



U.S.AIR FORCE

**Repair Stairs, Elevator and Restrooms
HQ CENT. BUILDING 1
Eglin AFB, FL**

Basis of Design

100% Submission

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TABLE OF CONTENTS

INTRODUCTION.....	1
Project Description.....	1
Project Objectives	1
Phasing.....	Error! Bookmark not defined.
ARCHITECTURAL.....	2
Design codes and standards	2
MECHANICAL	3
Design codes and standards	3
PLUMBING.....	4
Design codes and standards	4
ELECTRICAL	4
Design codes and standards	4
FIRE PROTECTION	
Design codes and standards	5

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INTRODUCTION

PROJECT DESCRIPTION

The scope of work of this project is to provide the design, demolition, and renovation of six toilet rooms in the core of the building and the renovation of the East and West exterior exit stairs. The interior stairs from the basement to the first floor will also be renovated. The existing elevator will be brought into code compliance so that the lobby smoke detector correctly initiates the elevation recall.

PROJECT OBJECTIVES

The objectives of this project are:

1. Renovate the Men's and Women's toilet rooms on each floor of the building.
2. Renovate the East and West exterior exit stairways for code compliance.
3. Bring the existing elevator into code compliance for emergency recall operations.

PHASING

The renovation of the toilet rooms will be completed in phases. The demolition and renovation will occur one floor at a time and work on the next floor will not begin until the previous toilet facility has been brought back into service. The sequence of the phasing will be coordinated with the facility manager.

The East and West Stairs will be phased in a manner that provides for the use of an alternate exit during the renovation.

ARCHITECTURAL

DESIGN CODES AND STANDARDS

The latest edition of the following design codes will be utilized on this project:

- UFC 3-600-01 Fire Protection, Change 3
- National Fire Protection Agency (NFPA) Life Safety Code 101
- ADA-ABA Accessibility Guidelines, current version
- UFC 1-200-01 General Building Design Requirements
- NFPA 14 (2013 edition) and NFPA 72
- International Building Code
- Existing Building Code
- UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings
- Engineering Technical Letter (ETL) 99.4, Fire Protection Engineering
- Criteria – Emergency Lighting and Marking of Exits

The renovation of the toilet rooms and vestibules includes demolition of floor tile, tile base, and wall tile. Toilet fixtures, cubicle stalls and all accessories, including vanity tops and lavatories will be removed and replaced with new ones. All surfaces will be prepared to receive new finishes. Floors in toilet rooms will be prepared to provide positive drainage to floor drains. New floor drain covers will be provided. Walls not receiving tile will be finished to achieve a level 5 finish. New wall tile with tile cove base will be full height on plumbing chase walls, other walls in the toilet rooms and vestibules will receive tile to 5'-0" AFF with paint above. All floors in the renovated areas will receive new floor tile. New touchless plumbing fixtures will be installed in new rough out locations to comply with accessibility standards. New ADA-ABA compliant solid surface vanity counters with backsplashes and in counter soap dispensers will be provided. New mirrors and wall sconces will be located at each vanity location. New high efficiency hand dryers will be installed with new power circuits. New privacy cubicles, urinal screens and accessories will be installed in accordance with ADA-ABA and ANSI guidelines. All abandoned metal closure panels will be removed and patched with similar adjacent building materials.

The East and West exterior exit stairs will be renovated and upgraded for code compliance. All terrazzo floor finish at landings and stairs will be patched with non-shrink grout and prepared for new rubber tile finishes. Existing rubber treads, riser material, handrails, and all combustible wood panel material will be demolished. Partitions at each stair will be entrance will be repaired and modified to achieve a one-hour fire rating and extend from slab to slab. Fire dampers will be added as required in existing ductwork. New solid core fire rated doors will be provided with exit hardware and vision panels. The stair riser surfaces will be modified to achieve dimensional uniformity. The maximum height variance will be 3/8". A new 1 1/4" diameter code compliant aluminum handrail system will be installed at all stairs. All interior stair walls will be prepared as required for new finishes. All voids, cracks, penetrations, or irregular surfaces will be repaired. All wall surfaces will be finished with 100% acrylic paint: one primer coat and two coats of finish paint. All penetrations will be fire rated. Exit signage will be removed and reinstalled. The existing electrical conduit serving exterior wall louvers will be removed, replaced with new, and painted to match the adjacent wall. New rubber tile finish will be installed on landing, risers, stair treads and stringers.

The East and West open interior stairs from the basement to the first floor located near the toilets will be renovated with the same finishes as the exit stairs. The interior stairs will remain open to the interior corridors with no enclosures.

MECHANICAL

DESIGN CODES AND STANDARDS

The latest edition of the following design codes will be utilized on this project:

- UFC 3-600-01 Fire Protection, Change 3
- National Fire Protection Agency (NFPA) Life Safety Code 101
- UFC 1-200-01 General Building Design Requirements
- NFPA 14 (2013 edition) and NFPA 72
- International Building Code
- Existing Building Code
- SMACNA HVAC Duct Construction Standards Metal and Flexible

Fire dampers will be added to existing ductwork and louvers required in the exterior exit stair tower walls.

PLUMBING

DESIGN CODES AND STANDARDS

The latest edition of the following design codes will be utilized on this project:

- International Plumbing Code
- UFC 3-420-01, Plumbing Systems
- ADA-ABA Accessibility Guidelines, current version

All the existing plumbing fixtures in six toilet rooms will be removed. New plumbing fixtures will be provided for the new renovated toilet facilities. New plumbing fixtures will be ADA-ABA compliant vitreous china (toilets, lavatories, and urinals). Flush valves and faucets will be all brass construction with polished chrome plated finish. All fixtures, flush valves and faucets will be water conservation design to meet national and local codes. Flush valves will be automatic low flow for water conservation. Faucets will be automatic low flow with a 0.5 gpm aerator. New floor drain covers will be installed.

ELECTRICAL

DESIGN CODES AND STANDARDS

The following design codes will be utilized on this project:

- NFPA 70 National Electrical Code, 2023
- International Building Code, 2021

The existing restroom wall mounted linear light fixtures located above the mirrors will be removed. The existing lighting circuits serving these light fixtures will be removed to above the accessible ceiling for re-connection to new wall sconces. Four new LED source wall sconces will be provided in each restroom between the new mirrors. A new 20A, 120V circuit will be provided for each restroom to power two new electric hand dryers.

New 20A single pole circuit breakers will be provided in existing panelboards where required for new circuits to the new hand dryers. The new circuit breakers will match the manufacturer and type as the existing circuit breakers.

All branch circuits and all feeders will have an equipment ground conductor. Neutrals will not be shared between branch circuits. Interior circuits and feeders will be copper conductors in EMT with steel compression fittings. The minimum raceway size will be ½". Conductors will be copper type THHN/THWN. The minimum conductor size will be #12AWG.

All electrical material will be listed by UL, ETL or other acceptable listing agency as required by the National Electrical Code. All electrical material will comply with applicable NEMA, ASTM or ANSI standards.

FIRE PROTECTION

DESIGN CODES AND STANDARDS

The latest edition of the following design codes will be utilized on this project:

- UFC 3-600-01 Fire Protection, Change 3
- National Fire Protection Agency (NFPA) Life Safety Code 101
- NFPA 72
- International Building Code
- Existing Building Code
- Engineering Technical Letter (ETL) 99.4, Fire Protection Engineering
- 796 CEOCA Fire Alarm & Suppression Requirements October 2023

The existing elevator into code compliance for Emergency Recall Operations. The existing controller will be removed from top of elevator cab. A new controller unit will be installed in the machine room on the roof. The new controller unit will initiate recall upon the activation of lobby smoke detector.

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