The final program approved by the Ideal Cement Company for two buildings of its new Tijeras Canyon plant indicated an architectural approach that would both exploit the possibilities of precast and prestressed concrete and produce a fresh and exciting architectural design appropriate to this region. The commission comprised a 23,000 sq. ft. maintenance building and a 9800 sq. ft. air-conditioned administration building to include offices and laboratory as well as locker and shower facilities for plant employees.

The design succeeds on many counts. It expresses the flexibility as well as the monolithic strength of concrete, qualities emphasized when one sees the fluid lines of the present structures against the stark geometry of the storage cylinders and cubic masses of the factory building. The design also expresses the new structural principle of thin shells.

The casting and finishing of the concrete evidence excellent craftsmanship. Exterior wall panels, prefabricated in Utah and trucked to the plant site, expose a handsomely textured aggregate surface.

Above all, this plant demonstrates that a factory can be a beautiful piece of architecture — an achievement that has been recognized by two awards. FACTORY MAGAZINE, a McGraw-Hill publication devoted to factory management, selected the Tijeras plant as one of the "Top Ten Plants of 1960." And at the recent AIA Rocky Mountain Region convention in Tucson, the structures received an HONORABLE MENTION award.

Throughout both buildings columns and wall panels are precast and the roof structure is thin shell. Two different schemes of construction are employed. In the maintenance shop the barrels are supported on structural wall panels which conform to the roof contour. In the administrative building barrels are supported on a skeleton frame consisting of arched beams and Y-shaped columns. Columns and panels are precast with steel insets for welded or bolted connections. Prestressed, precast concrete beams are employed for the crane way of the maintenance building. Picture captions explain other details of the construction.

Completed in May of 1959, the two buildings required eight months to erect; Robert Mc Kee, Inc., was the contractor. Yonemotos designed the effective landscaping.
1. This photograph shows the partial erection of the precast units of the Maintenance Building. Here the top panels were shaped to the profile of the barrels and were designed both to counteract the horizontal thrust of the barrels and as a beam to support them. Also shown are the prestressed crane beam in place at the left and the steel clips for anchoring the lower level roof barrels to the sidewalk panels of the higher structure.

2. Finished Maintenance Building. The lower precast barrels have been attached to the wall inserts shown in the previous picture.

3. Some of the shells for the Maintenance Building have been poured. In the background are stacked precast columns and beams. Note the steel base plates at end of columns. Of special interest are the steel frames attached temporarily to the shell at four points. By using two cranes to lift the framework, the barrels are moved into place without undue stress.

4. Forming for the precast barrels of Administration Building.

5. Several barrels of the Administration Building are in place on the precast columns and arched beams. This structure differs from the Maintenance Building in that columns and roof are entirely independent of the side-wall panels with the exception that certain of these elements are designed as shear panels to resist horizontal stresses. The roof barrels could not be supported on sidewalk panels because of the large number of openings in the walls. A steel tie-rod was incorporated in this building to counteract the horizontal thrust of the barrels.

6. Administration Building. End bay showing tie-rods.

7. Administration Building, lunch room.

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