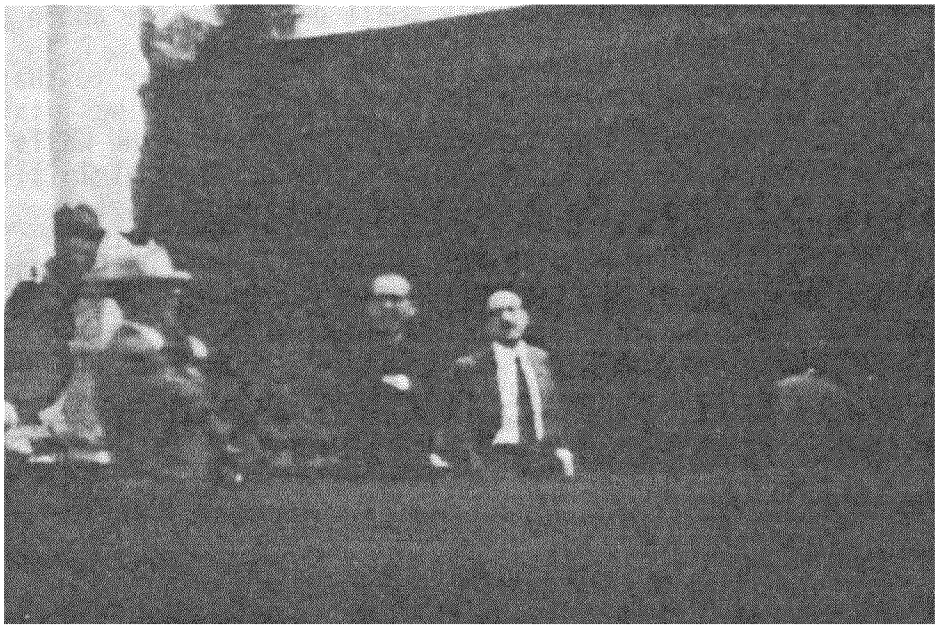

FIG. 3

Damage Due to Inadequate Embeddment of Beams of Choir Loft

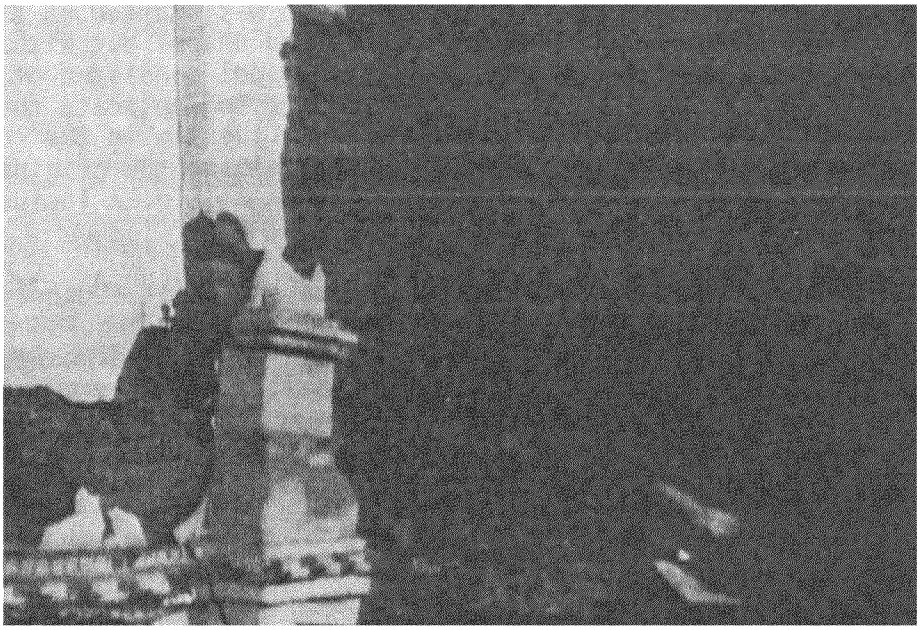

FIG. 4

Adobe Brick Collapse at Choir Loft

and peeling plaster with surprisingly small damage to the adobe brick itself.

The damage to the exterior of the chapel was similar to that of the interior. Extensive cracking and peeling of the plaster was visible on many walls. The most severe damage occurred at the base of the walls where one or more courses of adobe brick peeled off. The Spanish style tile roof neither collapsed nor suffered major damage.

The remaining adobe buildings at the mission were not severely damaged by the 1971 San Fernando Earthquake. Damage to stone lintels as shown in Figure 6 and cracking and minor peeling of the plaster on both interior and exterior wall surfaces was common to many of the adobe structures. The minor damage experienced by one and two-story buildings was probably due to the lateral stiffness provided by the numerous interior and exterior adobe shear walls.

Repair and Rehabilitation After The Earthquake

The damage suffered by the chapel's adobe walls was limited as described earlier. However, the Los Angeles Building Department ordered the chapel building vacated on the basis that the unreinforced adobe construction was a hazard to public safety. After approximately one year of engineering studies, it was concluded that repair and/or strengthening of the chapel's adobe walls was not economically or structurally feasible. The chapel's dimensions and aesthetic features were totally documented and the chapel was demolished including the foundation. In 1973, construction was started on a new chapel which would be an exact replica of the demolished chapel but with greater sesimic resistance. The new structure of the chapel consisted of a steel frame with interior and exterior surfaced plaster to duplicate the original chapel. All details of the earlier chapel, even the sag in the roof, were meticulously reconstructed for the sake of maintaining the originality of the new chapel. The new chapel interior is shown in Fig. 7 including the altar and the elaborate paintings on the walls.

The other structures on the mission grounds were not severely damaged by the 1971 Earthquake as discussed earlier. Damaged or cracked plaster was repaired. Two transverse adobe walls in the Convento Building were replaced with new reinforced concrete block walls and bond beams were added to increase the seismic resistance.

Conclusion

Through extensive efforts by many people involved with the San Fernando Mission and the generous financial aid provided by William Randolph Hearst, the San Fernando Mission today stands as a living monument to the Spanish