

ducts from below, which are exposed to the spray of the water, the interior of the beams and plates was given a heavy coating of plastic asphalt on which was laid a heavy lining of burlap saturated with plastic asphalt, then another coating of the latter. The conduit system is partly in the water sixty days during the year, but so far no moisture has entered the ducts.

The total weight of the I beams and plates used for this subway and floor is 180 tons.

THE MAIN CABLES.

The generator and feeder high tension cables are constructed for 10,000 volt working pressure. They are three conductor No. O. B. & S. cable, each conductor has 7-32" paper insulation, so that there is 7-16" insulation between the conductors, and the whole covered with a lead sheeting $\frac{1}{8}$ " thick. These cables run through the conduits to the middle dynamo room manhole, then along the basement corridor walls to the cable head cells. The cable rests here on Keystone cable hangers, supported by 3" channels placed two feet six inches apart. Wherever the cables are exposed outside of the conduits, they are covered with three layers of asbestos tape, each layer being 3-16" thick, and the whole fastened on with brass straps. The cable heads are all mounted in brick cells and consist of brass bushings soldered to the cable and the flared or bell shaped cast brass cable heads are then screwed on to the bushings and the whole filled with No. 66 Edison compound. The feeder cables which run into the tower, have at the latter place, a similar cable head and brick cell construction.

The exciter generator field and signal cables also run to the middle dynamo room through the conduit system thence along the ceiling below the basement and then up the walls to the second switch-board gallery on to the main switch-board. It will be seen that by putting all of the high tension cables in the basement and the D.C. cables in the sub-basement, they are entirely separated from each other. The exciter cables are 600,000 c.m. single conductor. The cables for the generator field are two conductor No. O. B. & S. and the signal cables are multiple conductor No. 14 B. & S. They are all paper insulated and lead covered, made to successfully withstand a break down test pressure of 1500 volts a.c. for one minute.

THE GENERAL ARRANGEMENT OF THE SWITCH-BOARD, SWITCHES, ETC.

The basement is used principally for the cable heads, static arresters and the potential transformers. These are all placed in buff brick cells with soapstone and brick barriers as shown on the