

ELLSWORTH AIR FORCE BASE,
BASE OPERATIONS TOWER AND FIRE STATION
(Building No. 7506)
1820 Vandenberg Court
Black Hawk Vicinity
Meade County
South Dakota

HABS No. SD-21-Z

HABS
SD-21-Z

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY

National Park Service
Midwest Region
1709 Jackson Street
Omaha, Nebraska 68102-2571

HISTORIC AMERICAN BUILDING SURVEY

ELLSWORTH AIR FORCE BASE BASE OPERATIONS TOWER AND FIRE STATION (Building No. 7506)

HABS No. SD-21-Z

Location: Ellsworth Air Force Base, 1820 Vandenberg Court, Black Hawk Vicinity, Meade County, South Dakota.¹

Significance: Following World War II, the United States saw its former allies in the war become unfriendly, resulting in the onset of the “Cold War”. This Cold War period saw the American military forced to maintain an active defense and readiness posture in the event the Cold War would turn into a real war. This set the stage for the establishment of Ellsworth Air Force Base and its emergence as a major component of America’s Cold War defense network.²

In May 1949, the base’s fleet of B-29 aircraft was replaced by new B-36 “Peacemaker” bombers. At the time, the B-36 aircraft was the largest and most significant strategic component of the Strategic Air Command’s (SAC) Cold War arsenal. The B-36 was the first aircraft created specifically to carry nuclear bombs to Soviet and other overseas targets.³

In 1950, the B-36 program was assigned RB-36 craft, temporarily shifting the base’s primary mission from one of combat to one of reconnaissance. As a result, the 28th Wing was transferred from the Fifteenth to the Eighth Air Force. The Eighth Air Force was also part of SAC. The RB-36 aircraft operated at the base from 1950 to 1955, completing a number of aerial photography and reconnaissance projects throughout the world.⁴

A new generation of heavy bombardment aircraft, the B-52, began to arrive in quantity in 1955, and were first stationed at Ellsworth in 1957. During that time, continued flight training and a massive program of infrastructure improvements at Ellsworth worked to ensure that the base would remain a state-of-the-art bombardment facility. Construction at the base in the early 1950s included runway improvements and additional hangars. The most significant and impressive operations facility constructed during this period at Ellsworth was the base operations building, which not only housed flight operations, but also included the airfield control tower and the fire station. Situated at the center of the new flight line, it was comprised of a two-story office block to the north; a one-story fire station complex to the south; and the control tower, which stood directly along the east side of the operational apron.⁵ The total number of military and civilian personnel working at the base grew from 3,283 in 1949 to a high of 7,139 in 1954.⁶ By 1955 Ellsworth was home to one of the Air Force’s major bomber bases as well as an early repository for components of America’s nuclear weapons stockpile.⁷

The Operations Tower and Fire Station was built in 1951 as a combination operations control tower and crash truck building containing eight crash stalls for the Fire Department. The total construction of the building was \$626,317.00.⁸ It represents design and engineering aspects significant to that era of military build-up.⁹ The Operations Tower controlled all air traffic in and out of the base. The Fire Station operated at this location until May 2000 at which time the construction of the new Fire Station was completed. Following the construction of a new control tower in 1988, the operations tower was turned into Real Estate as vacant space. In January 1990, the Security Police requested the space as a surveillance point, but all deficiencies were to be corrected. This never came to fruition. The tower has one point of ingress and egress, the steep stairs. Although the tower was remodeled in 1982 with materials rated as fire-resistive and there was a finding that a second means of egress was not required, the tower ultimately did not meet Occupational Safety and Health Administration (OSHA) standards and was identified for demolition in 1992.¹⁰

Site Context: This building was constructed to house the base's control tower, flight operations center, crash truck (emergency vehicles ready to respond to aircraft emergencies) and structural truck (emergency vehicles ready to respond to base structural emergencies) building. The construction of this building and new Very Heavy Bomber (VHB) hanger essentially established this site as the center of the north-south operational apron of the base.¹¹

Description: The building style is International. The frame is steel with a brick veneer. The roof is a five ply pitch and gravel. The foundation is reinforced concrete. The window bands are marked by continuous concrete lintels and sills. Between these courses, non-window area is filled with yellow brick in continuous header blocks. The first floor window in the tower was infilled with matching brick. There are modern additions of matching design to the north and south ends of the building. Four areas of crash/structural truck bays dominate the building. On the west face there is a five bay crash truck area which leads directly to the runway tarmac. A second single crash bay was added on the south face at the southwest corner at a later date. The south face has a three bay crash truck area. The east face holds a three bay structural truck area serving the structural fire protection needs for the base. A bunkroom, showers, offices, training room, and lounge are also in the building.¹²

The control tower is the third through seventh floors of the tower, with the seventh floor being the actual cab of the tower, 281 square feet. It has windows on the north and south corners on each floor level of the tower. On the north side at floor levels 3, 4, 5 and 6 all the windows are original metal frame, horizontal sliders. The center mullion is mounted at the corner of the tower walls with an adjoining window to each side. No masonry exists at the wall intersections where the windows occur, which results in a unique wrap-around appearance of the fenestration at these locations. The south corner has similar fenestration at floors 2, 3, 4, 5 and 6. The window frames at floors 3 and 5 are original metal sliders. The window frame at the second floor level matches the window system on the main body of the building which is a pair of fixed glazing panels over a pair of awning windows. The windows on 4 and 6 are horizontal pivoting windows. All window frames, regardless of type, fit in the original corner masonry opening and maintain the integrity of the original appearance. The control tower is polygonal (irregular hexagon) constructed, framed and sided in steel. A concrete catwalk with metal railing wraps the structure. The tower area is unaltered with original tile floors and painted walls. Small offices in the tower are accessed by steep stairs with metal balustrades. The two final flights of ladder-like stairs provide access to the control room.

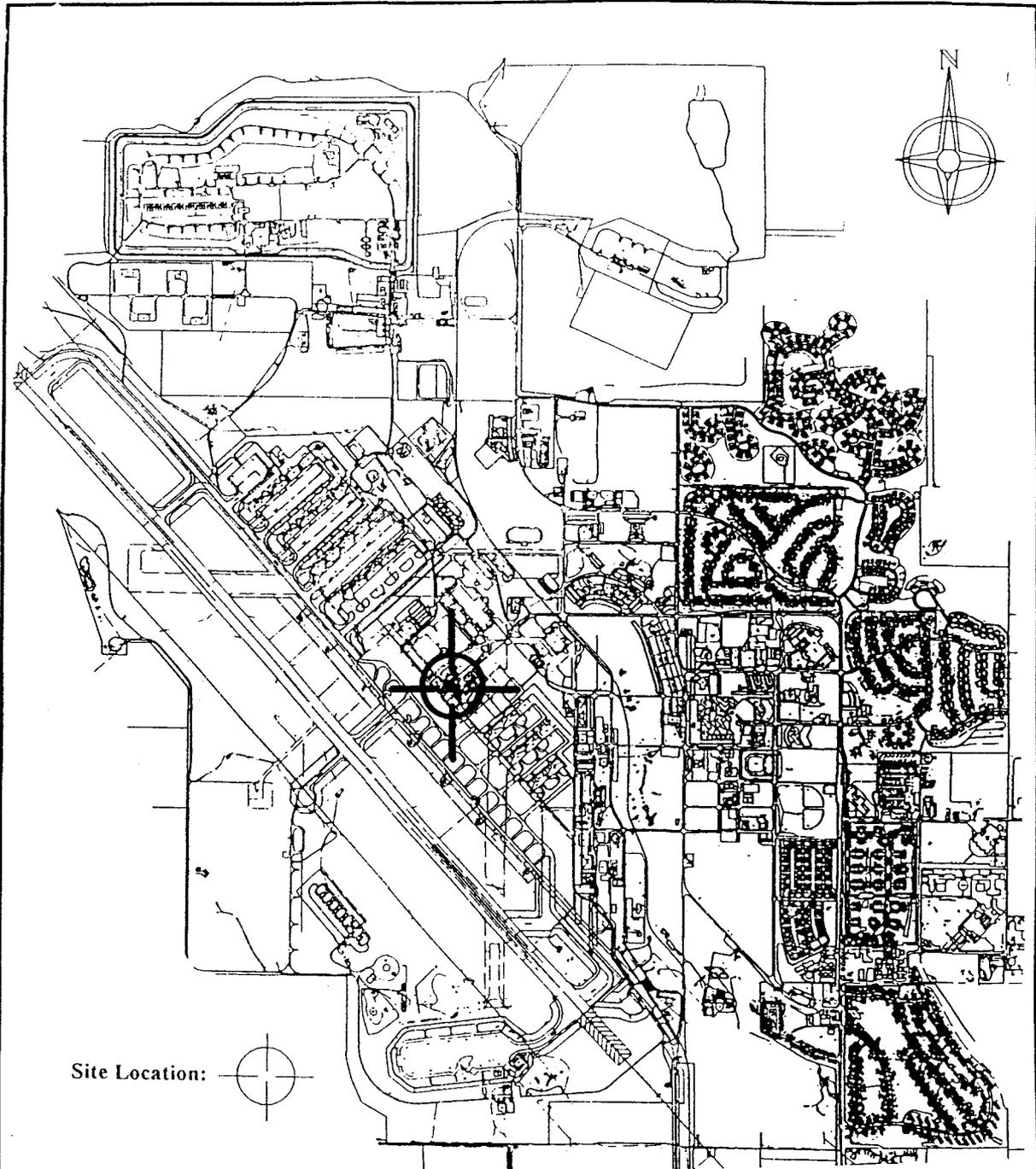
Historian: Lee Geiger, Rapid City, South Dakota, April, 1999

Sources: Hufstetler, Mark, and McCormick, Mary, et al, draft, "Ellsworth Air Force Base, South Dakota, Statement of Historic Contexts," Renewable Technologies Inc., Butte, Montana, November, 1995; Hufstetler, Mark, "Ellsworth AFB History Sites Inventory", 1994; "Real Property Records-Building 3501, Ellsworth AFB, South Dakota" Manuscript Records on file at the Real Property Office, Ellsworth AFB, South Dakota.

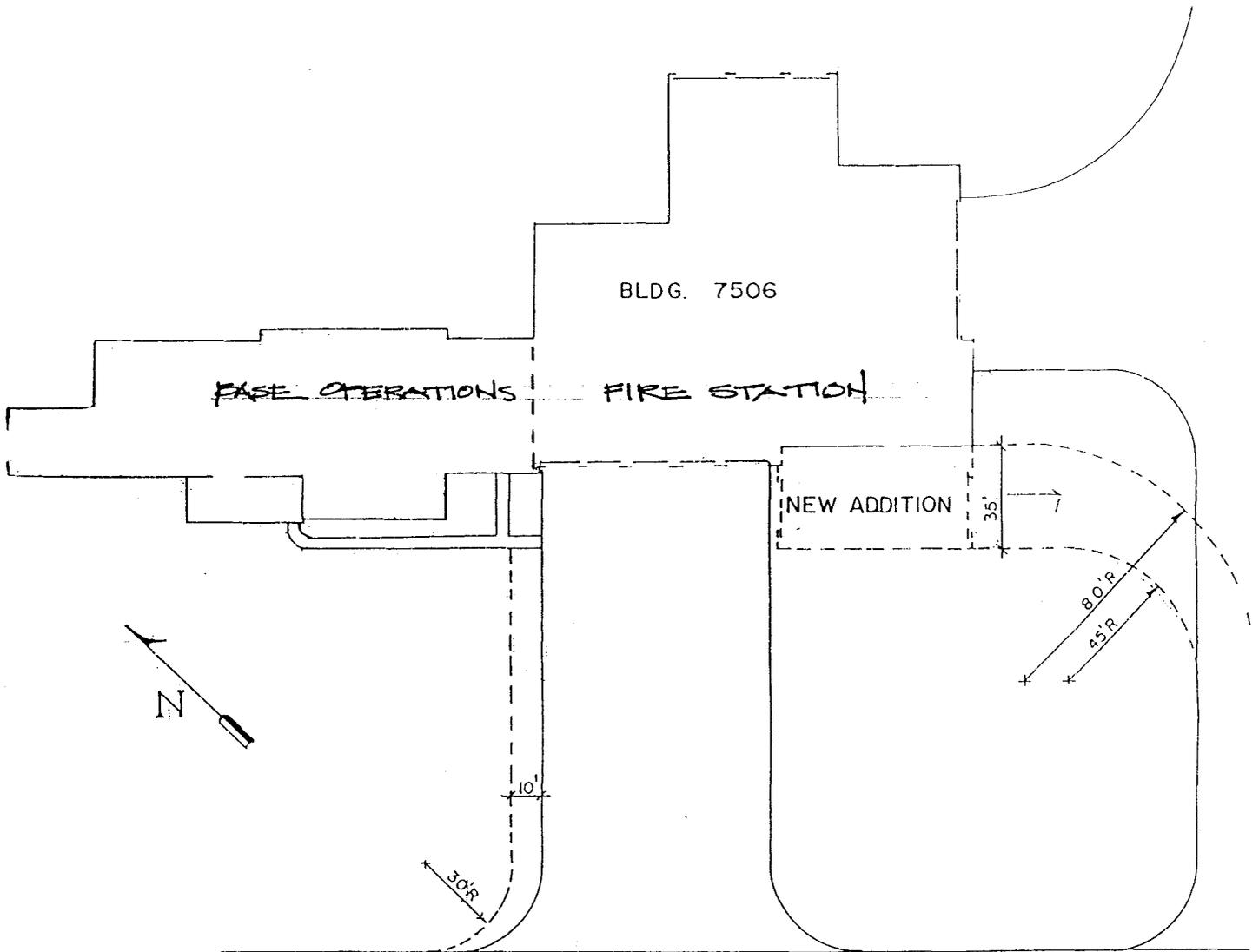
NOTES

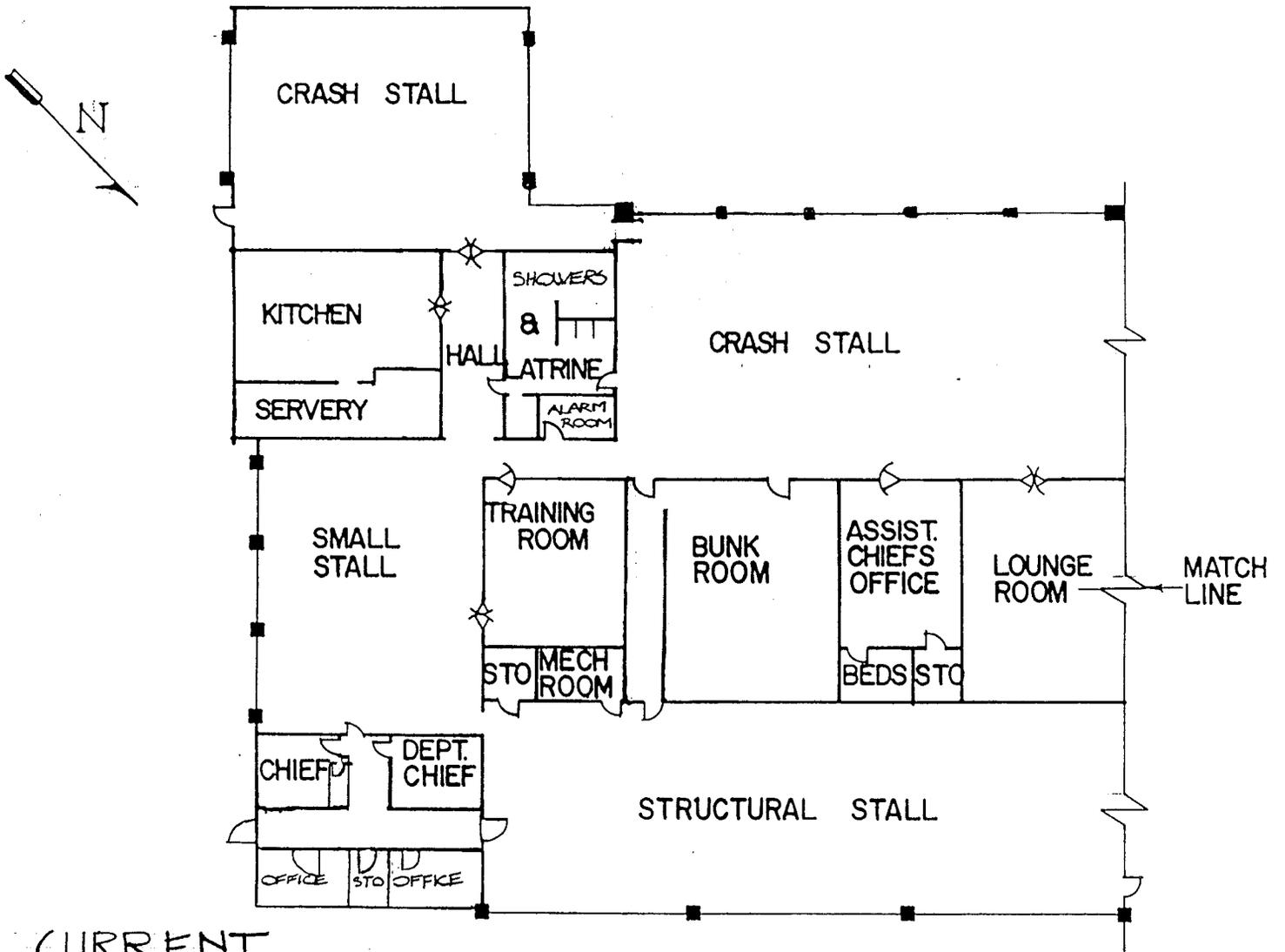
- 1 Hufstetler, Mark, "Ellsworth AFB History Sites Inventory", July, 1994
- 2 Hufstetler, Mark, and McCormick, Mary, et al, draft, "Ellsworth Air Force Base, South Dakota, Statement of Historic Contexts," Renewable Technologies Inc., Butte, Montana, November, 1995, Page 75
- 3 Ibid., 79
- 4 Ibid., 80
- 5 Ibid., 96
- 6 Ibid., 81-82
- 7 Hufstetler, Mark, "Ellsworth AFB History Sites Inventory," July, 1994
- 8 "Real Property Records-Building 7506, Ellsworth AFB, South Dakota," Manuscript Records on file at the Real Property Office, Ellsworth AFB, South Dakota
- 9 Hufstetler, Mark "Ellsworth AFB History Sites Inventory," July 1994
- 10 "Real Property Records-Building 7506, Ellsworth AFB, South Dakota," Manuscript Records on file at the Real Property Office, Ellsworth AFB, South Dakota
- 11 Hufstetler, Mark, "Ellsworth AFB History Sites Inventory," July, 1994
- 12 Ibid.

Ellsworth Air Force Base
Base Operations Tower and Fire Station
(Building No. 7506)
HABS No. SD-21-Z
(Page 5)

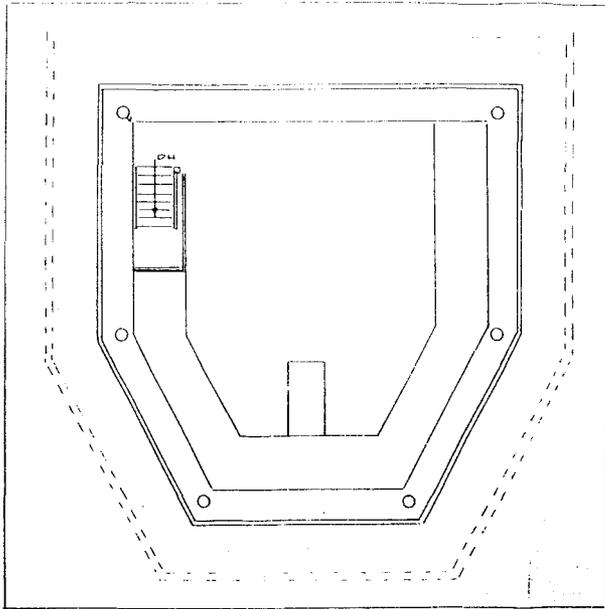


ELLSWORTH AIR FORCE BASE, SOUTH DAKOTA
Site Number: MD-BX-EL-00016
Historic Name: Operations Tower & Crash Truck
USAF Facility Number: 7506
USAF Nomenclature: FR STN

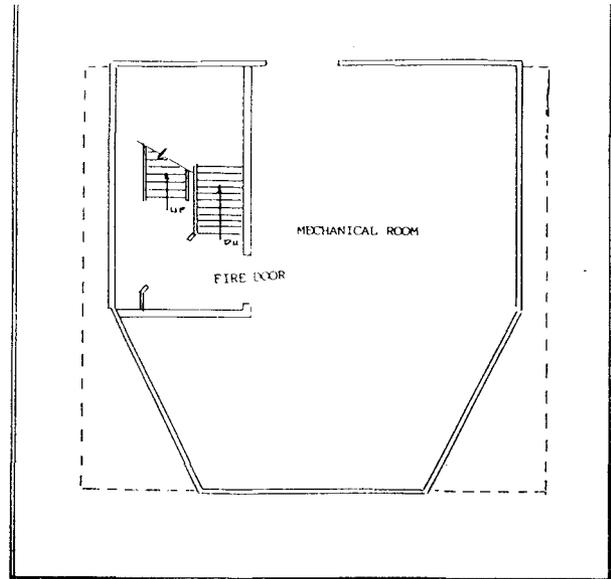




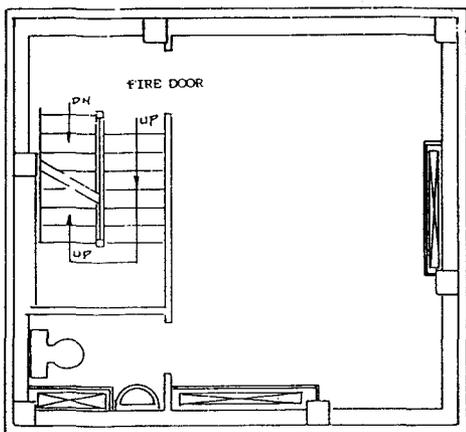
CURRENT FLOOR PLAN



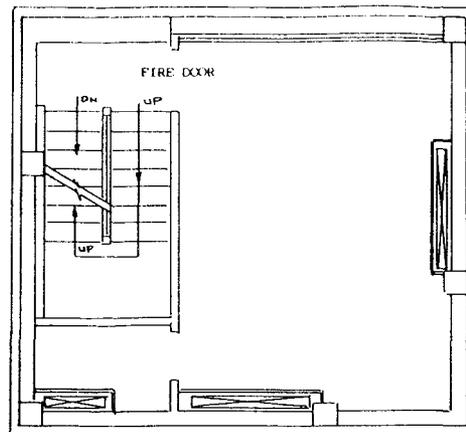
8TH FLOOR / CAB OF TOWER



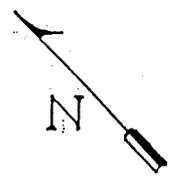
7TH FLOOR / MECHANICAL ROOM



TOWER / TYPICAL OFFICE & TOILET



TOWER / TYPICAL OFFICE & TOILET



TOWER PLANS