

## **SUBSIDENCE IN NEW ORLEANS: A PHOTOGRAPHIC CASE HISTORY OF THE LAKEVIEW SUBDIVISION**

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### **ABSTRACT**

The development of New Orleans' strategic location as the major port city on the lower Mississippi River required the drainage of extensive cypress swamps and marshes as well as protection from river flooding and hurricane storm surges. New Orleans overcame these natural barriers, grew rapidly and prospered during the eighteenth and nineteenth centuries. However, the early development of the city was confined largely to the higher ground of the broad natural levees along the Mississippi and to the smaller natural levees along Bayou Sauvage and Bayou Metairie. In order to accommodate expansion during the first decade of the twentieth century, a series of drainage canals were dredged, each equipped with a large, heavy duty electric pump. These canals drained large areas of cypress swamp in the central and northern part of the city.

The Lakeview subdivision, located in northwest New Orleans, was built on drained cypress swamp land near Lake Pontchartrain. Land filling was begun in the early 1920's and continued through the 1930's. Most of the structures in the neighborhood are single family dwellings constructed during the 1930's, 1940's and 1950's. The older homes were built on raised foundations supported by masonry pillars. When constructed on drained cypress swamp, they nearly always require periodic levelling and other foundation maintenance. Many of the later houses were built on concrete slab foundations. Some of the early slab foundations were poured directly on the ground, but this technique proved unsatisfactory, as the unsupported slabs quickly settled and cracked in the soft underlying swamp sediment. In order to stabilize slab foundations, a slab-on-piling foundation was developed, in which a concrete foundation cap is poured over a base of driven wooden foundation pilings.

A series of photographs were taken over a 51 year span of time, during which a single family lived in the residence on Colbert Street in Lakeview. These photographs illustrate the periodic subsidence of the adjacent land relative to the house, which was constructed in 1941. The house, built using the slab-on-piling technique, is located near the center of Lakeview between the 17th Street Canal on the west and the Orleans Canal on the east. Subsidence rates documented in the photographs are related in time to modifications in the pumped drainage system. The series of photographs, dating from the construction of the house in 1941 to the present, document periods of incremental subsidence, which now totals 32 inches (81 cm).