

[Circular No. 5.]

The Geological and Natural History Survey of Minnesota.

[BUILDING STONES, LIME, CLAY, &c.]

To Quarrymen and Builders:

The following letter from the office of the Chief of Engineers, United States Army, Washington, will show the design of this circular:

OFFICE OF THE CHIEF OF ENGINEERS,
UNITED STATES ARMY,
Washington, D. C., July 17, 1880.

Prof. N. H. Winchell, State Geologist, Minneapolis, Minn.

SIR:—Your communication of the 25th ultimo, relative to the testing of some building stones from the State of Minnesota, was referred to Gen. Q. A. Gillmore, who has returned it with the following remarks:

“The stones can be tested within three or four weeks after they are received. The specimens should be exact 2-inch cubes, very carefully prepared, accompanied by a statement giving the location of each quarry, the kind of stone, and its chemical composition so far as known.”

The specimens, prepared as indicated above, may be forwarded to General Q. A. Gillmore, Army Building, New York City.

By direction of the Chief of Engineers.

Very respectfully your obedient servant,

H. M. ADAMS,
Captain of Engineers.

(2213, G. R. 80.)

It is the desire of the Regents of the University to make this examination of the building-stones of the State as thorough as possible, and for that purpose the co-operation of quarry owners and of builders is solicited. These tests of strength will be

accompanied with chemical analyses, mineralogical description, and other physical tests. Every important building stone in the State should be examined thus minutely. In the preparation of the cubes care should be taken to state *which is the edge and which the bedding side*, since some stones exhibit important differences in these different directions. Four cubes of two inches each should be procured of each kind of stone to be examined, and sent to the undersigned.

In addition to the 2-inch cubes, a sample of the stone, dressed one foot square and six inches thick, should be placed in the State Museum at the University, for exhibition. Many such blocks have been procured already, but the series is not yet complete. The results of these examinations will be given in reports to the State legislature, and published as documents of the State, under the law for the geological and natural history survey.

A similar examination of the limes, and the clays for brick and stone-ware, will also be made as soon as possible. Much of the material for this investigation is already on hand, but the Museum should be supplied with samples of the brick and clay from every active yard in the State. All persons who wish to have their clays and bricks or pottery examined and compared with others in the State, or with eastern or southern products, should send about 50 pounds of the clay, in its crude state, and two or three of the bricks made in their yards, to the writer at Minneapolis, and they will be included in the general investigation.

The undersigned is also desirous of receiving any information or correspondence relating to other building materials in the State, such as flagging stones, paving stones, roofing slate, or cement, and will render any aid in his power, or give information or guidance to any who desire it, in selecting or in working up the building materials of the State. All correspondence and samples should be addressed to

N. H. WINCHELL,
State Geologist, Minneapolis.

The University of Minnesota,
August 20, 1880.

Minnesota Geological Survey
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