

Creating a concrete showplace

BY JOHN G. SYMONS*

When a concrete form manufacturer decides to build a new office-factory building he has a challenging opportunity to make some realistic tests of his own products. The decision to build must be based on a number of factors which are relatively constant for any manufacturer: the need for increased production capacity, more storage area, greater office efficiency and room for expansion. The importance of such a decision will obviously have many irrevocable effects not only regarding the future of the corporation, but also of the family of workers who help make it grow.

A sound background of construction, market and area research is prerequisite to planning. Location should be determined by proximity to arterial highways, a metropolitan area, and the general market area to be served. Market statistics computed by the sales department should be relied on in determining size—with provision for expansion.

One of the major decisions is the type of construction to use. For the form manufacturer, aside from the practical benefits of the material itself, it is inconsistent to advocate cast-in-place concrete for others and build a steel or masonry building for oneself.

For the new Symons Manufacturing Company office and factory in Des Plaines, Illinois, Architect John Fox of Fox and Fox, Chicago, designed a two-story, 15,000-square foot office building and an 85,000-square foot plant formed entirely of exposed, architecturally patterned concrete. Also included were two site-cast folded plate roofs for the entrance and breezeway. The general contractor was R. T. Milord Construction Company, Evergreen Park, Illinois.

Ground was broken in June, 1961. The factory, 301 feet by 271 feet, was completed by November, enabling the task of moving heavy equipment to proceed during a

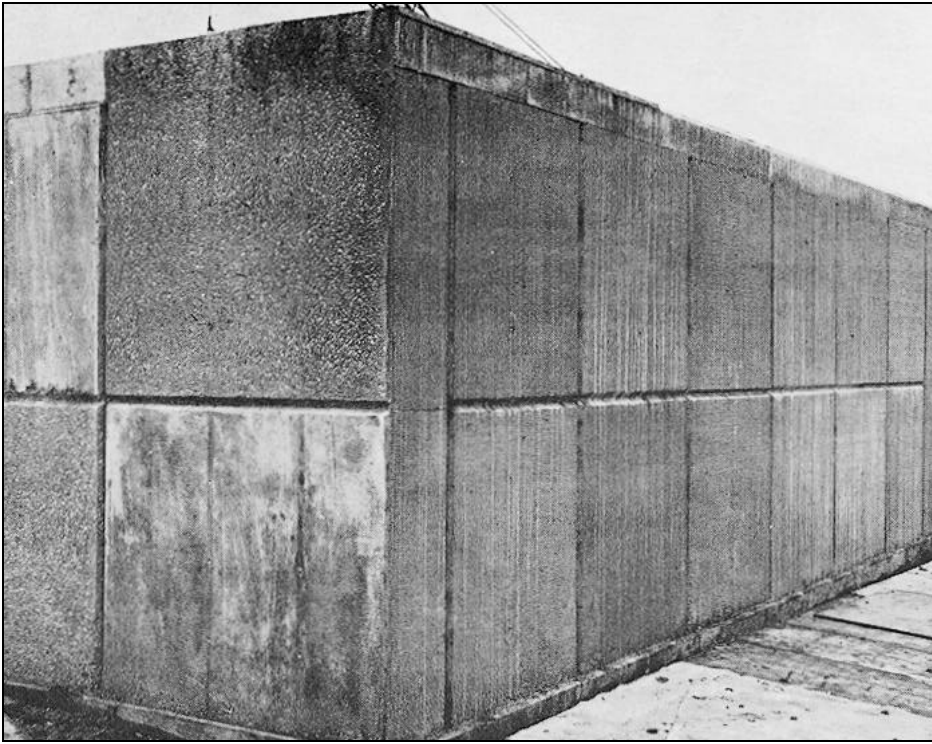
slow production month. By the end of December the office staff had moved into temporary facilities in the plant, thereby avoiding a prolonged communications stretch between the old Chicago office and the Des Plaines plant. By mid-March the office building, 60 feet by 130 feet, was completed, including decorating and air conditioning. In June, one year after ground breaking, open house ceremonies were held at the new office and factory.

Office and factory were designed specifically to utilize gang forming. Tying large sections of forms together for repetitive use not only lowered total forming costs but speeded the contractor's erection and stripping time. The forming technique involved the use of a steel rustication strip which fitted between panel side rails. This 1-inch strip which comes in 10-foot lengths, forms an interesting architectural design in the concrete and at the same time introduces a structural control joint. Gang sections were 12 feet by 25 feet and 12 feet by 30 feet with panels set horizontally and the rustication strip placed vertically at 5-foot centers.

For the office forming the 1-inch rustication strips were set 2 feet o. c. vertically and horizontally and form liners were tacked to the panels to leave an interesting textured design. Some pattern work of this type has been done with built-up equipment, but rarely before has prefabricated forming been used for this purpose.

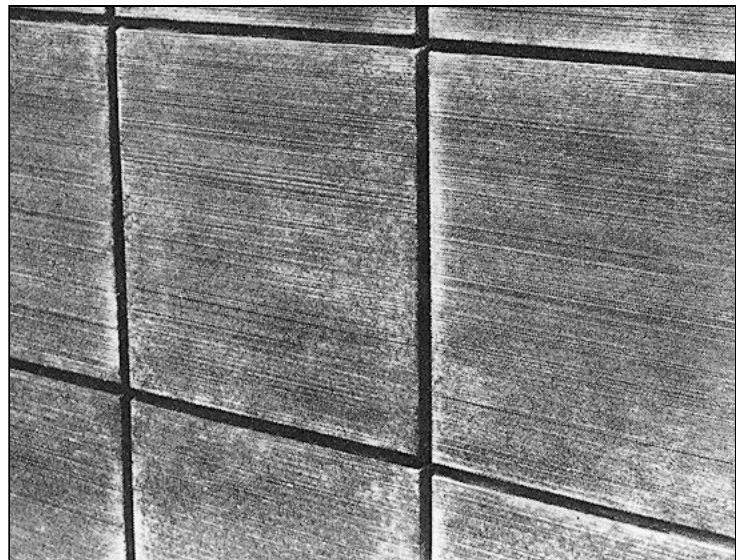
A slab shore system, used in conjunction with the prefabricated forms, allowed the contractor to eliminate up to 75 percent of conventional shoring, pre-adjust all shores from above or below the deck, and strip all slab-work without disturbing the support shoring.

Including the 4-inch folded plate roof entranceway and factory-office breezeway, a total of 59,462 square feet of contact area was formed for cast-in-place concrete. The contractor used 16,000 square feet of prefabricated forms for the job which, due to the slab shore system, could interchangeably form either wall or slab work.



In order to make a realistic advance study of various textures, designs and patterns that might be used in the full-scale structures, a 15- by 24-foot experimental building was built on the site. This now serves as a fire-proof paint shed for the plant.

Closeup of the office wall showing the pattern and texture achieved with rustication strips and striated form liners—another noteworthy example of the versatility of prefabricated forming.



The quantity of exposed work required careful planning of concreting specifications. Type I 3,500 psi concrete—a six-bag mix with an additive—was specified. Wall concrete was air entrained 3 or 4 percent for greater freeze and thaw resistance; exposed slabs and walks were air entrained at 6 percent. Slump was not to exceed 6 inches.

Construction of this new office and factory building has again proved that concrete, if properly formed, can

be an aesthetic as well as an economic building material—anywhere. In addition it has provided for this form manufacturer a rare opportunity to evaluate his own products in use and to plan for new products which may be marketed for commercial use. 

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