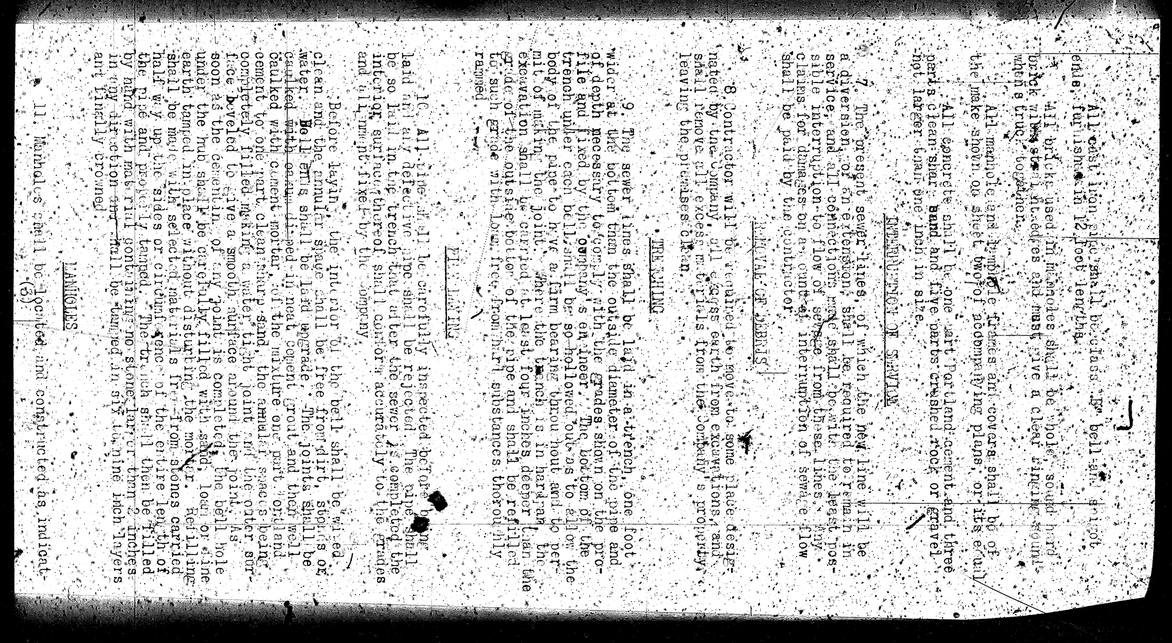


All cast iron pipe shall be laid in 12 foot lengths, or multiples of 12 feet, except where shorter lengths are necessary.

All brick used in manholes shall be hard burned kiln brick, free from lumps, and must give a clear ringing sound when struck together. Mortar for brick work shall be composed of one part Portland cement and three parts clean, sharp sand and five parts crushed rock or gravel not larger than one inch in size.

MANHOLE FOR NEW LINE

7. The present sewer lines, of which the new line will be a diversion or extension, shall be required to remain in service, and all connections made shall be with the least possible interruption to flow of sewage from these lines. Any claims for damages on account of interruption of sewage flow shall be paid by the contractor.

REMOVAL OF DEBRIS

8. Contractor will be required to remove to some place designated by the Company, all excess earth from excavations and shall remove all excess materials from the Company's property, leaving the premises clean.

TRENCHING

9. Any sewer lines shall be laid in a trench, one foot wider at the bottom than the outside diameter of the pipe and of depth necessary to closely fit the grades shown on the profile and fixed by the Company's engineer. The bottom of the trench under each bell shall be so hollowed out as to allow the body of the pipe to have a firm bearing throughout and to permit of making the joint. Where the trench is in hard rock excavation shall be carried at least four inches deeper than the grade of the outside bottom of the pipe and shall be refilled to such grade with loam, free from hard substances thoroughly rammed.

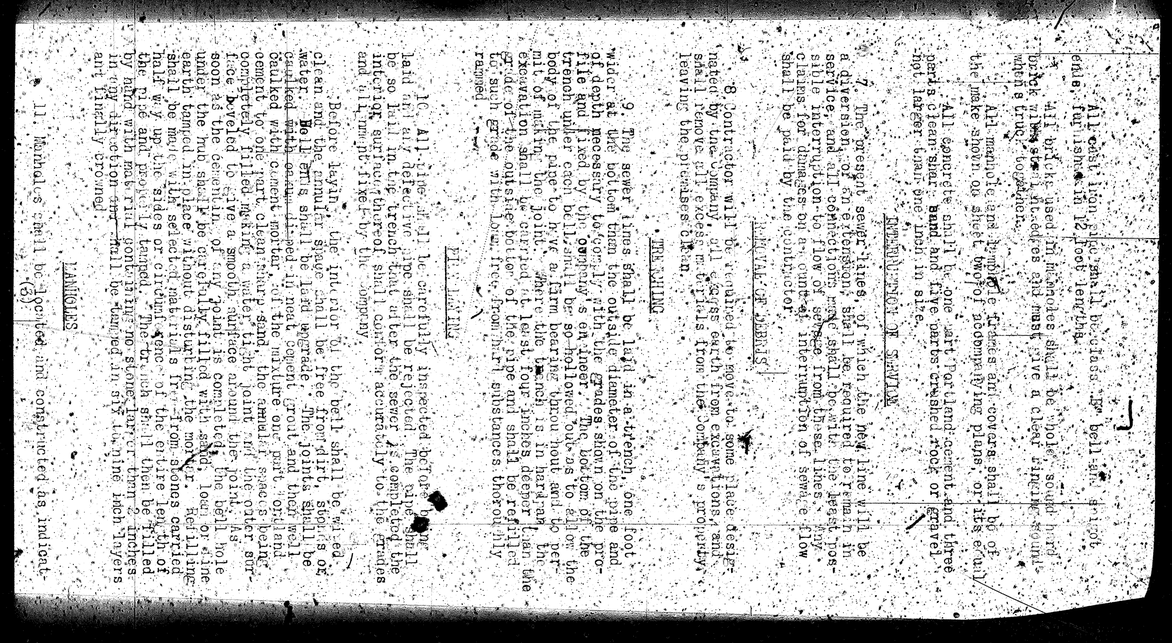
FILLING

10. All lines of pipe shall be carefully inspected before the same are covered, and any defective pipe shall be rejected. The pipe shall be so laid in the trench that after the sewer is completed the interior surface thereof shall conform accurately to the grades and alignment fixed by the Company.

Before laying, the interior of the bell shall be wiped clean and the annular space shall be free from dirt, stones or water. Bell ends shall be laid to grade, proof and thoroughly caulked with cement mortar, of the mixture one part Portland cement to one part clean, sharp sand, the caulking being completely filled making a water tight joint in the outer surface beveled to give a smooth surface about the joint. As soon as the cementing of any joint is completed, the bell hole under the pipe shall be carefully filled with sand, loam or fine earth tamped in place without disturbing the mortar. Refilling shall be made with selected materials free from stones carried half way up the sides or circumference of the entire length of the pipe and properly tamped. The trench shall then be filled by hand with material containing no stone larger than 2 inches in any direction and shall be tamped in six to nine inch layers and liberally drowned.

MANHOLES

11. Manholes shall be located and constructed as indicated



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