CROTON HYDROELECTRIC PLANT , SUBSTATION
Croton Road Dam, at the Muskegon River
Croton vicinity
Newaygo County
Michigan

HAER No. MI-81-D

PHOTOCRAPHS

WRITTEN ;HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENCINEERING RECORD
National Park Service
Northeast Region
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, P.A. 19106

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HISTORIC AMERICAN ENGINEERING RECORD

CROTON HYDROELECTRIC PLANT, SUBSTATION

HAER No. MI-81-D

Location:	Croton Dam Road, at the Muskegon River, Croton Vicinity, Newaygo County, Michigan UTM: 16.607960.4810040 Quad: Croton, MI, 1:24,000
Dates of Construction:	1930-1931
Engineer:	Allied Engineers, Inc., Engineers and Constructors
Present Owner:	Consumers Power Company, 212 West Michigan Avenue, Jackson, Michigan 49201
Present Use:	Electrical substation for hydroelectric generating plant
Significance:	The Croton Hydroelectric Plant substation was constructed in 1930-31 to replace the original switching equipment and transformers built in 1908 and located inside of the original powerhouse. This handsome building, which has extensive decorative elements, is an example of the attention often paid to the aesthetic appeal of an industrial building such as an electrical substation, located far from public view.
Project Information:	This documentation is the result of a May 9, 1994 consultation meeting between the Consumers Power Company (CPCo) and the State Historic Preservation Office (SHPO). This meeting took place in response to CPCo's desire to rehabilitate the plant's spillway. As a result of the meeting, CPCo and the SHPO agreed to the recordation of the entire Croton Hydroelectric plant in accordance with Historic American Engineering guidelines. The documentation was completed in 1994 by Dr. Charles K. Hyde, Wayne State University, under contract to CPCo.

HISTORY

The Croton Substation was constructed in 1930-1931 to allow the relocation of the electrical transformers and switching equipment originally installed in the Generator Building of the Croton Powerhouse in 1908. The electricity produced at the Croton Powerhouse was transmitted to the substation via overhead lines which extended from the north end of the powerhouse to the west bank of Croton Pond, approximately 100 feet north of the west end of the spillway structure.
Located to the west and north of the existing powerhouse and spillway structures, the substation in its entirety incorporates considerable electrical equipment, including transformers and switches, located in the yards outside of the substation building proper.

This report examines only the substation building, which has served both as a repair facility and as a control center.

PHYSICAL DESCRIPTION

The Croton Substation is a two-story rectangular, symmetrical building, measuring 34 feet wide, 57 feet 4 inches long, and 30 feet in height. The front elevation faces westward. The building is sheathed in brown brick laid out in stretcher courses. Stone is used on window sills and lintels, belt courses, coping, and around the front entrance.

The facades of the Substation are divided into vertical sections or bays, each defined by protruding rectangular columns made of brick - three on the west facade and four along the north and south facades. The east facade has no brick columns creating distinct vertical sections, but instead is dominated by a large rolling steel door, 12 feet 5 inches wide and 18 feet 6 inches high. Along the vertical axis the building facades are divided into three levels. The first extends up from the stone course along the base beyond the first-story windows. The second level covers the area between the second-story window sills and the belt course that partly functions as lintels. The top tier begins at the aforementioned belt course and ends with the coping on top of the roof-line parapet.

Each bay has windows on the first and second stories. First floor windows have a dozen panes; the second story windows, which are slightly longer, have fifteen. The front entrance extends from the facade. A stone frame with a decorative keystone surrounds an eight-paneled wooden front door which is topped by a series of four transom lights. Two exterior lamps flank the entrance. The front entrance section, which covers only the first story, is separated from the second story by a stone cornice.

The interior of the Substation building is divided into two distinct segments. The rear or east section of the building consists of a Repair Room, which is 26 feet wide, 31 feet 6 inches long, and two stories in height. The front or west section of the building is divided into two stories. The first floor includes a vestibule, with the remainder of the space divided evenly between a room housing the terminal board and a boiler room. A single large Switch Board Room, measuring 26 feet wide and 23 feet long, fills the front section of the second floor of the building.

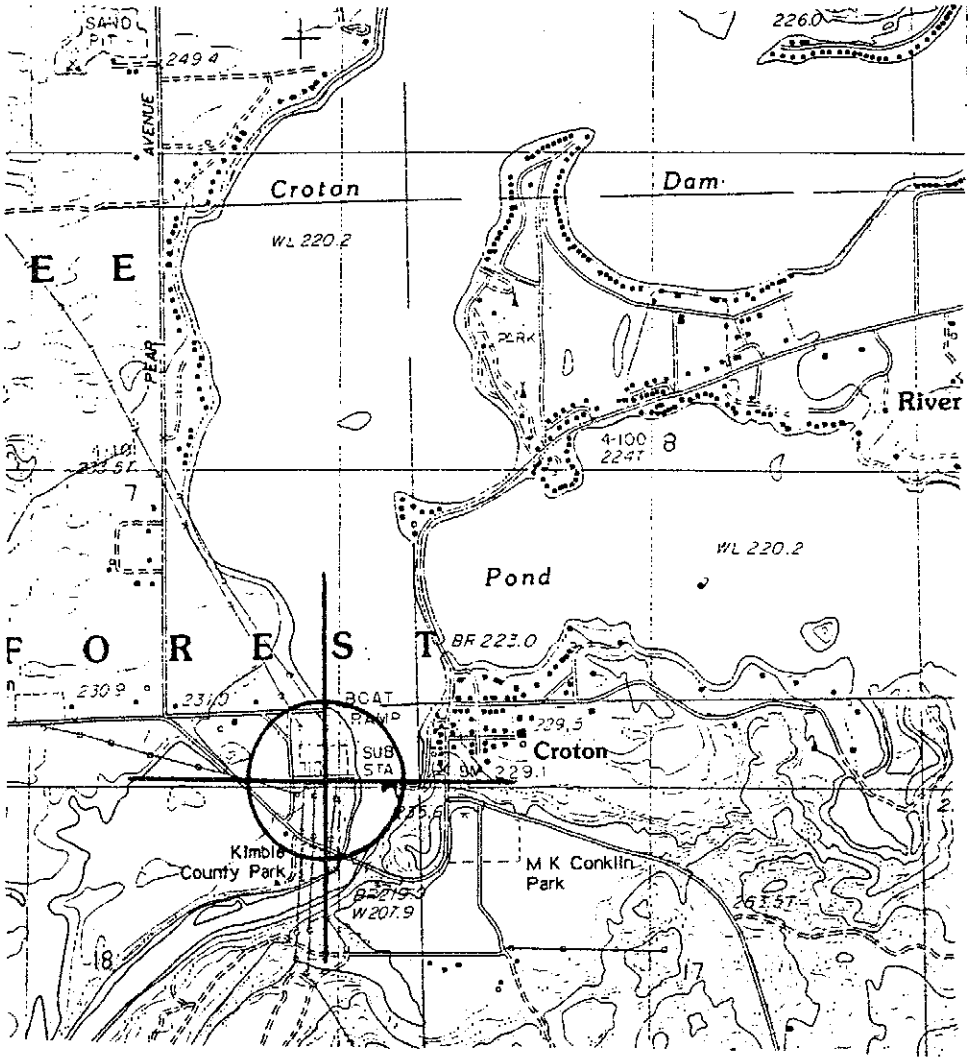
SOURCES OF INFORMATION

A. Engineering Drawings: The Consumers Power Company Engineering Department, 1945 West Parnall, Jackson, MI 49201, has approximately one hundred sheets of drawings produced by Allied Engineers, Inc., Engineers and Constructors, in December 1930, but with revisions extending to May 1931. This collection of drawings is likely to be permanently preserved by Consumers Power Company.

B. Historic Views: None were located.

CROTON, MICHIGAN QUADRANGLE, 1:24,000

UTM: 16.607960.4810040



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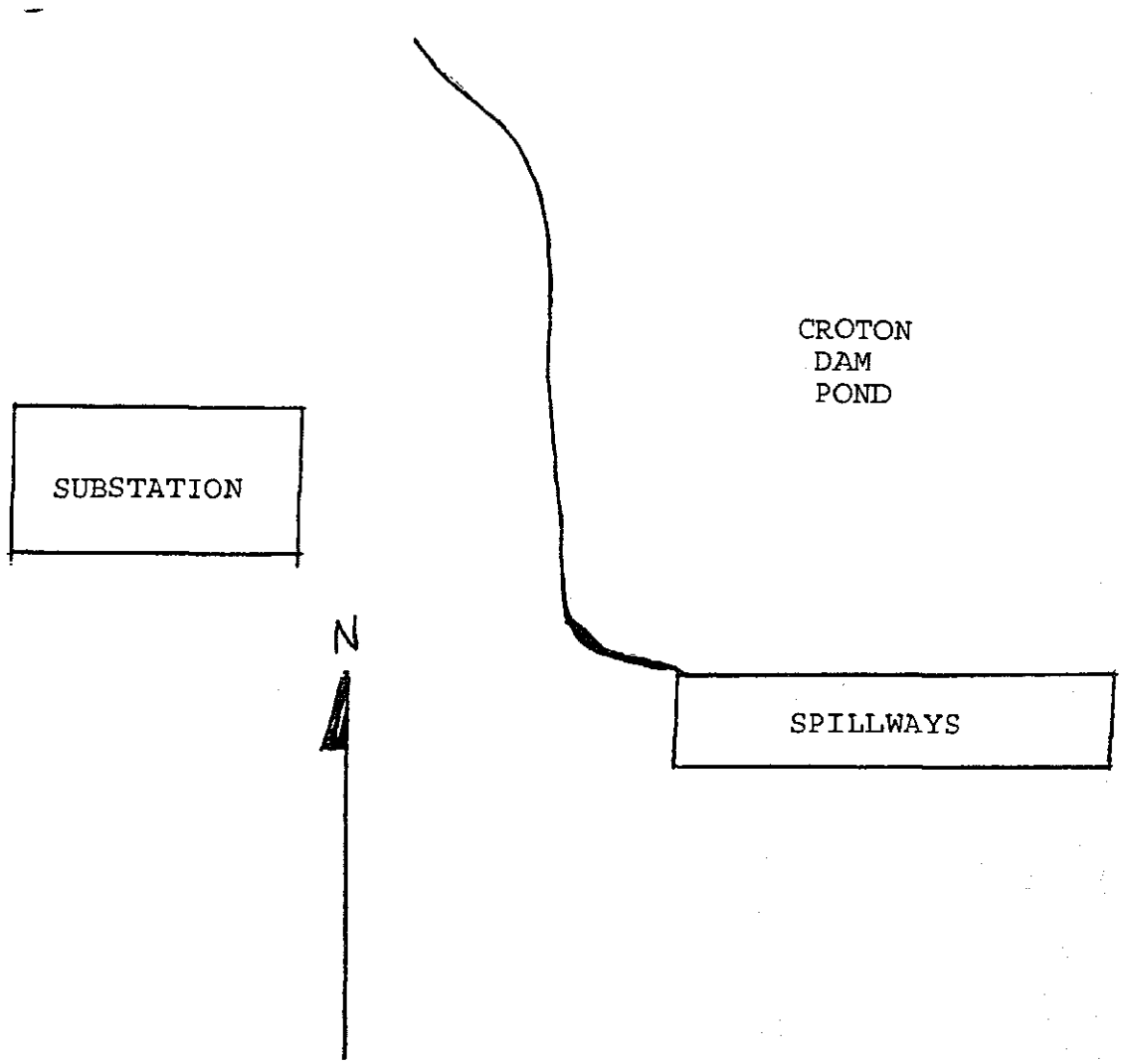
SITE PLAN



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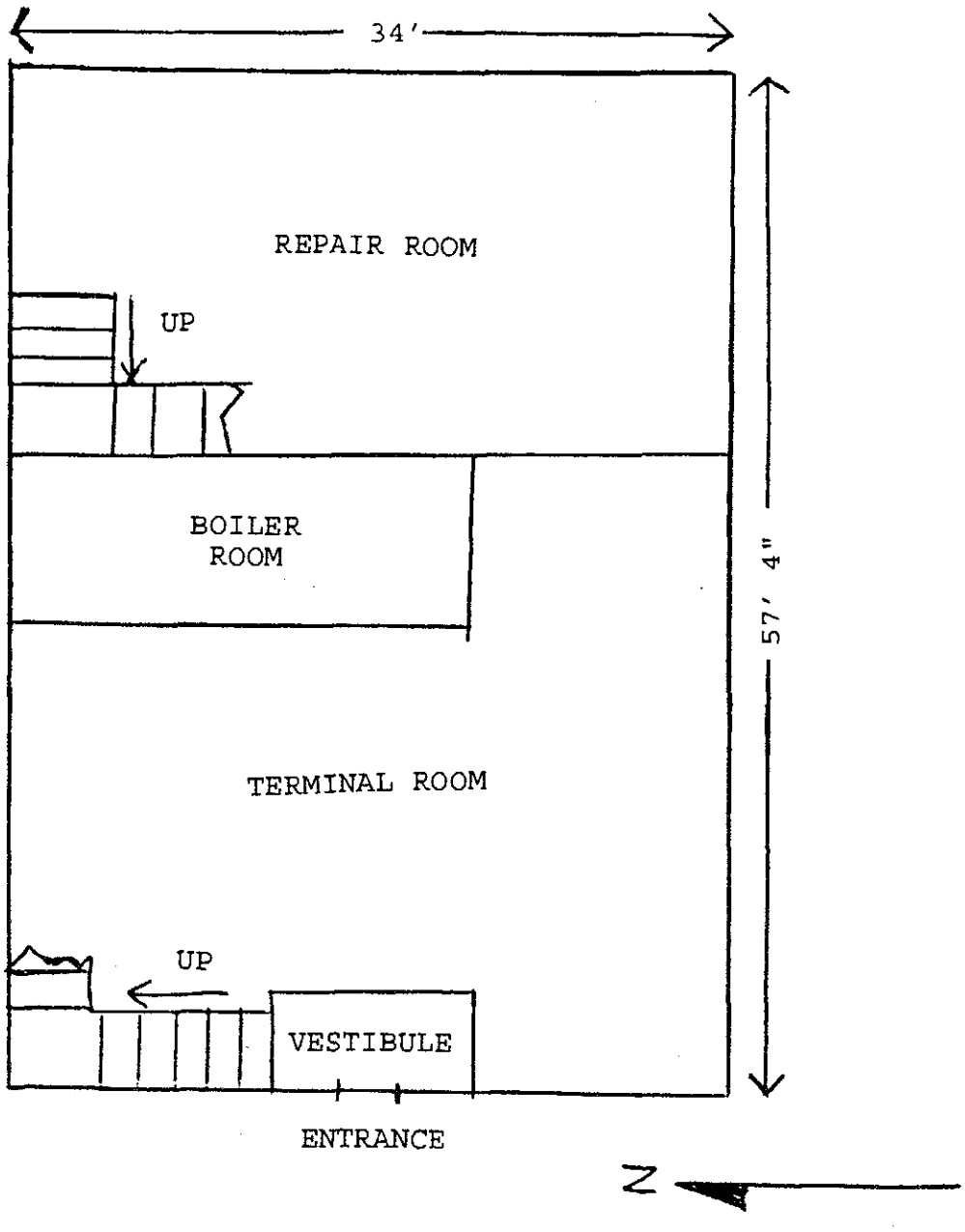
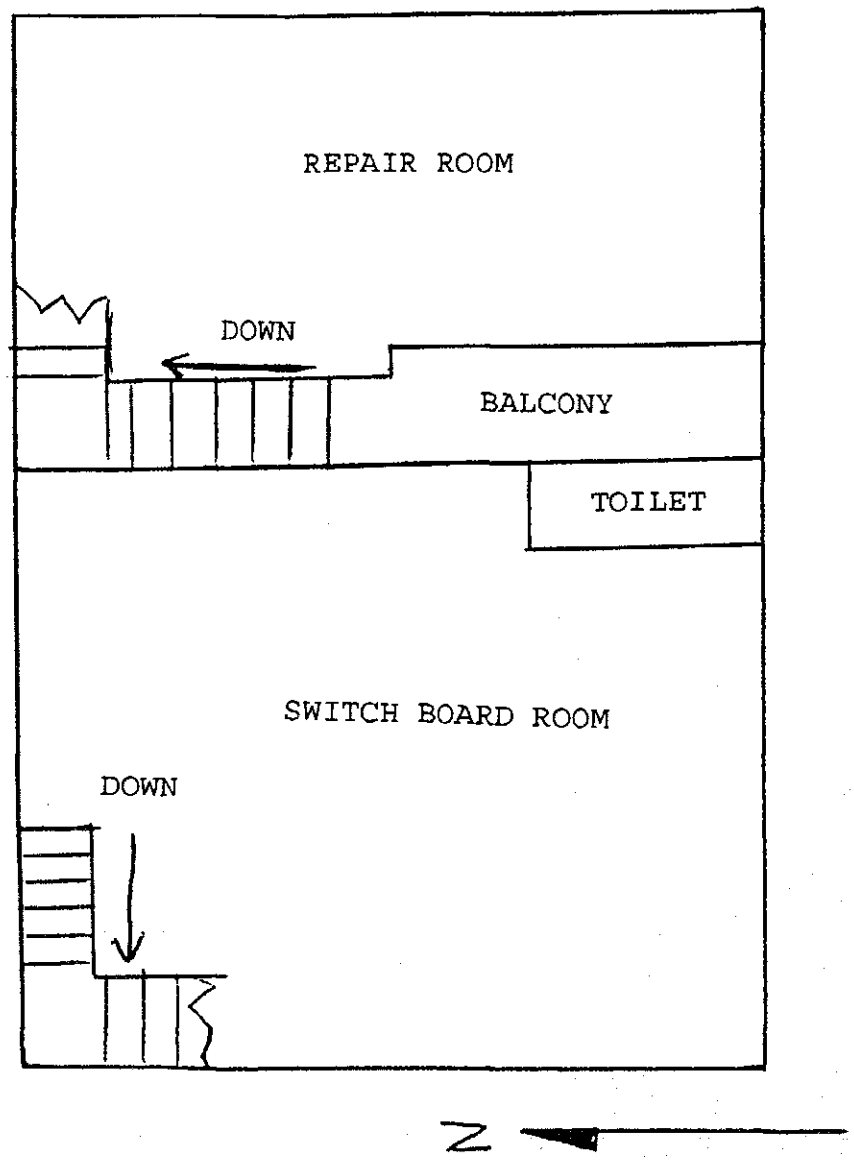
FLOOR PLAN, FIRST FLOOR



FLOOR PLAN, SECOND FLOOR



ADDENDUM TO:
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Croton Dam Road at Muskegon River
Croton vicinity
Newaygo County
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FIELD RECORDS

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National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001