32.10 feet above standard sea level.

**Serial No. 1248. Madison Street:** B. M. 768 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt in the southwest corner of the fifth bluestone step or landing at the girl's entrance to Public School No. 12, on the northwest corner of Madison and Jackson Streets. The bolt is on the Madison street side, about 53 feet west of Jackson Street. Elevation: 35.9 feet above mean low water; 33.86 feet above standard sea level.

**Serial No. 1249. Madison Street:** B. M. 767 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, set horizontally into the east face of the buttress on the west side of the girl's entrance to Public School No. 12 on the northwest corner of Madison and Jackson Streets. The bolt is on the Madison Street side of the building in the limestone base of the buttress, is about 57 feet west of Jackson Street and 5.8 feet above the area. Elevation: 39.2 feet above mean low water; 37.20 feet above standard sea level.

**Serial No. 1250. Gouverneur and Water Streets:** B. M. 10 (U. S. E.) is a square cut in southwest corner of bottom stone step of entrance to Gouverneur Hospital at the foot of Gouverneur and Water Streets. Elevation: 18.7 feet above mean low water; 16.63 feet above standard sea level.

**Serial No. 1251. Gouverneur Slip:** B. M. 773 (D. D.) is the center of the horizontal bar of a T cut in the south side of a stone block supporting the iron column at the southwest corner of the five-story loft building on the northeast corner of Gouverneur Slip and South Street. The bench mark is  $11\frac{1}{2}$  inches from the corner and about 1.7 feet above the sidewalk. Elevation: 11.1 feet above mean low water; 9.03 feet above standard sea level.

**Serial No. 1252. Jefferson Street:** B. M. 530 (D. D.) is a square cut on stone pillar on northwest corner of Jefferson and South Streets. Elevation: 10.2 feet above mean low water; 8.14 feet above standard sea level.

**Serial No. 1253. Rutgers Slip:** B. M. 529 (D. D.) is a square cut on stone step on northeast corner of Rutgers Slip and South Street. Elevation: 10.4 feet above mean low water; 8.27 feet above standard sea level.

**Serial No. 1254.** *Rutgers Slip:* B. M. 9 (U. S. E.) is a square cut in sidewalk near iron fence around park and on northeast corner of south roadway of Rutgers slip and Water Street. Elevation: 11.7 feet above mean low water; 9.60 feet above standard sea level.

**Serial No. 1255.** *Pike Slip:* B. M. 527 (D. D.) is a square cut on stone step on northeast corner of Pike Slip and South Street. Elevation: 10.3 feet above mean low water; 8.23 feet above standard sea level.

**Serial No. 1256.** *Manhattan Bridge:* B. M. 4 (U. S. E.) is a square with the letters "U. S." cut in bolt in cap log on the face of Arbuckle Bros. southerly dock, just north of the Manhattan Bridge. It is 6.9 feet from the northeast corner of dock and 4.5 feet north from snubbing post on the dock. Elevation: 11.2 feet above mean low water; 9.09 feet above standard sea level.

**Serial No. 1257.** *Pike Slip and Water Street:* B. M. 8 (U. S. E.) is a square cut on northeast corner of catch basin on northwest corner of Water Street and Pike Slip. Elevation: 10.4 feet above mean low water; 8.31 feet above standard sea level.

**Serial No. 1258.** *Pike Slip and Water Street:* B. M. O (U. S. E.) is a square cut in iron base of post supporting corner of building on northwest corner of Water Street and Pike Slip. Elevation: 12.4 feet above mean low water; 10.31 feet above standard sea level.

**Serial No. 1259.** *Market Slip and Water Street:* B. M. 7A (U. S. E.) is a square cut in sidewalk near fire plug on the corner of Water Street and Market Slip. Elevation: 10.7 feet above mean low water; 8.61 feet above standard sea level.

**Serial No. 1260.** *Water Street:* B. M. 7B (U. S. E.) is a square cut in northeast corner of bottom stone step in front of building No. 452 on Water Street. Elevation: 12.9 feet above mean low water; 10.81 feet above standard sea level.

**Serial No. 1261.** *Water and Catharine Streets:* B. M. 6A (U. S. E.) is a square cut in southeast corner of catch basin on southwest corner of Water and Catharine Streets. Elevation: 8.7 feet above mean low water; 6.64 feet above standard sea level.

**Serial No. 1262.** *Oliver Street:* B. M. 525A (D. D.) is a square cut on stone step about 14 feet east of northeast corner of Oliver and South Streets. Elevation: 9.8 feet above mean low water; 7.74 feet above standard sea level.

**Serial No. 1263.** *Roosevelt Street:* B. M. 525 (D. D.) is a square cut on stone step on northwest corner of Roosevelt and South Streets. Elevation: 9.8 feet above mean low water; 7.67 feet above standard sea level.

**Serial No. 1264.** *Cherry Street:* B. M. 765 (B. E. & A.) is the bottom of a square cut in the top of a large granite block in the anchorage of the Manhattan Bridge. The bench mark is on the south side of Cherry Street and on the west side of the arch. It is 3.1 feet above the sidewalk. Elevation: 19.8 feet above mean low water; 17.72 feet above standard sea level.

**Serial No. 1265.** *Franklin Square:* B. M. 764 (B. E. & A.) is the bottom of a square cut in the top of the granite water table on the south side of the abutment of the Brooklyn Bridge, on the northwest corner of Pearl and Frankfort Streets. The bench mark is on the south corner of the water table, is 2.5 feet above the sidewalk and lettered "B. M." Elevation: 27.9 feet above mean low water; 25.85 feet above standard sea level.

**Serial No. 1266.** *City Hall:* B. M. 760 (B. E. & A.) is the center of the horizontal bar of a large T cut in the brownstone water table on the south side of the City Hall, 6 inches from the southwest corner. The bench mark is 4.2 feet above the area. Elevation: 46.8 feet above mean low water; 44.74 feet above standard sea level.

**Serial No. 1267.** *Chambers Street:* B. M. 761 (B. E. & A.) is a 2-inch square cut in the top of the granite block at the southwest corner of the sixth or top step at the west entrance to the Hall of Records, on the northwest corner of Chambers and Center Streets. The bench mark is on the Chambers Street side, about 120 feet west of Center Street. Elevation: 42.8 feet above mean low water; 40.72 feet above standard sea level.

**Serial No. 1268.** *Chambers Street:* B. M. 762 (B. E. & A.) is the bottom of a square cut in the extreme southwest corner of the Hall of Records. The bench mark is on the north side of Chambers Street and on the east side of the alley connecting Chambers and Reade Streets. The point is on the top of the vertical foundation, just where it curves in toward the building. It is about 2 feet above the sidewalk. Elevation: 42.4 feet above mean low water; 40.29 feet above standard sea level.

**Serial No. 1269.** *Municipal Building:* B. M. 763 (B. E. & A.) is a 1-inch copper bolt in the top of the southwest corner of the granite pedestal of granite column at the southwest corner of the Municipal Building, at the intersection of Tryon Row and

Center Street. The bolt is on the southerly side of the building, at the base of the first column east of the cornerstone. Elevation: 43.7 feet above mean low water; 41.61 feet above standard sea level.

**Serial No. 1270.** *Brooklyn Bridge:* B. M. 7 (U. S. E.) is on top of iron lug in south side of center buttress on east face of Manhattan Tower of Brooklyn Bridge about 4 feet above roof over dock. Elevation: 29.7 feet above mean low water; 27.59 feet above standard sea level.

**Serial No. 1271.** *Dover and South Streets:* B. M. 5 (U. S. E.) is a square cut on bottom stone step in front of clothing store, east side of store on corner of Dover and South Streets. Elevation: 8.4 feet above mean low water; 6.34 feet above standard sea level.

**Serial No. 1272.** *Peck Slip:* B. M. 522 (D. D.) is the horizontal line of a T cut at No. 115 South Street, 54 feet south of Peck Slip. Elevation: 11.4 feet above mean low water; 9.33 feet above standard sea level.

**Serial No. 1273.** *Beekman Street:* B. M. 521 (D. D.) is a square cut on step at northwest corner of South and Beekman Streets. Elevation: 8.2 feet above mean low water; 6.14 feet above standard sea level.

**Serial No. 1274.** *Fulton Street:* B. M. 520 (D. D.) is a square cut on an iron plate on northwest corner of Fulton and South Streets. Elevation: 8.5 feet above mean low water; 6.37 feet above standard sea level.

**Serial No. 1275.** *Burling Slip:* B. M. 519 (D. D.) is a square cut on water table on northwest corner of South Street and Burling Slip. Elevation: 9.7 feet above mean low water; 7.56 feet above standard sea level.

**Serial No. 1276.** *Fletcher Street:* B. M. 518 (D. D.) is a square cut on water table, on northeast corner of South and Fletcher Streets. Elevation: 10.0 feet above mean low water; 7.78 feet above standard sea level.

**Serial No. 1277.** *Maiden Lane:* B. M. 517 (D. D.) is a square cut at the base of iron column on northeast corner of Maiden Lane and South Street. Elevation: 9.7 feet above mean low water; 7.53 feet above standard sea level.

**Serial No. 1278.** *Pine Street:* B. M. 516 (D. D.) is a square cut on water table on northwest corner of Pine and South Streets. Elevation: 11.2 feet above mean low water; 8.99 feet above standard sea level.

**Serial No. 1279.** *Wall Street:* B. M. 515 (D. D.) is a square cut on sewer basin on northwest corner of South and Wall Streets. Elevation: 9.0 feet above mean low water; 6.84 feet above standard sea level.

**Serial No. 1280.** *Wall and Front Streets:* B. M. 4 (U. S. E.) is a square cut in bottom stone step of Erie Railroad office at corner of Wall and Front Streets. Elevation: 10.6 feet above mean low water; 8.38 feet above standard sea level.

**Serial No. 1281.** *Jones Lane:* B. M. 513 (D. D.) is a square cut on sewer basin on northeast corner of Jones Lane and South Street. Elevation: 9.3 feet above mean low water; 7.07 feet above standard sea level.

**Serial No. 1282.** *Gouverneur Lane:* B. M. 512 (D. D.) is a square cut on sewer basin on northwest corner of Gouverneur Lane and South Street. Elevation: 9.6 feet above mean low water; 7.41 feet above standard sea level.

**Serial No. 1283.** *Pier 10:* B. M. (U. S. E.) is a square cut in base of iron fender, at west side of drive entrance to pier. It is 16 feet from west side of shed. Elevation: 10.2 feet above mean low water; 7.95 feet above standard sea level.

**Serial No. 1284.** *Pier 10:* B. M. (U. S. E.) is the center of four brass nails on top of planking on end face of Pier 10, and is in end of center of pier line. Elevation: 11.2 feet above mean low water; 9.02 feet above standard sea level.

**Serial No. 1285.** *Water Street and Old Slip:* B. M. 3 (U. S. E.) is on edge of curb, 1 inch from wall of southwest corner of doorway of Hook and Ladder Co. No. 15, at Water Street and Old Slip. Elevation: 11.5 feet above mean low water; 9.32 feet above standard sea level.

**Serial No. 1286.** *Old Slip:* B. M. 510 (D. D.) is a square cut on sewer basin on northeast corner of South Street and Old Slip. Elevation: 8.9 feet above mean low water; 6.75 feet above standard sea level.

**Serial No. 1287.** *Cuylers Lane:* B. M. 508 (D. D.) is a square cut on water table on northwest corner of South Street and Cuylers Lane. Elevation: 12.8 feet above mean low water; 10.64 feet above standard sea level.

**Serial No. 1288.** *Pier 7:* B. M. (U. S. E.) is center of square top of fender near west side of drive entrance to pier and is marked by four brass nails. Elevation: 10.8 feet above mean low water; 8.60 feet above standard sea level.

**Serial No. 1289.** *Pier 7:* B. M. (U. S. E.) is at the end of Pier 7. Top of cap log 14.5 feet from southwest corner. It is four brass nails in top of planking. Elevation: 11.1 feet above mean low water; 8.94 feet above standard sea level.

**Serial No. 1290.** *Coenties Slip:* B. M. 506 (D. D.) is the horizontal line of a T cut on water table on northeast corner of South Street and Coenties Slip. Elevation: 11.5 feet above mean low water; 9.29 feet above standard sea level.

**Serial No. 1291.** *Coenties Slip:* B. M. 505 (D. D.) is a square cut on sewer basin on northeast corner of South Street and Coenties Slip. Elevation: 9.2 feet above mean low water; 7.02 feet above standard sea level.

**Serial No. 1292.** *Coenties Slip:* B. M. 504 (D. D.) is a square cut on sewer basin on northwest corner of South Street and Coenties Slip. Elevation: 7.9 feet above mean low water; 5.69 feet above standard sea level.

**Serial No. 1293.** *Broad and Stone Streets:* B. M. 2 (U. S. E.) is a square cut in front step south side of curve and in front of drug store on the corner of Broad and Stone Streets. Elevation: 10.9 feet above mean low water; 8.69 feet above standard sea level.

**Serial No. 1294.** *Broad Street:* B. M. 503 (D. D.) is a square cut on sewer basin on northwest corner of South and Broad Streets. Elevation: 7.4 feet above mean low water; 5.23 feet above standard sea level.

**Serial No. 1295.** *Pier 4:* B. M. (U. S. E.) is on end face of Pier 4. It is the center of four brass nails 9.9 feet from west corner of pier and in top of cap log. Elevation: 11.1 feet above mean low water; 8.87 feet above standard sea level.

**Serial No. 1296.** *Pier 4:* B. M. H-5 (U. S. E.) is a square cut in southwest bolt of fourth mooring bit from shore end, west side of Pier No. 4. Elevation: 11.0 feet above mean low water; 8.80 feet above standard sea level.

**Serial No. 1297.** *Pier 4:* B. M. H-6 (U. S. E.) is a square cut in south bolthead of mooring cleat, southwest corner of Pier 4. Elevation: 11.5 feet above mean low water; 9.32 feet above standard sea level.

**Serial No. 1298.** *Pier 4:* B. M. H-7 (U. S. E.) is a  $\Delta$  station on Pier 4. Elevation: 11.3 feet above mean low water; 9.15 feet above standard sea level.

**Serial No. 1299.** *Pier 4:* B. M. H-8 (U. S. E.) is a square cut in south bolthead of mooring cleat, southeast corner of Pier 4. Elevation: 11.4 feet above mean low water; 9.24 feet above standard sea level.

**Serial No. 1800.** *Pier 3:* B. M. H-4 (U. S. E.) is a square cut in first step on curve (east end) of platform at entrance to Thirty-ninth Street Ferry to Brooklyn. Elevation: 11.6 feet above mean low water; 9.42 feet above standard sea level.

**Serial No. 1801.** *Pier 3:* B. M. H-3 (U. S. E.) is a square cut in northwest corner of third pier from west end of platform at entrance to Thirty-ninth Street Ferry to Brooklyn. Elevation: 13.2 feet above mean low water; 11.03 feet above standard sea level.

**Serial No. 1802.** *Moore Street:* B. M. 502 (D. D.) is a square cut on sewer basin on northwest corner of South and Moore Streets. Elevation: 7.8 feet above mean low water; 5.55 feet above standard sea level.

**Serial No. 1803.** *Whitehall Street:* B. M. 501 (D. D.) is the horizontal line of a T cut on stone platform on northeast corner of South and Whitehall Streets. Elevation: 9.7 feet above mean low water; 7.54 feet above standard sea level.

**Serial No. 1804.** *Whitehall Street:* B. M. 500 (D. D.) is the horizontal line of a T cut on stone pillar on northeast corner of South and Whitehall Streets. Elevation: 11.3 feet above mean low water; 9.10 feet above standard sea level.

**Serial No. 1305.** *Foot of Whitehall Street:* B. M. H-2 (U. S. E.) is a square cut in northwest corner of west pier on platform at entrance to Thirty-ninth Street Ferry to Brooklyn. Elevation: 13.2 feet above mean low water; 11.00 feet above standard sea level.

**Serial No. 1806.** *Whitehall and State Streets:* B. M. H-1 (U. S. E.) is a square cut in sidewalk west side of Whitehall south of State Street. Elevation: 9.1 feet above mean low water; 6.90 feet above standard sea level.

**Serial No. 1807.** *Broadway and Battery Place:* B. M. 1 (U. S. E.) is a square cut on bottom iron step, next to railing, of the Washington Building at the corner of Broadway and Battery Place. Elevation: 19.5 feet above mean low water; 17.30 feet above standard sea level.

**Serial No. 1308. Battery Park:** B. M. (U. S. E.) is a square cut in granite capstone at end of center pier at the Barge Office, Battery Park. Elevation: 9.2 feet above mean low water; 7.00 feet above standard sea level.

**Serial No. 1309. Battery:** B. M. 742 (B. E. & A.) is a  $\frac{7}{8}$ -inch copper bolt leaded vertically in the granite coping of the sea wall on the north side of the Battery Basin, on the west side of the new United States Barge Office. The bolt is about 50 feet west of the northeast corner of the basin and 1.6 feet east of a stone post. The letter "B" is cut in the coping just south of the bolt. Elevation: 9.2 feet above mean low water; 7.04 feet above standard sea level.

**Serial No. 1310. Battery:** B. M. 743 (B. E. & A.) is a 2-inch square cut in the top of the third or top granite step at the west side of the passenger entrance to the Thirtieth Street Ferry, just east of the foot of Whitehall Street. The bench mark is at the east side of the wagon entrance to Stapleton Ferry, and 2.1 feet from the south end of the step. Elevation: 12.7 feet above mean low water; 10.48 feet above standard sea level.

**Serial No. 1311. Battery:** B. M. 744 (B. E. & A.) is the center of the horizontal bar of a T cut in the south side of the 16-inch square stone column on the northeast corner of Whitehall Street and South Street. The column containing the bench mark is the southwest corner of the Eastern Hotel (five-story brick) and the point is about 2 feet above the sidewalk. Elevation: 11.3 feet above mean low water; 9.08 feet above standard sea level.

**Serial No. 1312. Battery:** B. M. 745 (B. E. & A.) is a square cut in the top of the most northerly corner of the second granite step at the base of the Ericsson Monument, in the west side of Battery Park between the Aquarium and the new United States Barge Office. Elevation: 15.3 feet above mean low water; 13.13 feet above standard sea level.

**Serial No. 1313. Battery:** B. M. 746 (B. E. & A.) is the center of the horizontal bar of a T cut in the brownstone base supporting two pilasters on the south side of the easterly entrance to the Aquarium (Castle Garden). The bench mark is about 5 feet south of the entrance and 1.75 feet above the sidewalk. (Established by the Department of Docks and Ferries.) Elevation: 14.6 feet above mean low water; 12.37 feet above standard sea level.

**Serial No. 1314. Battery:** B. M. 747 (B. E. & A.) is a square cut in the top of the northwest corner of a granite block in the coping of the stone bulkhead between Pier A and Pier 1, Hudson River. The bench mark is about 32 feet north of the north side of Pier A. (Established by the Department of Docks and Ferries.) Elevation: 8.9 feet above mean low water; 6.66 feet above standard sea level.

**Serial No. 1315. Battery:** B. M. 748 (B. E. & A.) is a horizontal line in the end of a  $\frac{7}{8}$ -inch copper bolt leaded horizontally into the north side of the south buttress on the west side of the United States customhouse. The bolt is on the State Street side of the building about 50 feet north of Bridge Street. It is 2.75 feet above the sidewalk and 6 inches from the west side of the buttress. Elevation: 19.3 feet above mean low water; 17.06 feet above standard sea level.

**Serial No. 1316. Battery:** B. M. 749 (B. E. & A.) is a 2-inch square cut in the top of the southeast corner of the fifth granite step of the south entrance on the State Street side of the United States customhouse. The bench mark is about 52 feet north of Bridge Street. Elevation: 19.2 feet above mean low water; 16.95 feet above standard sea level.

**Serial No. 1317. Governors Island:** B. M. 1 (C. & G. S.) is the lower edge of a rectangular cut in the stone in the northeast face of the retaining wall of the terrace or driveway in front of headquarters. It is lettered "U. S. C. S." and is about 2.5 feet above the ground. Elevation: 14.3 feet above mean low water; 12.12 feet above standard sea level.

**Serial No. 1318. Governors Island:** B. M. 3 (C. & G. S.) known as Primary B. M. II is a cross cut in the extreme northeast corner of the large stone having a ringbolt in the top and forming part of the coping of the sea wall on the north side of Governors Island in front of Castle William. It is about 100 feet west of the long dock. Elevation: 10.2 feet above mean low water; 8.00 feet above standard sea level.

**Serial No. 1319. Governors Island:** B. M. 4 (C. & G. S.) known as Primary B. M. I, is a cross cut in the south end of the bluestone door sill at the main entrance into Castle William. The bench mark is on the east side of the old fort and is  $3\frac{1}{2}$  inches from the south end of the sill and 3 inches from the east end. Elevation: 10.7 feet above mean low water; 8.54 feet above standard sea level.

**Serial No. 1320.** *Governors Island:* B. M. 5 (C. & G. S.) is a C. & G. Survey standard disk bench mark set in the top of granite sea wall on east side of Governors Island opposite foot of Hamilton Avenue, Brooklyn, inside the corner of a small wooden building whose inner edge rests on the sea wall, 46 feet north of B. M. 738. Elevation: 9.4 feet above mean low water; 7.21 feet above standard sea level.

**Serial No. 1321.** *Governors Island:* B. M. 6 (C. & G. S.) is a C. & G. Survey standard disk bench mark set in the top of the granite sea wall on the north side of Governors Island, north of Castle William, and 66 feet west of B. M. 3. Elevation: 10.2 feet above mean low water; 7.99 feet above standard sea level.

**Serial No. 1322.** *Governors Island:* B. M. 8 (U. S. E.) is the bottom of a square cut in the coping of the granite sea wall on the east side of Governors Island near coal dock opposite northeast corner of general stables. Elevation: 9.3 feet above mean low water; 7.11 feet above standard sea level.

**Serial No. 1323.** *Governors Island:* B. M. 738 (B. E. & A.) is the bottom of a 2½-inch-square cut in the coping of the granite sea wall on the east side of Governors Island, opposite the foot of Hamilton Avenue, Brooklyn. The bench mark is near the southeast corner of the coping stone, is south of the transformer house and just east of the quartermasters building (two-story and attic red brick), opposite a point about 11 feet south of the north end. The letter "B" is cut in the stone on the west side of the point. Elevation: 9.3 feet above mean low water; 7.13 feet above standard sea level.

**Serial No. 1324.** *Governors Island:* B. M. 739 (B. E. & A.) is the center of a ¾-inch drill hole in the center of the cross in the corner stone of the Chapel of St. Cornelius the Centurian, on the easterly side of Governors Island. The chapel is a white limestone structure, is about 150 feet north of Corbin Hall, and the corner stone contains the inscription "A. D. 1905" below the cross, which is on the north side of the chapel about 3 feet above the ground. Elevation: 18.7 feet above mean low water; 16.54 feet above standard sea level.

**SECTION K.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 1325 TO 1494: CARLISLE STREET TO SPUYTEN DUYVIL.**

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.
1325	Carlisle Street.....	1.8	5.9	8.08	10.3	14.3
1326	Cedar Street.....	0.5	4.0	6.77	9.0	13.0
1327	.....do.....	0.1	4.2	6.38	8.6	12.6
1328	Globe Square.....	-1.0	3.1	5.29	7.5	11.5
1329	Vesey Street.....	-0.5	3.6	5.81	8.0	12.0
1330	.....do.....	-0.2	3.9	6.14	8.3	12.3
1331	Chambers Street.....	0.3	4.4	6.02	8.8	12.8
1332	.....do.....	1.0	5.1	7.27	9.5	13.5
1333	Franklin Street.....	3.1	7.2	9.38	11.6	15.6
1334	.....do.....	1.6	5.7	7.93	10.1	14.1
1335	.....do.....	2.2	6.3	8.46	10.7	14.7
1336	Leonard Street.....	31.9	30.0	38.19	40.4	44.4
1337	Vestry Street.....	1.2	5.3	7.62	9.7	13.7
1338	.....do.....	0.5	4.6	6.82	9.0	13.0
1339	.....do.....	0.6	4.7	6.88	9.1	13.1
1340	Spring Street.....	1.3	5.4	7.56	9.8	13.8
1341	.....do.....	1.2	5.3	7.47	9.7	13.7
1342	Le Roy Street.....	3.3	7.4	9.02	11.8	15.8
1343	.....do.....	3.6	7.7	9.90	12.1	16.1
1344	.....do.....	1.7	5.8	7.98	10.2	14.2
1345	Charles Street.....	3.0	7.1	9.30	11.5	15.5
1346	.....do.....	1.5	5.6	7.83	10.0	14.0
1347	.....do.....	2.9	7.0	9.19	11.4	15.4
1348	West Twelfth Street.....	1.4	5.5	7.66	9.9	13.9
1349	.....do.....	2.4	6.5	8.66	10.9	14.9
1350	.....do.....	1.6	5.7	7.89	10.1	14.1
1351	West Fourteenth Street.....	3.4	7.6	9.77	11.9	15.9
1352	.....do.....	3.3	7.5	9.65	11.8	15.8
1353	.....do.....	4.1	8.3	10.40	12.6	16.6
1354	West Nineteenth Street.....	2.0	6.8	8.92	11.1	15.1

## SECTION K.—Elevations of bench marks, serial Nos. 1325 to 1494: Carlisle Street to Spuyten Duyvil—Continued.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.
1355	West Nineteenth Street.....	1.8	6.0	8.19	10.3	14.3
1356	do.....	3.2	7.4	9.58	11.7	15.7
1357	Pier 60.....	2.8	7.0	9.12	11.3	15.3
1358	West Twenty-fourth Street.....	-0.2	4.0	6.13	8.3	12.3
1359	do.....	0.7	4.9	7.10	9.2	13.2
1360	do.....	0.0	4.2	6.31	8.5	12.5
1361	Pier 64.....	1.4	5.6	7.79	9.9	13.0
1362	West Twenty-ninth Street.....	-3.6	0.6	2.90	4.9	8.9
1363	do.....	-3.2	1.0	3.14	5.3	9.3
1364	do.....	-1.9	2.3	4.48	6.6	10.6
1365	West Thirtieth Street.....	1.2	5.4	7.53	9.7	13.7
1366	West Thirty-third Street.....	37.4	41.0	43.71	45.9	49.9
1367	West Thirty-fourth Street.....	13.4	17.6	19.72	21.9	25.9
1368	do.....	12.4	16.6	18.80	20.9	24.9
1369	do.....	2.3	6.5	8.64	10.8	14.8
1370	do.....	1.9	6.1	8.23	10.4	14.4
1371	do.....	1.4	5.6	7.79	9.9	13.9
1372	do.....	1.5	5.7	7.83	10.0	14.0
1373	West Thirty-fifth Street.....	12.8	17.0	19.13	21.3	25.3
1374	West Thirty-sixth Street.....	13.8	18.0	20.14	22.3	26.3
1375	West Thirty-seventh Street.....	13.6	17.8	20.00	22.1	26.1
1376	West Thirty-eighth Street.....	14.3	18.5	20.70	22.8	26.8
1377	West Thirty-ninth Street.....	14.3	18.5	20.69	22.8	26.8
1378	West Fortieth Street.....	13.6	17.8	19.97	22.1	26.1
1379	West Forty-first Street.....	10.8	15.0	17.19	19.3	23.3
1380	do.....	0.6	4.8	6.98	9.1	13.1
1381	do.....	0.8	5.0	7.13	9.3	13.3
1382	West Forty-second Street.....	3.7	8.0	10.10	12.2	16.2
1383	do.....	8.2	12.5	14.64	16.7	20.7
1384	do.....	7.6	11.9	13.99	16.1	20.1
1385	do.....	8.1	12.4	14.51	16.6	20.6
1386	do.....	8.8	13.1	15.23	17.3	21.3
1387	West Forty-third Street.....	7.1	11.4	13.46	15.6	19.6
1388	West Forty-fourth Street.....	10.4	14.7	16.85	18.9	22.9
1389	do.....	7.5	11.8	13.90	16.0	20.0
1390	West Forty-fifth Street.....	9.2	13.5	15.64	17.7	21.7
1391	West Forty-sixth Street.....	11.3	15.6	17.65	19.8	23.8
1392	West Forty-seventh Street.....	14.1	18.4	20.47	22.6	26.6
1393	West Forty-eighth Street.....	15.6	19.9	22.00	24.1	28.1
1394	West Forty-ninth Street.....	17.3	21.6	23.73	25.8	29.8
1395	West Fiftieth Street.....	19.6	23.9	25.98	28.1	32.1
1396	West Fifty-first Street.....	20.4	24.7	26.83	28.9	32.9
1397	West Fifty-second Street.....	20.2	24.5	26.62	28.7	32.7
1398	do.....	17.5	21.8	23.89	26.0	30.0
1399	do.....	2.9	7.2	9.28	11.4	15.4
1400	do.....	2.4	6.7	8.79	10.9	14.9
1401	do.....	1.5	5.8	7.93	10.0	14.0
1402	do.....	1.7	6.0	8.14	10.2	14.2
1403	West Fifty-fourth Street.....	2.7	7.0	9.08	11.2	15.2
1404	West Fifty-sixth Street.....	2.4	6.7	8.76	10.9	14.9
1405	West Fifty-seventh Street.....	20.9	25.2	27.33	29.4	33.4
1406	West Fifty-eighth Street.....	19.8	24.1	26.23	28.3	32.3
1407	do.....	22.0	26.3	28.38	30.6	34.6
1408	do.....	19.8	24.1	26.24	28.3	32.3
1409	do.....	2.6	6.9	8.96	11.1	15.1
1410	West Fifty-ninth Street.....	3.1	7.4	9.47	11.6	15.6
1411	do.....	2.2	6.5	8.63	10.7	14.7
1412	do.....	2.0	6.3	8.41	10.5	14.5
1413	do.....	2.2	6.5	8.64	10.7	14.7
1414	do.....	19.8	24.1	26.16	28.3	32.3
1415	West Sixtieth Street.....	21.5	25.8	27.86	30.0	34.0
1416	do.....	21.4	25.7	27.82	29.9	33.9

## SECTION K.—Elevations of bench marks, serial Nos. 1325 to 1494: Carlisle Street to Spuyten Duyvil—Continued.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.
1417	Fifth Avenue.....	46.8	51.1	53.16	55.3	59.3
1418	Columbus Circle.....	80.2	84.5	86.64	88.7	92.7
1419	Central Park West.....	83.5	87.8	89.92	92.0	96.0
1420	West Seventieth Street.....	1.6	5.9	8.04	10.1	14.1
1421	.....do.....	1.6	5.9	8.02	10.1	14.1
1422	West Seventy-first Street.....	1.3	5.6	7.68	9.8	13.8
1423	Central Park West.....	84.0	88.8	90.82	92.9	96.9
1424	Manhattan Square.....	80.9	84.8	86.31	88.9	92.9
1425	West Seventy-ninth Street.....	4.4	8.3	10.32	12.4	16.4
1426	.....do.....	1.9	5.8	7.89	9.9	13.9
1427	.....do.....	1.5	5.4	7.48	9.5	13.5
1428	West Eighty-sixth Street.....	2.1	6.0	8.06	10.1	14.1
1429	.....do.....	0.3	4.2	6.25	8.3	12.3
1430	Central Park.....	105.1	109.1	111.17	113.2	117.2
1431	.....do.....	108.2	112.1	114.15	116.2	120.2
1432	Central Park, west.....	98.4	102.3	104.35	106.4	110.4
1433	.....do.....	98.4	102.3	104.30	106.4	110.4
1434	West Ninety-fifth Street.....	2.6	6.5	8.57	10.6	14.6
1435	.....do.....	4.6	8.5	10.60	12.6	16.6
1436	.....do.....	0.4	4.3	6.40	8.4	12.4
1437	.....do.....	-0.4	3.5	5.54	7.6	11.6
1438	West Ninety-ninth Street.....	6.4	10.3	12.41	14.4	18.4
1439	West One hundred and first Street.....	7.4	11.3	13.38	15.4	19.4
1440	West One hundred and third Street.....	6.6	10.5	12.60	14.6	18.6
1441	West One hundred and fifth Street.....	5.1	9.0	11.09	13.1	17.1
1442	West One hundred and eighth Street.....	9.1	13.0	15.10	17.1	21.1
1443	Seventh Avenue.....	29.5	33.5	35.50	37.5	41.5
1444	.....do.....	29.3	33.3	35.26	37.3	41.3
1445	West One hundred and eleventh Street.....	0.4	10.4	12.41	14.4	18.4
1446	West One hundred and thirteenth Street.....	6.9	10.9	12.89	14.9	18.9
1447	West One hundred and fifteenth Street.....	5.6	9.6	11.62	13.6	17.6
1448	West One hundred and seventeenth Street.....	5.9	9.9	11.91	13.9	17.9
1449	West One hundred and nineteenth Street.....	7.2	11.2	13.20	15.2	19.2
1450	Hancock Place.....	25.9	29.9	31.87	33.9	37.9
1451	West One hundred and twenty-third Street.....	3.0	7.0	9.01	11.0	15.0
1452	West One hundred and twenty-fifth Street.....	5.7	9.7	11.74	13.7	17.7
1453	West One hundred and twenty-seventh Street.....	0.4	10.4	12.45	14.4	18.4
1454	West One hundred and twenty-ninth Street.....	4.9	8.9	10.92	12.9	16.9
1455	.....do.....	0.6	4.6	6.57	8.6	12.6
1456	.....do.....	3.1	7.1	9.10	11.1	15.1
1457	Manhattan Street.....	32.0	36.0	37.99	40.0	44.0
1458	.....do.....	7.9	11.9	13.89	15.9	19.9
1459	.....do.....	7.1	11.1	13.05	15.1	19.1
1460	West One hundred and thirty-third Street.....	7.8	11.8	13.79	15.8	19.8
1461	West One hundred and thirty-seventh Street.....	1.3	5.3	7.33	9.3	13.3
1462	West One hundred and forty-third Street.....	5.2	9.2	11.17	13.2	17.2
1463	West One hundred and forty-seventh Street.....	5.6	9.6	11.57	13.6	17.6
1464	West One hundred and forty-ninth Street.....	6.2	10.2	12.20	14.2	18.2
1465	West One hundred and fifty-first Street.....	1.9	5.9	7.87	9.9	13.9
1466	West One hundred and fifty-second Street.....	5.9	9.9	11.93	13.9	17.9
1467	West One hundred and fifty-fifth Street.....	5.3	9.3	11.33	13.3	17.3
1468	.....do.....	142.7	146.7	148.73	150.7	154.7
1469	St. Nicholas Avenue.....	141.9	145.9	147.95	149.9	153.9
1470	.....do.....	140.6	144.6	146.59	148.6	152.6
1471	West One hundred and fifty-sixth Street.....	0.9	4.9	6.91	8.9	12.9
1472	West One hundred and fifty-eighth Street.....	4.9	8.9	10.93	12.9	16.9
1473	West One hundred and sixty-second Street.....	0.1	10.1	12.13	14.1	18.1
1474	St. Nicholas Avenue.....	159.5	163.5	165.49	167.5	171.5
1475	Asylum Dock.....	2.4	6.4	8.45	10.4	14.4
1476	West One hundred and sixty-ninth Street.....	170.3	174.3	176.25	178.3	182.3
1477	.....do.....	170.6	174.6	176.58	178.6	182.6
1478	West One hundred and seventieth Street.....	172.2	176.2	178.22	180.2	184.2
1479	West One hundred and seventy-fourth Street.....	179.9	183.9	185.92	187.9	191.9

## SECTION K.—Elevations of bench marks, serial Nos. 1325 to 1494: Carlisle Street to Spuyten Duyvil—Continued.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
1480	Fort Washington Park.....	Feet. 4.3	Feet. 7.9	Feet. 9.89	Feet. 11.8	Feet. 15.8
1481	do.....	5.0	8.6	10.62	12.5	16.5
1482	do.....	4.5	8.1	10.00	12.0	16.0
1483	Wadsworth Avenue.....	182.8	186.4	188.33	190.3	194.3
1484	do.....	179.8	183.4	185.32	187.3	191.3
1485	do.....	179.2	182.8	184.77	186.7	190.7
1486	Broadway.....	69.3	72.9	74.84	76.8	80.8
1487	do.....	69.3	72.9	74.83	76.8	80.8
1488	do.....	36.1	39.7	41.07	43.6	47.6
1489	Dyckman Street.....	18.7	22.3	24.20	26.2	30.2
1490	do.....	17.0	20.6	22.56	24.5	28.5
1491	do.....	5.7	9.3	11.29	13.2	17.2
1492	do.....	4.4	8.0	9.98	11.9	15.9
1493	Inwood Depot.....	5.7	9.4	11.31	13.2	17.2
1494	Spuyten Duyvil Depot.....	3.7	7.4	9.34	11.2	15.2

## DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 1325 TO 1494: CARLISLE STREET TO SPUYTEN DUYVIL.

**Serial No. 1325.** *Carlisle Street:* B. M. 1R (U. S. E.) is a square cut on the first stone step at the northeast corner of Carlisle and West Streets. Elevation: 10.3 feet above mean low water; 8.08 feet above standard sea level.

**Serial 1326.** *Cedar Street:* B. M. 3R (U. S. E.) is a square cut on the northwest corner of first doorstep of building No. 90 West Street southeast corner of West and Cedar Streets. Elevation: 9.0 feet above mean low water; 6.77 feet above standard sea level.

**Serial No. 1327.** *Cedar Street:* B. M. 4R (U. S. E.) is a  $\Delta$  cut 1 foot from lamp-post on the northeast corner of Cedar and West Streets. Elevation: 8.6 feet above mean low water; 6.38 feet above standard sea level.

**Serial No. 1328.** *Globe Square:* B. M. 2R (U. S. E.) is a square cut on sewer basin at the northeast corner of Globe Square and West Street. Elevation: 7.5 feet above mean low water; 5.29 feet above standard sea level.

**Serial No. 1329.** *Vesey Street:* B. M. 5R (U. S. E.) is a square cut on doorstep of first entrance, from Vesey Street, Lackawanna Hotel, on the northeast corner of Vesey and West Streets. Elevation: 8.0 feet above mean low water; 5.81 feet above standard sea level.

**Serial No. 1330.** *Vesey Street:* B. M. 6R (U. S. E.) is a square cut on curb, 5.2 feet south of hydrant on West Street south of Vesey Street. Elevation: 8.3 feet above mean low water; 6.14 feet above standard sea level.

**Serial No. 1331.** *Chambers Street:* B. M. 7R (U. S. E.) is a square cut on sewer basin 4.5 feet from lamp-post at northeast corner of West and Chambers Streets. Elevation: 8.8 feet above mean low water; 6.62 feet above standard sea level.

**Serial No. 1332.** *Chambers Street:* B. M. 8R (U. S. E.) is a square cut in sewer basin 6.5 feet from lamp-post on the southeast corner of West and Chambers Streets. Elevation: 9.5 feet above mean low water; 7.27 feet above standard sea level.

**Serial No. 1333.** *Franklin Street:* B. M. 9R (U. S. E.) is a square cut on the doorstep of the Franklin Street door of No. 215 West Street at the southeast corner of West and Franklin Streets. Elevation: 11.6 feet above mean low water; 9.38 feet above standard sea level.

**Serial No. 1334.** *Franklin Street:* B. M. 10R (U. S. E.) is a square cut on sewer catch basin, 8.5 feet from lamp-post, 23.5 feet from B. M. 11R and 53.7 feet from B. M. 9R, on the northeast corner of West and Franklin Streets. Elevation: 10.1 feet above mean low water; 7.93 feet above standard sea level.

**Serial No. 1335.** *Franklin Street:* B. M. 11R (U. S. E.) is a square cut in base of fire hydrant 23.5 feet from B. M. 10R on the north side of Franklin Street near West Street. Elevation: 10.7 feet above mean low water; 8.46 feet above standard sea level.

**Serial No. 1336.** *Leonard Street:* B. M. 779 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the southeast corner of the square granite base of the most southerly granite column on the west side of the New York Life Building at No. 346 Broadway, corner of Leonard Street. The bolt is 1.3 feet above the sidewalk and 4 feet north of Catharine Lane. Elevation: 40.4 feet above mean low water; 38.19 feet above standard sea level.

**Serial No. 1337.** *Vestry Street:* B. M. 12R (U. S. E.) is a square cut on the bend of raised part of sidewalk on the southeast corner of West and Vestry Streets. Elevation: 9.7 feet above mean low water; 7.52 feet above standard sea level.

**Serial No. 1338.** *Vestry Street:* B. M. 13R (U. S. E.) is a square cut on corner of sewer catch basin on the northeast corner of West and Vestry Streets. Elevation: 9.0 feet above mean low water; 6.82 feet above standard sea level.

**Serial No. 1339.** *Vestry Street:* B. M. 14R (U. S. E.) is a square cut on the sewer catch basin on the southeast corner of West and Vestry Streets. Elevation: 9.1 feet above mean low water; 6.88 feet above standard sea level.

**Serial No. 1340.** *Spring Street:* B. M. 15R (U. S. E.) is a square cut on sewer catch basin on the southeast corner of West and Spring Streets. Elevation: 9.8 feet above mean low water; 7.56 feet above standard sea level.

**Serial No. 1341.** *Spring Street:* B. M. 16R (U. S. E.) is a square cut on sewer catch basin on the northeast corner of West and Spring Streets. Elevation: 9.7 feet above mean low water; 7.47 feet above standard sea level.

**Serial No. 1342.** *Le Roy Street:* B. M. 17R (U. S. E.) is a square cut on stone step on the northeast corner of West and Le Roy Streets. Elevation: 11.8 feet above mean low water; 9.62 feet above standard sea level.

**Serial No. 1343.** *Le Roy Street:* B. M. 18R (U. S. E.) is a square cut on foundation of steel post at the southeast corner of West and Le Roy Streets. Elevation: 12.1 feet above mean low water; 9.90 feet above standard sea level.

**Serial No. 1344.** *Le Roy Street:* B. M. 19R (U. S. E.) is a square cut on sewer catch basin at the southeast corner of West and Le Roy Streets. Elevation: 10.2 feet above mean low water; 7.98 feet above standard sea level.

**Serial No. 1345.** *Charles Street:* B. M. 20R (U. S. E.) is a square cut on stone step of saloon at the northeast corner of West and Charles Streets. Elevation: 11.5 feet above mean low water; 9.30 feet above standard sea level.

**Serial No. 1346.** *Charles Street:* B. M. 21R (U. S. E.) is a square cut on sewer catch basin at the southeast corner of West and Charles Streets. Elevation: 10.0 feet above mean low water; 7.83 feet above standard sea level.

**Serial No. 1347.** *Charles Street:* B. M. 22R (U. S. E.) is a square cut on stone step of 404 West Street on the northeast corner of West and Charles Streets. Elevation: 11.4 feet above mean low water; 9.19 feet above standard sea level.

**Serial No. 1348.** *West Twelfth Street:* B. M. 23R (U. S. E.) is a square cut on sewer catch basin at the northeast corner of West and West Twelfth Streets. Elevation: 9.9 feet above mean low water; 7.66 feet above standard sea level.

**Serial No. 1349.** *West Twelfth Street:* B. M. 24R (U. S. E.) is a square cut on stone step of saloon at northeast corner of West and West Twelfth Streets. Elevation: 10.9 feet above mean low water; 8.66 feet above standard sea level.

**Serial No. 1350.** *West Twelfth Street:* B. M. 25R (U. S. E.) is a square cut on sewer catch basin on the southeast corner of West and West Twelfth Streets. Elevation: 10.1 feet above mean low water; 7.89 feet above standard sea level.

**Serial No. 1351.** *West Fourteenth Street:* B. M. 26R (U. S. E.) is a square cut on sewer catch basin on the southeast corner of West and West Fourteenth Streets. Elevation: 11.9 feet above mean low water; 9.77 feet above standard sea level.

**Serial No. 1352.** *West Fourteenth Street:* B. M. 27R (U. S. E.) is a square cut on sewer catch basin at the northeast corner of West and West Fourteenth Streets. Elevation: 11.8 feet above mean low water; 9.65 feet above standard sea level.

**Serial No. 1353.** *West Fourteenth Street:* B. M. 28R (U. S. E.) is a square cut on marble step of saloon at the southeast corner of West and West Fourteenth Streets. Elevation: 12.6 feet above mean low water; 10.40 feet above standard sea level.

**Serial No. 1354.** *West Nineteenth Street:* B. M. 29R (U. S. E.) is a square cut on stone step of saloon at the southeast corner of West and West Nineteenth Streets. Elevation: 11.1 feet above mean low water; 8.92 feet above standard sea level.

**Serial No. 1355.** *West Nineteenth Street:* B. M. 30R (U. S. E.) is a square cut on sewer catch basin on the southeast corner of West and West Nineteenth Streets. Elevation: 10.3 feet above mean low water; 8.19 feet above standard sea level.

**Serial No. 1356.** *West Nineteenth Street:* B. M. 31R (U. S. E.) is a square cut on concrete base of lamp-post on West Street foot of West Nineteenth Street. Elevation: 11.7 feet above mean low water; 9.56 feet above standard sea level.

**Serial No. 1357.** *Pier 60:* B. M. 32R (U. S. E.) is a cross cut on bolt head on the south corner of iron mooring post and the northwest corner of Pier 60. Elevation: 11.3 feet above mean low water 9.12 feet above standard sea level.

**Serial No. 1358.** *West Twenty-fourth Street:* B. M. 35R (U. S. E.) is a square cut on sewer catch basin on southeast corner of Twelfth Avenue and West Twenty-fourth Street. Elevation: 8.3 feet above mean low water; 6.13 feet above standard sea level.

**Serial No. 1359.** *West Twenty-fourth Street:* B. M. 36R (U. S. E.) is a square cut on marble step of saloon on the southeast corner of Twelfth Avenue and West Twenty-fourth Street. Elevation: 9.2 feet above mean low water; 7.10 feet above standard sea level.

**Serial No. 1360.** *West Twenty-fourth Street:* B. M. 37R (U. S. E.) is a square cut on sewer catch basin at the northeast corner of Twelfth Avenue and West Twenty-fourth Street. Elevation: 8.5 feet above mean low water; 6.31 feet above standard sea level.

**Serial No. 1361.** *Pier 64:* B. M. 2 (U. S. E.) is the top of a bolt (one of four) in the southwest corner of bedplate of mooring post on the southwest corner of dock. Elevation: 9.9 feet above mean low water; 7.79 feet above standard sea level.

**Serial No. 1362.** *West Twenty-ninth Street:* B. M. 38R (U. S. E.) is a square cut on sewer catch basin at the southwest corner of Twelfth Avenue and West Twenty-ninth Street. Elevation: 4.9 feet above mean low water; 2.80 feet above standard sea level.

**Serial No. 1363.** *West Twenty-ninth Street:* B. M. 39R (U. S. E.) is a square cut on sewer catch basin on the northeast corner of Twelfth Avenue and West Twenty-ninth Street. Elevation: 5.3 feet above mean low water; 3.14 feet above standard sea level.

**Serial No. 1364.** *West Twenty-ninth Street:* B. M. 40R (U. S. E.) is a square cut on concrete base of lamp-post at the foot of West Twenty-ninth Street and Twelfth Avenue. Elevation: 6.6 feet above mean low water; 4.48 feet above standard sea level.

**Serial No. 1365.** *West Thirtieth Street:* B. M. 3 (U. S. E.) is the top bolt (one of four) in the northeast corner of bedplate of mooring post on the southwest corner of dock at the foot of West Thirtieth Street. Elevation: 9.7 feet above mean low water; 7.53 feet above standard sea level.

**Serial No. 1366.** *West Thirty-third Street:* B. M. 810 (B. E. & A.) is the center of a 2-inch brass bolt set vertically in the top of the northwest corner of the square granite base of the most northerly granite column on the Seventh Avenue side of the Pennsylvania Railroad Station at West Thirty-third Street. The bolt is 3.1 feet above the sidewalk. Elevation: 45.9 feet above mean low water; 43.71 feet above standard sea level.

**Serial No. 1367.** *West Thirty-fourth Street:* B. M. 41R (U. S. E.) is a square cut on stone step at the northeast corner of Eleventh Avenue and West Thirty-fourth Street. Elevation: 21.9 feet above mean low water; 19.72 feet above standard sea level.

**Serial No. 1368.** *West Thirty-fourth Street:* B. M. 42R (U. S. E.) is a square cut on stone step at the northwest corner of Eleventh Avenue and West Thirty-fourth Street. Elevation: 20.9 feet above mean low water; 18.80 feet above standard sea level.

**Serial No. 1369.** *West Thirty-fourth Street:* B. M. 43R (U. S. E.) is a square cut on the sewer catch basin at the northeast corner of Twelfth Avenue and West Thirty-fourth Street. Elevation: 10.8 feet above mean low water; 8.64 feet above standard sea level.

**Serial No. 1370.** *West Thirty-fourth Street:* B. M. 44R (U. S. E.) is a square cut on curb at the southeast corner of Twelfth Avenue and West Thirty-fourth Street. Elevation: 10.4 feet above mean low water; 8.23 feet above standard sea level.

**Serial No. 1371.** *West Thirty-fourth Street:* B. M. 2 (U. S. E.) is the top bolt (one of four) in the southeast corner of bedplate of mooring post on the northwest corner of dock at the foot of West Thirty-fourth Street. Elevation: 9.9 feet above mean low water; 7.79 feet above standard sea level.

**Serial No. 1872.** *West Thirty-fourth Street:* B. M. 4 (U. S. E.) is the top bolt (one of four) in the northeast corner of the bedplate of mooring post on the southwest corner of dock at the foot of West Thirty-fourth Street. Elevation: 10.0 feet above mean low water; 7.83 feet above standard sea level.

**Serial No. 1873.** *West Thirty-fifth Street:* B. M. H-9 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Thirty-fifth Street, on Thirty-fifth Street side. Elevation: 21.3 feet above mean low water; 19.13 feet above standard sea level.

**Serial No. 1874.** *West Thirty-sixth Street:* B. M. H-10 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Thirty-sixth Street, on the Thirty-sixth Street side. Elevation: 22.3 feet above mean low water; 20.14 feet above standard sea level.

**Serial No. 1875.** *West Thirty-seventh Street:* B. M. H-11 (U. S. E.) is a square cut in curb on the northwest corner of Eleventh Avenue and Thirty-seventh Street, on the Thirty-seventh Street side. Elevation: 22.1 feet above mean low water; 20.00 feet above standard sea level.

**Serial No. 1876.** *West Thirty-eighth Street:* B. M. H-12 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Thirty-eighth Street, on the Thirty-eighth Street side. Elevation: 22.8 feet above mean low water; 20.70 feet above standard sea level.

**Serial No. 1877.** *West Thirty-ninth Street:* B. M. H-13 (U. S. E.) is a square cut on the northwest corner of Eleventh Avenue and West Thirty-ninth Street, Thirty-ninth Street side. Elevation: 22.8 feet above mean low water; 20.69 feet above standard sea level.

**Serial No. 1878.** *West Fortieth Street:* B. M. H-14 (U. S. E.) is a square cut on curb on the northwest corner of Eleventh Avenue and West Fortieth Street, Fortieth Street side. Elevation: 22.1 feet above mean low water; 19.97 feet above standard sea level.

**Serial No. 1879.** *West Forty-first Street:* B. M. H-15 (U. S. E.) is a square cut on curb on the northwest corner of Eleventh Avenue and West Forty-first Street, on Forty-first Street side. Elevation: 19.3 feet above mean low water; 17.19 feet above standard sea level.

**Serial No. 1880.** *West Forty-first Street:* B. M. 2 (U. S. E.) is the top bolt (one of four) in the northeast corner of the bedplate of mooring post on the northwest corner of dock at the foot of West Forty-first Street. Elevation: 9.1 feet above mean low water; 6.98 feet above standard sea level.

**Serial No. 1881.** *West Forty-first Street:* B. M. 4 (U. S. E.) is the top of bolt (one of four) in the northwest corner of the bedplate of the mooring post on the southwest corner of the dock at the foot of West Forty-first Street. Elevation: 9.3 feet above mean low water; 7.13 feet above standard sea level.

**Serial No. 1882.** *West Forty-second Street:* B. M. 1 (C. & G. S.) is a cross cut in the brick wall of coal shed No. 2 of the Consolidated Gas Co., Metropolitan branch, between Forty-first and Forty-second Streets. It is about 4 feet from the ground and 10 or 12 feet from the south end of the building on the south side of the southeast corner. It is marked "U.S.+C.S.," and the horizontal line of the cross is the mark. Elevation: 12.2 feet above mean low water; 10.10 feet above standard sea level.

**Serial No. 1883.** *West Forty-second Street:* B. M. 2 (C. & G. S.) is a small cross made on brick pilaster that supports the iron arch leading to the gas company's wharf, and in line with the end of the coal shed. It is on the side facing the water on the thirty-second brick up from the level of the dock, and is on a brick whose length is exposed, there being a header on each side. It is nearly 160 feet west from B. M. 1. Elevation: 16.7 feet above mean low water; 14.64 feet above standard sea level.

**Serial No. 1884.** *West Forty-second Street:* B. M. H-16 (U. S. E.) is a square cut in curb on the northwest corner of Eleventh Avenue and West Forty-second Street, on the Forty-second Street side. Elevation: 16.1 feet above mean low water; 13.99 feet above standard sea level.

**Serial No. 1885.** *West Forty-second Street:* B. M. 820 (B. E. & A.) is the center of the inclosed surface within the figure 4, cut in the cement sidewalk on the southeast corner of West Forty-second Street and Eleventh Avenue. The point is about 5 feet south of the south curb line of West Forty-second Street and about 7.5 feet east of the east curb line of Eleventh Avenue. Elevation: 16.6 feet above mean low water; 14.54 feet above standard sea level.

**Serial No. 1386.** *West Forty-second Street:* B. M. 821 (B. E. & A.) is a square cut in the top of the curved coping under the iron railing on the southwestern corner of West Forty-second Street and Eleventh Avenue. The bench mark is on the projecting coping stone at the middle of the arc. Elevation: 17.3 feet above mean low water; 15.23 feet above standard sea level.

**Serial No. 1387.** *West Forty-third Street:* B. M. H-17 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Forty-third Street, on Forty-third Street side. Elevation: 15.6 feet above mean low water; 13.46 feet above standard sea level.

**Serial No. 1388.** *West Forty-fourth Street:* B. M. 823 (B. E. & A.) is a square cut in the top of the northwest corner of the granite doorsill at the house entrance to the five-story brick tenement at No. 592 Eleventh Avenue. The bench mark is about 25 feet north of West Forty-fourth Street. Elevation: 18.9 feet above mean low water; 16.85 feet above standard sea level.

**Serial No. 1389.** *West Forty-fourth Street:* B. M. H-18 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Forty-fourth Street on Forty-fourth Street side. Elevation: 16.0 feet above mean low water; 13.90 feet above standard sea level.

**Serial No. 1390.** *West Forty-fifth Street:* B. M. H-19 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Forty-fifth Street on Forty-fifth Street side. Elevation: 17.7 feet above mean low water; 15.64 feet above standard sea level.

**Serial No. 1391.** *West Forty-sixth Street:* B. M. H-20 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Forty-sixth Street on Forty-sixth Street side. Elevation: 19.8 feet above mean low water; 17.65 feet above standard sea level.

**Serial No. 1392.** *West Forty-seventh Street:* B. M. H-21 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Forty-seventh Street on Forty-seventh Street side. Elevation: 22.6 feet above mean low water; 20.47 feet above standard sea level.

**Serial No. 1393.** *West Forty-eighth Street:* B. M. H-22 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Forty-eighth Street on Forty-eighth Street side. Elevation: 24.1 feet above mean low water; 22.00 feet above standard sea level.

**Serial No. 1394.** *West Forty-ninth Street:* B. M. H-23 (U. S. E.) is a square cut in curb on northwest corner of Eleventh Avenue and West Forty-ninth Street on Forty-ninth Street side. Elevation: 25.8 feet above mean low water; 23.73 feet above standard sea level.

**Serial No. 1395.** *West Fiftieth Street:* B. M. H-24 (U. S. E.) is a square cut in curb, on northwest corner of Eleventh Avenue and West Fiftieth Street, on Fiftieth Street side. Elevation: 28.1 feet above mean low water; 25.98 feet above standard sea level.

**Serial No. 1396.** *West Fifty-first Street:* B. M. H-25 (U. S. E.) is a square cut in curb on northwest corner of West Fifty-first Street and Eleventh Avenue on Fifty-first Street side. Elevation: 28.9 feet above mean low water; 26.83 feet above standard sea level.

**Serial No. 1397.** *West Fifty-second Street:* B. M. H-26 (U. S. E.) is a square cut in curb on northwest corner of West Fifty-second Street and Eleventh Avenue on Fifty-second Street side. Elevation: 28.7 feet above mean low water; 26.62 feet above standard sea level.

**Serial No. 1398.** *West Fifty-second Street:* B. M. H-27 (U. S. E.) is a square cut in walk north side of West Fifty-second Street, 40 feet east of park entrance. Elevation: 26.0 feet above mean low water; 23.89 feet above standard sea level.

**Serial No. 1399.** *West Fifty-second Street:* B. M. H-30 (U. S. E.) is a square cut in catch basin head, northeast corner Twelfth Avenue and West Fifty-second Street. Elevation: 11.4 feet above mean low water; 9.26 feet above standard sea level.

**Serial No. 1400.** *West Fifty-second Street:* B. M. H-31 (U. S. E.) is an iron bolt in cap log with a square cut around it on the northeast corner of Pier 92 at the foot of West Fifty-second Street. Elevation: 10.9 feet above mean low water; 8.79 feet above standard sea level.

**Serial No. 1401.** *West Fifty-second Street:* B. M. H-32 (U. S. E.) is a square cut around an iron bolt in cap log on the southwest corner of Pier No. 92, at the foot of West Fifty-second Street. Elevation: 10.0 feet above mean low water; 7.93 feet above standard sea level.

**Serial No. 1402.** *West Fifty-second Street:* B. M. H-33 (U. S. E.) is a square cut around an iron bolt in cap log, on the northwest corner of Pier 92 at the foot of West Fifty-second Street. Elevation: 10.2 feet above mean low water; 8.14 feet above standard sea level.

**Serial No. 1403.** *West Fifty-fourth Street:* B. M. H-34 (U. S. E.) is a square cut on north corner of catch basin on the northeast corner of Twelfth Avenue and West Fifty-fourth Street. Elevation: 11.2 feet above mean low water; 9.08 feet above standard sea level.

**Serial No. 1404.** *West Fifty-sixth Street:* B. M. H-43 (U. S. E.) is a square cut in north corner of catch basin, at the southeast corner of Twelfth Avenue and West Fifty-sixth Street. Elevation: 10.9 feet above mean low water; 8.76 feet above standard sea level.

**Serial No. 1405.** *West Fifty-seventh Street:* B. M. 830 (B. E. & A.) is a square cut in the edge of the brownstone doorsill of the two-story brick building on the southwest corner of Eleventh Avenue and West Fifty-seventh Street. The bench mark is 2.5 feet west of the corner. Elevation: 29.4 feet above mean low water; 27.33 feet above standard sea level.

**Serial No. 1406.** *West Fifty-eighth Street:* B. M. H-42 (U. S. E.) is a square cut on south end of area way in front of Interborough Rapid Transit Co's. powerhouse on Eleventh Avenue and West Fifty-eighth Street. Elevation: 28.3 feet above mean low water; 26.23 feet above standard sea level.

**Serial No. 1407.** *West Fifty-eighth Street:* B. M. 829 (B. E. & A.) is the bottom of a square cut in the center of the 6-inch wide granite water table on the east side of the Interborough Rapid Transit Co's. powerhouse on the northwest corner of Eleventh Avenue and West Fifty-eighth Street. The bench mark is 1 foot from the extreme southeast corner of the stone, and 2.5 feet above the sidewalk. Elevation: 30.5 feet above mean low water; 28.38 feet above standard sea level.

**Serial No. 1408.** *West Fifty-eighth Street:* B. M. H-41 (U. S. E.) is a square cut in capstone northeast corner of area way in front of Interborough Rapid Transit Co's. powerhouse on Eleventh Avenue near West Fifty-eighth Street. Elevation: 28.3 feet above mean low water; 26.24 feet above standard sea level.

**Serial No. 1409.** *West Fifty-eighth Street:* B. M. H-36 (U. S. E.) is a square cut in the south corner of catch basin on the southeast corner of Twelfth Avenue and West Fifty-eighth Street. Elevation: 11.1 feet above mean low water; 8.96 feet above standard sea level.

**Serial No. 1410.** *West Fifty-ninth Street:* B. M. H-37 (U. S. E.) is a square cut on south corner of catch basin, on the northeast corner of West Fifty-ninth Street and Twelfth Avenue. Elevation: 11.6 feet above mean low water; 9.47 feet above standard sea level.

**Serial No. 1411.** *West Fifty-ninth Street:* B. M. H-38 (U. S. E.) is a  $\frac{1}{2}$ -inch spike in cap log north side of New York Central Pier, foot of West Fifty-ninth Street, 131 feet west from telegraph pole New York Central 14. Elevation: 10.7 feet above mean low water; 8.63 feet above standard sea level.

**Serial No. 1412.** *West Fifty-ninth Street:* B. M. H-44 (U. S. E.) is a square cut around a  $\frac{1}{2}$ -inch ship spike in cap log on southwest corner of New York Central Pier, foot of West Fifty-ninth Street. Elevation: 10.5 feet above mean low water; 8.41 feet above standard sea level.

**Serial No. 1413.** *West Fifty-ninth Street:* B. M. H-45 (U. S. E.) is a nail within a triangle marked thus  $\triangle$  on raised footwalk at the end of pier 99 at the foot of West Fifty-ninth Street. It is 2.63 feet and 2.16 feet from south and north edges of the platform, 10.61 feet from the west face of the dock, and 9.25 feet to the northwest corner of the building. Elevation: 10.7 feet above mean low water; 8.64 feet above standard sea level.

**Serial No. 1414.** *West Fifty-ninth Street:* B. M. H-39 (U. S. E.) is a square cut in north corner of catch basin, at the northeast corner of Eleventh Avenue and West Fifty-ninth Street. Elevation: 28.3 feet above mean low water; 26.16 feet above standard sea level.

**Serial No. 1415.** *West Sixtieth Street:* B. M. 831 (B. E. & A.) is a square cut in the top of the northwest corner of the granite basin head on the southeast corner of Eleventh Avenue and West Sixtieth Street. The bench mark is on line with the east line of Eleventh Avenue. Elevation: 30.0 feet above mean low water; 27.86 feet above standard sea level.

**Serial No. 1416.** *West Sixtieth Street:* B. M. H-40 (U. S. E.) is a square cut in southwest corner of catch basin on the south side of West Sixtieth Street and east building line of Eleventh Avenue. Elevation: 29.9 feet above mean low water; 27.82 feet above standard sea level.

**Serial No. 1417.** *Fifth Avenue:* B. M. 827 (B. E. & A.) is the top of the southeast corner of the lowest granite step at the base of the Sherman Monument at the Fifth Avenue and Fifty-ninth Street entrance to Central Park. The bench mark is 9 inches above the sidewalk. Elevation: 55.3 feet above mean low water; 53.16 feet above standard sea level.

**Serial No. 1418.** *Columbus Circle:* B. M. 828 (B. E. & A.) is a  $\frac{7}{8}$ -inch copper bolt in the center of the top of the highest granite step on the north side of the Columbus Monument at the intersection of West Fifty-ninth Street and Eighth Avenue. Elevation: 88.7 feet above mean low water; 86.64 feet above standard sea level.

**Serial No. 1419.** *Central Park West:* B. M. 834 (B. E. & A.) is a square cut in the top of the north end of the seventh granite step at the main entrance to the Second Church of Christ Scientist on the southwest corner of Central Park West and West Sixty-eighth Street. The bench mark is on the east side of the church about 26 feet south of West Sixty-eighth Street. Elevation: 92.0 feet above mean low water; 89.92 feet above standard sea level.

**Serial No. 1420.** *West Seventieth Street:* B. M. E-2 (U. S. E.) is a cross cut in bolt in cap log south side of dock at West Seventieth Street, about 525 feet from outer end of pier. The bolt is surrounded by four nails and marked with two squares of nails about 2 feet on either side. Elevation: 10.1 feet above mean low water; 8.04 feet above standard sea level.

**Serial No. 1421.** *West Seventieth Street:* B. M. E-3 (U. S. E.) is a cross cut in spike in cap log on south side of New York Central pier at West Seventieth Street. Spike is about 15 feet from the outer end of the pier and is surrounded with six nails in a square. Elevation: 10.1 feet above mean low water; 8.02 feet above standard sea level.

**Serial No. 1422.** *West Seventy-first Street:* B. M. E-1 (U. S. E.) is a square cut on the granite foundation corner under brick wall to the New York Central Railroad roundhouse at foot of West Seventy-first Street. It is on west side of roundhouse, on north side of doorway. Elevation: 9.8 feet above mean low water; 7.68 feet above standard sea level.

**Serial No. 1423.** *Central Park West:* B. M. 849 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the south end of the lowest granite step at the main entrance to the New York Historical Society building, on the west side of Central Park West between West Seventy-sixth Street and West Seventy-seventh Street. Elevation: 92.9 feet above mean low water; 90.82 feet above standard sea level.

**Serial No. 1424.** *Manhattan Square:* B. M. 855 (B. E. & A.) is the center of the top of the 3-inch brass tablet bolt marking the U. S. C. & G. S. astronomic station in Manhattan Square. The bolt is set in the top of a concrete pier 14 by 26 inches and 3 feet high, is about 65 feet north of the north line of West Seventy-ninth Street, and about 250 feet west of the west line of Central Park West. Elevation: 88.9 feet above mean low water; 86.81 feet above standard sea level.

**Serial No. 1425.** *West Seventy-ninth Street:* B. M. E-4 (U. S. E.) is a square cut in south end of conical base surrounding lamp pole near shore end of West Seventy-ninth Street pier. Elevation: 12.4 feet above mean low water; 10.32 feet above standard sea level.

**Serial No. 1426.** *West Seventy-ninth Street:* B. M. E-5 (U. S. E.) is a square cut in driftbolt on northwest corner of pier at foot of West Seventy-ninth Street. Bolt is surrounded by a square of nails. Elevation: 9.9 feet above mean low water; 7.89 feet above standard sea level.

**Serial No. 1427.** *West Seventy-ninth Street:* B. M. E-6 (U. S. E.) is a cross cut in northeast bolt in base of iron snubbing post on southwest corner at dock of foot of West Seventy-ninth Street. Elevation: 9.5 feet above mean low water; 7.48 feet above standard sea level.

**Serial No. 1428.** *West Eighty-sixth Street:* B. M. E-7 (U. S. E.) is a square on southwest corner of wall, Columbia Yacht Club. Elevation: 10.1 feet above mean low water; 8.06 feet above standard sea level.

**Serial No. 1429.** *West Eighty-sixth Street:* B. M. E-8 (U. S. E.) is a square on concrete wall near north end of dock of Columbia Yacht Club. Elevation: 8.3 feet above mean low water; 6.25 feet above standard sea level.

**Serial No. 1430.** *Central Park:* B. M. 880 (B. E. & A.) is a level square cut in the natural rock in the west side of Central Park. The bench mark is on a sloping ledge about on line with the south line of West Ninety-third Street and about 180 feet east of the park wall on Central Park west. The letter "A" is cut in the rock on the west side of the bench. (Board of Water Supply B. M. 13A.) Elevation: 113.2 feet above mean low water; 111.17 feet above standard sea level.

**Serial No. 1431.** *Central Park:* B. M. 879 (B. E. & A.) is the top of a small rounded summit within a hollow square cut in the natural rock in the west side of Central Park. The bench mark is about on line with the north line of West Ninety-third Street and about 8 feet east of the first asphalt walk east of Central Park West. The letter "B" is cut in the rock on the west side of the bench. (Board of Water Supply B. M. 13B.) Elevation: 116.2 feet above mean low water; 114.15 feet above standard sea level.

**Serial No. 1432.** *Central Park West:* B. M. 877 (B. E. & A.) is the center of the horizontal bar of the final letter "H" in CHURCH, in the inscription on the cornerstone of the First Church of Christ Scientist, on the northwest corner of Central Park West and West Ninety-sixth Street. The bench mark is on the south side of the building, is 2.4 feet from the east side, and 2 feet above the sidewalk. Elevation: 106.4 feet above mean low water; 104.35 feet above standard sea level.

**Serial No. 1433.** *Central Park West:* B. M. 876 (B. E. & A.) is a cross cut in the top of the northeast corner of the granite pedestal of granite column on the north side of the main entrance to the First Church of Christ Scientist on the northwest corner of Central Park West and West Ninety-sixth Street. The cross is about 58 feet north of the corner. Elevation: 106.4 feet above mean low water; 104.90 feet above standard sea level.

**Serial No. 1434.** *West Ninety-fifth Street:* B. M. 151 (U. S. E.) is a square bolt surrounded by a square of red paint and U. S. on inside stringer, on north side of West Ninety-fifth Street Dock at Hudson River, 10 feet west of east twin mooring pile. Elevation: 10.6 feet above mean low water; 8.57 feet above standard sea level.

**Serial No. 1435.** *West Ninety-fifth Street:* B. M. 152 (U. S. E.) is a square cut from concrete and the letters "U. S. B. M." cut and painted on top of steel protection of second concrete pier counting from west to east supporting arch at Burns Bros. coal pockets at the head of West Ninety-fifth Street. Elevation: 12.6 feet above mean low water; 10.60 feet above standard sea level.

**Serial No. 1436.** *West Ninety-fifth Street:* B. M. 153 (U. S. E.) is a cross cut in a square on southwest bolt holding first twin mooring post from west face of American Can Co. Dock at West Ninety-fifth Street. Elevation: 8.4 feet above mean low water; 6.40 feet above standard sea level.

**Serial No. 1437.** *West Ninety-fifth Street:* B. M. 154 (U. S. E.) is a cross cut in square near southeast corner of base of steel mooring pile near south side of American Can Co. Dock at West Ninety-fifth Street. Elevation: 7.6 feet above mean low water; 5.54 feet above standard sea level.

**Serial No. 1438.** *West Ninety-ninth Street:* B. M. 91a (D. D.) is a square cut on park wall 76 feet south of department docks office, 3 feet above the ground. Elevation: 14.4 feet above mean low water; 12.41 feet above standard sea level.

**Serial No. 1439.** *West One hundred and first Street:* B. M. 91b (D. D.) is a square cut on park wall, 138 feet south of Bloomingdale Boathouse about West One hundred and first Street, 1 foot above the ground. Elevation: 15.4 feet above mean low water; 13.38 feet above standard sea level.

**Serial No. 1440.** *West One hundred and third Street:* B. M. 92 (D. D.) is a square cut on projecting stone of park wall, 397 feet north of north side of Bloomingdale Boathouse which is about at foot of West One hundred and third Street. Bench mark is 7.5 feet from top of wall. Elevation: 14.6 feet above mean low water; 12.60 feet above standard sea level.

**Serial No. 1441.** *West One hundred and fifth Street:* B. M. 92a (D. D.) is a square cut on park wall 1.3 feet from ground about West One hundred and fifth Street. Elevation: 13.1 feet above mean low water; 11.09 feet above standard sea level.

**Serial No. 1442.** *West One hundred and eighth Street:* B. M. 92b (D. D.) is a square cut on projecting stone of park wall, 45 feet south of south side of pumping station 9.5 feet from top of wall near West One hundred and eighth Street. Elevation: 17.1 feet above mean low water; 15.10 feet above standard sea level.

**Serial No. 1443.** *Seventh Avenue:* B. M. 886 (B. E. & A.) is the bottom of a square cut in the top of the southwest corner of the foundation stone of the stone post at the

west end of Central Park wall and on line with the east side of Seventh Avenue at West One hundred and tenth Street. The bench mark is 11 inches above the ground. Elevation: 37.5 feet above mean low water; 35.50 feet above standard sea level.

**Serial No. 1444.** *Seventh Avenue:* B. M. 887 (B. E. & A.) is the top of a  $\frac{1}{2}$ -inch square iron bolt in the top of the granite basin head on the northwest corner of Seventh Avenue and West One hundred and tenth Street. The bolt is 7 inches from the east edge of the basin head. Elevation: 37.3 feet above mean low water; 35.26 feet above standard sea level.

**Serial No. 1445.** *West One hundred and eleventh Street:* B. M. 92c (D. D.) is a square cut 291 feet north of watchman's shanty, 1.9 feet from ground about West One hundred and eleventh Street. Elevation: 14.4 feet above mean low water; 12.41 feet above standard sea level.

**Serial No. 1446.** *West One hundred and thirteenth Street:* B. M. 92d (D. D.) is a square cut on projecting stone of park wall 1.8 feet above the ground near West One hundred and thirteenth Street. Elevation: 14.9 feet above mean low water; 12.89 feet above standard sea level.

**Serial No. 1447.** *West One hundred and fifteenth Street:* B. M. 93 (D. D.) is a square cut on the projecting stone of park wall, 19.1 feet south of south side of Columbia College Boathouse at the foot of West One hundred and fifteenth Street; 8.2 feet from top of the wall. The letters D. D. are cut below bench mark. Elevation: 13.6 feet above mean low water; 11.62 feet above standard sea level.

**Serial No. 1448.** *West One hundred and seventeenth Street:* B. M. 93a (D. D.) is a square cut on northeast corner of boulder 1.3 feet west of wall about West One hundred and seventeenth Street. Elevation: 13.9 feet above mean low water; 11.91 feet above standard sea level.

**Serial No. 1449.** *West One hundred and nineteenth Street:* B. M. 93b (D. D.) is a square cut on stone of park wall 3 feet from the ground near West One hundred and nineteenth Street. Elevation: 15.2 feet above mean low water; 13.20 feet above standard sea level.

**Serial No. 1450.** *Hancock Place:* B. M. 898 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the cone-shaped granite wagon guard on the east side of the wagon entrance to the house of Hook and Ladder Co. No. 40, on the south side of Hancock Place about 150 feet west of Hancock Square. The bolt is 1.6 feet above the sidewalk. Elevation: 33.9 feet above mean low water; 31.87 feet above standard sea level.

**Serial No. 1451.** *West One hundred and twenty-third Street:* B. M. 93d (D. D.) is a square cut on boulder 9 feet west of park wall opposite watchman's shanty below Grant's Tomb on West One hundred and twenty-third Street. Elevation: 11.0 feet above mean low water; 9.01 feet above standard sea level.

**Serial No. 1452.** *West One hundred and twenty-fifth Street:* B. M. 93e (D. D.) is a square cut on stone of park wall, 10.7 feet south of switch, 3.1 feet above ground near West One hundred and twenty-fifth Street. Elevation: 13.7 feet above mean low water; 11.74 feet above standard sea level.

**Serial No. 1458.** *West One hundred and twenty-seventh Street:* B. M. 93f (D. D.) is a square cut on stone of park wall, 5 feet north of south side of Claremont Boat Club, 2.55 feet from the ground near West One hundred and twenty-seventh Street. Elevation: 14.4 feet above mean low water; 12.45 feet above standard sea level.

**Serial No. 1454.** *West One hundred and twenty-ninth Street:* B. M. "A" (U. S. E.) is a cross cut on the cast-iron base of lamp-post at West One hundred and twenty-ninth Street, on the east side of the railroad and on south side of street. It is marked by four lines on rim of base about 6 inches above the ground. Elevation: 12.9 feet above mean low water; 10.92 feet above standard sea level.

**Serial No. 1455.** *West One hundred and twenty-ninth Street:* B. M. "B" (U. S. E.) is a U cut in the base of column on end of West One hundred and twenty-ninth Street Pier (Recreation). Column is middle of three on west end of pier and 13 feet from inside of caplog. Elevation: 8.6 feet above mean low water; 6.57 feet above standard sea level.

**Serial No. 1456.** *West One hundred and twenty-ninth Street:* B. M. "C" (U. S. E.) is an L cut on the cast-iron base about 18 inches above the deck and about 100 feet from the west end of pier at the foot of One hundred and twenty-ninth Street. It is on the south side of entrance to double-deck section of pier. Elevation: 11.1 feet above mean low water; 9.10 feet above standard sea level.

**Serial No. 1457.** *Manhattan Street:* B. M. 899 (B. E. & A.) is the bottom of a square cut in the top of a granite pedestal supporting the steel column and also the

south end of the westerly steel arch of the Interborough Rapid Transit subway at Manhattan Street. The bench mark is on the west side of the Manhattan Street Subway Station at Broadway, about 35 feet south of Manhattan Street. It is 4 feet above the roadway and 6 inches from the northeast corner of the stone. Elevation: 40.0 feet above mean low water; 37.99 feet above standard sea level.

**Serial No. 1458.** *Manhattan Street:* B. M. 900 (B. E. & A.) is a square cut in the top of the southwest corner of the steel base of column on the east side of the River-side Drive Viaduct on Twelfth Avenue, opposite the corner formed by the intersection of the northeasterly line of Manhattan Street and the southerly line of West One hundred and thirtieth Street. The column containing the bench mark is 3 feet east of the curb and about on the center line of the northeasterly sidewalk of Manhattan Street. An arrowhead cut in the westerly side of the granite base block points to the bench, which is 1.4 feet above the sidewalk. Elevation: 15.9 feet above mean low water; 13.89 feet above standard sea level.

**Serial No. 1459.** *Manhattan Street:* B. M. 901 (B. E. & A.) is a square cut in the top of the southwest corner of the water table of the two-story brick hotel on the northwest corner of Manhattan Street, West One hundred and thirtieth Street, and Twelfth Avenue. The bench mark is about 100 feet west of Twelfth Avenue and 3.17 feet above the sidewalk. Elevation: 15.1 feet above mean low water; 13.08 feet above standard sea level.

**Serial No. 1460.** *West One hundred and thirty-third Street:* B. M. 97 (D. D.) is a square cut on stone step of Jones coal yard office, northwest corner of Twelfth Avenue and West One hundred and thirty-third Street. The cut is on Twelfth Avenue, 3 feet north of north side of West One hundred and thirty-third Street. Elevation: 15.8 feet above mean low water; 13.79 feet above standard sea level.

**Serial No. 1461.** *West One hundred and thirty-seventh Street:* B. M. 98 (D. D.) is a square cut on sea wall 4 feet south of switch near West One hundred and thirty-seventh Street. Elevation: 9.3 feet above mean low water; 7.33 feet above standard sea level.

**Serial No. 1462.** *West One hundred and forty-third Street:* B. M. 99 (D. D.) is a square cut on south side of sewer manhole, 11.0 feet west of masonry, at the foot of West One hundred and forty-third Street, east of railroad track. Elevation: 13.2 feet above mean low water; 11.17 feet above standard sea level.

**Serial No. 1463.** *West One hundred and forty-seventh Street:* B. M. 100 (D. D.) is a square cut on bottom step of masonry on north side of West One hundred and forty-seventh Street, east of railroad track. Elevation: 13.6 feet above mean low water; 11.57 feet above standard sea level.

**Serial No. 1464.** *West One hundred and forty-ninth Street:* B. M. 101 (D. D.) is a square cut on a rock about 11.0 feet west of masonry at the foot of West One hundred and forty-ninth Street. The cut is about 15 feet north of the south line of masonry. Elevation: 14.2 feet above mean low water; 12.20 feet above standard sea level.

**Serial No. 1465.** *West One hundred and fifty-first Street:* B. M. 102 (D. D.) is a square cut on base stone of southwest corner of foundation of bridge over railroad track at West One hundred and fifty-first Street. The cut is on the ground level west of railroad track. Elevation: 9.9 feet above mean low water; 7.87 feet above standard sea level.

**Serial No. 1466.** *West One hundred and fifty-second Street:* B. M. 103 (D. D.) is a square cut on the bottom step on southwest corner of bridge at West One hundred and fifty-second Street crossing. Elevation: 13.9 feet above mean low water; 11.93 feet above standard sea level.

**Serial No. 1467.** *West One hundred and fifty-fifth Street:* B. M. 105 (D. D.) is a square cut on place rock at West One hundred and fifty-fifth Street, about 10 feet east of railroad track. Elevation: 13.3 feet above mean low water; 11.33 feet above standard sea level.

**Serial No. 1468.** *West One hundred and fifty-fifth Street:* B. M. 918 (B. E. & A.) is the top of  $\frac{3}{4}$ -inch iron bolt set horizontally into the granite base of the large ornamental stone post at the corner of Trinity Church Cemetery, on the southwest corner of West One hundred and fifty-fifth Street and Amsterdam Avenue. The bolt is 5 $\frac{1}{2}$  inches above the sidewalk. Elevation: 150.7 feet above mean low water; 148.73 feet above standard sea level.

**Serial No. 1469.** *St. Nicholas Avenue:* B. M. 919 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, set horizontally into the blue-stone water table on the east side of Public School No. 46, on the southwest corner

of St. Nicholas Avenue and West One hundred and fifty-sixth Street. The bolt is 11 inches from the northeast corner of the building and 1.25 feet above the area. Elevation: 149.9 feet above mean low water; 147.95 feet above standard sea level.

**Serial No. 1470.** *St. Nicholas Avenue:* B. M. 920 (B. E. & A.) is a square cut in the top of the northwest corner of the lowest granite step at the main entrance to the Washington Heights Free Library at No. 922 St. Nicholas Avenue, opposite West One hundred and fifty-sixth Street. The bench mark is 4 inches above the sidewalk. Elevation: 148.6 feet above mean low water; 146.59 feet above standard sea level.

**Serial No. 1471.** *West One hundred and fifty-sixth Street:* B. M. 106 (D. D.) is a square cut on northwest corner of parapet wall near the sewer outlet near West One hundred and fifty-sixth Street. Elevation: 8.9 feet above mean low water; 6.91 feet above standard sea level.

**Serial No. 1472.** *West One hundred and fifty-eighth Street:* B. M. 107 (D. D.) is a square cut on south curb at sewer grating, at the foot of West One hundred and fifty-eighth street. Elevation: 12.9 feet above mean low water; 10.93 feet above standard sea level.

**Serial No. 1473.** *West One hundred and sixty-second Street:* B. M. 108 (D. D.) is a square cut on place rock about 6.0 feet east of railroad track, just south of West One hundred and sixty-second Street, about 80.0 feet south of south line of Vitch's Bathing House. Elevation: 14.1 feet above mean low water; 12.13 feet above standard sea level.

**Serial No. 1474.** *St. Nicholas Avenue:* B. M. 921 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the marble city monument in the center of the sidewalk on the northwest corner of St. Nicholas Avenue and West One hundred and sixty-second Street. The top of the monument is flush with the sidewalk. Elevation: 167.5 feet above mean low water; 165.49 feet above standard sea level.

**Serial No. 1475.** *Asylum Dock:* B. M. 109 (D. D.) is a square cut on corner of marble monument at about 5 feet east of railroad tracks at Asylum Dock. Elevation: 10.4 feet above mean low water; 8.45 feet above standard sea level.

**Serial No. 1476.** *West One hundred and sixty-ninth Street:* B. M. 922 (B. E. & A.) is a square cut in the top of the northeast corner of the bluestone doorsill at the boys entrance to Public School No. 169, on the southwest corner of West One hundred and sixty-ninth Street and Audubon Avenue. The bench mark is on the north side of the building and about 27 feet from the east side. Elevation: 178.3 feet above mean low water; 176.29 feet above standard sea level.

**Serial No. 1477.** *West One hundred and sixty-ninth Street:* B. M. 923 (B. E. & A.) is a cross cut in the granite masonry at the northeast corner of Public School No. 169, on the southwest corner of West One hundred and sixty-ninth Street and Audubon Avenue. The cross is on the north side of the building, is 6 inches from the corner and 1.17 feet above the sidewalk. Elevation: 178.6 feet above mean low water; 176.55 feet above standard sea level.

**Serial No. 1478.** *West One hundred and seventieth Street:* B. M. 924 (B. E. & A.) is the bottom of a square cut in the northwest corner of the granite doorsill at the east entrance to Engine House No. 67, on the south side of West One hundred and seventieth Street, about 110 feet east of Audubon Avenue. The bench mark is on the north edge of the sloping sill and 6.8 feet from the east side of the building. Elevation: 180.2 feet above mean low water; 178.22 feet above standard sea level.

**Serial No. 1479.** *West One hundred and seventy-fourth Street:* B. M. 925 (B. E. & A.) is a square cut in the top of the bluestone coping at the corner of the iron fence on the northeast corner of West One hundred and seventy-fourth Street and Audubon Avenue. It is 4 inches above the sidewalk. Elevation: 187.9 feet above mean low water; 185.92 feet above standard sea level.

**Serial No. 1480.** *Fort Washington Park:* B. M. 111 (D. D.) is a square cut on a pointed boulder, 6 feet west of tracks on south line of old dock at Washington Park. Elevation: 11.8 feet above mean low water; 9.89 feet above standard sea level.

**Serial No. 1481.** *Fort Washington Park:* B. M. 112 (D. D.) is a square cut on surface rock, 19.4 feet west of tracks and 59 feet south of Fort Washington railroad station. Elevation: 12.5 feet above mean low water; 10.52 feet above standard sea level.

**Serial No. 1482.** *Fort Washington Park:* B. M. 113 (D. D.) is a square cut on point of rock at north end of railroad, 9.6 feet west of tracks and 21.5 feet south of flagman's shanty. Elevation: 12.0 feet above mean low water; 10.00 feet standard sea level.

**Serial No. 1483.** *Wadsworth Avenue:* B. M. 931 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, set horizontally into the center of

the south face of the buttress on the west side of Public School No. 132, on the east side of Wadsworth Avenue between West One hundred and eighty-second Street and West One hundred and eighty-third Street. The bench mark is in the limestone, is north of the main entrance, and about 40 feet south of the north side of the building. It is 4 feet above the ground. Elevation: 190.3 feet above mean low water; 188.33 feet above standard sea level.

**Serial No. 1484.** *Wadsworth Avenue:* B. M. 932 (B. E. & A.) is a cross cut in the south face of the lowest granite block in the buttress on the west side of Public School No. 132, on the east side of Wadsworth Avenue between West One hundred and eighty-second Street and West One hundred and eighty-third Street. The bench mark is north of the main entrance, is about 40 feet south of the north side of the building, and 12 inches above the ground. Elevation: 187.3 feet above mean low water; 185.32 feet above standard sea level.

**Serial No. 1485.** *Wadsworth Avenue:* B. M. 933 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the northeast corner of the lowest bluestone step at the main entrance to Public School No. 132, on the east side of Wadsworth Avenue between West One hundred and eighty-second Street and West One hundred and eighty-third Street. The bolt is 6 inches from the north end of the step. Elevation: 186.7 feet above mean low water; 184.77 feet above standard sea level.

**Serial No. 1486.** *Broadway:* B. M. 934 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the south end of the bluestone doorsill at the house entrance to the six-story yellow brick apartment house at Nos. 4441-4443 Broadway. The bench mark is on the west side of Broadway about 56 feet north of Fairview Avenue. Elevation: 76.8 feet above mean low water; 74.84 feet above standard sea level.

**Serial No. 1487.** *Broadway:* B. M. 935 (B. E. & A.) is a square cut in the top of the southeast corner of the bluestone doorsill at the house entrance to the six-story apartment house at Nos. 4441-4443 Broadway. Elevation: 76.8 feet above mean low water; 74.83 feet above standard sea level.

**Serial No. 1488.** *Broadway:* B. M. 936 (B. E. & A.) is a square cut in the top of the northeast corner of the bluestone doorsill at the house entrance to the three-story brick and frame hotel at No. 4601 Broadway. The bench mark is on the west side of Broadway about 400 feet north of Nagle Avenue. Elevation: 43.6 feet above mean low water; 41.67 feet above standard sea level.

**Serial No. 1489.** *Dyckman Street:* B. M. 937 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of a marble city monument on the northeast corner of Dyckman Street and Broadway. The top of the monument is flush with the ground. Elevation: 26.2 feet above mean low water; 24.20 feet above standard sea level.

**Serial No. 1490.** *Dyckman Street:* B. M. 938 (B. E. & A.) is a square cut in the top of the bluestone coping of the brick wall at the property line between Nos. 207 and 209 Dyckman Street. The bench mark is about 55 feet east of Broadway and on top of the wall separating the areas of both apartment houses (six-story yellow brick). Elevation: 24.5 feet above mean low water; 22.56 feet above standard sea level.

**Serial No. 1491.** *Dyckman Street:* B. M. 939 (B. E. & A.) is a square cut in the top of the natural rock on the east side of the New York Central and Hudson River Railroad, and about 340 feet north of Dyckman Street. The bench mark is at the north end of the railroad cut and 2.6 feet above the ground. Elevation: 13.2 feet above mean low water; 11.29 feet above standard sea level.

**Serial No. 1492.** *Dyckman Street:* B. M. 122 (D. D.) is a square cut on the end of the north curb of Dyckman Street, 23 feet southeast of tracks. Elevation: 11.9 feet above mean low water; 9.98 feet above standard sea level.

**Serial No. 1493.** *Inwood Depot:* B. M. 123 (D. D.) is a square cut on north end of railroad, north of Inwood Depot, east side of tracks. Elevation: 13.2 feet above mean low water; 11.31 feet above standard sea level.

**Serial No. 1494.** *Spuytten Duyvil Depot:* B. M. 130 (D. D.) is a square cut on place rock, 6 feet north of main track, about 20 feet northwest of crossing gate west of Spuytten Duyvil Depot. Elevation: 11.2 feet above mean low water; 9.34 feet above standard sea level.

## SECTION L.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 1495 TO 1703: RIVERDALE TO TROY.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1495	Riverdale.....	7.0	10.7	12.59	12.75	14.5	18.5
1496	.....do.....	5.6	9.3	11.20	11.36	13.1	17.1
1497	.....do.....	3.0	7.3	9.21	9.37	11.1	15.1
1498	.....do.....	1.9	5.6	7.54	7.70	9.4	13.4
1499	.....do.....	5.0	8.7	10.61	10.77	12.5	16.5
1500	Yonkers.....	7.0	10.7	12.56	12.74	14.5	18.5
1501	.....do.....	10.4	14.1	15.99	16.17	17.9	21.9
1502	.....do.....	5.3	9.0	10.91	11.09	12.8	16.8
1503	.....do.....	285.5	289.2	291.08	291.26	293.0	297.0
1504	.....do.....	251.8	255.5	257.40	257.58	259.3	263.3
1505	.....do.....	203.6	207.3	209.19	209.37	211.1	215.1
1506	.....do.....	208.6	212.3	214.19	214.37	216.1	220.1
1507	.....do.....	209.5	213.2	215.06	215.24	217.0	221.0
1508	.....do.....	12.9	16.6	18.48	18.66	20.4	24.4
1509	.....do.....	8.2	11.9	13.79	13.97	15.7	19.7
1510	.....do.....	3.6	7.3	9.17	9.35	11.1	15.1
1511	.....do.....	116.8	120.5	122.40	122.58	124.3	128.3
1512	.....do.....	98.3	102.0	103.92	104.10	105.8	109.8
1513	.....do.....	79.5	83.2	85.10	85.28	87.0	91.0
1514	Hastings.....	4.8	8.6	10.40	<sup>1</sup> 10.65	12.3	16.3
1515	Dobbs Ferry.....	3.7	7.5	9.38	9.65	11.2	15.2
1516	.....do.....	9.0	12.8	14.63	14.90	16.5	20.5
1517	.....do.....	3.3	7.1	8.86	9.23	10.8	14.8
1518	.....do.....	1.9	5.7	7.60	7.87	9.4	13.4
1519	Ardsey.....	4.3	8.2	10.04	10.32	11.8	15.8
1520	.....do.....	1.7	5.6	7.42	7.70	9.2	13.2
1521	Irvington.....	1.5	5.4	7.23	7.52	9.0	13.0
1522	.....do.....	0.8	4.7	6.47	6.76	8.3	12.3
1523	.....do.....	1.5	5.4	7.19	7.48	9.0	13.0
1524	.....do.....	5.1	9.0	10.80	11.09	12.6	16.6
1525	.....do.....	1.2	5.1	6.94	7.23	8.7	12.7
1526	Parrytown.....	3.2	7.1	8.91	9.23	10.7	14.7
1527	.....do.....	2.1	6.0	7.83	8.15	9.6	13.6
1528	.....do.....	4.7	8.6	10.41	10.73	12.2	16.2
1529	.....do.....	14.5	18.4	20.18	20.50	22.0	26.0
1530	.....do.....	2.7	6.6	8.44	8.76	10.2	14.2
1531	.....do.....	2.4	6.3	8.14	8.46	9.9	13.9
1532	.....do.....	-2.0	1.9	3.68	4.00	5.5	9.5
1533	.....do.....	11.2	15.1	16.86	17.18	18.7	22.7
1534	.....do.....	9.0	12.9	14.73	15.05	16.5	20.5
1535	.....do.....	2.3	6.2	7.96	8.28	9.8	13.8
1536	Scarboro.....	4.5	8.5	10.26	10.63	12.0	16.0
1537	.....do.....	1.9	5.9	7.70	8.07	9.4	13.4
1538	.....do.....	4.9	8.9	10.65	11.02	12.4	16.4
1539	.....do.....	3.5	7.5	9.21	9.58	11.0	15.0
1540	.....do.....	0.6	4.6	6.36	6.73	8.1	12.1
1541	Ossining.....	2.5	6.1	7.83	8.21	9.5	13.5
1542	.....do.....	5.6	9.2	10.85	11.23	12.6	16.6
1543	.....do.....	5.7	9.3	11.03	11.41	12.7	16.7
1544	.....do.....	0.9	4.5	6.18	6.56	7.9	11.9
1545	.....do.....	1.0	4.6	6.26	6.64	8.0	12.0
1546	.....do.....	1.9	5.5	7.23	7.61	8.9	12.9
1547	.....do.....	1.5	5.1	6.79	7.17	8.5	12.5
1548	Croton.....	3.3	7.0	8.59	9.00	10.3	14.3
1549	Oscawana.....	4.4	8.1	9.90	10.24	11.4	15.4
1550	Montrose.....	31.6	35.3	37.00	37.44	38.6	42.6
1551	Verplancks Point.....	3.2	7.0	8.55	9.01	10.2	14.2
1552	.....do.....	0.8	4.0	6.22	6.68	7.8	11.8
1553	.....do.....	-0.2	3.6	5.18	5.64	6.8	10.8
1554	.....do.....	24.0	27.8	29.37	29.83	31.0	35.0
1555	Peekskill.....	4.0	8.5	10.00	10.54	11.6	15.6
1556	.....do.....	0.2	4.1	5.67	6.15	7.2	11.2
1557	Iona Island.....	0.4	4.4	5.85	6.35	7.4	10.9
1558	.....do.....	2.0	6.0	7.49	7.99	9.0	12.5
1559	.....do.....	8.6	12.6	14.10	<sup>1</sup> 14.60	15.0	19.1

<sup>1</sup> Above approximate sea level; not connected with precise level net.

SECTION I.—Elevations of bench marks, serial Nos. 1495 to 1703: Riverdale to Troy—  
Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1590	Highlands.....	1.8	5.8	7.35	7.87	8.8	12.3
1591	do.....	1.9	5.9	7.36	7.88	8.9	12.4
1592	Garrisons.....	14.5	18.7	20.08	20.64	21.5	25.0
1593	do.....	4.5	8.7	10.10	10.66	11.5	15.0
1594	West Point.....	7.8	12.0	13.42	14.00	14.8	18.3
1595	Cold Spring.....	2.4	6.6	7.96	8.55	9.4	12.9
1596	do.....	-0.2	4.0	5.35	6.94	6.8	10.3
1597	do.....	7.8	12.0	13.45	14.04	14.8	18.3
1598	do.....	6.8	11.0	12.45	13.04	13.8	17.3
1599	do.....	9.0	13.8	15.18	15.77	16.6	20.1
1570	Fishkill.....	4.8	9.1	10.47	11.14	11.8	15.3
1571	do.....	1.9	6.2	7.58	8.25	8.9	12.4
1572	New Ilamburg.....	8.2	12.3	13.80	14.55	15.2	18.7
1573	do.....	-1.0	3.1	4.56	5.31	6.0	9.5
1574	do.....	1.0	5.1	6.53	7.25	8.0	11.5
1575	do.....	-0.2	3.9	5.41	6.14	6.8	10.3
1576	do.....	-2.4	1.7	3.19	3.94	4.6	8.1
1577	do.....	1.4	5.5	6.95	7.67	8.4	11.9
1578	do.....	5.4	9.5	11.00	11.72	12.4	15.9
1579	do.....	4.1	8.2	9.65	10.38	11.1	14.6
1580	do.....	3.4	7.5	9.01	9.73	10.4	13.9
1581	do.....	21.1	25.2	26.71	27.44	28.1	31.6
1582	do.....	1.7	5.8	7.25	7.98	8.7	12.2
1583	do.....	-3.5	0.6	2.10	2.82	3.5	7.0
1584	Camelot.....	-0.5	3.5	4.97	5.79	6.5	10.0
1585	Poughkeepsie.....	25.4	29.3	30.80	31.68	32.4	35.9
1586	do.....	32.3	36.2	37.77	38.65	39.3	42.8
1587	do.....	166.7	170.6	172.11	172.99	173.7	177.2
1588	do.....	37.0	40.9	42.40	43.28	44.0	47.5
1589	do.....	33.6	37.5	39.07	39.95	40.6	44.1
1590	do.....	33.7	37.6	39.13	40.01	40.7	44.2
1591	do.....	219.0	222.9	224.39	225.27	226.0	229.5
1592	Hyde Park.....	1.2	4.9	6.50	7.46	8.2	11.7
1593	do.....	2.1	5.8	7.46	8.42	9.1	12.6
1594	do.....	0.2	3.9	5.51	6.47	7.2	10.7
1595	do.....	2.1	5.8	7.45	8.41	9.1	12.6
1596	do.....	0.5	4.2	5.81	6.77	7.5	11.0
1597	do.....	3.5	7.2	8.86	9.82	10.5	14.0
1598	Staatsburg.....	17.3	21.3	23.02	24.08	24.8	28.3
1599	Rhinecliff.....	8.6	12.4	14.31	15.50	16.1	19.6
1600	do.....	6.1	9.9	11.82	13.01	13.6	17.1
1601	do.....	-3.0	0.8	2.63	3.82	4.5	8.0
1602	do.....	4.8	8.6	10.49	11.68	12.3	15.8
1603	do.....	3.3	7.1	8.97	10.16	10.8	14.3
1604	do.....	3.0	6.8	8.63	9.82	10.5	14.0
1605	do.....	4.7	8.5	10.38	11.67	12.2	15.7
1606	do.....	3.4	7.2	9.06	10.25	10.9	14.4
1607	do.....	4.3	8.1	9.97	11.16	11.8	15.3
1608	do.....	1.7	5.5	7.32	8.51	9.2	12.7
1609	do.....	1.2	5.0	6.83	8.02	8.7	12.2
1610	Rondout.....	-2.1	1.7	3.60	4.79	5.4	8.9
1611	do.....	-2.1	1.7	3.57	4.76	5.4	8.9
1612	do.....	2.4	6.2	8.03	9.22	9.9	13.4
1613	do.....	1.2	5.0	6.88	8.07	8.7	12.2
1614	Barrytown.....	2.9	7.0	8.92	10.28	10.9	14.4
1615	do.....	-5.1	-1.0	0.93	2.29	2.9	6.4
1616	do.....	4.7	8.8	10.75	12.13	12.7	16.2
1617	do.....	3.3	7.4	9.34	10.70	11.3	14.8
1618	do.....	7.1	11.2	13.16	14.52	15.1	18.6
1619	do.....	8.2	12.3	14.25	15.61	16.2	19.7
1620	do.....	7.5	11.6	13.50	14.92	15.5	19.0
1621	do.....	10.0	14.1	16.03	17.39	18.0	21.5
1622	do.....	1.1	5.2	7.15	8.51	8.1	12.6
1623	do.....	1.2	5.3	7.26	8.62	9.2	12.7
1624	Tivoli.....	-0.1	3.8	5.86	7.33	7.9	11.4

## SECTION L.—Elevations of bench marks, serial Nos. 1495 to 1703: Riverdale to Troy—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
1625	Tivoli.....	0.3	4.2	6.28	7.75	8.3	11.8
1626	do.....	1.4	5.3	7.40	8.87	9.4	12.9
1627	do.....	0.9	4.8	6.88	8.35	8.9	12.4
1628	do.....	3.4	7.3	9.34	10.81	11.4	14.0
1629	do.....	3.5	7.4	9.46	10.93	11.5	15.0
1630	do.....	2.2	6.1	8.15	9.62	10.2	13.7
1631	do.....	0.2	4.1	6.19	7.66	8.2	11.7
1632	do.....	1.2	5.1	7.17	8.64	9.2	12.7
1633	do.....	3.0	6.9	8.92	10.39	11.0	14.5
1634	Saugerties.....	0.1	4.0	6.09	7.56	8.1	11.6
1635	do.....	-0.7	3.2	5.21	6.68	7.3	10.8
1636	do.....	0.5	4.4	6.44	7.91	8.5	12.0
1637	Cheviot.....	1.0	4.8	6.88	8.46	9.0	12.5
1638	Germtown.....	2.4	6.2	8.25	9.88	10.4	13.9
1639	do.....	1.3	5.1	7.18	8.79	9.3	12.8
1640	do.....	1.5	5.3	7.41	9.02	9.5	13.0
1641	do.....	-2.9	0.9	3.03	4.64	5.1	8.6
1642	do.....	2.0	5.8	7.87	9.48	10.0	13.5
1643	do.....	2.8	6.6	8.65	10.26	10.8	14.3
1644	North Germtown.....	6.6	10.4	12.47	14.08	14.6	18.1
1645	do.....	1.7	5.5	7.64	9.25	9.7	13.2
1646	Lilinthgo.....	1.1	5.3	7.43	9.14	9.6	13.1
1647	do.....	-0.1	4.1	6.25	7.96	8.4	11.9
1648	do.....	0.7	4.9	7.06	8.77	9.2	12.7
1649	do.....	-0.2	4.0	6.17	7.88	8.3	11.8
1650	do.....	1.2	5.4	7.60	9.31	9.7	13.2
1651	do.....	3.3	7.5	9.63	11.34	11.8	15.3
1652	Greendale.....	6.6	10.9	12.98	14.76	15.1	18.6
1653	do.....	3.2	7.5	9.59	11.37	11.7	15.2
1654	do.....	4.4	8.7	10.81	12.60	12.9	16.4
1655	do.....	5.7	10.0	12.08	13.86	14.2	17.7
1656	Hudson.....	142.8	147.6	149.69	151.54	151.8	155.3
1657	do.....	143.0	147.8	149.95	151.80	152.0	155.5
1658	do.....	87.0	91.8	93.90	95.75	96.0	99.5
1659	do.....	92.5	97.3	99.36	101.21	101.5	105.0
1660	do.....	1.9	6.7	8.84	10.09	10.9	14.4
1661	do.....	-1.0	3.8	5.90	7.75	8.0	11.5
1662	do.....	2.1	6.9	8.98	10.83	11.1	14.6
1663	do.....	2.8	7.6	9.73	11.68	11.8	15.3
1664	Stockport Station.....	-2.7	2.8	4.75	6.73	6.8	10.3
1665	do.....	0.9	6.4	8.41	10.39	10.4	13.9
1666	do.....	-1.0	4.5	6.49	8.47	8.5	12.0
1667	do.....	-0.6	4.9	6.90	8.88	8.9	12.4
1668	Cosackie.....	-3.3	2.8	4.74	6.78	6.7	10.2
1669	Stuyvesant.....	-4.5	2.7	4.62	6.72	6.5	10.0
1670	do.....	-2.1	5.1	6.98	9.08	8.9	12.4
1671	do.....	-2.5	4.7	6.58	8.68	8.5	12.0
1672	do.....	-0.2	7.0	8.95	11.05	10.8	14.3
1673	do.....	2.1	9.3	11.23	13.33	13.1	16.6
1674	Schodack.....	-8.8	2.1	3.63	5.92	5.2	8.7
1675	do.....	-4.0	6.9	8.45	10.74	10.0	13.5
1676	Castleton.....	-3.5	10.8	12.18	14.58	13.5	17.0
1677	do.....	-7.9	6.4	7.74	10.14	9.1	12.6
1678	do.....	-5.9	8.4	9.77	12.17	11.1	14.6
1679	do.....	-5.3	9.0	10.38	12.78	11.7	15.2
1680	do.....	0.5	14.8	16.19	18.59	17.5	21.0
1681	do.....	-1.1	13.2	14.51	16.91	15.9	19.4
1682	Rensselaer.....	-9.5	10.1	11.26	13.86	12.5	15.5
1683	do.....	-7.7	11.9	13.08	15.68	14.3	17.3
1684	do.....	-2.8	16.8	17.99	20.59	19.2	22.2
1685	do.....	-2.9	16.7	17.86	20.40	19.1	22.1
1686	do.....	-9.5	10.1	11.32	13.92	12.5	15.5
1687	do.....	-2.1	17.5	18.73	21.33	19.9	22.9
1688	do.....	2.9	22.5	23.67	26.27	24.9	27.0
1689	do.....	3.4	23.0	24.28	26.88	25.4	28.4

## SECTION L.—Elevations of bench marks, serial Nos. 1495 to 1703: Riverdale to Troy—Continued.

Serial No.	Locality.	Elevation of bench marks above—					
		Highest tide.	Mean high water.	Mean tide level.	Standard sea level.	Mean low water.	Lowest tide.
1690	Rensselaer.....	<i>Feet.</i> -1.4	<i>Feet.</i> 18.2	<i>Feet.</i> 19.39	<i>Feet.</i> 21.99	<i>Feet.</i> 20.6	<i>Feet.</i> 23.6
1691	do.....	-5.8	13.8	15.01	17.61	16.2	19.2
1692	do.....	-9.3	10.3	11.50	14.10	12.7	15.7
1693	Albany.....	-6.6	13.0	14.22	16.82	15.4	18.4
1694	do.....	2.8	22.4	23.60	26.20	24.8	27.8
1695	do.....	6.6	26.2	27.44	30.04	28.6	31.6
1696	do.....	-10.6	9.0	10.24	12.84	11.4	14.4
1697	do.....	-5.0	14.6	15.85	18.45	17.0	20.0
1698	do.....	-13.3	6.3	7.52	10.12	8.7	11.7
1699	do.....	1.6	21.2	22.42	25.02	23.6	26.6
1700	do.....	-17.9	1.7	2.86	5.46	4.1	7.1
1701	Troy.....	-7.9	19.8	20.96	23.76	22.1	24.6
1702	do.....	-4.8	22.9	24.00	26.80	25.2	27.7
1703	do.....	-4.5	23.2	24.38	27.18	25.5	28.0

DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 1495 TO 1703:  
RIVERDALE TO TROY.

**Serial No. 1495.** *Riverdale:* B. M. 1 (C. & G. S.) is the upper edge of a chiseled square hole on the vertical face of the stone retaining wall, east side of New York Central tracks; 15.02 feet south of the south end of the concrete platform under the Riverdale (overhead) station and about 126 feet north of the center of Bridge No. 19. This hole is 4.6 feet above the present ground level and is the lower edge of the stone that touches the upper edge of the square hole. Bench mark is 12.75 feet above standard sea level; 14.5 feet above mean low water; 12.59 feet above mean tide level.

**Serial No. 1496.** *Riverdale:* B. M. 94 (C. & G. S.) is a cross chiseled near the north end of the concrete coping of the sloping retaining wall that is east of the platform (east side of New York Central Railroad main-line track) of the station at Riverdale. The cross is 99.5 feet north of the north face of the new concrete station building and 22.95 feet south of stone milepost "N. Y. 13" (south face of milepost.) Bench mark is 11.36 feet above standard sea level; 13.1 feet above mean low water; 11.20 feet above mean tide level.

**Serial No. 1497.** *Riverdale:* B. M. (C. & G. S.) is the upper edge of the first corner of masonry above the water table at the southwest corner of the old, abandoned stone railroad station that is situated west of the New York Central Railroad tracks, and on the southwest corner of the wharf, at Riverdale. An I was chiseled on the upper right hand corner of the stone at the south end of the west face of the station. The bench mark is 20 inches above the top of the water table (B. M. 1498). Bench mark is 9.37 feet above standard sea level; 11.1 feet above mean low water; 9.21 feet above mean tide level.

**Serial No. 1498.** *Riverdale:* B. M. 95 (C. & G. S.) is an unmarked point on the highest part of the water table at the exact southwest corner of the old stone station which is west of the New York Central Railroad tracks, and on the southwest corner of the wharf at Riverdale. It is 20 inches below bench mark 1497. Bench mark is 7.70 feet above standard sea level; 9.4 feet above mean low water; 7.54 feet above mean tide level.

**Serial No. 1499.** *Riverdale:* B. M. 93 (C. & G. S.) is the highest point on a fish-plate bolt set vertically in the ledge of the rock cut, 297 feet north of the center of the station building at Mount St. Vincent, east side of the New York Central Railroad main-line tracks. A circle surrounding the bolt head and the letters "B. M." near by, are painted on the ledge. Bench mark is 56 feet north of the north end of the high retaining wall of concrete and 2.7 feet above the present ground level. It is also about 6 feet north of a detached piece of concrete facing. Bench mark is 10.77 feet above standard sea level; 12.5 feet above mean low water; 10.61 feet above mean tide level.

**Serial No. 1500.** *Yonkers:* B. M. 92 (C. & G. S.) is a cross cut on the top of railroad iron set vertically in the ground and projecting about 6 inches above the ground level. It is the southeast corner of the grass plot near the foot of Pier Street, and is about 5 feet north of the center of the north sidewalk and about 70 feet east of the railroad right-of-way iron fence that is on the east side of the New York Central Railroad main track (south of Ludlow Station). Bench mark is 12.74 feet above standard sea level; 14.5 feet above mean low water; 12.56 feet above mean tide level.

**Serial No. 1501.** *Yonkers:* B. M. 1 (U. S. E.) is a square cut on sewer basin at the northeast corner of Bridge and Pier Streets. It is 3.4 feet from telephone pole on which is the fire box No. 124. The basin is about 225 feet southeast of Ludlow Station, New York Central Railroad. Bench mark is 16.17 feet above standard sea level; 17.9 feet above mean low water; 15.99 feet above mean tide level.

**Serial No. 1502.** *Yonkers:* B. M. 2 (U. S. E.), is a square cut in base of second support of the shed over concrete platform on the east side of Ludlow Station, New York Central Railroad, south end. Bench mark is 11.09 feet above standard sea level; 12.8 feet above mean low water; 10.91 feet above mean tide level.

**Serial No. 1508.** *Yonkers:* B. M. "S-65", (B. W. S.), is a bolt in ledge 20 feet west of central line south track of Central Park Avenue. It is 27 feet south of New York Tel. pole No. 420 and 140 feet north of Shipman Avenue. Bench mark is 291.26 feet above standard sea level; 293.0 feet above mean low water; 291.08 feet above mean tide level.

**Serial No. 1504.** *Yonkers:* B. M. "S-66" (B. W. S.) is a pipe casing 20 feet west of central line of Kimball Avenue, 60 feet north of entrance to Yonkers Public School No. 11. It is 3 feet above road and 4 feet from stone gate post. Bench mark is 257.58 feet above standard sea level; 259.3 feet above mean low water; 257.40 feet above mean tide level.

**Serial No. 1505.** *Yonkers:* B. M. "Headhouse" (B. W. S.) is a cut on southeast step of Aqueduct head house, McLean and Jerome Avenues. Bench mark is 209.37 feet above standard sea level; 211.1 feet above mean low water; 209.19 feet above mean tide level.

**Serial No. 1506.** *Yonkers:* B. M. "Aqueduct No. 47," (B. W. S.) is a bolt in ledge 10 feet east of near rail at east side of Jerome Avenue, 300 feet south of McLean Avenue. Aqueduct Com. Elev's 214.967 feet. Bench mark is 214.37 feet above standard sea level; 216.1 feet above mean low water; 214.19 feet above mean tide level.

**Serial No. 1507.** *Yonkers:* B. M. "N-1" (B. W. S.) is a pipe casing bolt in ledge 47 feet west of west track on Jerome Avenue and 201 feet south of center line of McLean Avenue. Bench mark is 215.24 feet above standard sea level; 217.0 feet above mean low water; 215.06 feet above mean tide level.

**Serial No. 1508.** *Yonkers:* B. M. 3 (U. S. E.) is a square cut in the northeast corner, north end of concrete retaining wall, on the west side of the New York Central & Hudson River Railroad tracks. It is 1.85 feet from northeast corner of iron transmission pole No. 308, north of Federal Sugar Refinery. It is marked "U. S." Bench mark is 18.66 feet above standard sea level; 20.4 feet above mean low water; 18.48 feet above mean tide level.

**Serial No. 1509.** *Yonkers:* B. M. 4 (U. S. E.) is a square cut in concrete retaining wall, west side New York Central & Hudson River Railroad tracks and marked "U. S." It is 3.6 feet northeast from transmission pole No. 299, south of Federal Sugar Refinery. Bench mark is 13.97 feet above standard sea level; 15.7 feet above mean low water; 13.79 feet above mean tide level.

**Serial No. 1510.** *Yonkers:* B. M. 5 (U. S. E.) is a square 2 inches on a side cut on the northwest corner of sewer basin under the New York Central & Hudson River Railroad bridge crossing Main Street, on the south side of the street. Bench mark is 9.35 feet above standard sea level; 11.1 feet above mean low water; 9.17 feet above mean tide level.

**Serial No. 1511.** *Yonkers:* B. M. 1165 (B. E. & A.) is a square cut in the top of the northwest corner of the capstone of the large stone post on the southeast corner of Caryl Avenue and Broadway. The bench mark is 4.3 feet above the sidewalk. Bench mark is 122.58 feet above standard sea level; 124.3 feet above mean low water; 122.40 feet above mean tide level.

**Serial No. 1512.** *Yonkers:* B. M. 1166 (B. E. & A.) is a  $\frac{1}{4}$ -inch copper bolt in the top of the northeast corner of the large granite block on the north side of the house entrance to the five-story brick apartment house at No. 506 Broadway, opposite

Valentine Lane. The bolt is 3 inches from the north side of the block, is  $3\frac{1}{2}$  inches west of the base of the limestone pilaster, and 1.8 feet above the sidewalk. Bench mark is 104.10 feet above standard sea level; 105.8 feet above mean low water; 103.92 feet above mean tide level.

**Serial No. 1513.** *Yonkers:* B. M. 1167 (B. E. & A.) is the bottom of a square cut in the top of the southeast corner of the lowest step of the east wing wall of the north abutment of the Yonkers Rapid Transit Railroad at Lawrence Street (Lowerre Station). The bench mark is 2 feet above the sidewalk and an arrowhead cut in the stone points to the spot. Bench mark is 85.28 feet above standard sea level; 87.0 feet above mean low water; 85.10 feet above mean tide level.

**Serial No. 1514.** *Hastings:* B. M. (U. S. E.) is on nipple of fire plug near Zinsser & Co.'s gate (factory) and alongside of road which passes under the New York Central & Hudson River Railroad tracks. Bench mark is 10.65 feet above approximate sea level; 12.3 feet above mean low water; 10.40 feet above mean tide level.

**Serial No. 1515.** *Dobbs Ferry:* B. M. 2 (C. & G. S.) is the center of the head of a copper bolt leaded horizontally in the middle of a brick in the first course on the sixth brick west from the southeast corner of Taylor's office. Bolt is about 1 foot below bottom of brick water table and 2.6 feet west from the east face of building. Bench mark is known as Primary B. M. V, and is 9.65 feet above standard sea level; 11.2 feet above mean low water; 9.38 feet above mean tide level.

**Serial No. 1516.** *Dobbs Ferry:* B. M. 4 (C. & G. S.) is the intersection of two lines cut in the end of a copper bolt, leading horizontally into the fourth stone above sill, on the west side of the stone railroad station. It is 5 feet above the ground, 10 inches south of the door to the baggage room, and 4 feet north of the southwest corner of the building. It is known as B. M. U and is marked thus: "U. S." Bench mark is 14.90 feet above standard sea level; 16.5 feet above mean low water; 14.63 feet above mean tide level.

**Serial No. 1517.** *Dobbs Ferry:* B. M. 5 (C. & G. S.) is the bottom of a square hole cut in very hard stone projecting from the west side of the foundation of the main and most southern building of the Palmine Butler Co.'s plant. This building is one-fourth mile north of the railroad station on the east side of the track. Bench mark is 16.3 feet from the north end and 89.4 feet from the south end of the building,  $2\frac{1}{2}$  inches from the brick wall and 1 inch below the ground. It is known as B. M. W and is marked thus:   
 U. S. Bench mark is 9.23 feet above standard sea level; 10.8 feet above mean low water; 8.96 feet above mean tide level.

**Serial No. 1518.** *Dobbs Ferry:* B. M. 91 (C. & G. S.) is a chiseled square on the northeast corner of the concrete foundation for transmission line tower No. 540, on the west side of New York Central main line and siding and about 0.3 mile north of the station. Bench mark is 7.87 feet above standard sea level; 9.4 feet above mean low water; 7.60 feet above mean tide level.

**Serial No. 1519.** *Ardsley:* B. M. 90 (C. & G. S.) is a chiseled square on the southwest corner of the concrete platform at the Ardsley New York Central Railroad station. Mark is about 325 feet south of the center of the ticket office and is on the east side of the main line tracks. Bench mark is 10.32 feet above standard sea level; 11.8 feet above mean low water; 10.04 feet above mean tide level.

**Serial No. 1520.** *Ardsley:* B. M. 89 (C. & G. S.) is a chiseled square on a low shoulder on the west side of the stone milepost "N. Y. 22," east side of New York Central Railroad main line tracks. Bench mark is 7.70 feet above standard sea level; 9.2 feet above mean low water; 7.42 feet above mean tide level.

**Serial No. 1521.** *Irvington:* B. M. 88 (C. & G. S.) is a chiseled square on the southwest corner of the concrete coping of culvert No. 54, on the west side of New York Central Railroad tracks. Bench mark is 7.52 feet above standard sea level; 9.0 feet above mean low water; 7.23 feet above mean tide level.

**Serial No. 1522.** *Irvington:* B. M. 1 (C. & G. S.) is the head of an iron bolt in the cap log of wharf, 3 feet south of end of log at northeast corner of slip. A square cut was made on the log around this bolt and lettered thus:   
 U. S. Bench mark is 6.76 feet above standard sea level; 8.3 feet above mean low water; 6.47 feet above mean tide level.

**Serial No. 1523.** *Irvington:* B. M. 2 (C. & G. S.) is the horizontal line of a cross cut in the face of a brick 2 feet north of the southwest corner of the brick steam mill on the wharf, at the head of the slip and 1.5 feet above the ground. This steam mill

<sup>1</sup> Not connected with precise level net.

building is the first brick building north of the coal office of Cockwood & Pateman and is about 200 feet southwest of the New York Central Railroad station ticket office. Bench mark is 7.48 feet above standard sea level; 9.0 feet above mean low water; 7.19 feet above mean tide level.

**Serial No. 1524.** *Irvington:* B. M. 87 (C. & G. S.) is a chiseled square on the southwest corner of the stone wall of the waiting-room door, the first door south of the curved bay window on the west side of the station. Station is on the east side of the New York Central Railroad main line of tracks. Bench mark is 11.09 feet above standard sea level; 12.6 feet above mean low water; 10.80 feet above mean tide level.

**Serial No. 1525.** *Irvington:* B. M. 86 (C. & G. S.) is a chiseled square on a low shoulder on the west side of stone mile post "N. Y. 23." The milepost is east of the New York Central Railroad main line tracks and leans to the eastward. Bench mark is 7.23 feet above standard sea level; 8.7 feet above mean low water; 6.94 feet above mean tide level.

**Serial No. 1526.** *Tarrytown:* B. M. 85 (C. & G. S.) is a chiseled square on the southwest corner of south pier (east side of main line of the New York Central Railroad tracks), supporting overhead trestle for block signals. Trestle is at brick battery house No. 18, 240 feet south of milepost "N. Y. 24", and 1.4 miles south of station at Tarrytown. Bench mark is 9.23 feet above standard sea level; 10.7 feet above mean low water; 8.91 feet above mean tide level.

**Serial No. 1527.** *Tarrytown:* B. M. 84 (C. & G. S.) is a chiseled square on a low shoulder on the west side of stone milepost "N. Y. 25." The milepost is east of the New York Central Railroad main line tracks, and west of the double track siding and is west of the freight house. Milepost is cracked at the ground level, about 6 inches below the bench mark. Stone has evidently been cemented together at the crack. Bench mark is 8.15 feet above standard sea level; 9.6 feet above mean low water; 7.83 feet above mean tide level.

**Serial No. 1528.** *Tarrytown:* B. M. 3 (C. & G. S.) is the top edge of the coping stone on an approximate level with the floor of the Tarrytown Tile Works on Main Street, a short distance west of the railroad, 3.5 feet east of the large door in the center of the south face of building, and 2.8 feet above the ground. An arrowhead on the sloping face of the coping stone points to the exact spot where the rod was held and the letters "U. S." were cut in the first row of brick above the B. M. It is known also as "Tidal 1." Bench mark is 10.73 feet above standard sea level; 12.2 feet above mean low water; 10.41 feet above mean tide level.

**Serial No. 1529.** *Tarrytown:* B. M. 6 (C. & G. S.) is the intersection of two lines cut in the end of a copper bolt, leaded horizontally into the stone, on the first highway bridge across the track north of the railroad station on the south end of the east abutment, 4 feet above the ground and 12 inches from the face next the tracks. It is known also as B. M. 2 and is marked thus:   
 U. S. Bench mark is 20.50 feet above standard  
 B. M. sea level; 22.0 feet above mean low water; 20.18 feet above mean tide level.

**Serial No. 1530.** *Tarrytown:* B. M. 83 (C. & G. S.) is a chiseled square on the southwest corner of the stone sill of the second door (in the west face of the railroad station) south of the northwest corner of the station which is on the east side of the New York Central Railroad main line tracks. Sill is at entrance to baggage room. Bench mark is 8.76 feet above standard sea level; 10.2 feet above mean low water; 8.44 feet above mean tide level.

**Serial No. 1531.** *Tarrytown:* B. M. 1 (U. S. E.) is on west arm of hydrant in front of F. Brook's Hotel, Main Street, near Ferry Slip. Bench mark is 8.46 feet above standard sea level; 9.9 feet above mean low water; 8.14 feet above mean tide level.

**Serial No. 1532.** *Tarrytown:* B. M. 3 (U. S. E.) is a square cut in a ledge rock about 200 feet southeast of Riverside Hose Company No. 4, which is on Main Street about 500 feet west of railroad tracks. Bench mark is 4 feet above standard sea level; 5.5 feet above mean low water; 3.68 feet above mean tide level.

**Serial No. 1533.** *Tarrytown:* B. M. 103 (C. & G. S.) is a chiseled square near the southwest corner of the concrete pier supporting the eastern steel pole of the "low bridge warning" which is 150 feet north of the center of bridge No. 68. The letters "U. S." are chiseled in the concrete. It is three-eighths mile north of Tarrytown Station. Bench mark is 17.18 feet above standard sea level; 18.7 feet above mean low water; 16.86 feet above mean tide level.

**Serial No. 1534.** *Tarrytown:* B. M. 102 (C. & G. S.) is a chiseled square on the northeast corner of the south concrete pier (west side of the New York Central Railroad

tracks) of bridge No. 72 B. Bench mark is 0.18 mile north of station at Philips Manor, 7.5 feet of the westernmost rail, and 1.6 feet above ground level. Bench mark is 15.05 feet above standard sea level; 16.5 feet above mean low water; 14.73 feet above mean tide level.

**Serial No. 1535.** *Tarrytown:* B. M. 101 (C. & G. S.) is a chiseled square on a low shoulder on the west side of the stone milepost, "N. Y. 27," located on the east side of the New York Central Railroad tracks, opposite brick battery house No. 22. Bench mark is 8.28 feet above standard sea level; 9.8 feet above mean low water; 7.96 feet above mean tide level.

**Serial No. 1536.** *Scarboro:* B. M. 100 (C. & G. S.) is a chiseled square on the north-west corner of the square capstone on the north pier (about 5 feet east of the east rail) of overhead foot bridge No. 76 A. Foot bridge is 1½ rails south of power transmission tower No. 797, and leads from Rockefeller's property to a stone structure on the river bank. It is about 1.9 miles south of station at Scarboro. Bench mark is 10.63 feet above standard sea level; 12.0 feet above mean low water; 10.26 feet above mean tide level.

**Serial No. 1537.** *Scarboro:* B. M. 99 (C. & G. S.) is a chiseled square on the central part of the south end of a low shoulder (1 inch below present ground level) of stone milepost "N. Y. 28" located on the east side of the New York Central Railroad tracks. Milepost leans to the east. It is 1.5 miles south of station at Scarboro. Bench mark is 8.07 feet above standard sea level; 9.4 feet above mean low water; 7.70 feet above mean tide level.

**Serial No. 1538.** *Scarboro:* B. M. 98 (C. & G. S.) is a chiseled square cut on the southwest corner of the north pier (east side of the New York Central Railroad tracks) of the block signal trestle numbered 2921, 2922, 2923, 2924. It is 0.3 mile south of station at Scarboro. Bench mark is 11.02 feet above standard sea level; 12.4 feet above mean low water; 10.65 feet above mean tide level.

**Serial No. 1539.** *Scarboro:* B. M. (C. & G. S.) is a ¾-inch hole within a faint triangle on a ledge rock projecting from the base of concrete retaining wall, east side of the New York Central Railroad tracks opposite (east of) a point that is one-third of the way from power transmission tower No. 826 toward No. 827. Mark is about 1½ feet above the present ground level and is 308 feet north of the center of the trestle supporting the block signals numbered 2831, 2832, 2833, 2834. At the trestle on the east side of the track there is a concrete foundation (with four projecting anchor bolts) of an old signal or semaphore. Rod held on a small, smooth shoulder about 2½ inches of the center of the hole. Bench mark is 9.58 feet above standard sea level; 11.0 feet above mean low water; 9.21 feet above mean tide level.

**Serial No. 1540.** *Scarboro:* B. M. 97 (C. & G. S.) is the top of an iron bolt set vertically in the top stone, south abutment wing (east side of track) of the first bridge north of Scarboro Station. East end of this stone is pointed (wedge shaped) and bolt is 6 inches from the northeast and southeast faces of the stone and is about 0.19 mile north of Scarboro Station. Bench mark is 6.73 feet above standard sea level; 8.1 feet above mean low water; 6.36 feet above mean tide level.

**Serial No. 1541.** *Ossining:* B. M. 96 (C. & G. S.) is a chiseled square on a low shoulder on the east side of the stone milepost "N. Y. 30," located on the west side of the New York Central Railroad tracks, 1.1 miles south of the station at Ossining. Bench mark is 8.21 feet above standard sea level; 9.5 feet above mean low water; 7.83 feet above mean tide level.

**Serial No. 1542.** *Ossining:* B. M. 2 (U. S. E.) is a square cut on the northwest corner of the stone window sill, north window, on the west face of the bindery of the Rand-McNally Co.'s plant. The letters "U. S." are chiseled in the face of the sill below the mark. Bench mark is 2.65 feet south from the northwest corner of the building, and 41.3 feet north from the line of demarcation between the old stone building and the newer concrete building used as a machine shop. It is about 5 feet above the present ground level. Bench mark is 11.23 feet above standard sea level; 12.6 feet above mean low water; 10.85 feet above mean tide level.

**Serial No. 1543.** *Ossining:* B. M. 4 (U. S. E.) is a chiseled square on the northeast corner of the stone window sill, easternmost window, north face of stone (lower story is of stone) building of the Rand-McNally Co.'s plant. It is 3.7 feet west from the northeast corner of the old stone building, and 36.7 feet west of the northeast corner of the automatic ticket press room which adjoins the old stone building. The letters "U. S." are chiseled on the face of the sill below the mark. Bench mark is 11.41 feet above standard sea level; 12.7 feet above mean low water; 11.03 feet above mean tide level.

**Serial No. 1544. Ossining:** B. M. 5 (U. S. E.) is extreme southeast corner of sill of north door east side of Ossining Heat, Light & Power Co.'s plant, at the foot of Broadway. Bench mark is 6.56 feet above standard sea level; 7.9 feet above mean low water; 6.18 feet above mean tide level.

**Serial No. 1545. Ossining:** B. M. 106 (C. & G. S.) is the intersection of a cross within a circle cut on the stone sill of the south door, east side of the Ossining Heat, Light & Power Co.'s plant at the foot of Broadway. Bench mark is 1.18 feet north of the brick wall forming the facing on the south side of the entrance. The figure "18" is cut on the sill nearby. Bench mark is 6.64 feet above standard sea level; 8.0 feet above mean low water; 6.26 feet above mean tide level.

**Serial No. 1546. Ossining:** B. M. 105 (C. & G. S.) is a chiseled square on a low shoulder on the west side of the stone milepost "N. Y. 32" located on the east side of the New York Central Railroad tracks, about 1 mile north of station at Ossining. The point held is 0.3 foot south by west of center of square, 1.2 feet above the present ground level. Bench mark is 7.61 feet above standard sea level; 8.9 feet above mean low water; 7.23 feet above mean tide level.

**Serial No. 1547. Ossining:** B. M. 3 (C. & G. S.) is the highest point within a 3-inch triangle cut in the stone on the northwest corner of north stone abutment supporting the middle bridge, No. 92. It is 44.8 feet southeast of the southeast corner of the brick battery house at "C. R." tower, about 1.8 miles north of station at Ossining. It is also 32.5 feet east of the west face of the north concrete abutment supporting the western plate girder bridge. It is also known as B. M. RR-60. Bench mark is 7.17 feet above standard sea level; 8.5 feet above mean low water; 6.79 feet above mean tide level.

**Serial No. 1548. Croton:** B. M. C-1 (C. & G. S.) is the bottom of a square hole cut in the top of a large bed of rock, about 6 feet west of the west rail, about one-half mile north of Croton on the first small rocky point north of the coal chutes and water tanks, 1,200 feet north of stone milepost 35 from New York. Bench mark is marked thus: U. S. It is 9 feet above standard sea level; 10.3 feet above mean low water; 8.59 B. M. feet above mean tide level.

**Serial No. 1549. Oscawana:** B. M. RR-67 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock near Oscawana, 100 feet north of tower 33, about 2,000 feet south of stone milepost 37 from New York, and on the east side of the track a little above the level of the rails. (Established by New York Central & Hudson River Railroad.) Bench mark is 10.24 feet above standard sea level; 11.4 feet above mean low water; 9.80 feet above mean tide level.

**Serial No. 1550. Montrose:** B. M. R. R. (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock, about 100 yards south of Montrose, on the east end of the first stone culvert south of the station. (Established by New York Central & Hudson River Railroad. Bench mark is 37.44 feet above standard sea level; 38.6 feet above mean low water; 37.00 feet above mean tide level.

**Serial No. 1551. Verplancks Point:** B. M. 1 (C. & G. S.) is the center of a copper bolt head broken off, inserted in ledge of rock, at foot of old Fort Stanwik. Bench mark is 9.01 feet above standard sea level; 10.2 feet above mean low water; 8.55 feet above mean tide level.

**Serial No. 1552. Verplancks Point:** B. M. 2 (C. & G. S.) is a cross cut in the third stone from the ground in the wall. The stone was painted lead color and there was a high post standing behind it. Bench mark is 6.68 feet above standard sea level; 7.8 feet above mean low water; 6.22 feet above mean tide level.

**Serial No. 1553. Verplancks Point:** B. M. 3 (C. & G. S.) is on a limestone rock about 25 feet south of the only large tree on the bank at Verplancks Point. It is marked by a ring and the letters "C. S." Bench mark is 5.64 feet above standard sea level; 6.8 feet above mean low water; 5.18 feet above mean tide level.

**Serial No. 1554. Verplancks Point:** B. M. 4 (C. & G. S.) is a bolt near the center of a stone over a gutter with the letters "B. M." marked under it. It is about  $1\frac{1}{2}$  miles north of Montrose, a short distance west of Buchanan's Oil Cloth Factory, on the east side of the track. It is known also as B. M. "V. O. 12." Bench mark is 29.83 feet above standard sea level; 31.0 feet above mean low water; 29.37 feet above mean tide level.

**Serial No. 1555. Peekskill:** B. M. 4 (C. & G. S.) is a cross cut on southwest corner of stone sill of door on the south side of ticket office, on the west side of Peekskill Station. Rod was held on smooth surface of stone in the crotch of cross nearest edge

of sill. It is known also as B. M. "V. O. Peekskill." Bench mark is 10.54 feet above standard sea level; 11.6 feet above mean low water; 10.06 feet above mean tide level.

**Serial No. 1556. Peekskill:** B. M. 127 (U. S. E.) is a cross cut in the concrete doorsill on the north side of the main (east) entrance to the freight house that is on the west and south part of Center Dock. It is located on the smooth part of the concrete, 0.1 foot west of the east (rough) edge of the sill and 7.83 feet north of the north face of the foundation of the office adjoining the freight house. Bench mark is 6.15 feet above standard sea level; 7.2 feet above mean low water; 5.67 feet above mean tide level.

**Serial No. 1557. Iona Island:** B. M. 1 (C. & G. S.) is top of iron ringbolt, 115 feet above the position of gauge on lower side of wharf. Bench mark is 6.35 feet above approximate sea level;<sup>1</sup> 7.4 feet above mean low water; 5.85 feet above mean tide level.

**Serial No. 1558. Iona Island:** B. M. 2 (C. & G. S.) is the highest point within a ring 2 to 3 inches in diameter cut in large boulder back of corner of stone wall abutting against wharf. Bench mark is 7.99 feet above approximate sea level;<sup>1</sup> 9.0 feet above mean low water; 7.49 feet above mean tide level.

**Serial No. 1559. Iona Island:** B. M. 3 (C. & G. S.) is on the highest point of rocky ledge running back of wharf, marked by a ring 2 to 3 inches in diameter cut in the rock. Bench mark is 14.6 feet above approximate sea level;<sup>1</sup> 15.6 feet above mean low water; 14.10 feet above mean tide level.

**Serial No. 1560. Highlands:** B. M. 1 (C. & G. S.) is a cross cut on northwest corner of the west wall of a small culvert, about 600 feet north from milepost 44 from New York,  $1\frac{1}{4}$  miles south of Highlands. It is known also as B. M. RR-84. Bench mark is 7.87 feet above standard sea level; 8.8 feet above mean low water; 7.35 feet above mean tide level.

**Serial No. 1561. Highlands:** B. M. 2 (C. & G. S.) is the bottom of a square hole cut on a large flat rock nearly level with the ground. It is about one-half mile south of Highlands, 45 feet west of the center of a small stream, just north of the first small rock cut about 600 feet north of milepost 45, and about 100 feet east of east rail. It is known as B. M. D-1. Bench mark is 7.88 feet above standard sea level; 8.9 feet above mean low water; 7.36 feet above mean tide level.

**Serial No. 1562. Garrison:** B. M. 1 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock, 795 feet north of stone milepost 50, and 680 feet south of mouth of tunnel. It is known also as B. M. "RR-99" (established by New York Central & Hudson River Railroad). Bench mark is 20.64 feet above standard sea level; 21.5 feet above mean low water; 20.08 feet above mean tide level.

**Serial No. 1563. Garrison:** B. M. 2 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock 1 mile north of Garrison, 894 feet north of stone milepost 49, in a cut on the east side of track. It is known as B. M. "RR-97" (established by New York Central & Hudson River Railroad). Bench mark is 10.66 feet above standard sea level; 11.5 feet above mean low water; 10.10 feet above mean tide level.

**Serial No. 1564. West Point:** B. M. (C. & G. S.) is a copper bolt driven into a hole drilled in the granite doorpost, on the west side of the northwest corner of the north wing of the equipment shed. Bench mark is 14.00 feet above standard sea level; 14.8 feet above mean low water; 13.42 feet above mean tide level.

**Serial No. 1565. Cold Spring:** B. M. 3 (C. & G. S.) is the bottom of a hole 2 inches square and one-half inch deep, cut on a shelf of the rocky edge at the southeast end Coleman's coal dock, and is 153 feet south of the south face of W. H. Ladue's planing mill and 14 feet west of the line produced southward along the west face of the same planing mill. Back of this bench mark the rocky ledge rises to a height of about 20 feet. It is about 4 feet above the ground and has the letters "U. S. B. M." cut above it. Bench mark is 8.55 feet above standard sea level; 9.4 feet above mean low water; 7.96 feet above mean tide level.

**Serial No. 1566. Cold Spring:** B. M. 4 (C. & G. S.) is a cross cut on the upper face and near the south end of the stone sill of the south door on the west end of the planing and saw mill of W. H. Ladue at the corner of West and New Streets. Bench mark is 5.94 feet above standard sea level; 6.8 feet above mean low water; 5.35 feet above mean tide level.

<sup>1</sup> Not connected with precise level net.

**Serial No. 1567.** *Cold Spring:* B. M. 5 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in rock near the south end of the ledge of the rock cut on the east side of the track, 165 feet north of the railroad ticket office, 18.3 feet north of the center of the water plug, 6 feet east of the east rail and about 0.4 foot above top of rail. It is known also as B. M. "V. O. 9." Bench mark is 14.04 feet above standard sea level; 14.8 feet above mean low water; 13.45 feet above mean tide level.

**Serial No. 1568.** *Cold Spring:* B. M. 6 (C. & G. S.) is the bottom of a square hole cut on a ledge of rock about in line with the center of the street and 4 feet above its general level, about 190 feet west of railroad station at the northern terminus of the first north and south street west of depot. It is known also as B. M. E., and is marked by letters <sup>U. S.</sup> B. M. Bench mark is 13.04 feet above standard sea level; 13.8 feet above mean low water; 12.45 feet above mean tide level.

**Serial No. 1569.** *Cold Spring:* B. M. (C. & G. S.) is the highest point of a square cut on the north side of the stone sill at the entrance to the baggage room of the railroad station, 8.95 feet north from the southwest brick corner of the station and 0.41 foot south from the northwest corner of stone sill. Bench mark is 15.77 feet above standard sea level; 16.6 feet above mean low water; 15.18 feet above mean tide level.

**Serial No. 1570.** *Fishkill:* B. M. 1 (C. & G. S.) is a step cut in a broad sloping rock, 20 feet west of west main track, 55 feet north of a block signal, 4 feet above rails. It is 40½ rails south of Fishkill Station, 37½ rails south of milepost 59. Bench mark is known also as IK' and is 11.14 feet above standard sea level; 11.8 feet above mean low water; 10.47 feet above mean tide level.

**Serial No. 1571.** *Fishkill:* B. M. 2 (C. & G. S.) is a cross on the end of an iron rod about 1½ inches in diameter set vertically in the rock and projecting about 4 or 5 inches. It is near the northern end of the first rock cut north of the station, 1,238 feet north of stone milepost 59, 310 feet south of bridge No. 162, and 6 feet east of east main track. It is known also as B. M. "RR-118." Bench mark is 8.25 feet above standard sea level; 8.9 feet above mean low water; 7.58 feet above mean tide level.

**Serial No. 1572.** *New Hamburg:* B. M. 1 (C. & G. S.) is the east edge of a shallow drill hole surrounded by a rude triangle, 37 meters north of station, 64 meters north of Main Street, 2 meters west of center of west track, 19½ rails south of a stream crossing the track, on an irregular shaped rock at the west end of the gutter, 12 meters south of entrance to rock cut leading to tunnel, 0.2 meter above the rails. The north edge of the hole is broken out and a stone is just to the east of the wall. It is known also as B. M. "H'." Bench mark is 14.55 feet above standard sea level; 15.2 feet above mean low water; 13.80 feet above mean tide level.

**Serial No. 1573.** *New Hamburg:* B. M. 2 (C. & G. S.) is the bottom of a square hole cut in stone on top of northwestern one of four stone piers, about 3 feet high, 1½ miles north of Chelsea, 10 rails south of tower 53, about 9 yards east of east rail. It is known also as B. M. "F." Bench mark is 5.31 feet above standard sea level; 6.0 feet above mean low water; 4.56 feet above mean tide level.

**Serial No. 1574.** *New Hamburg:* B. M. 1 (U. S. E.) is a ¼-inch drill hole marked "U. S." on the northeast corner of north abutment of old drawbridge over Wappinger Creek. It is 3.8 feet west of east line of abutment and on a line with the numeral "1902" cut in same. Bench mark is 7.25 feet above standard sea level; 8.0 feet above mean low water; 6.53 feet above mean tide level.

**Serial No. 1575.** *New Hamburg:* B. M. 2 (U. S. E.) is a square cut on coping stone east end of flatiron of Highway Bridge on Wappinger Creek. The letters "U. S." are cut just below the square cut. Bench mark is 6.14 feet above standard sea level; 6.8 feet above mean low water; 5.41 feet above mean tide level.

**Serial No. 1576.** *New Hamburg:* B. M. 3 (U. S. E.) is the north bulkhead opposite draw of the New York Central & Hudson River Railroad bridge, on Wappinger Creek. Bench mark is 3.94 feet above standard sea level; 4.6 feet above mean low water; 3.19 feet above mean tide level.

**Serial No. 1577.** *New Hamburg:* B. M. 4 (U. S. E.) is a square cut in slaty stone coping of the northwest corner of gas wharf of the upper end of Wappinger Creek. Bench mark is 7.67 feet above standard sea level; 8.4 feet above mean low water; 6.95 feet above mean tide level.

**Serial No. 1578.** *New Hamburg:* B. M. 9 (U. S. E.) is a square cut on granite block 1.5 by 3.8 by 1.1 feet, on the first bridge cross Wappinger Creek below falls. "U. S." is cut near it. Bench mark is 11.72 feet above standard sea level; 12.4 feet above mean low water; 11.00 feet above mean tide level.

**Serial No. 1579.** *New Hamburg:* B. M. 14 (U. S. E.) is top of brass rod 8 inches long embedded in a concrete monument located just inside the fence of yard belonging to G. Decker and close to fence between Decker and Ed. Van Dyne property about 4 inches below surface. Bench mark is 10.38 feet above standard sea level; 11.1 feet above mean low water; 9.65 feet above mean tide level.

**Serial No. 1580.** *New Hamburg:* B. M. 15 (U. S. E.) is the highest point in a square cut on a granite township line stone, the top of which is marked with a cross within a square. It is about 300 feet west of *Petrel* steamboat landing and about 125 feet northeast of  $\Delta$  17. The stone projects about 4 inches above the surface. Bench mark is 9.73 feet above standard sea level; 10.4 feet above mean low water; 9.01 feet above mean tide level.

**Serial No. 1581.** *New Hamburg:* B. M. 16 (U. S. E.) is top of brass rod in concrete monument built in the south side of the bank of road to Wappinger Falls and about 2.5 feet above level of road. It is just about on the continuation of the west line of a two-story frame house of J. Donelly and is about 5 feet south of road. The house is the first above the electric light plant. Bench mark is 27.44 feet above standard sea level; 28.1 feet above mean low water; 26.71 feet above mean tide level.

**Serial No. 1582.** *New Hamburg:* B. M. 24 (U. S. E.) is top of brass plug in concrete monument on north side of road to Wappinger Falls and about 300 feet east of Stuart's Foundry and 45.37 feet east of station  $\Delta$  3. Bench mark is 7.98 feet above standard sea level; 8.7 feet above mean low water; 7.25 feet above mean tide level.

**Serial No. 1583.** *New Hamburg:* B. M. 32 (U. S. E.) is a square cut on west end of concrete abutment for bridge seat north end of new lift bridge over Wappinger Creek. It is marked "U. S." Bench mark is 2.82 feet above standard sea level; 3.5 feet above mean low water; 2.10 feet above mean tide level.

**Serial No. 1584.** *Camelot:* B. M. G (C. & G. S.) is the bottom of a square hole cut in stone on the north side of a low rocky point of land, 6 feet from the river bank, 4 feet above high water and about 6 feet west of a bunch of cedar trees, 80 feet west of the west rail of the New York Central Railroad, and 12 feet north of the prolongation of the north wall of the Camelot railroad station. Bench mark is lettered "U. S. B. M." and is 5.79 feet above standard sea level; 6.5 feet above mean low water; 4.97 feet above mean tide level.

**Serial No. 1585.** *Poughkeepsie:* B. M. 3 (C. & G. S.) is the bottom of a square hole cut in the top of a large rock about one foot high and 1.25 miles south of the railroad station at Poughkeepsie. It is marked "U. S. B. M." and is two rails south of tower No. 57 and about 40 feet east of the east rail and 12 feet east of the wire fence. It is known also as B. M. H<sub>1</sub>. Bench mark is 31.68 feet above standard sea level; 32.4 feet above mean low water; 30.80 feet above mean tide level.

**Serial No. 1586.** *Poughkeepsie:* B. M. 4 (C. & G. S.) is the horizontal diameter of a half-inch hole surrounded by a triangle, in the east face of the west side of Union Street Bridge, near the top of a large stone. It is also known as B. M. "Ih'." Bench mark is 38.65 feet above standard sea level; 39.3 feet above mean low water; 37.77 feet above mean tide level.

**Serial No. 1587.** *Poughkeepsie:* B. M. 5 (G. S.) is an aluminum tablet set in the front face of the city hall, corner of Main and Washington Streets. It is known also as B. M. "173A." Bench mark is 172.99 feet above standard sea level; 173.7 feet above mean low water; 172.11 feet above mean tide level.

**Serial No. 1588.** *Poughkeepsie:* B. M. 6 (C. & G. S.) is a cross in the top of a brass bolt in the north face of the west side of the arched bridge at the Poughkeepsie Station in the fifth stone above the ground and second from the east edge of the column. The lower left-hand edge of the head of the bolt is broken off and the letters "U. S." are cut under it. It is known also as B. M. "Ig'." Bench mark is 43.28 feet above standard sea level; 44.0 feet above mean low water; 42.40 feet above mean tide level.

**Serial No. 1589.** *Poughkeepsie:* B. M. 7 (C. & G. S.) is the center of a broad horizontal line of a cross cut deeply in the rock on the east face of the west side of the arched bridge at the station. It is the northern and the higher one of two similar crosses near together. It is known also as B. M. "Vose." Bench mark is 39.95 feet above standard sea level; 40.6 feet above mean low water; 39.07 feet above mean tide level.

**Serial No. 1590.** *Poughkeepsie:* B. M. 8 (C. & G. S.) is the bottom of a square hole cut on the north end of the sill at the east door leading to the waiting room of the brick railroad station. It is the sill of the fourth door from the south end of the building. It is known also as B. M. "I<sub>1</sub>." Bench mark is 40.01 feet above standard sea level; 40.7 feet above mean low water; 39.13 feet above mean tide level.

**Serial No. 1591. Poughkeepsie:** B. M. 9 (C. & G. S.) is a chiseled mark on the south end of the west abutment of Poughkeepsie Bridge, on the southwest corner of the top stone. Bench mark is 225.27 feet above standard sea level; 226.0 feet above mean low water; 224.39 feet above mean tide level.

**Serial No. 1592. Hyde Park:** B. M. 1 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a flat rock in the gutter on the east side of the track just north of Hyde Park, 210 feet north of bridge No. 223. It is known also as B. M. R. R.-161. Bench mark is 7.46 feet above standard sea level; 8.2 feet above mean low water; 6.50 feet above mean tide level.

**Serial No. 1593. Hyde Park:** B. M. 2 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock, east of track about 6 inches below top of rail, about  $\frac{3}{4}$ -mile north of Hyde Park, 145 meters north of stone milepost 80 from New York. It is known also as B. M. "RR-162." Bench mark is 8.42 feet above standard sea level; 9.1 feet above mean low water; 7.46 feet above mean tide level.

**Serial No. 1594. Hyde Park:** B. M. 3 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock about middle of east wall of culvert 226, about  $\frac{3}{4}$ -mile north of stone milepost 80, from New York, and about  $1\frac{1}{4}$  miles north of Hyde Park. It is known also as B. M. "RR-163." Bench mark is 6.47 feet above standard sea level; 7.2 feet above mean low water; 5.51 feet above mean tide level.

**Serial No. 1595. Hyde Park:** B. M. 4 (C. & G. S.) is the intersection of two lines cut in the top of an iron fishplate bolt set vertically in stone, 6 feet east of the east rail in the top of a rock 2 feet high, about 1 mile south of Hyde Park, 625 feet north of bridge No. 222. It is known also as B. M. "RR-159." Bench mark is 8.41 feet above standard sea level; 9.1 feet above mean low water; 7.45 feet above mean tide level.

**Serial No. 1596. Hyde Park:** B. M. 5 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock about  $1\frac{1}{4}$  miles south of Hyde Park, on the south abutment of bridge No. 220 on the northeast corner of the east end. It is known also as B. M. "1e'." Bench mark is 6.77 feet above standard sea level; 7.5 feet above mean low water; 5.81 feet above mean tide level.

**Serial No. 1597. Hyde Park:** B. M. 6 (C. & G. S.) is the intersection of two lines cut in the top of an iron fishplate bolt set vertically in stone, on the west side of the track, about 6 or 8 feet from the west rail, about 2 miles south of Hyde Park, about one-half mile north of milepost 77 from New York, about the center of the first rock cut north of the milepost. It is known also as B. M. "RR-77 $\frac{1}{2}$ ." Bench mark is 9.82 feet above standard sea level; 10.5 feet above mean low water; 8.86 feet above mean tide level.

**Serial No. 1598. Staatsburg:** B. M. "R. R. DeWitt" (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a large rock about 2 feet high just east of the gutter at the first cut south of Staatsburg, 6 meters south of stone milepost 83, from New York, on the east side of the track. Bench mark is 24.08 feet above standard sea level; 24.8 feet above mean low water; 23.02 feet above mean tide level.

**Serial No. 1599. Rhinecliff:** B. M. 1 (C. & G. S.) is a cross leaded into a rock to the rear of the northeast corner of the station about  $5\frac{1}{2}$  feet above the ground. The letters "U. S. C. S." are cut beneath it. It is known also as B. M. "Iyy." Bench mark is 15.50 feet above standard sea level; 16.1 feet above mean low water; 14.31 feet above mean tide level.

**Serial No. 1600. Rhinecliff:** B. M. 2 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock at the rear of the southeast end of the station. It is known also as B. M. "Iyyy." Bench mark is 13.01 feet above standard sea level; 13.6 feet above mean low water; 11.82 feet above mean tide level.

**Serial No. 1601. Rhinecliff:** B. M. 3 (C. & G. S.), is the top of a roundheaded fishplate bolt set vertically in a rock, on the north trestle bed of abutment to bridge No. 249 in the southeast corner of the east end. It is known also as B. M. "Iz." Bench mark is 3.28 feet above standard sea level; 4.5 feet above mean low water; 2.63 feet above mean tide level.

**Serial No. 1602. Rhinecliff:** B. M. 1R (U. S. E.), is a square cut on concrete platform south bound of Rhinecliff Station. It is on the southwest corner of the northeast flag, 1.8 feet south of the sixth post supporting the roof from the south end of station. Bench mark is 11.68 feet above standard sea level; 12.3 feet above mean low water; 10.49 feet above mean tide level.

**Serial No. 1603. Rhinecliff:** B. M. 2R (U. S. E.) is a square cut on the west side of milepost 89, which is on the east side of the right of way and 375 feet south of Rhinecliff Station platform. Bench mark is 10.16 feet above standard sea level; 10.8 feet above mean low water; 8.97 feet above mean tide level.

**Serial No. 1604.** *Rhinecliff:* B. M. 3R (U. S. E.) is a square cut in the northwest corner of concrete base under northwest corner of signal bridge 249, 730 feet south of south end of Rhinecliff railroad station platform. Bench mark is 9.82 feet above standard sea level; 10.5 feet above mean low water; 8.63 feet above mean tide level.

**Serial No. 1605.** *Rhinecliff:* B. M. 10R (U. S. E.) is a square cut on the west end of doorsill of door on the south end of Astor's Pumping Station, about 7,000 feet north of Rhinecliff railroad station; Bench mark is 11.57 feet above standard sea level; 12.2 feet above mean low water; 10.38 feet above mean tide level.

**Serial No. 1606.** *Rhinecliff:* B. M. 13R (U. S. E.) is a square marked "U. S." in concrete platform, north end of north-bound platform of Rhinecliff railroad station. Bench mark is 10.25 feet above standard sea level; 10.9 feet above mean low water; 9.06 feet above mean tide level.

**Serial No. 1607.** *Rhinecliff:* B. M. 14R (U. S. E.) is a bronze station mark cemented in a shoulder of rock ledge about 35 feet south of the southwest end of the old tunnel through the property of Vincent Astor. The point is about 4 feet above the ground. The tunnel is about 2.08 miles north of Rhinecliff railroad station. Bench mark is 11.18 feet above standard sea level; 11.8 feet above mean low water; 9.97 feet above mean tide level.

**Serial No. 1608.** *Rhinecliff:* B. M. 15R (U. S. E.) is a square cut with "U. S." over it on the concrete foundation for a marine railway on the west side of railroad right of way and near the south entrance to Astor's tunnel about 2.08 miles north of Rhinecliff railroad station. It is cut on the southeast corner of foundation of south rail. Bench mark is 8.51 feet above standard sea level; 9.2 feet above mean low water; 7.32 feet above mean tide level.

**Serial No. 1609.** *Rhinecliff:* B. M. 16R. (U. S. E.) is the center of a line with the letters "U. S." thus:  $\begin{matrix} U \\ S \end{matrix}$  about 2 feet above the surface of the ground, located on the south face of the west wing wall of tunnel 255A through the property of Vincent Astor, 2.08 miles north of Rhinecliff railroad station. Bench mark is 8.02 feet above standard sea level; 8.7 feet above mean low water; 6.83 feet above mean tide level.

**Serial No. 1610.** *Rondout:* B. M. 3 (C. & G. S.) is a horizontal line cut on the face of the stone foundation on the west side of the (old) lighthouse. The line is 3.1 feet below the level of the stone flooring at the base of the lighthouse and is 0.23 feet below the upper southeast corner of the fourth step (from the top) leading down to the water. Above the line the letters "B. M." are cut, the bottom of each letter touching the horizontal line. Bench mark is 4.79 feet above standard sea level; 5.4 feet above mean low water; 3.60 feet above mean tide level.

**Serial No. 1611.** *Rondout:* B. M. 4 (C. & G. S.) is a horizontal line 0.54 feet long cut in the vertical face on the fourth (from top) granite step on the west side of the (old) lighthouse. At the eastern end of the line are the letters "B. M." This line is 0.31 foot below the top outer (south) edge of the fourth step. Bench mark is 4.76 feet above standard sea level; 5.4 feet above mean low water; 3.57 feet above mean tide level.

**Serial No. 1612.** *Rondout:* B. M. 4R (U. S. E.) is a square cut on concrete boat platform, south side of Rondout new light station (north end). The cut is on inside top of iron steps leading down to boat landing. Bench mark is 9.22 feet above standard sea level; 9.9 feet above mean low water; 8.03 feet above mean tide level.

**Serial No. 1613.** *Rondout:* B. M. 5R (U. S. E.) is the top of stud bolt on fence brace on Rondout old lighthouse. It is the first stud east of the entrance to wooden boat platform on the north side of the light. In an attempt to cut a cross on top of this stud the north half was broken off. Bench mark is 8.07 feet above standard sea level; 8.7 feet above mean low water; 6.88 feet above mean tide level.

**Serial No. 1614.** *Barrytown:* B. M. 1 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock outside of the gutter about  $1\frac{1}{2}$  miles south of Barrytown, 30 feet north of culvert 261. It is known also as B. M. "Iy." Bench mark is 10.28 feet above standard sea level; 10.9 feet above mean low water water; 8.92 feet above mean tide level.

**Serial No. 1615.** *Barrytown:* B. M. 2 (C. & G. S.) is an iron pin filed off a little to give a suitable surface for the rod in the top of the east draw-bed stone, at the east end about  $1\frac{1}{2}$  miles north of Barrytown on the south abutment of bridge No. 269. It is known also as B. M. "Iv." Bench mark is 2.29 feet above standard sea level; 2.9 feet above mean low water; 0.93 foot above mean tide level.

**Serial No. 1616.** *Barrytown:* B. M. 17R (U. S. E.) is a square cut on southeast corner of northwest concrete footing under footbridge 262A, 0.96 mile south of Barrytown railroad station of the New York Central & Hudson River Railroad. Bench mark is 12.13 feet above standard sea level; 12.7 feet above mean low water; 10.77 feet above mean tide level.

**Serial No. 1617.** *Barrytown:* B. M. 18R (U. S. E.) is a square cut on top of center of west end of culvert 264 of New York Central & Hudson River Railroad, 0.38 mile south of Barrytown railroad station. Bench mark is 10.7 feet above standard sea level; 11.3 feet above mean low water; 9.34 feet above mean tide level.

**Serial No. 1618.** *Barrytown:* B. M. 19R (U. S. E.) is a square cut on northwest corner of concrete switch block on the west side of the track opposite the north side of switch tower 71, about 300 feet south of Barrytown railroad station of the New York Central & Hudson River Railroad. Bench mark is 14.52 feet above standard sea level; 15.1 feet above mean low water; 13.16 feet above mean tide level.

**Serial No. 1619.** *Barrytown:* B. M. 20R (U. S. E.) is the center of the New York Central monument 500+00 about 20 feet south of the south side of Barrytown railroad station and in the center between the two tracks. Bench mark is 15.61 feet above standard sea level; 16.2 feet above mean low water; 14.25 feet above mean tide level.

**Serial No. 1620.** *Barrytown:* B. M. 21R (U. S. E.) is a square cut in southeast corner of concrete switch block on the west side of the New York Central Railroad tracks, about 100 feet north of the north side of Barrytown railroad station. It is the first large concrete block south of the steel signal post at the southeast corner of the freight shed. Bench mark is 14.92 feet above standard sea level; 15.5 feet above mean low water; 13.56 feet above mean tide level.

**Serial No. 1621.** *Barrytown:* B. M. 22R (U. S. E.) is a square cut on west side of milepost 95, 0.3 mile north of Barrytown railroad station on the east side of the tracks. Bench mark is 17.39 feet above standard sea level; 18.0 feet above mean low water; 16.03 feet above mean tide level.

**Serial No. 1622.** *Barrytown:* B. M. 23R (U. S. E.) is a square cut on the southeast corner of the capstone on the west side of the north abutment of bridge 267, 0.97 mile north of Barrytown railroad station. Bench mark is 8.51 feet above standard sea level; 9.1 feet above mean low water; 7.15 feet above mean tide level.

**Serial No. 1623.** *Barrytown:* B. M. 24R (U. S. E.) is a square cut on the southwest corner of capstone on the east side of the north abutment of bridge 268 of the New York Central Railroad, 1.2 miles north of Barrytown railroad station. Bench mark is 8.62 feet above standard sea level; 9.2 feet above mean low water; 7.26 feet above mean tide level.

**Serial No. 1624.** *Tivoli:* B. M. 2 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock about 1 mile north of Tivoli in the south end of east wall of culvert 279. It is known also as B. M. "It." Bench mark is 7.33 feet above standard sea level; 7.9 feet above mean low water; 5.86 feet above mean tide level.

**Serial No. 1625.** *Tivoli:* B. M. 3 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock about 1½ miles north of Tivoli on culvert No. 280 near J. H. Livingstone's pumping house on the south top stone of the east covering. It is known also as B. M. "Is." Bench mark is 7.75 feet above standard sea level; 8.3 feet above mean low water; 6.28 feet above mean tide level.

**Serial No. 1626.** *Tivoli:* B. M. 25R (U. S. E.) is a square with the letters "U. S." cut on the southeast corner of concrete footing of signal 9842, which is about 0.58 mile south of Tivoli railroad station and on west side of the tracks opposite the south end of a retaining wall on the east side. The signal is about 35 feet north of telegraph pole 98/15. Bench mark is 8.87 feet above standard sea level; 9.4 feet above mean low water; 7.40 feet above mean tide level.

**Serial No. 1627.** *Tivoli:* B. M. 26R (U. S. E.) is a square cut in the center of north end, east side of culvert 276, on the east side of the tracks, 1,797 feet south of Tivoli railroad station. Bench mark is 8.35 feet above standard sea level; 8.9 feet above mean low water; 6.88 feet above mean tide level.

**Serial No. 1628.** *Tivoli:* B. M. 27R (U. S. E.) is a square cut on northwest corner of concrete base under bottom of steps leading up to the footbridge over the tracks, just north of Tivoli railroad station. It is about 30 feet north of the north side of Tivoli station. Bench mark is 10.81 feet above standard sea level; 11.4 feet above mean low water; 9.34 feet above mean tide level.

**Serial No. 1629.** *Tivoli:* B. M. 28R (U. S. E.) is a square cut on west side of door-step leading to barroom on the southwest corner of the Hoffmann House at Tivoli.

The hotel is about 200 feet south of Tivoli station and about 150 feet to the east. Bench mark is 10.93 feet above standard sea level; 11.5 feet above mean low water; 9.46 feet above mean tide level.

**Serial No. 1630.** *Tivoli:* B. M. 29R (U. S. E.) is a square cut on west side of milepost 99 in the rear of Tivoli station on the east side of track. Bench mark is 9.62 feet above standard sea level; 10.2 feet above mean low water; 8.15 feet above mean tide level.

**Serial No. 1631.** *Tivoli:* B. M. 12R (U. S. E.) is a bronze mark cemented in rock on fill on west side of railroad tracks north of Tivoli and opposite to Saugerties Long Dock. It is 157.9 feet from south corner of the concrete retaining wall on the east side of the tracks and 111.9 feet from the north end; 50.8 feet north from whistle post. Bench mark is 7.66 feet above standard sea level; 8.2 feet above mean low water; 6.19 feet above mean tide level.

**Serial No. 1632.** *Tivoli:* B. M. 30R (U. S. E.) is a square on the west side of the milepost No. 102 which is 2 miles north of Tivoli, and on the east side of the New York Central tracks. Bench mark is 8.64 feet above standard sea level; 9.2 feet above mean low water; 7.17 feet above mean tide level.

**Serial No. 1633.** *Tivoli:* B. M. 31R (U. S. E.) is a track spike set in concrete monument at center of west side of east abutment of road bridge over the New York Central tracks, 50 feet north of milepost 102 and 2 miles north of Tivoli station and about 10 feet east of east rail. Bench mark is 10.39 feet above standard sea level; 11.0 feet above mean low water; 8.92 feet above mean tide level.

**Serial No. 1634.** *Saugerties:* B. M. 1 (U. S. E.) is on a solid ledge near old powder house at east end of stoneyard on north dike. The letters "B. M." are cut on west face of ledge. Bench mark is 7.56 feet above standard sea level; 8.1 feet above mean low water; 6.09 feet above mean tide level.

**Serial No. 1635.** *Saugerties:* B. M. 2 (U. S. E.) is a cross cut on top of large ringbolt near southwest corner of old powder house. Bench mark is 6.68 feet above standard sea level; 7.3 feet above mean low water; 5.21 feet above mean tide level.

**Serial No. 1636.** *Saugerties:* B. M. 7R (U. S. E.) is a bronze mark cemented in granite stone front of main entrance to Saugerties Light Station on end of north dike of Esopus Creek. This point was originally used for this purpose and was marked by a cross. Bench mark is 7.91 feet above standard sea level; 8.5 feet above mean low water; 6.44 feet above mean tide level.

**Serial No. 1637.** *Cheviot:* B. M. 32R (U. S. E.) is a square with "U. S." cut on center of north end of west side of culvert 282, on west side of tracks, 7 rails south of Cheviot long dock and about 15 feet north of monument 547+000. Culvert is 0.78 mile south of Germantown railroad station. Bench mark is 8.46 feet above standard sea level; 9.0 feet above mean low water; 6.88 feet above mean tide level.

**Serial No. 1638.** *Germantown:* B. M. 1 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock, the first rock cut below the landing on the east side of the track near Germantown with the letters "B. M." in red on the rock. It is known also as B. M. "Io." Bench mark is 9.86 feet above standard sea level; 10.4 feet above mean low water; 8.25 feet above mean tide level.

**Serial No. 1639.** *Germantown:* B. M. 2 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock, just outside of the gutter, on the east side of the track, about 1½ miles south of Germantown, about 52 rails south of stone milepost 103. It is known also as B. M. "Iq." It is 8.79 feet above standard sea level; 9.3 feet above mean low water; 7.18 feet above mean tide level.

**Serial No. 1640.** *Germantown:* B. M. 3 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock, just at the edge of the gutter, on the east side of track, 2¼ miles south of Germantown, 26 rails north of stone milepost 102. It is known also as B. M. "Ir." Bench mark is 9.02 feet above standard sea level; 9.5 feet above mean low water; 7.41 feet above mean tide level.

**Serial No. 1641.** *Germantown:* B. M. 33R (U. S. E.) is a square cut in granite on south side of east end of culvert 286. The stone is the most easterly one of the south side and the square is on the northeast corner of it. The culvert is three rails south of milepost 105 and 0.58 mile north of Germantown railroad station. Bench mark is 4.64 feet above standard sea level; 5.1 feet above mean low water; 3.03 feet above mean tide level.

**Serial No. 1642.** *Germantown:* B. M. 34R (U. S. E.) is a square cut on the west side of milepost 105 on the east side of New York Central tracks, 0.6 mile north of Germantown railroad station. Bench mark is 9.48 feet above standard sea level; 10.0 feet above mean low water; 7.87 feet above mean tide level.

**Serial No. 1643.** *Germantown:* B. M. 35R (U. S. E.) is a step cut in shoulder of ledge on the east side of New York Central tracks, about four rails north of milepost 105 and 0.63 mile north of Germantown station. The letters "U. S." are cut north and south of the bench mark, and it is about 1½ feet below top of rail and 5 feet east of same. It is at the south end of the rock cut. Bench mark is 10.26 feet above standard sea level; 10.8 feet above mean low water; 8.65 feet above mean tide level.

**Serial No. 1644.** *North Germantown:* B. M. 36R (U. S. E.) is a square cut in ledge rock at North Germantown. The bench mark is on the east side of the New York Central tracks and about 100 feet south of crossing. The square was cut out to make a level surface for the rod; and arrow was cut on the west face of ledge and the letters "US/BM" were cut on the north face. The bench mark is directly south of the west side of the railroad station. Bench mark is 14.08 feet above standard sea level; 14.6 feet above mean low water; 12.47 feet above mean tide level.

**Serial No. 1645.** *North Germantown:* B. M. 37R (U. S. E.) is a square cut on northwest corner of west side of culvert 287. The culvert is 0.2 mile north of North Germantown railroad station. Bench mark is 9.25 feet above standard sea level; 9.7 feet above mean low water; 7.64 feet above mean tide level.

**Serial No. 1646.** *Linlithgo:* B. M. 1 (C. & G. S.) is the top of a roundheaded fish-plate bolt set vertically in a rock, near the southeast corner of the stone foundation supporting an overhead bridge on the west side of the track near stone milepost 109, about three-quarters of a mile north of Linlithgo, 13½ rails south of tower 80. It is known also as B. M. "RR213." Bench mark is 9.14 feet above standard sea level; 9.6 feet above mean low water; 7.43 feet above mean tide level.

**Serial No. 1647.** *Linlithgo:* B. M. 2 (C. & G. S.) is the top of a roundheaded fish-plate bolt set vertically in a rock, on the southeast topstone, on the east end of the north abutment of bridge No. 290, about three-quarters of a mile south of Livingston Creek. It is known also as B. M. "In." Bench mark is 7.96 feet above standard sea level; 8.4 feet above mean low water; 6.25 feet above mean tide level.

**Serial No. 1648.** *Linlithgo:* B. M. 38R (U. S. E.) is a square cut on the northeast corner of granite capstone of west wing wall of north abutment of culvert 289. The culvert is 1 mile south of Linlithgo station and on west side of tracks. Bench mark is 8.77 feet above standard sea level; 9.2 feet above mean low water; 7.06 feet above mean tide level.

**Serial No. 1649.** *Linlithgo:* B. M. 39R (U. S. E.) is a square cut on second concrete step from top on west wing wall of south abutment of bridge 291 over Livingston Creek, about 0.1 mile south of Linlithgo railroad station. Bench mark is 7.88 feet above standard sea level; 8.3 feet above mean low water; 6.17 feet above mean tide level.

**Serial No. 1650.** *Linlithgo:* B. M. 40R (U. S. E.) is a square cut on second concrete step from top of west wing wall of north abutment of bridge 291 over Livingston Creek, about 0.1 mile south of Linlithgo railroad station. Bench mark is 9.31 feet above standard sea level; 9.7 feet above mean low water; 7.60 feet above mean tide level.

**Serial No. 1651.** *Linlithgo:* B. M. 41R (U. S. E.) is a square cut on west side of concrete block under tall semaphore signal on east side of New York Central tracks, six rails north of the north abutment of bridge 291 over Livingston Creek, and about 400 feet south of Linlithgo railroad station. Bench mark is 11.34 feet above standard sea level; 11.8 feet above mean low water; 9.63 feet above mean tide level.

**Serial No. 1652.** *Greendale:* B. M. 1 (C. & G. S.) is a half-inch hole drilled in a rock embedded in a bank on the east side of the road crossing the railroad tracks near Greendale station, opposite Catskill, and directly opposite the road opening out in the east line fence about 28 rails north of stone milepost 110, and 2½ miles south of the station. In 1902, as the mouth of the hole presented too rough a surface to hold the rod upon safely, a faint cross mark was made on the smooth surface of the stone beside the hole on the north side and the rod held upon the mark. It is known also as B. M. "Im." Bench mark is 14.76 feet above standard sea level; 15.1 feet above mean low water; 12.98 feet above mean tide level.

**Serial No. 1653.** *Greendale:* B. M. 43R (U. S. E.) is a square cut with "U. S." under it in the northwest corner of the concrete foundation for the signal just south of Greendale station on the east side of the tracks No. 11013. Bench mark is 11.37 feet above standard sea level; 11.7 feet above mean low water; 9.59 feet above mean tide level.

**Serial No. 1654.** *Greendale:* B. M. 44R (U. S. E.) is a square with "U. S." beside it cut in the south end of the stone doorstep of the east entrance to the waiting room

of Greendale station. Bench mark is 12.59 feet above standard sea level; 12.9 feet above mean low water; 10.81 feet above mean tide level.

**Serial No. 1655.** *Greendale:* B. M. 45R (U. S. E.) is a square with "U. S." cut in the top of the south end of a concrete retaining wall. The wall is the first one south of milepost 112 and is east of the railroad tracks, 1.5 miles north of Greendale railroad station. Bench mark is 13.86 feet above standard sea level; 14.2 feet above mean low water; 12.08 feet above mean tide level.

**Serial No. 1656.** *Hudson:* B. M. 1 (G. S.) is the intersection of cross lines on a bronze tablet marked "151 Albany" on the northeast corner of the upper station of the Boston & Albany Railway, 1 foot above the platform. It is known also as "B. M. 151A." Bench mark is 151.54 feet above standard sea level; 151.8 feet above mean low water; 149.69 feet above mean tide level.

**Serial No. 1657.** *Hudson:* B. M. 2 (C. & G. S.) is a 2-inch square cut at center of the flat pyramid-shaped top of the western granite post at the south entrance to the public square near the upper end of Warren Street. The post is about 1 foot square, projecting about 18 inches above the sidewalk and apparently set well into the ground. Established by the Hudson city engineers, and is known as "City 14." Bench mark is 151.80 feet above standard sea level; 152.0 feet above mean low water; 149.95 feet above mean tide level.

**Serial No. 1658.** *Hudson:* B. M. 3 (C. & G. S.) is a cross mark on top of marble post 6 inches square known as monument No. 2, at the north or main entrance to the courthouse grounds in the triangle formed by the sidewalk and the two curved walks leading into the main walk to the courthouse entrance. This monument is set into the ground projecting four or five inches and marking the center of the street approaching the courthouse. The rod was held upon the smooth surface of the stone in the southeast quadrant of the intersecting lines. (Established by Hudson City engineers, known also as "City B. M. 29".) Bench mark is 95.75 feet above standard sea level; 96.0 feet above mean low water; 93.90 feet above mean tide level.

**Serial No. 1659.** *Hudson:* B. M. 4 (C. & G. S.) is the bottom of a square hole with the letters "U. S. B. M." around it cut in the stone on the water table on the east side of the portico of the main (north) entrance to the courthouse. It is known as B. M. "J<sub>1</sub>." Bench mark is 101.21 feet above standard sea level; 101.5 feet above mean low water; 99.36 feet above mean tide level.

**Serial No. 1660.** *Hudson:* B. M. 5 (C. & G. S.) is the top of a roundheaded fish-plate bolt set vertically in a rock under the overhead bridge leading to the docks and Athens Ferry, the first bridge above Hudson station, in the west side of the top of the stone pier, under the second iron column from the south, in the first row of columns from the east. It is known also as B. M. "V.O.A." Bench mark is 10.69 feet above standard sea level; 10.9 feet above mean low water; 8.84 feet above mean tide level.

**Serial No. 1661.** *Hudson:* B. M. 6 (C. & G. S.) is the top of a roundheaded fish-plate bolt set vertically in the top of a rock, about 1 mile south of Hudson, about 7 rails north of milepost 113 and two or three rails south of Hollenbeck's house on the south abutment of bridge No. 296 in the top of the east stone at the east end. It is known also as B. M. "Ik." Bench mark is 7.75 feet above standard sea level; 8.0 feet above mean low water; 5.90 feet above mean tide level.

**Serial No. 1662.** *Hudson:* B. M. 46R (U. S. E.) is a square and "U. S." cut in the southeast corner of a square concrete platform in front of the north door of the one-story railroad office building about 75 feet south of Hudson station. Bench mark is 10.83 feet above standard sea level; 11.1 feet above mean low water; 8.98 feet above mean tide level.

**Serial No. 1663.** *Hudson:* B. M. 47R (U. S. E.) is a square and "U. S." cut in the concrete paving on the south side of the Hudson station. It is in the northwest corner of the third square from the southwest corner of the station and is directly beside a drain pipe leading from roof. Bench mark is 11.58 feet above standard sea level; 11.8 feet above mean low water; 9.73 feet above mean tide level.

**Serial No. 1664.** *Stockport Station:* B. M. 1 (D. W.) is the center of a square cut on the northwest corner of the south abutment of bridge No. 307 just south of the station. It is 6.73 feet above standard sea level; 6.8 feet above mean low water; 4.75 feet above mean tide level.

**Serial No. 1665.** *Stockport Station:* B. M. 2 (D. W.) is the center of a square cut in a large stone on the east side of the New York Central & Hudson River Railroad, 10 feet from the east rail, and 1,000 feet south of Stockport Boat Landing. It is 10.39 feet above standard sea level; 10.4 feet above mean low water; 8.41 feet above mean tide level.

**Serial No. 1666.** *Stockport Station:* B. M. 3 (D. W.) is a square cut in the top stone at the northwest corner of bridge No. 311, New York Central & Hudson River Railroad, about 4,200 feet north of Stockport Landing. It is 8.47 feet above standard sea level; 8.5 feet above mean low water; 6.49 feet above mean tide level.

**Serial No. 1667.** *Stockport Station:* B. M. RR-223 (C. & G. S.) is on a culvert on bridge No. 304 on the east side of the abutment. It is 8.88 feet above standard sea level; 8.9 feet above mean low water; 6.90 feet above mean tide level.

**Serial No. 1668.** *Coxsackie:* B. M. RR-237 (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically in a rock, about three-fourths mile north of Coxsackie station in the top of the east end of culvert 318, about the middle of the wall. It is 6.78 feet above standard sea level; 6.7 feet above mean low water; 4.74 feet above mean tide level.

**Serial No. 1669.** *Stuyvesant:* B. M. 2 (D. W.) is the center of a square cut in a stone on southeast corner of stone culvert on New York Central & Hudson River Railroad about 1,300 feet south of road to Stuyvesant Lighthouse. It is 6.72 feet above standard sea level; 6.5 feet above mean low water; 4.62 feet above mean tide level.

**Serial No. 1670.** *Stuyvesant:* B. M. 3 (D. W.) is a cross cut on a bolt on the north davit for boat, 3 feet north of northwest corner of Stuyvesant Lighthouse, 1½ miles north of Stuyvesant. It is 9.08 feet above standard sea level; 8.9 feet above mean low water; 6.98 feet above mean tide level.

**Serial No. 1671.** *Stuyvesant:* B. M. 4 (D. W.) is the center of a square cut in the top stone on the southwest corner of bridge No. 326, New York Central & Hudson River Railroad, about 2,600 feet south of the south end of Hotaling. It is 8.68 feet above standard sea level; 8.5 feet above mean low water; 6.58 feet above mean tide level.

**Serial No. 1672.** *Stuyvesant:* B. M. 5 (D. W.) is the center of a square cut in the natural ledge, 60 feet east of the New York Central & Hudson River Railroad track in line with the south side of warehouse of dock for loading brick, opposite New Baltimore Lighthouse, 1½ miles south of Schodack Landing. It is 11.05 feet above standard sea level; 10.8 feet above mean low water; 8.95 feet above mean tide level.

**Serial No. 1673.** *Stuyvesant:* B. M. 1h (C. & G. S.) is a cross in a circle cut in the stone on the southwest corner of the sill of the door to waiting room on west side of the station. It is 13.33 feet above standard sea level; 13.1 feet above mean low water; 11.23 feet above mean tide level.

**Serial No. 1674.** *Schodack:* B. M. 1f (C. & G. S.) is the top of a roundheaded fishplate bolt set vertically on the northeast corner of the top stone, at the east end of the south abutment of sluice bridge No. 328, about 600 feet north of milepost 129, 1½ miles south of Schodack Landing. It is 5.92 feet above standard sea level; 5.2 feet above mean low water; 3.63 feet above mean tide level.

**Serial No. 1675.** *Schodack:* B. M. K<sub>1</sub> (C. & G. S.) is the bottom of a square hole, lettered "U. S. B. M.," cut in the top of hard rock, five rails north of culvert No. 329, 8 feet east of east rail and about on level with the top of this rail. It is 10.74 feet above standard sea level; 10.0 feet above mean low water; 8.45 feet above mean tide level.

**Serial No. 1676.** *Castleton:* B. M. 1 (D. W.) is a cross cut on stone on the east side of foundation of water tank, near signal tower 94 and opposite Mulls Lighthouse, about 2½ miles south of Castleton. The bench mark is the highest part of the stone in the southeast quadrant formed by the intersecting lines. It is 14.58 feet above standard sea level; 13.5 feet above mean low water; 12.18 feet above mean tide level.

**Serial No. 1677.** *Castleton:* B. M. 2 (D. W.) is a square cut on stone on the east end of culvert No. 337 of the New York Central & Hudson River Railroad, about 2,000 feet south of Castleton Lighthouse. It is 10.14 feet above standard sea level; 9.1 feet above mean low water; 7.74 feet above mean tide level.

**Serial No. 1678.** *Castleton:* B. M. 3 (D. W.) is a cross in a circle cut in stone forming the second step of the southwest wing wall of bridge No. 339 of the New York Central & Hudson River Railroad, 1 mile south of Castleton and opposite Castleton Lighthouse. It is 12.17 feet above standard sea level; 11.1 feet above mean low water; 9.77 feet above mean tide level.

**Serial No. 1679.** *Castleton:* B. M. 5 (D. W.) is a square cut in stone at the northwest corner of the north abutment of bridge No. 341 of the New York Central & Hudson River Railroad, opposite the lower end of Campbells Island, and about 1

mile north of Castleton station. It is 12.78 feet above standard sea level; 11.7 feet above mean low water; 10.38 feet above mean tide level.

**Serial No. 1680.** *Castleton:* B. M. L<sub>1</sub> (C. & G. S.) is the intersection of two lines cut in the end of a copper bolt leaded horizontally into brick, in the rear (west) wall of Phibb's Opera House, 21 bricks or about 5 feet above the ground, and 4 bricks or about 33 inches north of the southwest corner of the building, 500 feet south of the railroad station and 20 feet east of the east rail. It is lettered "U. S. B. M." It is 18.59 feet above standard sea level; 17.5 feet above mean low water; 16.19 feet above mean tide level.

**Serial No. 1681.** *Castleton:* B. M. Ib (C. & G. S.) is a cross in a circle cut on the southwest corner of the stone sill at the north door on the west side of the New York Central & Hudson River Railroad Depot. It is 16.91 feet above standard sea level; 15.9 feet above mean low water; 14.51 feet above mean tide level.

**Serial No. 1682.** *Rensselaer:* B. M. 1 "Gristmill" (C. & G. S.) is a cross cut in the northwest (river) face of the northeast corner of stone foundation to an old gristmill at the foot of Second Avenue, just opposite to Albany. The letters "B. M." are painted in white near the mark. This structure was replaced about 1905 by an office building on the same foundation and is now (1921) used by the Ulster Davis Co. Center of cross is 2.01 feet southwest from the north corner and 4.05 feet down from top of the stone foundation. Bench mark is 13.86 feet above standard sea level; 12.5 feet above mean low water; 11.26 feet above mean tide level.

**Serial No. 1683.** *Rensselaer:* B. M. 3 (C. & G. S.) is the center of a cross cut on the west corner of the northwest abutment wing of the stone arch culvert a few yards south of the concrete railroad bridge over Second Avenue. Bench mark is on that tier of stone which is one-half meter above B. M. 1692. Bench mark is 15.68 feet above standard sea level; 14.3 feet above mean low water; 13.08 feet above mean tide level.

**Serial No. 1684.** *Rensselaer:* B. M. 4 (C. & G. S.) is the center of a cross cut in the water sill on the south front of the Rensselaer House 1.07 feet west of the southeast corner of brownstone water sill and 0.31 foot above the lower edge of sill. Bench mark is 20.59 feet above standard sea level; 19.2 feet above mean low water; 17.99 feet above mean tide level.

**Serial No. 1685.** *Rensselaer:* B. M. 5 (C. & G. S.) is a cross cut on southwest corner of railroad bridge over Aiken Avenue (formerly Mill Street). Bench mark is 20.46 feet above standard sea level; 19.1 feet above mean low water; 17.86 feet above mean tide level.

**Serial No. 1686.** *Rensselaer:* B. M. 6 (C. & G. S.) is the center of a  $\frac{3}{8}$ -inch brass bolt leaded horizontally in the stone foundation of the Ulster Davis Co. office building, on the side facing the river, at the foot of Second Avenue. It is marked "U. S. B. M." above the bolt, and "A" beneath it. The bolt is about 1.8 feet above the ground, and 4.3 feet northeast of the north edge of door, and 6.7 feet southwest of B. M. 1 "Gristmill." It is known as Lake Survey B. M. 1. Bench mark is 13.92 feet above standard sea level; 12.5 feet above low water; 11.32 feet above mean tide level.

**Serial No. 1687.** *Rensselaer:* B. M. 8 (C. & G. S.) is a cross cut on top of stone at southwest corner of foundation of water tank at south end of viaduct on which Broadway Street crosses the New York Central & Hudson River Railroad tracks. The highest part of the cross is the reference mark. It is known as Lake Survey B. M. 3, and Deep Waterways B. M. 1898. Bench mark is 21.33 feet above standard sea level; 19.9 feet above mean low water; 18.73 feet above mean tide level.

**Serial No. 1688.** *Rensselaer:* B. M. 9 (C. & G. S.) is the point on top of east shoulder of northeast end of southeast pier of upper railroad bridge across Hudson River, and is marked "B. M." (Established by U. S. Engineers.) It is also known as Lake Survey B. M. 4. Bench mark is 26.27 feet above standard sea level; 24.9 feet above mean low water; 23.67 feet above mean tide level.

**Serial No. 1689.** *Rensselaer:* B. M. 10 (C. & G. S.) is the bottom of a square hole cut in the first stone above ground on the west corner of the foundation of the pier supporting the southwest end of the first bend of the iron trestle approaching the bridge by which the Albany and Hudson "third rail" electric road crosses the New York Central & Hudson River Railroad tracks, about a mile south of the railroad station at Rensselaer, N. Y. It is marked "U. S. B. M." and is about 40 feet of the east rail. It is known as B. M. M<sub>1</sub>. Bench mark is 26.88 feet above standard sea level; 25.4 feet above mean low water; 24.28 feet above mean tide level.

**Serial No. 1690.** *Rensselaer:* B. M. 11 (C. & G. S.) is the top of a rounded fishplate bolt set vertically in a rock near a pork-packing house at the south end of an open

ditch where water goes underground, at the west side of an overhead bridge in the southern part of Rensselaer (formerly Greenbush), N. Y. It was established by the New York Central & Hudson River Railroad engineers. It is also known as B. M. "V. O. 1". Bench mark is 21.99 feet above standard sea level; 20.6 feet above mean low water; 19.39 feet above mean tide level.

**Serial No. 1691.** *Rensselaer:* B. M. 12 (C. & G. S.) is the bottom of a square hole marked, "U. S. B. M.", on the water table of the brick car house of the electric railway company, about half a mile south of the railroad station at Rensselaer. It is about 200 yards south of Second Avenue, 100 feet west of the west rail of the New York Central & Hudson River Railroad, 3 feet from the northeast corner of the building and 3 feet above the ground. It is known as B. M. N<sub>1</sub>. Bench mark is 17.61 feet above standard sea level; 16.2 feet above mean low water; 15.01 feet above mean tide level.

**Serial No. 1692.** *Rensselaer:* B. M. 13 (U. S. E.) was originally the upper side of the head of a copper bolt leaded into the springing stone of north arch of culvert of Boston & Albany Railroad, a few rods south of bridge over Second Avenue, Rensselaer, formerly Greenbush. The mark is on the north side of culvert and west side of railroad. In 1902 it was found that the bolt had been removed, and a cross mark was made beside the hole, on the north side, with the horizontal line, which was used as the bench mark, on an estimated level with the center of the hole. Bench mark is 14.10 feet above standard sea level; 12.7 feet above mean low water; 11.50 feet above mean tide level.

**Serial No. 1693.** *Albany:* B. M. 1 (C. & G. S.) is the center of a cross cut into top of upper stone of masonry at southwest corner of east wall of west lock (Lock No. 1) at Albany. It is known also as B. M. 6 Lake Survey, B. M. 4a New York. It is marked "B. M. U. S." Bench mark is 16.82 feet above standard sea level; 15.4 feet above mean low water; 14.22 feet above mean tide level.

**Serial No. 1694.** *Albany:* B. M. 2 (C. & G. S.) is a cross cut in a circle on top of coping between the ends of the anchor on the southwest gate of west lock of Lock No. 2, at Albany. It is known also as Lake Survey B. M. 6 and New York B. M. 5. Bench mark is 26.20 feet above standard sea level; 24.8 feet above mean low water; 23.60 feet above mean tide level.

**Serial No. 1695.** *Albany:* B. M. 3 (C. & G. S.) is the bottom of a square hole cut in the first step of towpath abutment; east end of south wing wall of Delaware & Hudson Railroad bridge over Erie Canal, a little north of Albany. It is known also as B. M. 7 Lake Survey and B. M. 6 New York. Bench mark is 30.04 feet above standard sea level; 28.6 feet above mean low water; 27.44 feet above mean tide level.

**Serial No. 1696.** *Albany:* B. M. 4 (C. & G. S.) is a cross cut in iron bolt, northeast corner of north coping stone, west abutment of Island Bridge, foot of State Street. It is known also as B. M. 1 New York. Bench mark is 12.84 feet above standard sea level; 11.4 feet above mean low water; 10.24 feet above mean tide level.

**Serial No. 1697.** *Albany:* B. M. 5 (C. & G. S.) is a cross in a circle cut in the lower basement window sill at east end of State Street side of Government building at foot of State Street. It is known also as B. M. 2 New York. Bench mark is 18.45 feet above standard sea level; 17.0 feet above mean low water; 15.85 feet above mean tide level.

**Serial No. 1698.** *Albany:* B. M. 6 (C. & G. S.) is a cross in a circle cut on the shelf at the lower end of pier between locks at Lock No. 1, Erie Canal. It is known also as B. M. 4 New York. Bench mark is 10.12 feet above standard sea level; 8.7 feet above mean low water; 7.52 feet above mean tide level.

**Serial No. 1699.** *Albany:* B. M. 7 (C. & G. S.) is a cross in a circle cut on the north end of towpath parapet of the culvert east of bridge No. 6, Erie Canal, near Albany. It is known also as B. M. 5a New York, and Canal B. M. 1. Bench mark is 25.02 feet above standard sea level; 23.6 feet above mean low water; 22.42 feet above mean tide level.

**Serial No. 1700.** *Albany:* B. M. 8 (C. & G. S.) is on the miter sill of southwest, or Lower Lock No. 1, Erie Canal at Albany. It is known also as B. M. "Miter Sill." Bench mark is 5.46 feet above standard sea level; 4.1 feet above mean low water; 2.86 feet above mean tide level.

**Serial No. 1701.** *Troy:* B. M. 2 (D. W.) is a cross within a square cut at the south end of the east side of the Trojan Warehouse of the Fuller & Warren Co., on the northwest corner of Monroe and River Streets on the north end of the stone doorsill. It is 23.76 feet above standard sea level; 22.1 feet above mean low water; 20.96 feet above mean tide level.

**Serial No. 1702.** *Troy:* B. M. O<sub>1</sub> (C. & G. S.) is the intersection of two lines cut in the end of a copper bolt leaded horizontally into brick of the front (north) wall, 2 feet from the northwest corner and about 4 feet 8 inches above the ground in the third brick from the corner and the nineteenth above the stone foundation of the brick building of the Hudson River Terminal Warehouse Company, a prominent building just east of the New York Central & Hudson River Railroad on Jackson Street, in the southern edge of the city. Bench mark is lettered "U. S. B. M." It is 26.8 feet above standard sea level; 25.2 feet above mean low water; 24.00 feet above mean tide level.

**Serial No. 1703.** *Troy:* B. M. P<sub>1</sub> (C. & G. S.) is the intersection of two lines cut in the end of a copper bolt leaded horizontally into brick on the rear (E) wall of the brick building of the International Shirt & Collar Co., on the northeast corner of Adams and River Streets, 5 feet above the ground and 18 inches from the southeast corner in the center of the third brick from the corner and the twentieth above the ground. It is 27.18 feet above standard sea level; 25.5 feet above mean low water; 24.38 feet above mean tide level.

**SECTION M.—ELEVATIONS OF BENCH MARKS, SERIAL NOS. 1704 TO 1869: STATEN ISLAND.**

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1704	St. George	50.9	55.0	57.18	59.4	63.4
1705	do.	51.7	55.8	57.94	60.2	64.2
1706	do.	37.1	41.2	43.32	45.6	49.6
1707	do.	3.1	7.2	9.38	11.6	15.6
1708	do.	68.3	72.4	74.51	76.8	80.8
1709	Tompkinsville	28.4	32.5	34.70	36.9	40.9
1710	do.	3.7	7.8	9.91	12.2	16.2
1711	do.	5.6	9.7	11.90	14.1	18.1
1712	do.	34.7	38.8	41.00	43.2	47.2
1713	do.	29.4	33.5	35.62	37.9	41.9
1714	Stapleton	3.5	7.0	9.71	12.0	16.0
1715	do.	28.8	32.9	35.04	37.3	41.3
1716	do.	22.2	26.3	28.47	30.7	34.7
1717	Clifton	0.4	10.2	12.56	14.9	18.9
1718	do.	4.9	8.7	11.07	13.4	17.4
1719	Rosebank	36.1	39.9	42.19	44.6	48.6
1720	do.	34.7	38.5	40.83	43.2	47.2
1721	do.	38.4	42.2	44.51	46.9	50.9
1722	Fort Wadsworth	90.9	94.7	97.08	99.4	103.4
1723	do.	94.1	97.9	100.22	102.6	106.6
1724	do.	101.0	104.8	107.15	109.5	113.5
1725	do.	95.9	99.7	102.02	104.4	108.4
1726	do.	66.9	70.7	73.00	75.4	79.4
1727	do.	18.2	22.0	24.32	26.7	30.7
1728	do.	1.4	5.2	7.54	9.9	13.9
1729	do.	2.6	6.4	8.77	11.1	15.1
1730	do.	7.5	11.3	13.69	16.0	20.0
1731	do.	1.4	5.2	7.52	9.9	13.9
1732	Grasmere	40.0	43.8	46.18	48.5	52.5
1733	do.	47.3	51.1	53.44	55.8	59.8
1734	do.	85.7	89.5	91.83	94.2	98.2
1735	do.	89.7	93.5	95.86	98.2	102.2
1736	Artochar	62.0	65.8	68.18	70.5	74.5
1737	do.	59.9	63.7	66.00	68.4	72.4
1738	do.	56.1	59.9	62.25	64.6	68.6
1739	South Beach	4.1	7.9	10.27	12.6	16.6
1740	do.	7.0	10.8	13.10	15.5	19.5
1741	do.	6.9	10.7	13.08	15.4	19.4
1742	do.	3.2	7.0	9.38	11.7	15.7
1743	do.	3.2	7.0	9.33	11.7	15.7
1744	Garretsons	57.6	61.1	63.57	66.1	70.1
1745	do.	55.4	58.9	61.41	63.9	67.9
1746	do.	38.1	41.6	44.12	46.6	50.6
1747	Grant City	29.8	33.3	35.79	38.3	42.3
1748	do.	32.9	36.4	38.92	41.4	45.4

## SECTION M.—Elevations of bench marks, serial Nos. 1704 to 1869: Staten Island—Contd.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
		<i>Feet.</i>	<i>Fert.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1749	Grant City.....	33.0	36.5	39.00	41.5	45.5
1750	New Dorp.....	64.5	53.0	60.46	63.0	67.0
1751	do.....	42.1	45.6	48.13	50.0	54.6
1752	do.....	14.1	17.6	20.08	22.6	26.6
1753	do.....	9.1	12.6	15.12	17.6	21.6
1754	do.....	- 0.3	3.2	5.74	8.2	12.2
1755	do.....	0.4	3.9	6.39	8.9	12.9
1756	do.....	85.8	89.3	91.82	94.3	98.3
1757	do.....	42.7	46.2	48.69	51.2	55.2
1758	do.....	115.1	118.6	121.06	123.6	127.6
1759	New Dorp Beach.....	0.9	4.4	6.96	9.4	13.4
1760	do.....	2.5	6.4	8.94	11.4	15.4
1761	do.....	3.3	6.8	9.23	11.8	15.8
1762	Richmond.....	42.8	46.3	48.80	51.3	55.3
1763	do.....	36.5	40.0	42.47	45.0	49.0
1764	do.....	42.9	46.4	48.92	51.4	55.4
1765	do.....	71.8	75.3	77.85	80.3	84.3
1766	do.....	73.0	77.1	79.61	82.1	86.1
1767	do.....	7.9	11.4	13.95	16.4	20.4
1768	Oakwood.....	51.1	54.6	57.12	59.6	63.6
1769	do.....	52.3	55.8	58.28	60.8	64.8
1770	do.....	33.0	36.5	38.97	41.5	45.5
1771	Giffords.....	65.1	68.5	71.07	73.6	77.6
1772	do.....	66.6	70.0	72.56	75.1	79.1
1773	Eltlingville.....	55.8	59.2	61.72	64.3	68.3
1774	Annadale.....	74.3	77.6	80.22	82.8	86.8
1775	do.....	73.0	76.3	78.86	81.5	85.5
1776	do.....	89.2	92.5	95.10	97.7	101.7
1777	do.....	79.4	82.7	85.35	87.9	91.9
1778	Huguenot.....	65.2	68.4	71.02	73.7	77.7
1779	do.....	66.1	69.3	72.01	74.6	78.6
1780	Princes Bay.....	42.6	45.8	48.46	51.1	55.1
1781	do.....	28.3	31.5	34.13	36.8	40.8
1782	Pleasant Plains.....	27.2	30.4	33.05	35.7	39.7
1783	do.....	30.2	42.4	45.09	47.7	51.7
1784	Richmond Valley.....	36.9	40.1	42.71	45.4	49.4
1785	do.....	2.5	5.7	8.34	11.0	15.0
1786	do.....	1.0	4.2	6.85	9.5	13.5
1787	do.....	15.3	18.5	21.12	23.8	27.8
1788	do.....	15.2	18.4	21.07	23.7	27.7
1789	do.....	15.3	18.5	21.13	23.8	27.8
1790	Tottenville.....	1.2	4.4	7.01	9.7	13.7
1791	do.....	7.6	10.8	13.49	16.1	20.1
1792	do.....	34.0	37.2	39.86	42.5	46.5
1793	do.....	42.9	46.1	48.76	51.4	55.4
1794	do.....	72.5	75.7	78.37	81.0	85.0
1795	do.....	74.0	77.2	79.85	82.5	86.5
1796	do.....	72.8	76.0	78.68	81.3	85.3
1797	do.....	73.9	77.1	79.78	82.4	86.4
1798	Krelscher ville.....	57.2	60.4	63.08	65.7	69.7
1799	do.....	42.1	45.3	47.96	50.6	54.6
1800	do.....	54.4	57.6	60.20	62.9	66.9
1801	do.....	18.3	21.5	24.11	26.8	30.8
1802	Rossville.....	14.1	17.3	19.99	22.6	26.6
1803	do.....	0.4	9.6	12.24	14.9	18.9
1804	do.....	4.1	7.3	9.93	12.6	16.6
1805	do.....	14.8	18.0	20.68	23.3	27.3
1806	do.....	7.5	10.7	13.37	16.0	20.0
1807	do.....	67.5	70.7	73.38	76.0	80.0
1808	do.....	8.8	12.0	14.62	17.3	21.3
1809	do.....	8.7	11.9	14.51	17.2	21.2
1810	Fresh Kills.....	0.2	9.4	12.01	14.7	18.7
1811	do.....	15.0	18.2	20.89	23.5	27.5
1812	do.....	4.2	7.4	10.02	12.7	16.7
1813	do.....	4.0	7.8	10.42	13.1	17.1

## SECTION M.—Elevations of bench marks, serial Nos. 1704 to 1869: Staten Island—Contd.

Serial No.	Locality.	Elevations of bench marks above—				
		Highest tide.	Mean high water.	Standard sea level.	Mean low water.	Lowest tide.
1814	Fresh Kills .....	5.1	8.3	10.08	13.6	17.6
1815	do. ....	8.6	11.8	14.44	17.1	21.1
1816	do. ....	6.6	9.8	12.48	15.1	19.1
1817	do. ....	8.0	11.2	13.84	16.5	20.5
1818	Greenridge.....	38.8	42.0	44.64	47.3	51.3
1819	do. ....	39.5	42.7	45.36	48.0	52.0
1820	New Springville.....	16.4	19.0	22.43	24.9	28.0
1821	Union Avenue.....	4.2	7.7	10.22	12.7	16.7
1822	Linoloumville.....	33.3	36.8	39.32	41.8	45.8
1823	do. ....	40.0	43.5	46.00	48.5	52.5
1824	do. ....	33.3	36.8	39.25	41.8	45.8
1825	do. ....	22.1	25.6	28.06	30.6	34.6
1826	Travisville.....	18.6	22.1	24.58	27.1	31.1
1827	Bloomfield.....	10.1	13.6	16.08	18.6	22.6
1828	Watchogue.....	3.2	6.7	9.24	11.7	15.7
1829	do. ....	3.1	6.6	9.05	11.6	15.6
1830	Summersville.....	14.9	18.8	21.14	23.4	27.4
1831	Old Place.....	5.8	9.7	11.99	14.3	18.3
1832	Howland Hook.....	1.7	5.6	7.92	10.2	14.2
1833	do. ....	14.1	18.0	20.31	22.6	26.6
1834	do. ....	17.6	21.5	23.77	26.1	30.1
1835	do. ....	20.9	24.8	27.05	29.4	33.4
1836	North Shore.....	13.2	17.1	19.39	21.7	25.7
1837	Shooters Island.....	3.3	7.2	9.47	11.8	15.8
1838	Mariners Harbor.....	3.9	7.8	10.08	12.4	16.4
1839	do. ....	4.4	8.3	10.59	12.9	16.9
1840	do. ....	3.9	7.8	10.07	12.4	16.4
1841	do. ....	3.5	7.4	9.73	12.0	16.0
1842	do. ....	3.9	7.8	10.07	12.4	16.4
1843	Arlington.....	47.8	51.7	54.02	56.3	60.3
1844	do. ....	39.8	43.7	45.06	48.3	52.3
1845	do. ....	40.4	44.3	46.64	48.9	52.9
1846	do. ....	4.6	8.5	10.83	13.1	17.1
1847	Elm Park.....	8.2	12.1	14.36	16.7	20.7
1848	do. ....	6.1	10.0	12.30	14.6	18.6
1849	Port Richmond.....	14.3	18.2	20.54	22.8	26.8
1850	do. ....	4.6	8.5	10.77	13.1	17.1
1851	do. ....	5.5	9.4	11.68	14.0	18.0
1852	do. ....	9.7	13.6	15.88	18.2	22.2
1853	do. ....	3.6	7.5	9.84	12.1	16.1
1854	do. ....	4.3	8.2	10.50	12.8	16.8
1855	do. ....	10.2	23.1	25.44	27.7	31.7
1856	do. ....	17.6	21.5	23.85	26.1	30.1
1857	West New Brighton.....	7.1	11.0	13.32	15.6	19.6
1858	do. ....	2.6	6.5	8.79	11.1	15.1
1859	do. ....	2.4	6.3	8.64	10.9	14.9
1860	Livingston.....	13.8	17.7	20.00	22.3	26.3
1861	Sailors Snug Harbor.....	31.1	35.0	37.34	39.6	43.6
1862	do. ....	18.2	22.1	24.44	26.7	30.7
1863	do. ....	6.3	10.2	12.56	14.8	18.8
1864	do. ....	0.6	4.5	6.78	9.1	13.1
1865	New Brighton.....	6.0	10.8	13.08	15.4	19.4
1866	do. ....	6.8	10.7	13.01	15.3	19.3
1867	do. ....	48.3	52.2	54.54	56.8	60.8
1868	do. ....	22.9	26.8	29.15	31.4	35.4
1869	do. ....	28.9	32.8	35.07	37.4	41.4

DESCRIPTIONS OF BENCH MARKS, SERIAL NOS. 1704 TO 1869: STATEN ISLAND.

**Serial No. 1704.** *St. George:* B. M. 141 (B. E. & A.) is a 1½-inch square cut in the top of the north end of the lowest granite step at the southeast entrance to the Richmond Borough Hall, on the northwest corner of Jay and South Streets. The bench mark is on the Jay Street side of the building and 6 inches above the walk. Elevation: 59.4 feet above mean low water; 57.18 feet above standard sea level.

**Serial No. 1705.** *St. George:* B. M. 142 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, set horizontally into the southeast corner of the Richmond Borough Hall, on the northwest corner of Jay and South Streets. The bench mark is in the limestone block under the inscribed cornerstone, faces Jay Street, and is 1.75 feet above the walk. Elevation: 60.2 feet above mean low water; 57.94 feet above standard sea level.

**Serial No. 1706.** *St. George:* B. M. 143 (B. E. & A.) is a 2-inch square cut in the top of the west end of the granite base block of electric lamp at the west end of the concrete wall between the two wagon approaches to the New York Ferry. The bench mark is about 35 feet north of the grounds of the United States Lighthouse Department and about 5 feet east of the center line of Jay Street. Elevation: 45.6 feet above mean low water; 43.32 feet above standard sea level.

**Serial No. 1707.** *St. George:* B. M. 144 (B. E. & A.) is a 2-inch square cut in the top of the sea wall at the foot of South Street, just east of the grounds of the United States Lighthouse Department. The bench mark is on the outshore edge of the coping, is 25.35 feet east of the crib bulkhead at the foot of South Street, and 7 feet east of the east end of the brick wall on the south side of the street. Elevation: 11.6 feet above mean low water; 9.38 feet above standard sea level.

**Serial No. 1708.** *St. George:* B. M. 145 (B. E. & A.) is a square cut in the top of the southeast corner of the lowest granite step just north of the south lamp at the west entrance to the Richmond Borough Hall. This is Richmond topographical B. M. No. 456. Elevation: 76.8 feet above mean low water; 74.51 feet above standard sea level.

**Serial No. 1709.** *Tompkinsville:* B. M. 146 (B. E. & A.) is a 1-inch square cut in the top of the south end of the granite curb at the corner of the retaining wall on the east side of Central Avenue, about 43 feet south of the north line of Arrietta Street. Elevation: 36.9 feet above mean low water; 34.70 feet above standard sea level.

**Serial No. 1710.** *Tompkinsville:* B. M. 147 (B. E. & A.) is a 1-inch square cut in the top of the southeast corner of the first step at the store entrance to the four-story brick house at No. 65 Arrietta Street, formerly No. 1. The corner of the step is lettered "B. W. S." and is about 40 feet west of the inshore end of the pier. Elevation: 12.2 feet above mean low water; 9.91 feet above standard sea level.

**Serial No. 1711.** *Tompkinsville:* B. M. 148 (B. E. & A.) is a square cut in the top of the west end of the top step at the house entrance to No. 65 Arrietta Street, formerly No. 1. The building is four-story brick, is on the north side of the street, and near the pier. Elevation: 14.1 feet above mean low water; 11.90 feet above standard sea level.

**Serial No. 1712.** *Tompkinsville:* B. M. 149 (B. E. & A.) is the center of the surface within a quadrant cut in the top of the southeast corner of the lowest granite step at the store entrance to the three-story brick house at No. 12 Griffin Street. This point is Richmond topographical B. M. No. 9 and the building was formerly the post office. Elevation: 43.2 feet above mean low water; 41.00 feet above standard sea level.

**Serial No. 1713.** *Tompkinsville:* B. M. 150 (B. E. & A.) is a square lettered "B. W. S." cut in the top of the southwest corner of the concrete retaining wall on the southeast corner of Arrietta Street and the Boulevard, about 50 feet west of the center line of Minthorne Street. The bench mark is 9½ inches above the sidewalk and just west of the southwest corner of Arrietta Street and Minthorne Street. Elevation: 37.9 feet above mean low water; 35.62 feet above standard sea level.

**Serial No. 1714.** *Stapleton:* B. M. 151 (B. E. & A.) is the top of a ¾-inch iron rod inside of a wrought-iron pipe casing in Stapleton Park, near the northeast corner. The bench mark is on line with the easterly curb line of Beach Street, is about 45 feet west of the west curb line of Bay Street, and about 20 feet south of the south curb line of Water Street. The top of the pipe casing is 10 inches above the ground. Elevation: 12.0 feet above mean low water; 9.71 feet above standard sea level.

**Serial No. 1715.** *Stapleton:* B. M. 152 (B. E. & A.) is the bottom of a square cut in the top of the granite water table at the extreme southeast corner of Public

School No. 14, at the northwest corner of Broad and Brook Streets. The bench mark is 1.25 feet above the sidewalk. Elevation: 37.3 feet above mean low water; 35.04 feet above standard sea level.

**Serial No. 1716.** *Stapleton:* B. M. 153 (B. E. & A.) is a cross cut in the granite foundation of the southeast corner of Public School No. 14, on the northwest corner of Broad and Brook Streets. The bench mark faces Brook Street, is 9½ inches above the sidewalk, and 7 inches from the corner of the building. Elevation: 30.7 feet above mean low water; 28.47 feet above standard sea level.

**Serial No. 1717.** *Clifton:* B. M. 154 (B. E. & A.) is the center of the surface within a quadrant cut in the top of the northeast corner of the bluestone water table of the two-story and attic brick and frame house on the southwest corner of Norwood Avenue and Bay Street. The point is 6 inches above the sidewalk. (Richmond topographical B. M. No. 12.) Elevation: 14.9 feet above mean low water; 12.56 feet above standard sea level.

**Serial No. 1718.** *Clifton:* B. M. 155 (B. E. & A.) is a cross cut in the top of the southwest corner of the water table of Scott's stables, on the northeast corner of Bay Street and Norwood Avenue (Amos Street). The water table is flush with the sidewalk. Elevation: 13.4 feet above mean low water; 11.07 feet above standard sea level.

**Serial No. 1719.** *Rosebank:* B. M. 156 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter set horizontally into the limestone at the south side of the northeast buttress of Public School No. 13, on the southwest corner of Anderson Avenue and Clifton Avenue. The bench mark is about 40 feet south of the north end of the building, is 1.5 feet from the east side of the buttress and 2 feet above the ground. Elevation: 44.6 feet above mean low water; 42.19 feet above standard sea level.

**Serial No. 1720.** *Rosebank:* B. M. 157 (B. E. & A.) is a cross cut in the granite foundation on the east side of Public School No. 13, on the southwest corner of Anderson Avenue and Clifton Avenue. The bench mark is on the south side of the northeast buttress, is 8 inches above the ground, and about 40 feet from the north end of the building. Elevation: 43.2 feet above mean low water; 40.83 feet above standard sea level.

**Serial No. 1721.** *Rosebank:* B. M. 158 (B. E. & A.) is a 2-inch square cut in the top of the northeast corner of the bluestone coping of retaining wall on the west side of Anderson Avenue, in front of Public School No. 13. The bench mark is about 65 feet south of the Clifton Avenue corner of the wall and 5 feet above the sidewalk. Elevation: 46.9 feet above mean low water; 44.51 feet above standard sea level.

**Serial No. 1722.** *Fort Wadsworth:* B. M. 107 (B. E. & A.) is a 2-inch square cut in the top of the east side of the concrete coping of a square duct manhole on the southeast corner of Richmond Avenue and New York Avenue. The bench mark is 2.5 feet northwest of a high granite post at the corner. Elevation: 99.4 feet above mean low water; 97.08 feet above standard sea level.

**Serial No. 1723.** *Fort Wadsworth* B. M. 108 (B. E. & A.) is the top of a ¾-inch iron rod inside of a wrought-iron pipe casing in the center of the west sidewalk of New York Avenue, about 475 feet north of Richmond Avenue. The bench mark is about 20 feet from the curb and 44.5 feet southeasterly from the southeast corner of the post exchange. Elevation: 102.6 feet above mean low water; 100.22 feet above standard sea level.

**Serial No. 1724.** *Fort Wadsworth:* B. M. 109 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, cemented horizontally into the first course of limestone in the northeast corner of the one-story and basement red-brick post exchange building 30 feet west of New York Avenue and about 555 feet north of Richmond Avenue. The bench mark is on the north side of the building, 5.5 feet above the ground, and 4 inches from the corner. Elevation: 109.5 feet above mean low water; 107.15 feet above standard sea level.

**Serial No. 1725.** *Fort Wadsworth:* B. M. 110 (B. E. & A.) is the center of the horizontal bar of a T cut in the bluestone coping at the northeast corner of the one-story and basement red-brick post exchange building 30 feet west of New York Avenue and about 555 feet north of Richmond Avenue. The bench mark is on the north side of the building and 6 inches above the ground. Elevation: 104.4 feet above mean low water; 102.02 feet above standard sea level.

**Serial No. 1726.** *Fort Wadsworth:* B. M. 111 (B. E. & A.) is a square cut in the top of the northeast corner of a large granite post at the northerly entrance to the military reservation. The bench mark is 50 feet east of New York Avenue and at the south side of the road. Elevation: 75.4 feet above mean low water; 73.00 feet above standard sea level.

**Serial No. 1727.** *Fort Wadsworth:* B. M. 174 (B. E. & A.) is the highest point within a square cut in the top of the northeast corner of the 4-inch granite water table at the northeast corner of the red-brick torpedo storehouse in the military reservation at Fort Wadsworth. The building is on the west side of the steep road leading to the dock. Elevation: 26.7 feet above mean low water; 24.32 feet above standard sea level.

**Serial No. 1728.** *Fort Wadsworth:* B. M. 175 (B. E. & A.) is a square cut in the top of the outshore edge of the sea wall at Fort Wadsworth, 40.8 feet southeasterly from the old iron ringbolt opposite the large granite buttress near the north end of the old fort. Elevation: 9.9 feet above mean low water; 7.54 feet above standard sea level.

**Serial No. 1729.** *Fort Wadsworth:* B. M. "South Dock" (U. S. E.) is a square cut in the northwest corner of the stone dock near the south end of the reservation at Fort Wadsworth. The bench mark is on the same pier as "South Dock" Station. Elevation: 11.1 feet above mean low water; 8.77 feet above standard sea level.

**Serial No. 1730.** *Fort Wadsworth:* B. M. 176 (B. E. & A.), is the center of the horizontal bar of a T cut in the extreme northerly corner of old Fort Wadsworth. The bench mark is in the granite-wall at the acute angle corner and 5 feet above the ground. Elevation: 16.0 feet above mean low water; 13.69 feet above standard sea level.

**Serial No. 1731.** *Fort Wadsworth:* B. M. 177 (B. E. & A.) is a square cut in the top of the outshore edge of the sea wall at Fort Wadsworth. The bench mark is 44.5 feet southeasterly from the extreme northerly corner of the old granite fort, is 20 feet from the buttress face and in front of an old iron ringbolt in the sea wall. Elevation: 9.9 feet above mean low water; 7.52 feet above standard sea level.

**Serial No. 1732.** *Grasmere:* B. M. 100 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in topographical monument No. 37, on the westerly side of the Southside Boulevard about 235 feet north of Old Town Road. The monument is 18 feet southeast of the low iron railing at the gate in front of the Tocci estate, and 6 inches below the ground. Elevation: 48.5 feet above mean low water; 46.18 feet above standard sea level.

**Serial No. 1733.** *Grasmere:* B. M. 101 (B. E. & A.) is the bottom of a 2-inch square cut in the top of the southerly corner of stone culvert wall on the northwesterly side of the Southside Boulevard, between Parkinson Avenue and Old Town Road, just east of the Tocci estate. An arrowhead points to the bench mark. Elevation: 55.8 feet above mean low water; 53.44 feet above standard sea level.

**Serial No. 1734.** *Grasmere:* B. M. 102 (B. E. & A.) is a cross cut in the bluestone on the northwesterly side of the most westerly of two high brick gateposts at the lodge gate on the Cameron estate, on the south side of Fingerboard Road about one-half mile east of Clove Avenue. The bench mark is 1.5 feet above the ground and directly below the iron catch for the small gate. Elevation: 94.2 feet above mean low water; 91.83 feet above standard sea level.

**Serial No. 1735.** *Grasmere:* B. M. 103 (B. E. & A.) is a square with the letters "B. M." alongside, cut in the top of the northeasterly edge of the bluestone coping on top of the brick wall just west of the lodge gate on the Cameron estate, on the south side of Fingerboard Road about one-half mile east of Clove Avenue. The bench mark is 1.2 feet easterly from the side of the brick column at the end of the wall and 4 feet above the ground. Elevation: 98.2 feet above mean low water; 95.86 feet above standard sea level.

**Serial No. 1736.** *Arrochar:* B. M. 104 (B. E. & A.) is the highest point within a 1-inch square cut in the top of the southwest corner of a large stone in the retaining wall on the northeast corner of Sand Lane and Richmond Avenue. The bench mark is on the west side of the wall about 8.5 feet from the Richmond Avenue curb. Elevation: 70.5 feet above mean low water; 68.18 feet above standard sea level.

**Serial No. 1737.** *Arrochar:* B. M. 105 (B. E. & A.) is the intersection of a cross within the chiseled quadrant of a circle on top of the northwest corner of the east abutment of the highway bridge on Richmond Avenue, over the tracks of the Staten Island Rapid Transit Railway, just west of Florida Avenue. The letters "B. M." are cut alongside of the bench mark, which is on the sidewalk grade. Elevation: 68.4 feet above mean low water; 66.00 feet above standard sea level.

**Serial No. 1738.** *Arrochar:* B. M. 106 (B. E. & A.) is the bottom of a square cut in the north end of the bridge seat of the east abutment of highway bridge on Richmond Avenue, over the tracks of the Staten Island Rapid Transit Railway, just west of Florida Avenue. The letters "B. M. B. E." are cut in the stone and surround the bench mark, which is about 4 feet below the sidewalk. Elevation: 64.6 feet above mean low water; 62.25 feet above standard sea level.

**Serial No. 1739.** *South Beach:* B. M. "Concrete Block," (U. S. E.), is an I cut in the southwest corner of concrete block (foundation) in lot with remains of buried building. It is four blocks from the walk. The concrete blocks are next to the merry-go-round, which is southwest of Nunley's Bathing Pavilion. Elevation: 12.6 feet above mean low water; 10.27 feet above standard sea level.

**Serial No. 1740.** *South Beach:* B. M. "A" (U. S. E.) is a square cut in concrete rim of the swimming pool, directly in line of Happyland Pier. It is northeast of entrance to the pool, about 35 feet from same. Elevation: 15.5 feet above mean low water; 13.10 feet above standard sea level.

**Serial No. 1741.** *South Beach:* B. M. "B" (U. S. E.) is a square cut in the concrete rim of the swimming pool directly on line of Happyland Pier. It is about 35 feet northeast of entrance to the pool. Elevation: 15.4 feet above mean low water; 13.08 feet above standard sea level.

**Serial No. 1742.** *South Beach:* B. M. "C" (U. S. E.) is a square cut in the concrete sidewalk directly in front of the second concession from the Ferris wheel near the scenic railway. It is also the second concession from the large arcade. The scenic railway and the Ferris wheel referred to are the first ones along board walk coming from Happyland Pier. Elevation: 11.7 feet above mean low water; 9.38 feet above standard sea level.

**Serial No. 1743.** *South Beach:* B. M. "D" (U. S. E.) is a square cut in the cement walk at Gardner's Hotel. It is about 1½ feet from the entrance to the hotel, also about 50 feet northeast of the entrance to South Beach Station. Elevation: 11.7 feet above mean low water; 9.33 feet above standard sea level.

**Serial No. 1744.** *Garretsons:* B. M. 97 (B. E. & A.) is a cross cut in the foundation on the northeasterly side of the Cromwell Hose Co. Building, on the southeasterly corner of Richmond Road and Sea View Avenue. The bench mark is below the granite cornerstone, is 3.6 feet above the ground, and 6 inches from the northerly corner of the building. Elevation: 66.1 feet above mean low water; 63.57 feet above standard sea level.

**Serial No. 1745.** *Garretsons:* B. M. 98 (B. E. & A.) is a ½-inch copper bolt in the top of the north end of the bluestone sill of basement window of the Cromwell Hose Co. Building, on the southeasterly corner of Richmond Road and Sea View Avenue. The bench mark is on the east side of the building and 2.7 feet above the ground. Elevation: 63.9 feet above mean low water; 61.41 feet above standard sea level.

**Serial No. 1746.** *Garretsons:* B. M. 99 (B. E. & A.) is a square cut in the top of the north end of the second step at the southeasterly entrance to Public School No. 11, on the northwesterly side of Jefferson Avenue between Garretson Avenue and Cromwell Avenue. Elevation: 46.6 feet above mean low water; 44.12 feet above standard sea level.

**Serial No. 1747.** *Grant City:* B. M. 94 (B. E. & A.) is a 1½-inch square cut in the top of the northwest corner of the large bluestone doorsill at the main entrance to the Midland Park Hotel, on the northeasterly corner of Lincoln Avenue and Railroad Avenue. The hotel is a two-story building, the lower portion being red brick. Elevation: 38.3 feet above mean low water; 35.79 feet above standard sea level.

**Serial No. 1748.** *Grant City:* B. M. 95 (B. E. & A.) is a square cut in the top of the east end of the second bluestone steps of stoop at the boys' entrance to Public School No. 33 on the northwesterly corner of Washington Avenue and Thompson Street. The bench mark is on the Washington Avenue side of the building. Elevation: 41.4 feet above mean low water; 38.92 feet above standard sea level.

**Serial No. 1749.** *Grant City:* B. M. 96 (B. E. & A.) is a horizontal line in the end of a ¾-inch copper bolt leaded horizontally into the fifth course of brick in the southerly corner of Public School No. 33 on the northwesterly corner of Washington Avenue and Thompson Street. The bolt faces Thompson Street and is 6 inches from the Washington Avenue side of the building. Elevation: 41.5 feet above mean low water; 39.00 feet above standard sea level.

**Serial No. 1750.** *New Dorp:* B. M. 43 (B. E. & A.) is the center of a brass plate in the top of the topographical monument on the southeast corner of Rose Avenue and First Street. The top of the monument is 8 inches below the sidewalk and is protected by a cylindrical iron casing with cover. Elevation: 63.0 feet above mean low water; 60.46 feet above standard sea level.

**Serial No. 1751.** *New Dorp:* B. M. 44 (B. E. & A.) is a ¾-inch copper bolt in the top of the southwest corner of the bluestone doorsill at the house entrance to three-story yellow brick building at No. 127 Fifth Street, between Rose Avenue and New Dorp Lane. The top of the bolt is flush with the step and 6 inches above the sidewalk. Elevation: 50.6 feet above mean low water; 48.13 feet above standard sea level.

**Serial No. 1752.** *New Dorp:* B. M. 45 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the topographical monument at New Dorp Lane and Southside Boulevard. The monument is just northeast of the center line of New Dorp Lane and on the northwesterly curb line of the Boulevard. It is 6 inches below the surface and protected by a square iron casing with cover. Elevation: 22.6 feet above mean low water; 20.08 feet above standard sea level.

**Serial No. 1753.** *New Dorp:* B. M. 46 (B. E. & A.) is the highest point within a  $1\frac{1}{2}$  inch square cut in the top of the southwesterly side of the brownstone watertable at the most westerly corner of the concrete stable on the Vanderbilt estate, on the northerly side of New Dorp Lane opposite Vanderbilt Avenue. The bench mark is about 325 feet southeasterly from the southerly line of Mill Road and about 38 feet northeast of New Dorp Lane. It is 1.75 feet southeasterly from the corner of the stable and 1 foot above the ground. Elevation: 17.6 feet above mean low water; 15.12 feet above standard sea level.

**Serial No. 1754.** *New Dorp:* B. M. 47 (B. E. & A.) is the center of a  $1\frac{1}{2}$ -inch square cut in the top of the southerly corner of the bluestone doorsill at the southwesterly side of the one-story brick laundry building in the grounds of St. John's Guild, near the foot of New Dorp Lane. The bench mark is about 1,550 feet southwest of New Dorp Lane and about 420 feet southeast of Cedar Grove Avenue. Elevation: 8.2 feet above mean low water; 5.74 feet above standard sea level.

**Serial No. 1755.** *New Dorp:* B. M. 48 (B. E. & A.) is the center of a brass bolt marking the U. S. C. & G. S. triangulation station Elm Tree, near the foot of New Dorp Lane. The bolt is about 155 feet northeast of New Dorp Lane and about 87 feet west of Elm Tree Beacon. The bench mark is 1.5 feet below the ground surface, but exposed. Elevation: 8.9 feet above mean low water; 6.39 feet above standard sea level.

**Serial No. 1756.** *New Dorp:* B. M. 50 (B. E. & A.) is the bottom of a square cut in the top of the southeast corner of the bluestone water table of south buttress of the clock tower at the Amboy Road entrance to Ocean View Cemetery, at Grant Avenue. The bench mark is 6 inches above the ground and the letters "B. M." are cut in the water table below. Elevation: 94.3 feet above mean low water; 91.82 feet above standard sea level.

**Serial No. 1757.** *New Dorp:* B. M. 54 (B. E. & A.) is a cross cut in the east side of the third brick above the bluestone doorsill at the west side of the house entrance to No. 127 Fifth Street, between Rose Avenue and New Dorp Lane. The building is three-story yellow brick. Elevation: 51.2 feet above mean low water; 48.69 feet above standard sea level.

**Serial No. 1758.** *New Dorp:* B. M. 55 (B. E. & A.) is the center of the top of a concrete monument on the northeast corner of Egbert Avenue and Saw Mill Road, opposite Meisner Avenue. The monument is a cylindrical tile pipe filled with concrete, and the top is 3 inches above the ground. Elevation: 123.6 feet above mean low water; 121.06 feet above standard sea level.

**Serial No. 1759.** *New Dorp Beach:* B. M. 1 (C. & G. S.) is the top of station mark at Station Elm Tree, near the foot of New Dorp Lane. The station is about 155 feet northeast of New Dorp Lane and about 87 feet west of Elm Tree Beacon. The top of the mark is flush with the ground and about 8 inches above the brass rod which acts as a subsurface mark for the station. The top of the brass rod is a bench mark in precise level net of board of estimate and apportionment, New York City. Elevation: 9.4 feet above mean low water; 6.96 feet above standard sea level.

**Serial No. 1760.** *New Dorp Beach:* B. M. 2 (C. & G. S.) is the pointed top of the most westerly of 4 granite monuments surrounding Elm Tree Beacon and marking United States Government property. The monument is about 175 feet northeast of New Dorp Lane and about 27 feet west of the beacon. The top of the monument is 1.75 feet above the ground and an inch square surrounds the bench mark. This monument is the one nearest to triangulation station Elm Tree. B. M. 2 is the same as B. M. 49 of board of estimate and apportionment, New York City. Elevation: 11.4 feet above mean low water; 8.94 feet above standard sea level.

**Serial No. 1761.** *New Dorp Beach:* B. M. 3 (C. & G. S.) is the top of a granite monument at shore end of New Dorp Lane. Monument projects 18 inches above ground. It has "U. S." in large letters cut on side facing the water. Bench mark is on the south side of the road at the corner of property of Elm Tree Lighthouse keeper, approximately 20 meters back from highwater mark. Elevation: 11.8 feet above mean low water; 9.28 feet above standard sea level.

**Serial No. 1762.** *Richmond:* B. M. 38 (B. E. & A.) is the highest point within a 1-inch square cut in the top of the northeast corner of the water table near the northwest corner of the Richmond County Courthouse, on the southerly side of Center Street, opposite Court Street. The bench mark is 26.5 feet east of the west side of the build-

ing and 7.5 feet south of the most westerly of four massive columns in front of the courthouse. It is about 6.5 feet above the sidewalk. Elevation: 51.3 feet above mean low water; 48.80 feet above standard sea level.

**Serial No. 1763.** *Richmond:* B. M. 39 (B. E. & A.) is a cross between the letters "B. M.", cut in the third course of brick above the walk on the north side of Public School No. 28, on the southwest corner of Garretson Street and Center Street. The cross is in the center of the front of the building between the two basement windows. Elevation: 45.0 feet above mean low water; 42.47 feet above standard sea level.

**Serial No. 1764.** *Richmond:* B. M. 40 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the east end of the large granite step or doorsill at the entrance to the Richmond County Courthouse, on the south side of Center Street opposite Court Street. The step containing the bolt is part of the main building and about 6.5 feet above the sidewalk. Elevation: 51.4 feet above mean low water; 48.92 feet above standard sea level.

**Serial No. 1765.** *Richmond:* B. M. 41 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the small topographical monument (traverse Station No. 15) in the school grounds on the southeast corner of Richmond Road and Egbert Avenue (Saw Mill Road). The monument is west of the northwest corner of Public School No. 10 and is in line with the prolongation of the west curb of Egbert Avenue. The top of the monument is 8 inches below the ground and is protected by a cylindrical iron casing with cement block cover. Elevation: 80.3 feet above mean low water; 77.85 feet above standard sea level.

**Serial No. 1766.** *Richmond:* B. M. 42 (B. E. & A.) is a cross between the letters "B. M." cut in the fourth course of bricks above the ground at the northwest corner of Public School No. 10, on the southeast corner of Richmond Road and Egbert Avenue (Saw Mill Road). The cross is on the westerly side of the building and 8 inches above the ground. Elevation: 82.1 feet above mean low water; 79.61 feet above standard sea level.

**Serial No. 1767.** *Richmond:* B. M. 165 (B. E. & A.) is a square cut in the top of the east end of the second bluestone step at the retaining wall in front of No. 74 Fresh Kills Road. The bench mark is on the southerly side of the road and about 155 feet westerly from Center Street. The house is occupied by W. F. Lake. Elevation: 16.4 feet above mean low water; 13.95 feet above standard sea level.

**Serial No. 1768.** *Oakwood:* B. M. 51 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in topographical monument No. 10, on the northeasterly side of Clark Avenue and almost on the center line of Amboy Road. The top of the monument is 7 inches below the surface and is protected by a square iron casing with cover. Elevation: 59.6 feet above mean low water; 57.12 feet above standard sea level.

**Serial No. 1769.** *Oakwood:* B. M. 52 (B. E. & A.) is a  $\frac{1}{2}$ -inch copper bolt in the top of the southeast corner of the bluestone basement window sill of two-story and attic frame house on the northwest corner of Guyon Avenue and the Staten Island Rapid Transit Railway. The bolt is in the sill of the most southerly basement window, is 5.7 feet from the south corner of the building, and 3 feet above the ground. Elevation: 60.8 feet above mean low water; 58.28 feet above standard sea level.

**Serial No. 1770.** *Oakwood:* B. M. 53 (B. E. & A.) is the highest point within a square cut in the top of the most northerly corner of a stone culvert on the east side of Tysend Lane about 25 feet northwest of the center line of the Staten Island Rapid Transit Railway. An arrow is cut in the side of the culvert farthest from the railroad and points to the bench mark. Elevation: 41.5 feet above mean low water; 38.97 feet above standard sea level.

**Serial No. 1771.** *Giffords:* B. M. "N" (C. & G. S.) is the center of a cross cut on a large rock about 125 meters southwest of Gifford station on the Staten Island Railroad, on the west side of the track. (Board of Estimate and Apportionment B. M. 172.) Elevation: 73.6 feet above mean low water; 71.07 feet above standard sea level.

**Serial No. 1772.** *Giffords:* B. M. 173 (B. E. & A.) is the highest point within a  $1\frac{1}{2}$ -inch square cut in the top of a bowlder about 6.5 feet in diameter partly embedded in the embankment on the north side of the Staten Island Rapid Transit Railway, and about 350 feet west of Giffords Lane. The bench mark is near the east side of the bowlder and the letters "B. M." are chiseled alongside. Elevation: 75.1 feet above mean low water; 72.56 feet above standard sea level.

**Serial No. 1773.** *Eltingville:* B. M. 170 (B. E. & A.) is a  $1\frac{1}{2}$ -inch square cut in the top of the north end of the bluestone doorsill at the saloon entrance to Daniel Geil's Hotel at No. 3651 Seaside Avenue. The building is three-story frame and brick, is on the east side of the Avenue, and 100 feet south of the Staten Island Rapid Transit Railway. Elevation: 64.3 feet above mean low water; 61.72 feet above standard sea level.

**Serial No. 1774. Annadale:** B. M. 166 (B. E. & A.) is the highest point within a 1-inch square cut in the top of the south end of the brick and cement culvert wall on the west side of Annadale Road and 30 feet north of the center line of the Staten Island Rapid Transit Railway. Elevation: 82.8 feet above mean low water; 80.22 feet above standard sea level.

**Serial No. 1775. Annadale:** B. M. 167 (B. E. & A.) is a cross cut in the fifth course of brick above the ground at the southwest corner of the two-story and attic frame house at No. 847 Annadale Road. The building is on the east side of the road about 160 feet north of the center line of the Staten Island Rapid Transit Railway. The bench mark is on the south side of the building and 9 inches from the corner. Elevation: 81.5 feet above mean low water; 78.86 feet above standard sea level.

**Serial No. 1776. Annadale:** B. M. 168 (B. E. & A.) is the top of a  $\frac{3}{4}$ -inch copper bolt in a topographical monument at the intersection of Annadale Road and Washington Avenue. The monument is near the easterly side of Annadale Road and just north of the center line of Washington Avenue. The top is 10 inches below the grade and is protected by a square iron cover. Elevation: 97.7 feet above mean low water; 95.10 feet above standard sea level.

**Serial No. 1777. Annadale:** B. M. 171 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of a topographical monument at the intersection of Amboy Road and Annadale Road. The monument is on the center line of both roads, is 1.5 feet below grade and protected by iron casing and cover. Elevation: 87.9 feet above mean low water; 85.35 feet above standard sea level.

**Serial No. 1778. Huguenot:** B. M. 18 (B. E. & A.) is the bottom of a square cut in the top of the center of the bluestone window sill at the southwest corner of Public School No. 5 on the north side of Amboy Road about 510 feet east of Huguenot Avenue. The sill containing the bench mark faces Amboy Road, is between the two cellar windows and 8 inches above the ground. Elevation: 73.7 feet above mean low water; 71.02 feet above standard sea level.

**Serial No. 1779. Huguenot:** B. M. 169 (B. E. & A.) is the intersection of a 1-inch cross cut in the face of a white marble tablet set in the wall at the southeast corner of Public School No. 5, on the north side of Amboy Road about 510 feet east of Huguenot Avenue. The builder's name, David C. Keller, is cut in the face of the tablet. The bench mark is 2 feet above the ground and 3.5 feet from the corner of the building. Elevation: 74.6 feet above mean low water; 72.01 feet above standard sea level.

**Serial No. 1780. Princes Bay:** B. M. 16 (B. E. & A.) is the center of the top of a small topographical monument on the southwest corner of Princes Bay Avenue (Seguine Avenue) and the Staten Island Rapid Transit Railway. The monument is on the prolongation of the center line of the sidewalk on the west side of Princes Bay Avenue, is about 10 feet north of the post and wire fence at the corner, and 16 inches below the ground. It is protected by a cylindrical iron casing with cover. Elevation: 51.1 feet above mean low water; 48.46 feet above standard sea level.

**Serial No. 1781. Princes Bay:** B. M. 17 (B. E. & A.) is a cross cut in the top of the south end of the fourth or top granite step at the main entrance to the two-story and attic red-brick house of Silas Miller, on the east side of Princes Bay Avenue (Seguine Avenue) about 1,500 feet south of the Staten Island Rapid Transit Railway. Elevation: 36.8 feet above mean low water; 34.13 feet above standard sea level.

**Serial No. 1782. Pleasant Plains:** B. M. 14 (B. E. & A.) is a 2-inch square cut in the top of the south end of the bluestone threshold step at the house entrance to three-story brick tenement at No. 6343 Amboy Road, about 30 feet south of Station Avenue. Elevation: 35.7 feet mean above low water; 33.05 feet above standard sea level.

**Serial No. 1783. Pleasant Plains:** B. M. 15 (B. E. & A.) is the bottom of a square cut in the top of the south end of the most northerly bluestone window sill on the east side of Public School No. 3. The bench mark is about 12 feet from the north side of the building and 1 foot above the ground. Elevation: 47.7 feet above mean low water; 45.09 feet above standard sea level.

**Serial No. 1784. Richmond Valley:** B. M. 11 (B. E. & A.) is a square cut in the top of the east end of the third step of the east entrance to the Bethel Methodist Episcopal Church on the northeast corner of Church Street and Amboy Road. Elevation: 45.4 feet above mean low water; 42.71 feet above standard sea level.

**Serial No. 1785. Richmond Valley:** B. M. 12 (B. E. & A.) is a cross cut in the foundation stone at the northwest corner of the one-story and attic frame house on the northeast corner of Richmond Valley Road and Amboy Road. The cross is on the west side of the building and 9 inches above the ground. The letter "B" is cut in the stone above the cross. Elevation: 11.0 feet above mean low water; 8.34 feet above standard sea level.

**Serial No. 1786.** *Richmond Valley:* B. M. 13 (B. E. & A.) is the center of a 2-inch square cut in the top of the east end of the south wall of the stone culvert crossing Richmond Valley Road about 25 feet south of the center line of the Staten Island Rapid Transit Railway. The bench mark is about 3 feet east of the west side of the frame house on the northeast corner of Amboy Road and Richmond Valley Road. An arrow head cut in the face of the wall points to the bench mark. Elevation: 9.5 feet above mean low water; 6.85 feet above standard sea level.

**Serial No. 1787.** *Richmond Valley:* B. M. 159 (B. E. & A.) is the bottom of a square cut in the top of the east end of the first bluestone window sill west of the north or main entrance to O. H. Barnard's silk mill, on the south side of Richmond Valley Road about 250 feet east of Fresh Kills Road. An arrowhead cut in the face of the sill points to the bench mark. Elevation: 23.8 feet above mean low water; 21.12 feet above standard sea level.

**Serial No. 1788.** *Richmond Valley:* B. M. 160 (B. E. & A.) is the bottom of a square cut in the top of the east end of the west window sill on the north side of O. H. Barnard's silk mill on the south side of Richmond Valley Road about 250 feet east of Fresh Kills Road. The bench mark is 7.5 feet from the west side of the building. Elevation: 23.7 feet above mean low water; 21.07 feet above standard sea level.

**Serial No. 1789.** *Richmond Valley:* B. M. 161 (B. E. & A.) is a square cut in the top of the west end of the east window sill on the north side of O. H. Barnard's silk mill, on the south side of Richmond Valley Road, about 250 feet east of Fresh Kills Road. The bench mark is 7.75 feet from the east end of the building. Elevation: 23.8 feet above mean low water; 21.13 feet above standard sea level.

**Serial No. 1790.** *Tottenville:* B. M. 3 (B. E. & A.) is the intersection of a cross cut in the top of a spike, with a head  $\frac{1}{4}$  inch square in the top of the fourth pile from the northwest corner, on the north side of the dock at the foot of Amboy Road. The pile containing the bench mark is on line with the north line of Amboy Road. Elevation: 9.7 feet above mean low water; 7.01 feet above standard sea level.

**Serial No. 1791.** *Tottenville:* B. M. 4 (B. E. & A.) is the top of a railroad spike driven vertically in the blazed root of a tree stump on the south side of Amboy Road about 95 feet east of the Arthur Kill. The bench mark is on the north side of the tree, which is opposite a sewer manhole at the foot of Amboy Road. Elevation: 16.1 feet above mean low water; 13.49 feet above standard sea level.

**Serial No. 1792.** *Tottenville:* B. M. 5 (B. E. & A.) is the bottom of a square cut in the top of the east curb, on the northeast corner of Hopping Avenue and Amboy Road. The square is at the northwest corner of a curved section of the curb and 3 inches south of the north line of the concrete sidewalk on Amboy Road. Elevation: 42.5 feet above mean low water; 39.86 feet above standard sea level.

**Serial No. 1793.** *Tottenville:* B. M. 6 (B. E. & A.) is the bottom of a square cut in the top of the northwest corner of the bluestone sill of bay window at the west side of the two-story and attic frame house of Mr. Barnes, on the north side of Amboy Road about 150 feet east of Hopping Avenue. The bench mark is 1 foot above the ground, and an arrow head on the west side of the sill points to the spot. Elevation: 51.4 feet above mean low water; 48.76 feet above standard sea level.

**Serial No. 1794.** *Tottenville:* B. M. 7 (B. E. & A.) is the center of a  $1\frac{1}{2}$ -inch square cut in the top of the west end of the first or lowest step at the Summit Street entrance to Public School No. 1, between Garretson Avenue and Prospect Avenue. Elevation: 81.0 feet above mean low water; 78.37 feet above standard sea level.

**Serial No. 1795.** *Tottenville:* B. M. 8 (B. E. & A.) is a horizontal line on the face of a 2-inch brass tablet bolt leaded horizontally into the north side of Public School No. 1, on the south side of Summit Street between Garretson Avenue and Prospect Avenue. The bolt is in the east side of the west buttress at the northwest corner of the building and 1.75 feet above the ground. Elevation: 82.5 feet above mean low water; 79.85 feet above standard sea level.

**Serial No. 1796.** *Tottenville:* B. M. 9 (B. E. & A.) is a cross cut in the bluestone near the northwest corner of Public School No. 1, on the south side of Summit Street between Garretson Avenue and Prospect Avenue. The cross is in the east side of the west buttress on the north side of the building, below B. M. No. 8. Elevation: 21.3 feet above mean low water; 78.08 feet above standard sea level.

**Serial No. 1797.** *Tottenville:* B. M. 10 (B. E. & A.) is the center of a  $1\frac{1}{2}$ -inch square cut in the top of the west end of the sixth or top bluestone step at the north of main entrance to the Church of Our Lady, on the southeast corner of Prospect Avenue and Amboy Road. Elevation: 82.4 feet above mean low water; 79.78 feet above standard sea level.

**Serial No. 1798.** *Kreischerville:* B. M. 19 (B. E. & A.) is the center of a 1-inch square cut in the top of the brick water table at the southwest corner of Public School No. 4, on the east side of Fresh Kills Road, about 200 feet north of Sharrets Lane. The square is 4 feet above the ground and a cross is cut in the brick below the bench mark. Elevation: 65.7 feet above mean low water; 63.08 feet above standard sea level.

**Serial No. 1799.** *Kreischerville:* B. M. 162 (B. E. & A.) is a square cut in the top of the north end of the second bluestone step at the entrance to Killmeyer's estate, on the west side of Fresh Kills Road about 100 feet south of Kreischer Street. Elevation: 50.6 feet above mean low water; 47.96 feet above standard sea level.

**Serial No. 1800.** *Kreischerville:* B. M. 163 (B. E. & A.) is a horizontal line in the end of a  $\frac{3}{4}$ -inch copper bolt leaded horizontally into the brick under the middle window on the west side of Public School No. 4, on the east side of Fresh Kills Road about 200 feet north of Sharrets Lane. The bolt is in the sixth course of brick above the ground. Elevation: 62.9 feet above mean low water; 60.29 feet above standard sea level.

**Serial No. 1801.** *Kreischerville:* B. M. 164 (B. E. & A.) is the center of the horizontal bar of a T cut in the south face of the brick buttress at the southeast corner of the two-story brick building of the Richmond Brick & Tile Co. on the west side of Kreischer Street near Fresh Kills Road. The bench mark is about 4 feet above the ground and on the largest building of the group. Elevation: 26.8 feet above mean low water; 24.11 feet above standard sea level.

**Serial No. 1802.** *Rossville:* B. M. 20 (B. E. & A.) is the highest point within a 1-inch square cut in the top of the south corner of the stone abutment at the north-west corner of St. Luke's Church, on the southeast corner of St. Luke's Avenue and Fresh Kills Road. Elevation: 22.6 feet above mean low water; 19.99 feet above standard sea level.

**Serial No. 1803.** *Rossville:* B. M. 21 (B. E. & A.) is the center of the horizontal bar of a T cut in the brick at the northeast corner of Frank Engert's three-story brick hotel on the south side of Fresh Kills Road, about 86 feet west of the center line of Prospect Avenue. The T is 2.1 feet above the sidewalk and 2 inches west of the northeast corner of the building. Elevation: 14.9 feet above mean low water; 12.24 feet above standard sea level.

**Serial No. 1804.** *Rossville:* B. M. 22 (B. E. & A.) is a 1-inch square cut in the top of the west end of the bluestone curb on the north side of Fresh Kills Road, between Rossville Avenue and Prospect Avenue. Elevation: 12.6 feet above mean low water; 9.93 feet above standard sea level.

**Serial No. 1805.** *Rossville:* B. M. 23 (B. E. & A.) is a square cut in the top of the bluestone coping of retaining wall on the south side of Fresh Kills Road, just east of St. Luke's Church and west of Prospect Avenue. The bench mark is at the point of curve on the north edge of the coping, is 2.5 feet above the sidewalk, and about 6 feet east of the west end of the wall. Elevation: 23.3 feet above mean low water; 20.68 feet above standard sea level.

**Serial No. 1806.** *Rossville:* B. M. 24 (B. E. & A.) is a square cut in the top of the southeast corner of the New York and New Jersey boundary monument near the southwest corner of Fresh Kills Road and St. Luke's Avenue. The monument is granite with a square top, which is 12 inches above the ground. It is on the south side of Fresh Kills Road 3 feet south of the fence line and about 80 feet west of the center line of St. Luke's Avenue, has the inscription "N. Y. & N. J." on the west side, and "B. M. 1889" on the east side. Elevation: 16.0 feet above mean low water; 13.37 feet above standard sea level.

**Serial No. 1807.** *Rossville:* B. M. 25 (B. E. & A.) is a horizontal line on the face of a 2-inch brass bolt leaded horizontally into the limestone front of Public School No. 6, on the east side of Rossville Avenue, about midway between Fresh Kills Road and Woodrow Road. The bolt faces Rossville Avenue, is in the center of the building and 6 inches above the ground. Elevation: 76.0 feet above mean low water; 73.38 feet above standard sea level.

**Serial No. 1808.** *Rossville:* B. M. 26 (B. E. & A.) is the center of a square cut in the top of the southwest corner of the north parapet wall of culvert crossing Fresh Kills Road at Huguenot Avenue (Swains Lane). Bench mark is 3.5 feet above the ground. Elevation: 17.3 feet above mean low water; 14.62 feet above standard sea level.

**Serial No. 1809.** *Rossville:* B. M. 27 (B. E. & A.) is the center of a square cut in the top of the northwest corner of the south parapet wall of culvert crossing Fresh Kills Road at Huguenot Avenue (Swains Lane). The bench mark is 3.5 feet above

the ground. Elevation: 17.2 feet above mean low water; 14.51 feet above standard sea level.

**Serial No. 1810.** *Fresh Kills:* B. M. 30 (B. E. & A.) is a cross cut in the north face of the retaining wall on the southwest corner of Fresh Kills Road and Bridge Avenue. The cross is 7.3 feet west of Bridge Avenue and 1.4 feet above the ground. Elevation: 14.7 feet above mean low water; 12.01 feet above standard sea level.

**Serial No. 1811.** *Fresh Kills:* B. M. 31 (B. E. & A.) is a square cut in the top of the east end of the bluestone sill of the most northerly cellar window at the northeast corner of Emma Banker's two-story stone and frame dwelling, near the southwest corner of Fresh Kills Road and Bridge Avenue. The point is on the north side of the house and about 13 feet from the east side. It is 170 feet west of Bridge Avenue and about 490 feet south of Fresh Kills Road. Elevation: 23.5 feet above mean low water; 20.89 feet above standard sea level.

**Serial No. 1812.** *Fresh Kills:* B. M. 32 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in a small topographical monument near the southwest corner of Fresh Kills Road and Bridge Avenue (monument station No. 8). The monument is 11.5 feet northeast of the retaining wall at the corner and 6.3 feet north of the telegraph pole nearest the corner. The top of the monument is 1.3 feet below the ground and is protected by a cylindrical iron casing with cover. Elevation: 12.7 feet above mean low water; 10.02 feet above standard sea level.

**Serial No. 1813.** *Fresh Kills:* B. M. 33 (D. D.) is a square cut in the west end of the old stone wall on the northeast corner of Fresh Kills Road and Bridge Avenue. The bench mark is 4 inches above the ground. Elevation: 13.1 feet above mean low water; 10.42 feet above standard sea level.

**Serial No. 1814.** *Fresh Kills:* B. M. 34 (B. E. & A.) is a square cut in the top of the east end of the second bluestone step leading to the two-story frame house on the north side of Fresh Kills Road about 1,800 feet east of Bridge Avenue. Elevation: 13.6 feet above mean low water; 10.98 feet above standard sea level.

**Serial No. 1815.** *Fresh Kills:* B. M. 35 (B. E. & A.) is a cross between the letters "B. M.," cut in the facing of retaining wall on the north side of Fresh Kills Road, in front of the Breen estate. The cross is 3.5 feet west of the east end of the wall, is 8 inches above the ground, and about 600 feet west of Gifford's Lane. Elevation: 17.1 feet above mean low water; 14.44 feet above standard sea level.

**Serial No. 1816.** *Fresh Kills:* B. M. 36 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the small topographical monument on the southeast corner of Fresh Kills Road and Gifford's Lane. The top of the monument is 6 inches below the surface and is protected by a square iron casing with cover. Elevation: 15.1 feet above mean low water; 12.48 feet above standard sea level.

**Serial No. 1817.** *Fresh Kills:* B. M. 37 (B. E. & A.) is the highest point within a 2-inch square cut in the top of the large projecting stone in the base of retaining wall on the east side of Gifford's Lane, 9 feet south of its intersection with the southerly line of Fresh Kills Road. Elevation: 16.5 feet above mean low water; 13.84 feet above standard sea level.

**Serial No. 1818.** *Greenridge:* B. M. 28 (B. E. & A.) is a cross between the letters "B. M.," cut in the brick at the northwest corner of Public School No. 7, on the south side of Fresh Kills Road between Washington Avenue and Greenridge Avenue. The cross is on the third course of brick above the ground on the north side of the building and is 10 inches from the west side. Elevation: 47.3 feet above mean low water; 44.64 feet above standard sea level.

**Serial No. 1819.** *Greenridge:* B. M. 29 (B. E. & A.) is a 1-inch square cut in the top of the west end of the third bluestone step at the north or main entrance to Public School No. 7, on the south side of Fresh Kills Road between Washington Avenue and Greenridge Avenue. Elevation: 48.0 feet above mean low water; 45.36 feet above standard sea level.

**Serial No. 1820.** *New Springville:* B. M. 57 (B. E. & A.) is a  $\frac{3}{4}$ -inch copper bolt in the top of the topographical monument at the intersection of Old Stone Road and Union Avenue (traverse station No. 88). The top of the monument is 2 feet below the ground and is protected by a cylindrical iron casing with cover. Elevation: 24.9 feet above mean low water; 22.43 feet above standard sea level.

**Serial No. 1821.** *Union Avenue:* B. M. 58 (B. E. & A.) is the center of a 3-inch circle cut in the outcropping natural rock on the east side of Union Avenue, about 465 feet south of Richmond Turnpike. The rock containing the bench mark is north of a small bridge over the creek crossing Union Avenue and about 465 feet south of Richmond Turnpike. Elevation: 12.7 feet above mean low water; 10.22 feet above standard sea level.

**Serial No. 1822.** *Linoleumville:* B. M. 59 (B. E. & A.) is a horizontal line in the end of a  $\frac{3}{4}$ -inch copper bolt leaded horizontally into the brick at the northeast corner of Public School No. 26, on the south side of Richmond Turnpike, between Wild Avenue and Prospect Avenue. The bolt is on the fourth course of brick above the bluestone base and faces Richmond Turnpike. It is  $7\frac{1}{2}$  inches from the northeast corner of the building and 1.3 feet above the sidewalk. Elevation: 41.8 feet above mean low water; 39.32 feet above standard sea level.

**Serial No. 1823.** *Linoleumville:* B. M. 60 (B. E. & A.) is a cross cut in the bluestone coping 7.75 feet above the sidewalk at the northeast corner of Public School No. 26, on the south side of Richmond Turnpike, between Wild Avenue and Prospect Avenue. The cross is directly above B. M. 39. Elevation: 48.5 feet above mean low water; 46.00 feet above standard sea level.

**Serial No. 1824.** *Linoleumville:* B. M. 61 (B. E. & A.) is a square cut in the east end of the second bluestone step at the north or main entrance to Public School No. 26, on the south side of Richmond Turnpike, between Wild Avenue and Prospect Avenue. Elevation: 41.8 feet above mean low water; 39.25 feet above standard sea level.

**Serial No. 1825.** *Linoleumville:* B. M. 62 (B. E. & A.) is the top of a large brass plug in the concrete monument on the south side of Richmond Turnpike, about 184 feet east of the east line of Wild Avenue. The top of the monument is 1.5 feet below the ground and 18 feet south of south line of Richmond Turnpike. Known as Richmond No. 779. Elevation: 30.6 feet above mean low water; 28.06 feet above standard sea level.

**Serial No. 1826.** *Travisville:* B. M. 63 (B. E. & A.) is a  $1\frac{1}{4}$ -inch square cut in the top of the west end of the stone doorsill at the westerly entrance to Travis Hall at No. 3921 Richmond Turnpike, about 150 feet west of its intersection with Lexington Avenue. The bench mark is 4 feet east of the west side of the building and 4 inches from the west end of the sill. Elevation: 27.1 feet above mean low water; 24.58 feet above standard sea level.

**Serial No. 1827.** *Bloomfield:* B. M. 64 (B. E. & A.) is the center of the horizontal bar of a T cut in the brick at the northeast corner of Public School No. 25, on the west side of Chelsea Road about 1,400 feet south of Decker Avenue. The bench mark is on the north side of the building on the eighteenth course above the ground, and  $1\frac{1}{2}$  inches from the corner. Elevation: 18.6 feet above mean low water; 16.08 feet above standard sea level.

**Serial No. 1828.** *Watchogue:* B. M. 65 (B. E. & A.) is the highest point within a square cut in the top of the south end of stone culvert wall on the east side of South Avenue about 1,150 feet south of Lamberts Lane. Elevation: 11.7 feet above mean low water; 9.24 feet above standard sea level.

**Serial No. 1829.** *Watchogue:* B. M. 66 (B. E. & A.) is the highest point within a square cut in the top of the north end of stone culvert wall on the west side of south Avenue about 1,150 feet south of Lamberts Lane. Elevation: 11.6 feet above mean low water; 9.05 above standard sea level.

**Serial No. 1830.** *Summerville:* B. M. 71 (B. E. & A.) is a square cut in the top of the northwest edge of the west window sill on the north side of Public School No. 24, on the south side of Washington Avenue between Franklin Avenue and Lincoln Avenue. The bench mark is 5.4 feet from the west side of the building. Elevation: 23.4 feet above mean low water; 21.14 feet above standard sea level.

**Serial No. 1831.** *Old Place:* B. M. 72 (B. E. & A.) is the center of a brass bolt marking the U. S. C. & G. S. triangulation station Old Place, about 785 feet west of Western Avenue and about 175 feet northeast of Washington Avenue. The triangulation station is in the rear of a one-story frame house occupied by Frederick Denker and owned by the Standard Oil Co. The bench mark is 6 inches below the ground. Elevation: 14.3 feet above mean low water; 11.99 feet above standard sea level.

**Serial No. 1832.** *Howland Hook:* B. M. 115 (B. E. & A.) is the intersection of a cross cut in the top of a large spike with hemispherical head on the westerly side of the dock at the ferry slip. The bench mark is about 30 feet from the outshore corner of the dock. Elevation: 10.2 feet above mean low water; 7.92 feet above standard sea level.

**Serial No. 1833.** *Howland Hook:* B. M. 116 (B. E. & A.) is the center of a square cut in the top of the west end of the basin head on the southeast corner of Western Avenue and Richmond Terrace. Elevation: 22.6 feet above mean low water; 20.31 feet above standard sea level.

**Serial No. 1834.** *Howland Hook:* B. M. 117 (B. E. & A.) is the intersection of a cross cut in the top of the southwest nut on top of the fire hydrant on the southeast corner of Western Avenue and Richmond Terrace. Elevation: 26.1 feet above mean low water; 23.77 feet above standard sea level.

**Serial No. 1835.** *Howland Hook:* B. M. 118 (B. E. & A.) is the center of the horizontal bar of a T cut in the northeast corner of the brick foundation of the two-story frame dwelling on the southwest corner of Catherine Street and Richmond Terrace. The bench mark is 1.25 feet above the ground. Elevation: 29.4 feet above mean low water; 27.05 feet above standard sea level.

**Serial No. 1836.** *North Shore:* B. M. 119 (B. E. & A.) is a square cut in the top of the northeast corner of the granite property monument on the south side of Richmond Terrace about 540 feet east of Holland Avenue. The monument is at the west side of a stone retaining wall and the figure 4 is cut in the top of the monument, which is 12 inches above the ground. Elevation: 21.7 feet above mean low water; 19.39 feet above standard sea level.

**Serial No. 1837.** *Shooters Island:* B. M. 1 (C. & G. S.) is a cross with the letters "U. S." cut in one of the corner bricks on east face of southeast corner of engine house of Townsend and Downey's works on Shooters Island. Elevation: 11.8 feet above mean low water; 9.47 feet above mean tide level.

**Serial No. 1838.** *Mariners Harbor:* B. M. 121 (B. E. & A.) is the highest point within a square cut in the top of the northeast corner of the limestone base of the east lamp-post at the northeast corner of the Mariners Harbor National Bank, on the southwest corner of Union Avenue and Richmond Terrace. The bench mark is 1.8 feet above the sidewalk. Elevation: 12.4 feet above mean low water; 10.08 feet above standard sea level.

**Serial No. 1839.** *Mariners Harbor:* B. M. 122 (B. E. & A.) is a square cut in the top of the east end of the granite doorsill at the entrance to the Mariners Harbor National Bank, on the southwest corner of Union Avenue and Richmond Terrace. Elevation: 12.9 feet above mean low water; 10.59 feet above standard sea level.

**Serial No. 1840.** *Mariners Harbor:* B. M. 122A (U. S. E.) is a square cut in the southwest corner of the doorsill of second building east of Harbor Road on the north side of Richmond Terrace. Elevation: 12.4 feet above mean low water; 10.07 feet above standard sea level.

**Serial No. 1841.** *Mariners Harbor:* B. M. 123 (B. E. & A.) is a square cut in the top of the southeast corner of the window sill at the southeast corner of the one-story brick boiler and engine house of the Hecker, Jones, Jewell Milling Co., about 260 feet north of Richmond Terrace at Bush Avenue. The bench mark is on the east side of the engine house and 1.5 feet above the ground. Elevation: 12.0 feet above mean low water; 9.73 feet above standard sea level.

**Serial No. 1842.** *Mariners Harbor:* B. M. 124 (B. E. & A.) is the center of a 2-inch square cut in the top of the west end of the brownstone doorsill at the west entrance to Franklin Hall (three-story brick,) on the north side of Richmond Terrace opposite the foot of Harbor Road. Elevation: 12.4 feet above mean low water; 10.07 feet above standard sea level.

**Serial No. 1843.** *Arlington:* B. M. 68 (B. E. & A.) is the underside of the limestone coping at the southwest corner of Public School No. 23, on the east side of Mersereau Avenue, just south of Arlington Place. The point is between two parallel lines cut in the underside of the coping, which is 8.5 feet above the ground. Elevation: 56.3 feet above mean low water; 54.02 feet above standard sea level.

**Serial No. 1844.** *Arlington:* B. M. 69 (B. E. & A.) is a square cut in the top of the south end of the first step under the limestone balustrade at the west entrance to Public School No. 23 on the east side of Mersereau Avenue, just south of Arlington Place. Elevation: 48.3 feet above mean low water; 45.96 feet above standard sea level.

**Serial No. 1845.** *Arlington:* B. M. 70 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, leaded horizontally into the southwest corner of Public School No. 23, on the east side of Mersereau Avenue just south of Arlington Place. The bench mark faces Mersereau Avenue, is 6 inches from the corner of the building and 1.2 feet above the ground. Elevation: 48.9 feet above mean low water; 46.64 feet above standard sea level.

**Serial No. 1846.** *Arlington:* B. M. 120 (B. E. & A.) is the center of a 1½-inch square cut in the top of the center of the concrete basin head on the southeast corner of Mersereau Avenue and Richmond Terrace. Elevation: 13.1 feet above mean low water; 10.83 feet above standard sea level.

**Serial No. 1847.** *Elm Park:* B. M. 125 (B. E. & A.) is the intersection of a cross within a square cut in the top of the west end of the most easterly window sill on the south side of the Standard Varnish Works, on the north side of Richmond Terrace about 36 feet west of the west line of Granite Avenue. Elevation: 16.7 feet above mean low water; 14.36 feet above standard sea level.

**Serial No. 1848.** *Elm Park:* B. M. 126 (B. E. & A.) is the highest point within a 2-inch square cut in the west end of the bluestone doorsill at the store entrance to three-story brick building (No. 2558) on the north side of Richmond Terrace about 140 feet east of Granite Avenue. Elevation: 14.6 feet above mean low water; 12.30 feet above standard sea level.

**Serial No. 1849.** *Port Richmond:* B. M. 93 (B. E. & A.) is a square cut in the top of the west end of the granite doorsill at the Catherine Street entrance to the brick tower of the German Lutheran Church, on the southwest corner of Catherine Street and Jewett Avenue. The bench mark is 1 inch above the sidewalk. Elevation: 22.8 feet above mean low water; 20.54 feet above standard sea level.

**Serial No. 1850.** *Port Richmond:* B. M. 127 (B. E. & A.) is a square cut in the top of the east end of the large bluestone sill under the most easterly of two large limestone columns at the entrance to the Port Richmond National Bank, on the south side of Richmond Terrace about 25 feet west of Richmond Avenue. Elevation: 13.1 feet above mean low water; 10.77 feet above standard sea level.

**Serial No. 1851.** *Port Richmond:* B. M. 128 (B. E. & A.) is a square cut in the top of the northwesterly end of the top step or sill at the house entrance to the two-story red-brick building at No. 2045 Richmond Terrace. The building is on the northerly side of the street and alongside of the approach to the Bergen Point Ferry. Elevation: 14.0 feet above mean low water; 11.68 feet above standard sea level.

**Serial No. 1852.** *Port Richmond:* B. M. 129 (B. E. & A.) is a square cut in the top of the northwesterly corner of the bluestone doorsill at the southerly entrance to the office of the Staten Island Ship Building Co., at No. 1983 Richmond Terrace. The building is a two-story yellow brick and just north of the Staten Island Rapid Transit Railway. The bench mark is 13 feet from the southwest corner of the building. Elevation: 18.2 feet above mean low water; 15.88 feet above standard sea level.

**Serial No. 1853.** *Port Richmond:* B. M. 130 (B. E. & A.) is a 1-inch square cut in the top of the north end of granite doorsill at the house entrance to No. 1916 Richmond Terrace, near Jewett Avenue. The building is on the south side of an alley, is three-story red and yellow brick, and was formerly No. 15 and No. 17. Elevation: 12.1 feet above mean low water; 9.84 feet above standard sea level.

**Serial No. 1854.** *Port Richmond:* B. M. 131 (B. E. & A.) is the highest point within a square cut in the top of the southeast corner of the projecting foundation stone at the base of the west wall of three-story red-brick building at No. 1851 Richmond Terrace, opposite Columbia Street. The bench mark is 12 inches from the west side of the building. Elevation: 12.8 feet above mean low water; 10.50 feet above standard sea level.

**Serial No. 1855.** *Port Richmond:* B. M. 132 (B. E. & A.) is a horizontal line on the face of a brass tablet bolt 2 inches in diameter, leaded horizontally into the cornerstone on the east side of the entrance to police station at No. 1590 Richmond Terrace, between Van Street and Tompkins Place. The bench mark is in the lower portion of the building and 3 feet above the sidewalk. Elevation: 27.7 feet above mean low water; 25.44 feet above standard sea level.

**Serial No. 1856.** *Port Richmond:* B. M. 133 (B. E. & A.) is a square cut in the top of the east end of the second step at the unused easterly entrance to No. 1590 Richmond Terrace, between Van Street and Tompkins Place. The building is a two-story yellow brick, and the step containing the bench mark is in the lower portion. Elevation: 26.1 feet above mean low water; 23.85 feet above standard sea level.

**Serial No. 1857.** *West New Brighton:* B. M. 4 (C. & G. S.) is a C. & G. Survey standard disk set in cement in a drill hole made in side of north wall of red-brick residence at No. 1553 Richmond Terrace, about 5 feet above bed of Staten Island Rapid Transit Railway (12 feet below terrace level). Elevation: 15.6 feet above mean low water; 13.32 feet above standard sea level.

**Serial No. 1858.** *West New Brighton:* B. M. 5 (C. & G. S.) is a C. & G. Survey standard disk set in cement in a drill hole made in old semaphore foundation along the south side of tracks of the Staten Island Rapid Transit Railway about 100 feet west of culvert described in B. M. 6. Elevation: 11.1 feet above mean low water; 8.79 feet above standard sea level.

**Serial No. 1859.** *West New Brighton:* B. M. 6 (C. & G. S.) is a C. & G. Survey standard disk set in cement in drill hole made in culvert on the south side of the Staten Island Rapid Transit Railway tracks. This culvert is about 120 yards west of the West New Brighton Rail Road Station. Elevation: 10.9 feet above mean low water; 8.60 feet above standard sea level.

**Serial No. 1860.** *Livingston:* B. M. 134 (B. E. & A.) is the center of a 1½-inch circle cut in the top of the granite water table at the southwest corner of the New York and Staten Island Electric Co.'s building on the north side of Richmond Terrace, about 70 feet east of Davis Avenue. The figure 5 is chiseled alongside of the bench mark, which is 4.5 feet above the ground. Elevation: 22.3 feet above mean low water; 20.00 feet above standard sea level.

**Serial No. 1861.** *Sailor's Snug Harbor:* B. M. 135 (B. E. & A.) is on the administration building, known as building "C," about 500 feet west of Tysen Avenue and about 100 feet south of Richmond Terrace, opposite the main entrance to the grounds of Sailor's Snug Harbor. The bench mark is a square cut in the top of the east edge of a massive granite block at the northeast corner of the steps and supporting the lamp-post. The point is 4.3 feet from the north end of the block and 2.9 feet above the ground. Elevation: 39.6 feet above mean low water; 37.34 feet above standard sea level.

**Serial No. 1862.** *Sailor's Snug Harbor:* B. M. 136 (B. E. & A.) is the highest point within a quadrant cut in the top of the northwest corner of the granite coping of the stone "quarterdeck" on the north side of Richmond Terrace, opposite to and north of the main entrance to Sailor's Snug Harbor. The bench mark is about level with the sidewalk, is outside of the iron railing, and about 16 feet northeast of the flagpole. Elevation: 26.7 feet above mean low water; 24.44 feet above standard sea level.

**Serial No. 1863.** *Sailor's Snug Harbor:* B. M. 137 (B. E. & A.) is the center of a square cut in the northeast corner of the long granite platform at the foot of the stone steps leading from the north side of Richmond Terrace to the tracks of the Staten Island Rapid Transit Railway, opposite the main entrance to Sailor's Snug Harbor. The bench mark is about 12 feet below the sidewalk and 2.5 feet above the railroad tracks. Elevation: 14.8 feet above mean low water; 12.56 feet above standard sea level.

**Serial No. 1864.** *Sailor's Snug Harbor:* B. M. 138 (B. E. & A.) is the bottom of a square cut in the southwest corner of the coping stone of the sea wall north of Sailor's Snug Harbor. The bench mark is about 260 feet west of the flagpole opposite the main entrance and about 15 feet east of the one-story boathouse at the sea wall. Elevation: 9.1 feet above mean low water; 6.78 feet above standard sea level.

**Serial No. 1865.** *New Brighton:* B. M. 1 (C. & G. S.) is a C. & G. Survey standard disk set in cement into a drill hole on back (north) wall of red-brick building, No. 421 Richmond Terrace. Bench mark is set in wall about 3 feet above ground and is about at same elevation as bed of railroad tracks, from which it is distant about 3 meters. Elevation: 15.4 feet above mean low water; 13.08 feet above standard sea level.

**Serial No. 1866.** *New Brighton:* B. M. 2 (C. & G. S.) is a C. & G. Survey standard disk set in cement into a drill hole on horizontal step of circular cement manhole with an iron cover, which is located a few meters north of railroad tracks, about 100 meters from station. The manhole is close to a semaphore signal post and near the bottom of a loose dirt bluff, 15 feet below surface of Richmond Terrace. Elevation: 15.3 feet above mean low water; 13.01 feet above standard sea level.

**Serial No. 1867.** *New Brighton:* B. M. 3 (C. & G. S.) is a C. & G. Survey standard disk set in cement into a drill hole on south side of stone wall embankment which extends out from south side of brick wall foundation to two-story wooden house, No. 20 Westervelt Avenue. The stone wall is a confining wall to low elevation to south. Bench mark is 1 foot above surface of ground to south, but is 3 feet below surface elevation to north (main entrance to house). Elevation: 56.8 feet above mean low water; 54.54 feet above standard sea level.

**Serial No. 1868.** *New Brighton:* B. M. 139 (B. E. & A.) is the highest point within a quadrant cut in the northeast corner of the bluestone doorsill at the store entrance to the Richmond Building, on the southwest corner of York Avenue and Richmond Terrace. The bench mark is about 22 feet west of the northeast corner of the building. Elevation: 31.4 feet above mean low water; 29.15 feet above standard sea level.

**Serial No. 1869.** *New Brighton:* B. M. 140 (B. E. & A.) is the center of a square cut in the top of the west end of the granite doorsill at the entrance to the two-story brick building, No. 441 Richmond Terrace, at Westervelt Avenue. The building is the New Brighton Post Office. Elevation: 37.4 feet above mean low water; 35.07 feet above standard sea level.