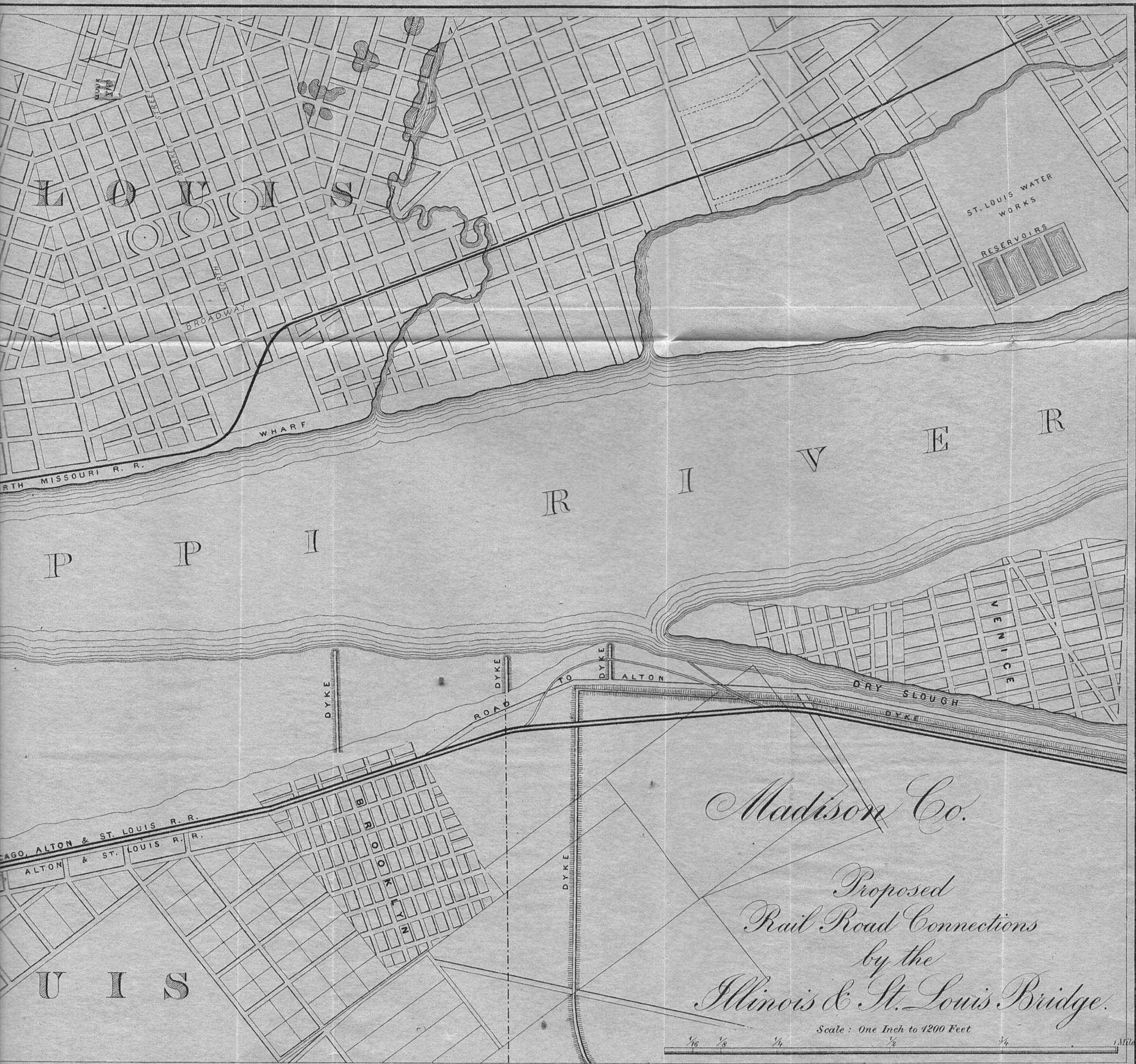


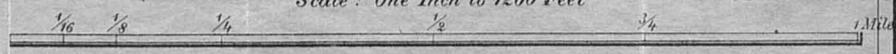


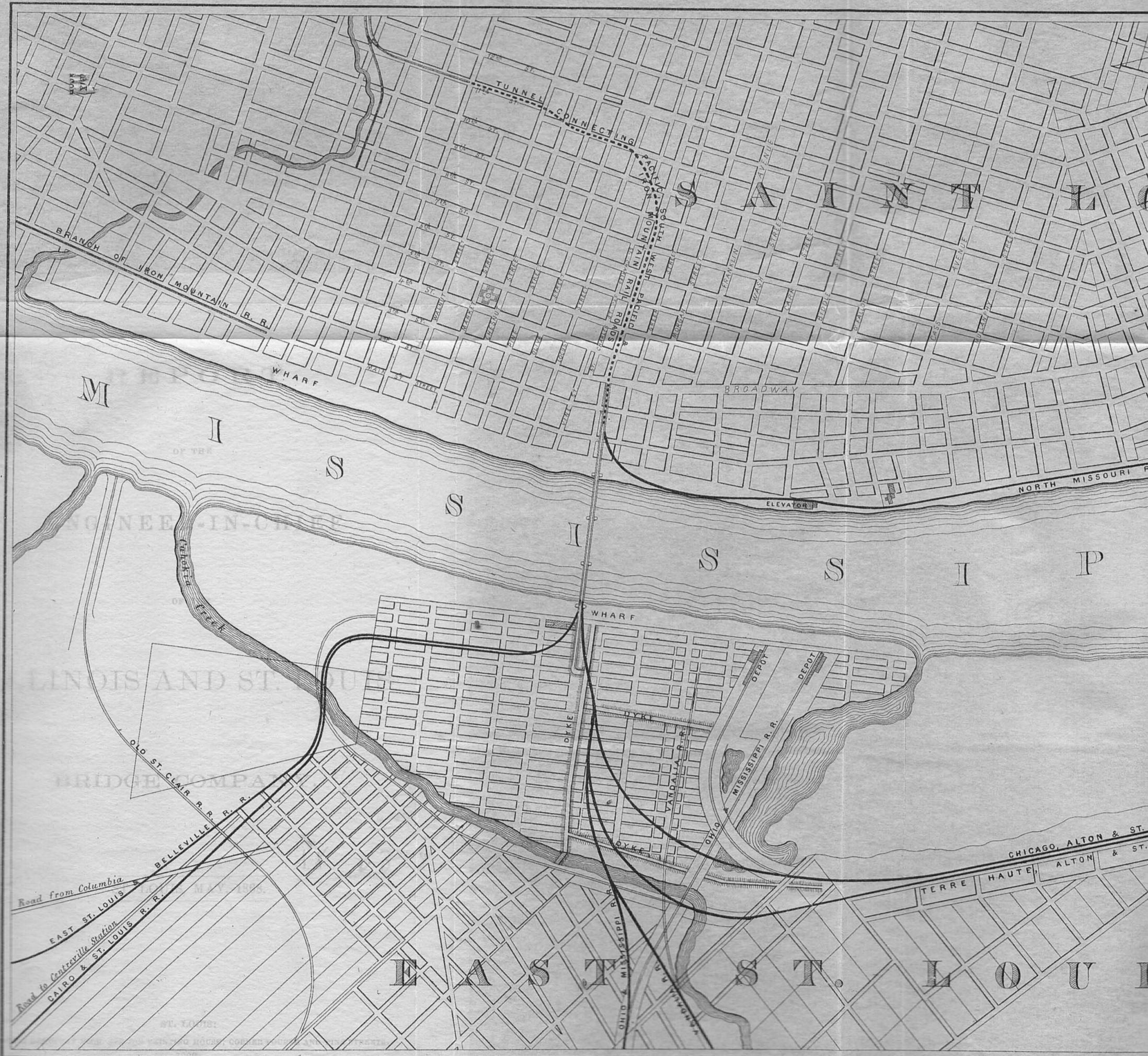
Perspective View



Madison Co.
Proposed
Rail Road Connections
by the
Illinois & St. Louis Bridge.

Scale: One Inch to 4200 Feet





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REPORT

OF THE

ENGINEER-IN-CHIEF

OF THE

ILLINOIS AND ST. LOUIS

BRIDGE COMPANY.



XX - 3324

ST. LOUIS, MAY, 1868.

ST. LOUIS:

MISSOURI DEMOCRAT BOOK AND JOB PRINTING HOUSE, CORNER FOURTH AND PINE STREETS.

1868.

REPORT.

To the President and Directors of the Illinois and St. Louis Bridge Company:

GENTLEMEN—I have the honor to submit the following report of the operations of the engineering department of your Company.

In view of the great importance of your enterprise, the deep interest manifested in it by our citizens and the public generally, and because the plans adopted by you have been frequently misrepresented and unfairly criticised, I have deemed it proper that everything of interest connected with my department should be placed in such form as to be clearly understood, not alone by your stockholders, but also by every person of ordinary intelligence in the community. I have, therefore, endeavored to explain the plan of structure, the principles involved in its construction, and the reasons for its preference, in the simplest language I can command, and with an avoidance, as far as possible, of the use of all technicalities not understood by every one. At the same time, you will be furnished, in an appendix, with all the scientific data, principles and formulæ involved in investigating and calculating the various strains to which each and every part of the Bridge is liable to be subjected. These are so arranged, together with the results deduced therefrom, as to furnish to the most critical and scientific engineer, the materials in convenient form whereby he may be able with great economy of labor, to investigate the correctness of every step that I propose to take in constructing your Bridge.

Fully estimating the great responsibility assumed in undertaking to design and complete this important work, I have felt that in no way could I so certainly insure a successful result, and at the same time manifest my appreciation of the obligation imposed upon me, as by securing the aid of the ablest talent, in every department of the work, and proving by careful experiment as far as possible, everything connected with it that has not been already fully demonstrated in practice, so that when the whole is finally consummated,