Laying of corner stone of fritz engineering laboratory, June 12, 1954

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Description of Facilities

The size of this laboratory may be seen from the foundation walls which outline its 70-ft. width, 130-ft. length, and by the 80-ft. height of the few columns you see erected. A four-story unit adjacent to the old laboratory will include tool, instrument, service facilities and a structural Concrete Laboratory on the first floor, and undergraduate instructional Civil Engineering laboratories in MATERIALS TESTING, SOIL MECHANICS, AND SANITARY ENGINEERING, STORAGE, and related student write-up rooms on the other three floors.

The central area of this building will be one large test room the full height and length of the building, and 50-ft. wide. Dominating this testing area will be the world's largest tension-compression testing machine; largest in its height of 57 ft. and by its base which will the full length of the building. Part of this base is a block of concrete 35 ft. deep, 26 ft. wide, and 42 ft. long (weighing over 4,000,000 lb.) to which the machine will be anchored. A movable platform will surround the machine and lift the testing group to convenient working levels. As we expect to test large structures to destruction, a 20-ton crane to handle these structures will operate over this testing area. The entire floor of this area is to be a test slab of concrete 4 ft. thick, heavily reinforced with steel, and provided with special anchorages.
The steel frame you see partially erected may seem heavy—it is, for it also will serve as a testing frame quite independent of the 5,000,000 lb. machine. Our engineers and students will be able to pull against this building frame (simulating wind pressures from cyclones) as they test within it transmission towers, building frames and other space structures.

Another important feature in the test area will be a dynamic test bed to be part of the floor. Special equipment will allow us to apply loads to beams or girders 60 or 70 ft. long at the rate of 500 loads per minute. In three days we shall have results which heretofore required years to determine. This same equipment will allow us to determine the fatigue strength. Just as you have broken a piece of wire in two by bending it back and forth, so will we bend large structural members—not just to break them in two but to determine their useful life as part of a structure.

To the south side of this test bay will be seven stories of smaller laboratories for graduate instruction and research, such as the structural models, photoelasticity, electronic, and metallographic laboratories. The corridors and balconies of this unit are arranged so tests in the machines can be viewed. A library, conference rooms, seminar room, and some 27 offices will provide comfortable quarters to house the headquarters and also almost the entire department personnel (Civil Engineering & Mechanics Department). While some of the staff may still have to go to other campus buildings to meet their classes, nearly everyone in the department will have an office close to the
laboratory where he also works.

A year ago we removed the first shovel full of earth - a year from now we look forward to moving into this fine building to carry on for the College of Engineering our part of the instruction and training of young men, and learning more about using our construction materials more efficiently and economically to the benefit of all.

President Whitaker and Dr. Grace, we, who have taken part in the planning of these facilities, look forward with great pleasure to the opportunity to use them.