DEPARTMENT OF THE ARMY
ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
600 ARMY PENTAGON
WASHINGTON, DC 20310-0600

REPLY TO
ATTENTION OF

DAIM-ZA

MEMORANDUM FOR

Commander, Installation Management Command, Attn: IMPW-M, 2405 Gun Shed Road, Joint Base San Antonio, Fort Sam Houston, TX 78234
Commander, United States Army Corps of Engineers (CEMP), 441 G Street NW, Washington, DC 20314

SUBJECT: Army Standard for Non-Commissioned Officers Academy (NCOA)

1. The enclosed Army Standard for the Non-Commissioned Officers Academy is hereby approved for implementation. Only the Assistant Chief of Staff for Installation Management has authority to approve exceptions to this standard. Waivers from the Army Standard must be approved in accordance with Army Regulation 420-1.

2. The standard is effective for Military Construction, Army (MCA) projects in FY22 and beyond. USACE Center of Standardization will develop and maintain Standard Designs consistent with these Army standards. Real Property Planning and Analysis System will also update criteria to reflect the Army standards.

3. The co-leads for the Facility Design Team for the NCOA are DAMO-TR, Ms. Mary Ellen McCrillis, (703) 614-7902, mary.mccrillis.civ@mail.mil; DAIM-ODC, Ms. Erica Simon (571) 256-9739, erica.s.simon2.civ@mail.mil; TRADOC proponent is HQ G1/4 Mr. Mark Hoff (757) 501-6876, mark.a.hoff2.civ@mail.mil; USACE Center of Standardization from the Norfolk District: Mr. Matthew Scanlon (757) 201-7114, Mathew.c.scanlon@usace.army.mil.

BINGHAM.GWENDOLYN.1124774248 Digitally signed by BINGHAM.GWENDOLYN.1124774248 Date: 2019.05.15 16:59:38 -04'00'

Encl

GWENDOLYN BINGHAM
Lieutenant General, GS
Assistant Chief of Staff
for Installation Management

CF:
US Army Training and Doctrine Command G1/4

Army Standard

Non-Commissioned Officer Academy

Primary Catcode: 17120

CENTER OF STANDARDIZATION:

Primary COS (Campus, Operations, DFAC, and Instruction)

Norfolk District

Supporting COS (Barracks):

Fort Worth District

ACSIM Approved 15 May 2018

1.0 EXECUTIVE SUMMARY

1.1 PURPOSE

The Non-Commissioned Officer Academy (NCOA) is part of the Non-Commissioned Officer Education System (NCOES) which provides an Academy environment for educating Non-Commissioned Officers (NCOs) in the United States Army. The Non-Commissioned Officer Academy (NCOA) is comprised of a dedicated campus of buildings for conducting individual and collective training for Non-Commissioned Officers (NCOs). The Non-Commissioned Officer (NCO) Academy (NCOA) is required by the Army to accommodate administration, instruction, living, dining, outdoor training, equipment storage, related site amenities and parking. The NCOA is comprised of several facility types to meet the Army's needs; the Academy Building which houses the Administration and core Instruction functions, AST Barracks, Dining Facility (medium and large NCOA), Covered training, and Lawn Equipment Storage Building (LEB). These facilities, along with a running track and other authorized support facilities, comprise a cohesive campus environment to allow the students to live, eat, learn, and work together.

The NCOA has a defined course document that outlines the Academy's curriculum; The Program of Instruction (POI) provides the academic timeline, administrative support requirements, instructional environment, and the materials and equipment necessary to conduct the NCOA course(s). These course POIs drive the facility requirements of this standard. The following describes the NCOES courses that are typically offered at an NCO Academy:

Basic Leader Course (BLC): The BLC is a branch-immaterial course that provides basic leadership training. The BLC provides Soldiers an opportunity to acquire the leader skills, knowledge, and experience needed to lead team-level size units. It is the foundation for further training and development. Scope of tasks/competencies addressed in the BLC will provide both the team and squad-level perspective, where appropriate, and build upon experience gained in previous training and operational assignments.

Advanced Leader Course (ALC): The Advanced Leader Course is a branch-specific course that provides Soldiers selected for promotion to Staff Sergeant (SSG) with an opportunity to enhance leadership, technical skill, tactical expertise and experience needed to lead squad-size units. Training builds on experience gained in previous training and operational assignments. Branch schools and selected training battalions conduct this course in a live-in learning environment, where possible.

Senior Leader Course: The SLC is a branch-specific course that provides an opportunity for Soldiers selected for promotion to E-7 to acquire the leader, technical, and tactical skills, knowledge, and experience needed to lead platoon-size units. Training builds on experience gained in previous training and operational assignments. Branch schools and selected training battalions conduct this course in a live-in learning environment, where possible.

Master Leader Course (MLC): The MLC is a branch-immaterial course that provides an opportunity for Soldiers selected for promotion to Master Sergeants (MSG) to acquire the leader skills required for success at both troop and staff assignments throughout the defense establishment.

Instructor Certification: Instructor certification course is required for all NCOES instructors in accordance with TRADOC regulation.

1.2 OVERALL CONCEPT

A new Standard NCO Academy shall support instruction, feeding, and lodging within a contiguous campus environment consisting of the following major facilities:

- Academy Building
- Advanced Skills Training (AST) barracks *
- Permanent party standard dining facility *

***It is the intent of the Standard to leverage existing lodging and feeding capacity if feasible. Refer to paragraph 2.3 (Dining Facility) and 2.4 (Barracks).

The NCOA size is sourced from the annual through-put (enrollment) of Soldiers for a given NCOA course(s); through-put is captured the Army Program of Individual Training (ARPRINT) during the Structure Manning Decision Review (SMDR) process. Annual throughput is then converted to an average daily in-session student load. For overall campus concept plans, refer to the U.S. Army Corps of Engineers, Norfolk District, Center of Standardization.

1.3 DESCRIPTION

Academy Building (Primary Catcode 17120)**:**
Operations/Administration: This space is comprised of offices, special functions, locker/shower rooms, storage, and classroom components. The Operations/Administration area provides command and control, logistical, and administrative support to the training activities.

Instruction: Instruction areas are comprised of classrooms, instructor offices, Instructor break/huddle rooms, and Student break rooms. Special purpose educational spaces may be required beyond those specifically identified in this standard. Those spaces will be sized based upon prevailing industry standards. If a sloped floor Auditorium is required and justified, it will be based upon 15 NSF/PN.

Barracks (Catcode 72122):
Barracks are comprised of living quarters, toilets, laundry, lounge, storage, and other support spaces. The barracks building can be separated or attached to the Academic building.

Dining (Catcode 72210):
DFAC is comprised of delivery, storage, preparation, cleaning, and serving and seated dining and utilizes a modified Standard EPDF sized for medium and large NCOA.

Exterior Covered Training Area (Catcode 17139):
A covered training area is included to provide a sheltered exterior space for POI-based training and instruction. The covered training structure will be attached or very close to the Academic Building classrooms that it supports.

Lawn Equipment Building:
The LEB provides storage for maintenance equipment and materials for use by the Facility. This building should be detached from the NCOA building.

Parking:
Vehicular and service access drives, and parking area.

Track and PT pits (Catcode 75027):
A running track and physical training (PT) pits support the PT instruction of the Academy and should be on or near the campus.

1.4 APPLICABILITY

- The Army Standard applies to Active and Reserve Component facilities on Army Installations.
- The Army Standard is mandatory for all construction projects. Facility renovation is addressed under the Guidance section.
- NCOA projects must be reviewed by the USACE designated Center of Standardization (COS) for compliance with the Army Standard.
- All USACE geographic districts will incorporate the mandatory design features described herein in close coordination with the COS for NCOA complexes.

1.5 WAIVERS

- Only the Assistant Chief of Staff for Installation Management has the authority to approve exceptions to the Army Standard.
- Waivers from the Army Standard must be requested in accordance with AR 420-1 and the Army Facilities Standardization Program Charter, latest edition.
- All waiver requests to the Army Standard require COS conflict resolution prior to submission by the Garrison Commander through the IMCOM Region to HQ IMCOM.
- Garrison Army Standard waiver request submissions must be received in sufficient time to allow completion of Facility Design Team review and development of recommendations or courses of action for the Army Facilities Standardization Committee to consider prior to implementation into project design. Late submissions or project delays are not sufficient stand-alone justification for accelerated review or other dispensation to meeting the Army Standard.
- All waiver requests will include compelling rationale of functional and operational deviations to include substantiating documentation in sufficient detail for the Army to assess implications of approving the waiver.
- All HQDA approved waivers will be documented in installation master plans thereby serving as the installation's modified standards.

2.0 NCOA - COMPLEX

<table>
<tr><th>ITEM</th><th>MANDATORY CRITERIA</th></tr>
<tr><td>Gross Area of Facilities</td><td>
NCO ACADEMY COMPLEX FACILITIES MAXIMUM GROSS AREA:

Provide a complete NCO Academy complex with the following facilities* in accordance with the Gross Square Footage (GSF) allotment indicated. The facility constructed gross area will not exceed 5% of the space allocation to accommodate site, construction, or environmental factors. Square footage will be based on Student load and TDA elements. For most NCO Academies, the sizes will be in accordance with the table below. For academies that fall between size bands, adjust the square footage in accordance with the space allotments provided in this standard.

Academy Building
<table>
<tr><td>Small</td><td>37,100 GSF</td><td>(each, 128 PN)</td></tr>
<tr><td>Medium</td><td>62,990 GSF</td><td>(each, 256 PN)</td></tr>
<tr><td>Large</td><td>84,200 GSF</td><td>(each, 384 PN)</td></tr>
</table>
Barracks Building – Refer to paragraph 2.4. Barracks will be sized based upon the required TDY billeting population.

Exterior Covered Training
<table>
<tr><td>Covered Training</td><td>12 GSF/PN</td><td>One per NCOA</td></tr>
</table>
Lawn Equipment Building:
<table>
<tr><td>LEB</td><td>1,000 GSF</td><td>One per NCOA</td></tr>
</table>
Permanent Party Dining Facility (DFAC) – Refer to paragraph 2.3

Notes:
1. Where used in this document, PN = Personnel = ‘Average Daily in-session Student Load’ unless noted otherwise
2. Where identified, Net Square Footages (NSF) represents actual measured floor area. Scope adjustments (such as half-scope spaces), where applicable, ARE NOT INCLUDED in the NSF number of this Army Standard.
3. For building area calculations and measurements, refer to UFC 1-200-01
</td></tr>
<tr><td>Anti-Terrorism/Force Protection</td><td>Facilities will meet security requirements IAW UFC 4-010-01, DoD Minimum Anti-terrorism Standards for Buildings, latest edition. All instructional (including exterior covered training), operational, and living facilities of this Standard are classified as “Primary Gathering”. The Lawn Equipment Building is classified as “uninhabited”.</td></tr>
</table>

ITEM	MANDATORY CRITERIA
Accessibility	To the maximum extent that is reasonable and practicable without degrading the facility's military utility, comply with Architectural Barriers Act (ABA) Chapters 1 and 2 as well as Chapters 3 through 10 of the *Americans With Disabilities Act and Architectural Barriers Act Accessibility Guidelines for Buildings and Facilities,* current version.
Parking	Parking will be provided for staff, government and service vehicles, students and visitors. Total parking space allocation for the complex will be designed based on current Tables of Distribution and Allowances (TDA). Parking to be provided on the basis of 100% of TDA staff and 80% of average daily student load.
Maximum Site Planning Distances	Site the NCOA facilities on a contiguous site, minimizing distances among the NCOA building, the DFAC, and the Barracks for efficient circulation of staff and students on connecting walkways. The track may be a ¼ mile track or alternatively, it may be a 1 mile perimeter loop around the campus. However, the distance between the track and the NCOA building will not exceed ¼ mile. The Covered Training should abut the building, but if detached will be no further than 200 feet from the Building exit.
Signage	Adequate interior and exterior identification signage will be provided for all site amenities and spaces for wayfinding of students and visitors, and staff.
Technical Design and Standards	Apply Military Criteria and Building Code requirements in accordance with UFC 1-200-01 DoD Building Code (General Building Requirements), latest version, and the NCOA Standard Design Criteria.
Building Systems	All buildings systems comprising the building's infrastructure, including mechanical (heating, ventilating and air-conditioning), plumbing (water and sewer) electrical (lighting and power), Fire Protection, and communications, will be designed to accommodate the Peak Design Capacity.
Energy Performance and Sustainable Design Development	Facilities will be designed to meet current sustainable development and design policy requirements as established by the Department of Defense.
Exterior Lighting	Exterior lighting systems will be provided for parking areas, sidewalks, interconnecting buildings, service yards, service drives, outdoor training areas, and other areas within the complex, as required, in accordance with IESNA (Illuminating Engineering Society of North America) recommendations and applicable UFCs.

ITEM	MANDATORY CRITERIA
Telecommunications	Telecommunications infrastructure will meet applicable UFCs and American National Standards Institute / Telecommunications Industry Association / Electronic Industries Alliance (ANSI/TIA/EIA) 568 and 569 requirements. In the event of conflicts, the most stringent guidance will apply. The facility must connect to the Installation telecommunications (voice and data) system through the outside plant (OSP) underground infrastructure per UFC 3-580-01. Connections to OSP cabling system will be from each facilities main cross connect located in main telecommunications rooms or telecommunications rooms closest to OSP access point. Telecommunications outlets will be provided per UFC 3-580-01 based on functional purpose of the various spaces. Telecommunications Rooms will be provided for the voice and data network in accordance with UFC 3-580-01 criteria and ANSI/EIA/TIA-569-B and 569 requirements to serve digital (automation aided) classrooms.

2.1 NCOA - ACADEMIC BUILDING

ITEM	MANDATORY CRITERIA
Capacity vs Population	The Academy Building will be designed to meet the Design Capacity determined by the program POI.
Facility Programming	Administration and Instruction Facilities are designed to support the POI and associated instruction, operations, and logistics.
Staff Private and Semi-Private Offices	Medium NCOA will include the following (adjust as required for small and large NCOA) Provide private offices: One (1) Commandant (150 NSF each); One (1) Deputy Commandant (110 NSF each); One (1) CRS Manager (100 NSF each) Small facility: One (1) Office (100 NSF each) Medium facility: Two (2) Offices (100 NSF each) Large facility: Three (3) Offices (100 NSF each) Provide semi-private offices: One (1) receptionist-type 6'x8' workstation; Small facility provide: Three (3) Standard 6'x8' workstations. Medium facility provide: Four (4) standard 6'x8' workstations Large facility provide: Six (6) standard 6'x8' workstations Offices are provided based on the approved TDA. Allocation of private and Semi-private offices will be confirmed by the installation. Staff offices will be arranged to form an administration suite. The administration suite will include: waiting, staff work room, and the conference room. **SF allotment**: Non-instructor staff are allotted admin space based on 130 NSF per non-instructor TDA plus special purpose space. This allotment includes 'in-suite" circulation, or aisle space between cubicles.
Waiting	Provide a waiting area adjacent to the reception desk within the administration suite to accommodate NCOA visitors. Waiting area will be sized based on 10 SF per person to be served. Provide a minimum 20 NSF coat closet adjacent to and accessible from the waiting area. **SF allotment**: Based on AR 405-70 for the following anticipated simultaneous visitors: Small facility: eight (10) guests Medium facility: ten (12) guests Large facility: twelve (14) guests

ITEM	MANDATORY CRITERIA
Staff Work Room	Provide a minimum 150 NSF staff work room within the administration suite, capable of accommodating copiers, work tables, mail room equipment and mail slots. **SF allotment**: Based on allotment of 10 NSF per non-instructor TDA
Conference Room	Provide a VTC-enabled Conference room within the administration suite for command and instructor staff use. Conference room will be equipped to provide video teleconferencing capability. Provide a minimum 20 NSF A/V control closet accessed from within the conference room. **SF allotment**: Conference room will be sized based on the following allowance: 150 SF + 12 SF per TDA; Small facility: 28 TDA = 480 NSF Medium facility: 50 TDA = 750 NSF Large facility: 72 TDA = 1000 NSF
Staff Duty	Provide a 64 NSF Staff Duty area with a counter station and securable cabinets in the main entrance Lobby. Serves as security checkpoint and has monitors for the security cameras that are located throughout the facility.
Staff Break Room (non-instruction staff)	Provide a Staff Break Room. Locate off of the primary corridor within close proximity of the administrative suite. **SF allotment**: Provide space based on 30 NSF per non-instructor TDA staff.
Lactation Room	Provide private lactation room in accordance with Army Policy for building occupant use. Design criteria will be in accordance with AIA's *Lactation Room Design.* **SF allotment**: 100 NSF
Record Storage	Provide a secured lockable storage room, near the administration area, with controlled access to store test material and other files. **SF allotment**: 1.5 NSF/PN.
Staff Toilets	Provide separate, single occupant, male and female toilet rooms. Toilet Rooms will be located near the Administrative Suite for the use of administrative personnel and authorized visitors only. Staff toilets will be ABA compliant.

ITEM	MANDATORY CRITERIA
Large Training Classroom	Provide one (1) large AV and technology enabled group training classroom capable of accommodating the approved average daily student load plus the TDA staff and instructors. The room will be centrally located as well as visible from the main entrance. A raised platform will be provided. The platform and gathering area should accommodate persons with disabilities. **SF allotment**: 17 NSF per (Students+TDA)
Common Toilet Rooms	Provide separate Male and Female Common Toilet Rooms. Provide per IBC. The assumed Male/Female ratio for toilet fixtures will be 60/40. Common Toilet rooms will be along a main corridor, near the large classroom, small group classrooms, student break rooms, Instructor huddle/break rooms, and the administration suite.
In-Processing	Provide two (2) rooms, each accessed from within the Large group classroom. Rooms will be used for separation of Men and Women during in-processing activities. **SF allotment**: 100 NSF each room
Drinking Fountains	Provide drinking fountains per IBC, along the primary corridors in close proximity to the toilet and locker rooms.
Storage Area	General Storage adjacent to and accessible from the large group classroom for storage of tables, chairs, military paraphernalia to support the Large group training classroom and adjacent outdoor PT. include a 50 NSF storage closet located adjacent to and accessible from the Large group classroom for Audio/Video equipment and controls. Storage core will be configured to support classroom furniture storage. These should be accessible from the main corridor and be located centrally in the building. General building maintenance/Storage: Provide to support facility functions. **SF allotment**: Total approximately 3.5 % of building GSF

<table>
<tr><th>ITEM</th><th>MANDATORY CRITERIA</th></tr>
<tr><td>Locker Rooms</td><td>
The following functional areas are mandatory in the general area referred to as “Locker Room” for both men and women.

Locker/Dressing Area
Grooming Area
Shower Area with private shower stalls. Gang showers are NOT permitted.
Restroom facilities

A separate men’s and women’s locker room will be provided with all functions listed above provided. Locker Rooms must be efficiently zoned so that the restroom functions are close to the entrance of the locker room, and do not require unnecessary passage of restroom users through the locker and shower area.

The number of lockers will be based on the number of soldiers to be served. The assumed Male/Female ratio for lockers will be 80/20.

Toilets provided within the Locker Room will count toward the total required number of fixtures for the Academy building as calculated per IBC based on the occupant load.

Showers will be provided based on the following table:
<table>
<tr><td>FUNCTION</td><td colspan="3">FACILITY SIZE</td></tr>
<tr><td></td><td>Small</td><td>Medium</td><td>Large</td></tr>
<tr><td>Men’s Showers</td><td>8</td><td>12</td><td>18</td></tr>
<tr><td>Women’s Showers</td><td>4</td><td>6</td><td>9</td></tr>
</table>
</td></tr>
<tr><td>Computer Maintenance Room</td><td>
Provide a Computer Maintenance Room in close proximity to the administration suite. In the absence of established industry space planning standards, use the following allotment.

SF allotment: 3 NSF/PN
</td></tr>
</table>

ITEM	MANDATORY CRITERIA
Classrooms	The number of Classrooms is determined both by the specific POI and the average daily load for the NCOA. (e.g. (256 students/16 students per classroom) = 16 classrooms) 16PN Classrooms is the standard and will be approximately 960 NSF each. Each classroom includes sixteen (16) soldier desks, one (1) instructor desk and one (1) visitor desk. For classrooms accommodating fewer than 16, determine if it is cycle cost effective to provide these in light of the predominant use of 16 PN classrooms. If so, adjust NSF accordingly. Classrooms will be clustered in groups of four (4) if possible, around a secondary hub/que area. Classroom Infrastructure must support digital automation-aided based learning in accordance with TRADOC's Enterprise Classroom technology standards Provide a minimum 36 S.F. storage space (included in the classroom allotment) within each classroom space allotment for storage of classroom resources. **SF allotment**: approximately 60 NSF each student (Classroom only)
Instructor (SGL) Offices	Provide one private office per instructor. Each classroom will have two (2) instructor offices. Instructor offices will be accessed from within the classroom. These offices allow counseling as well as course and student management activities of the instructor. The instructor office space follows the utilization of Real Property, AR 405-70, and the GIB standard. This space is required in accordance with the approved TDA for authorized personnel. The instructor to soldier ratio is 1/8. (e.g. (16 students/8 students per instructor) = 2 instructors per classroom) **SF allotment**: (1) 100 NSF office per instructor
Senior Instructor (SSGL) Offices	Provide one private office per Senior Instructor. Senior instructors are provided at a ratio of 1 SSGL per 4 SGLs. (e.g. (16 classrooms X 2 Instructors) = 32 Instructors, (32 Instructors / 4 Instructors per SSGL) = 8 SSGLs) SSGL Offices will be located near the classroom clusters along a main corridor **SF allotment**: (1) 100 NSF office per Senior instructor .

ITEM	MANDATORY CRITERIA
Instructor Huddle/Break Room	Provide a combined Huddle/Break Room for instructor and senior instructor use. Huddle/Break rooms may be efficiently provided for each grouping of classrooms (typically in 4 classroom Quads). **SF allotment**: 30 NSF per instructor served.
Student Break Room	Provide Student Break Rooms. The space will be accessible from a main corridor and generally located in close proximity to classrooms and toilet rooms. It may be 'zoned' to accommodate groups of students as well as individuals. **SF allotment**: 8 to 10 SF per student (depending on climate).
Vestibules	A vestibule or air lock will be provided at primary and secondary building entrances. Vestibules will be provided as required by code.
Lobby and Corridors	Provide a well-lit entrance lobby with wayfinding. Provide as required for circulation. Minimum corridor width will be as required by applicable codes, but not less than 8 ft for classroom corridors. Main corridors will be 10 to 12 ft wide. Secondary corridors will be 6 ft minimum. Overhang or recess at exterior doors is desirable for weather protection. Coordinate user requirements for access control of exterior corridor doors. Where equipment on carts or dollies is regularly moved through corridors, add requirement for wall guard and corner guard protection. **SF allotment** (lobby) 3 to 4 NSF per occupant:
Stairs	Provide as required for circulation and egress in multi-story buildings. Interior stairs are preferable in most climates. A stair will be conveniently located near the Lobby/Elevator/Public Entrance to the building. Minimum stair width will be as required by applicable codes, but not less than 48 inches.
Elevator	Provide at least one passenger elevator in each multi-story building. The passenger elevator will be located adjacent to the main corridor, near the main entry. If required, a freight elevator will be located near the receiving area if provided. Provide one elevator machine room in each multi-story building adjacent to the elevator and adjacent corridor. Size to comply with equipment and code requirements.
Janitor Closets	Provide a minimum of one (1) janitor closet on each floor of the building. Room will be minimum 50 S.F. Room will be accessed from the corridor.

ITEM	MANDATORY CRITERIA
Recycling Room	Provide a dedicated recycling room for storage of full and excess collection bins. Room size will be based on the minimum square footage prescribed per USGBC LEED Criteria.
Telecommunications Room	A Telecommunications Room is required to manage building connection to telephone, fiber optic, cable television, and other infrastructure. For NCOAs larger than 10,000 square feet, multiple Communications Rooms are required and are to be arranged in accordance with UFC 3-580-01 and (ANSI/TIA/EIA) 568 and 569 requirements. In the event of conflicts, the most stringent guidance will apply. **SF allotment**: Telecommunications rooms will have a combined gross square foot area of approximately 1.1% of the building gross area.
Fire Pump Room	When required, provide a room for fire pump equipment. Fire pump room will be located based on the availability of site distribution systems. Room will be sized to accommodate the required equipment. **SF allotment**: If required, based on site and design requirements.
Electrical Room	Provide dedicated interior spaces and exterior areas for electrical equipment. Size and locate rooms (including doorways) to allow equipment removal and maintenance. Provide floor openings and vertical shaft spaces as necessary. Provide minimum of one electrical room per floor. Locate main electrical equipment room on ground floor. Electrical rooms on upper floors should be located to allow efficient distribution. Electrical rooms will not be used for storage or other purposes; access to electrical rooms will be limited to authorized personnel. Electrical service to the building will be underground. Locate exterior electrical equipment to comply with ATFP standards. Outdoor electrical equipment will be located within a screened enclosure, preferably within the mechanical screened equipment yard. **SF allotment**: The area is part of the gross area factor calculation. Total net area equal to 1.5 % of the gross building area subtotal for planning purposes. Actual required area will be determined Based on design requirements.

ITEM	MANDATORY CRITERIA
Mechanical Room	Provide dedicated interior spaces and exterior areas for plumbing, fire protection, and HVAC equipment. Size and locate rooms (including doorways) to allow equipment removal and maintenance. Provide floor openings and vertical shaft spaces as necessary. Locate main mechanical room on ground floor with doors opening to exterior. Mechanical support spaces will not be used for storage or other purposes; access to mechanical spaces will be limited to authorized personnel. Locate exterior mechanical equipment and air intake and openings in exterior walls to comply with AT/FP standards. Provide plumbing as required for functions of the space. Space will be heated independently from the remainder of the building. Space will be ventilated. Exterior mechanical equipment will be located in a screened equipment yard. Locate mechanical equipment yard to meet all AT/FP requirements. Equipment yard enclosure will match the main building in appearance and comply with the Installation Design Standards. **SF allotment**: The area is part of the gross area factor calculation. Total net area equal to 5% of the gross building area subtotal for planning purposes. Actual required area will be determined Based on design requirements.

2.2 NCOA - OUTDOOR FACILITIES

ITEM	MANDATORY CRITERIA
Covered Training	Provide a covered training area near the rear building entrance to support academic and hands-on training. This area provides a covered area to support and conduct training while providing protection for equipment and personnel from the elements. The structure will have open sides with a metal roof. The ground surface will be constructed of a durable, low maintenance material in accordance with course requirements. The covered training area will be designed in accordance with the approved POI. . **SF allotment**: 12 NSF per student is required. (e.g. (256 PN x 12 SF/PN) = 3,072 SF)

ITEM	MANDATORY CRITERIA
Lawn Equipment Building (LEB)	A Lawn Equipment Building will be provided to store equipment necessary to the function. The structure will match the physical characteristics of the main NCOA structure. Locate out of the main pedestrian and vehicular flow but in a location that can be accessed by lawn maintenance equipment. Comply with AT/FP required setbacks. **SF allotment**: 1,000 GSF
Running Course	Provide one (1) running course per NCOA. The running course will be a ¼ mile closed circuit, either oval or round in shape, constructed of synthetic sports surface material. The track must be a separate standalone feature and must be observable from one central location to allow for maximum instructor oversight. Night Training is required per the POI; lighting will be provided around the running course to enable the Soldiers and Staff to conduct training in a safe environment. The running track lighting level will be a minimum of 3 foot candles and will be switch operated. Refer to COS and TRADOC INCOPD for specific illumination requirements. *Alternative: A 1-mile cross-country running course around the perimeter of the campus. This configuration often contributes to a more attractive campus environment when site conditions are favorable.*

<table>
<tr><th>ITEM</th><th>MANDATORY CRITERIA</th></tr>
<tr><td>Physical Training (PT) Pits</td><td>
PT Pits will be used for hand-to-hand combat drills, physical exercise, and calisthenics.

The PT Pits are constructed of a durable, low maintenance, synthetic surface, such as shredded rubber chips, and must incorporate surface and subsurface drainage. Color will be selected by the installation. PT Pits should be either standalone facilities or located within the interior of the Running Course.

PT Pits criterion is based on the approved POI. Each pit is a minimum of 18,500 square feet. Square pits are desired, but pit configurations may be adjusted to accommodate site conditions.

<table>
<tr><th colspan="3">Standard</th></tr>
<tr><td></td><td>PN</td><td>EA</td></tr>
<tr><td>PT Pits</td><td>75</td><td>1</td></tr>
<tr><td>Pull-Up Bar Set</td><td>25</td><td>1</td></tr>
</table>
<table>
<tr><th colspan="3">PT Pits</th></tr>
<tr><td></td><td>Min (EA)</td><td>Max (EA)</td></tr>
<tr><td>Small</td><td>-</td><td>2</td></tr>
<tr><td>Medium</td><td>2</td><td>4</td></tr>
<tr><td>Large</td><td>4</td><td>5</td></tr>
</table>
<table>
<tr><th colspan="3">Pull-Up Bar Sets</th></tr>
<tr><td></td><td>Min (EA)</td><td>Max (EA)</td></tr>
<tr><td>Small</td><td>-</td><td>5</td></tr>
<tr><td>Medium</td><td>5</td><td>10</td></tr>
<tr><td>Large</td><td>11</td><td>16</td></tr>
</table>
</td></tr>
<tr><td>Equipment Yard</td><td>Equipment yards will be provided in compliance with ATFP and the Installation Design Guide to house and screen mechanical and electrical equipment, satellite antennas, emergency generators, etc. Access to the yards will be provided for maintenance. Place out of the main pedestrian and vehicular flow but in a location that can be accessed for repair work and convenient for utility lines to the mechanical/electrical rooms.</td></tr>
<tr><td>Dumpster Enclosure</td><td>Provide a dumpster enclosure for each building within the complex. Consider accommodating recycling in the same enclosure.

Place out of the main pedestrian and vehicular flow but in a location that can be accessed by truck for emptying the dumpster. Comply with AT/FP required setbacks.

Provide gates and landscape in accordance with the Installation Design Guide. Assure the height is adequate for the dumpsters to be used. Provide a reinforced concrete apron for the front tires of the truck to bear on. Use landscape screening.</td></tr>
</table>

2.3 NCOA - DINING FACILITY (DFAC)

A new dining facility will only be programmed when a requirements analysis or planning charrette has validated a requirement and determined that it is infeasible to co-locate the NCOA within a 1 mile walkable distance from an existing DFAC with feeding capacity. If programmed, the NCOA DFAC is based upon the feeding population of the NCOA, in addition to any other ASIP loads identified in the requirements analysis to be served by the DFAC. Since the NCOA is a training environment with limited downtime, the NCOA contribution to DFAC demand is based upon the average daily in-session load of the Soldiers plus the approved Table of Distribution and Allowance (TDA) personnel and guests on campus. The DFAC should be capable of supporting 95% utilization.

A DFAC must provide three meals a day feeding support to the NCOA students, Staff, and lecturers at the Academy. It is based upon the Army Standard with cafeteria-style operation and serving lines for regular full menu and short order or fast food meals, self-service areas for beverages, desserts, and salads. Carry-out and drive-through options are not required for the NCOA population. The NCOA feeding population is typically less than that of the current standard 500PN permanent party small-sized DFAC (serves 400-660 PN). Therefore, when sized for NCOA population alone, a small modified standard 250PN DFAC will be appropriate at most medium and large Academies. A 250PN DFAC serves between 200-399 PN. If the DFAC feeding population falls below 200 PN (ex; a small NCOA), a new non-standard dining facility may be required.. Refer to the U.S. Army Corps of Engineers, Norfolk District, Center of Standardization for additional information.

Total NCOA DFAC Feeding Population Calculation =
(Average Daily Load of Soldiers) + (Authorized TDA Personnel) + (Average Number of Guests per day)

DFAC Size	
	Max GSF
Small NCOA	Non-standard design as required
Medium NCOA	12,500 [1, 2]
Large NCOA	12,500 [2]

Note 1: Reduction from the max GSF shall be considered for NCOA with less than 200 students (average daily load) if the DFAC is not shared with other Installation tenants.

Note 2: Additional square footage may be authorized if field feeding or carryout is required, in accordance with the allowances of the Enlisted Personnel Dining Facility Standard.

References:
U.S. Army Corps of Engineers, Norfolk District, Center of Standardization issued guidance.
Army Standard for Permanent Party Enlisted Personnel Dining Facilities, February 15, 2012.

2.4 NCOA – AST BARRACKS

Refer to the AST Army Standard Barracks. .An NCOA complex requires barracks to house TDY students. Where existing billeting capacity is already available *nearby*, then ***new*** barracks need not be provided subject to Army MILCON waiver policy described in paragraph 1.5. In this context, “nearby” shall be defined as being within approximately ¼ mile of the Academy Building and safely/efficiently traversed without compromising the NCOA educational mission/operation.

References:
U.S. Army Corps of Engineers, Fort Worth District, Center of Standardization.

2.5 NCOA - SITE AND LANDSCAPE

ITEM	MANDATORY CRITERIA
General	Provide a functional layout of NCOA facilities and site elements. Arrange vehicular circulation to minimize conflict with pedestrian circulation. Pavement marking and signage will clearly delineate traffic patterns. Integrate sustainable design principles by retaining and using existing topography to advantage; preserve environmentally sensitive areas and reduce overall project impact on the site.
Site Design	Site planning is an essential aspect of the facility design. The art of site planning requires the interdisciplinary involvement of the community planner, architect, landscape architect, civil, mechanical, electrical, and communication engineers. Siting should consider shared use parking based on the time that adjacent facilities are in use. The design of vehicular paths, pedestrian paths and landscape design can define the functional campus yet enhance the flow into and out of the area. Provide appropriate buffer areas to separate and visually isolate the facility from adjacent areas. Consider providing landscaping or other screening between incompatible land uses.
Parking and Vehicular Traffic	Site the facility so it is clearly visible to pedestrians, cars and delivery vehicles. Separate service/delivery access from the student/staff access and circulation. Plan for daily deliveries to the loading area. Control vehicular access within UFC 4-010-01 standoff distances for the building. Comply with the requirements of Technical Instructions 804-11 Design for Non-Organizational or Privately Owned Vehicle (POV) Site Circulation and Parking and Technical Instructions 800-01 Design Criteria, Chapter 3 Site Planning and Design Criteria.
Walkways	Connect the buildings within the NCOA complex to the public walkway system and to parking, with pedestrian walkways. Primary building entrances will be at least 8 wide. The minimum width of a sidewalk will be 5 ft. Place curb cuts in convenient locations while not creating obstacles for walkers. Depress curbs for access where possible instead of creating ramps. Consider brick or concrete pavers or patterned concrete to identify significant entrances. Provide well-lighted walkways since the facilities may be used in the evening.
Outdoor Furnishings	Provide outdoor furnishings including trash and recycling receptacles, seating, bicycle racks, lighting standards and bollards in coordination with the Installation Design Guide. Where the climate is acceptable, provide outdoor break areas with tables, seating and shading devices.

ITEM	MANDATORY CRITERIA
Signage	Plan site identification signage in coordination with site approach, landscape, and lighting. Comply with the Installation Design Guide and the Army Installation Design Standards. Provide traffic control signage as well as "No Parking" signs at service drives. Provide informational signs to direct students to appropriate entries.
Site Lighting	Site lighting is an integral part of the design. Comply with the requirements of the Installation Design Guide. Provide lighting to ensure safe movement through outdoor areas. Consider the color rendition of outdoor lighting. Use bollards or variations in lighting to articulate entrances and public areas. Design lighting levels in accordance with the *Illuminating Engineering Society (IES) Lighting Handbook* illumination levels. Use photocells, motion detectors and timers to control lighting and conserve energy.
Landscaping/ Hardscaping	Coordinate the landscape design with AT/FP and Installation requirements. Preserve natural landscape features including existing topography, trees, and vegetation. Provide windbreaks and shading where appropriate. Consider earth berms to screen parking and roadways. Where berms or swales are used use gradual slopes no greater than 1:5 to allow use of mowing equipment. Screen service area and outdoor equipment. Shade parking areas to reduce heat developed by exposed pavement. Landscaping will be in accordance with requirements of the Installation. Where appropriate, provide a variety of plants with seasonal change, color, texture, fragrance, and interpretive value. Always use local, durable, native species to help ensure survivability. The use of native plants will also minimize the requirement for chemical pesticides, herbicides and watering. Choose plant materials on the basis of plant hardiness, climate, soil conditions, low maintenance, and quality. Selected plant materials will be easily maintained and tolerant of the specific site conditions. Incorporate sustainable design principles into the selection of plants. Planting or seeding will occur only during periods when beneficial results can be obtained. Plant varieties will be nursery grown or plantation grown stock. They will be grown under climatic conditions similar to those in the locality of the project. Plants will be furnished that have heavy, well developed, and balanced top with vigorous well developed root system, and will be furnished in containers.
Capillary Water Barrier	A capillary water barrier is required for all interior slabs on grade, including storage, loading dock, mechanical and electrical spaces.
Termite Treatment	Preventive methods for subterranean termites will be applied in accordance with local regulations.
Radon Testing	Test will be performed for potential radon exposure to occupants in accordance with UFC 3-490-04A. Provide Radon protection in accordance with applicable requirements.

3.0 BACKGROUND

3.1 Composition

A Non-Commissioned Officer Academy Complex consists of several facilities types; Administration and Instruction Facility, Barracks, DFAC (if justified), track, Lawn Equipment Building and Covered Training Building.

3.2 General Design Philosophy

An NCOA complex will be programmed as a complex, rather than as individual facilities. The Facilities, outdoor training areas, barracks, and any additional support facilities, will be arranged on the site contiguously to the extent possible to allow the students to live, eat, train, and work together. Functional, operational, and spatial relationships critical to meeting training requirements are embedded in the operational campus layout. The facility planner will contact the COS to consider alternatives that will minimize or preclude functional and operational impacts on training requirements when there is a critical need for spatial or land use consideration for this Army Standard.

3.3 Planning and Land use

Site selection and real property master planning for all NCOA complexes should, to the maximum extent possible, meet layout and configuration for spatial relationships between the Operations and Administration facility, barracks and DFAC as depicted in the NCOA Complex Standard Design site layout.

4.0 GUIDANCE

4.1 Operational Configuration

The overall scope of an NCOA Complex varies depending on the number of Students within the complex. An NCOA Complex includes; Barracks, Administration, Instruction, Dining, Outdoor Training area with a quarter mile running track, parking, and service access. The Complex should also have a clear and convenient pedestrian access to the Barracks, Operation and Instruction Facilities, and Dining Facility. The Standard Design does not utilize or include a Central Chiller or Energy Plant.

4.2 Accessibility

Accessible parking spaces will be provided for visitors and non-military personnel with disabilities. The required number of spaces is prescribed by the Architectural Barriers Act (ABA) accessibility guidelines. Such spaces are required to be located so as to provide convenient access to the building entrance. Administrative areas will be accessible. Accessible desks and chairs will be provided by the installation or school based on specific needs when they arise. When an auditorium is provided, access to stage/platform and wheel chair space in the audience will be provided in accordance with ABA standards.

4.3 Building Areas

Building Areas will be identified and calculated in accordance with UFC 3-101-01 *Architecture*.

4.4 Energy Performance & Sustainable Design

NCOA Complex facilities will be designed to meet current Sustainable development and design policy requirements as established by the Department of the Army. Higher sustainability levels may be established by other applicable Army or DOD policy, regulation, or criteria. Currently DOD complies with UFC 1-200-02 *High Performance and Sustainable Buildings*.

Exterior Construction: Utilize sustainable, low-maintenance finish materials. Roofing materials will be reflective, “cool-roof” type finishes in appropriate regions. Landscaping: Utilize Xeriscape™ design techniques to ensure all plant materials are native to the area and require minimal maintenance. All landscapes will be designed to utilize no potable water for irrigation after a one-year establishment period. Irrigation will be minimal and achieved through ground-water collection and grey-water reuse.

Site Utilities: Where feasible, all site utilities will utilize underground distribution methods. Mechanical Systems: Facilities will utilize the most energy efficient solution for HVAC design available within budget. Mechanical system design will not be required to accommodate older, less-efficient legacy systems.

4.5 Compliance Threshold

The Army Standard may identify an Army regulation, technical guide or other written guidance as mandatory criteria. The COS provides the first line technical compliance review. The Facilities Design Team (FDT), in conjunction with the COS, will resolve any issues where there may be conflicting, unclear or no compliance measurement threshold. Resolution may require senior leadership guidance or amendment of the Army Standard. The Army Standard is not intended to provide compliance criteria detailed in references, regulations, industry standards, or the standard design.

4.6 Renovation

This standard is applicable primarily to new NCO Academy complexes. However, if renovation of an existing NCO Academy is justified, it is assumed that remediation of life safety deficiencies are highest priority. The functional elements of this standard (and its associated standard design) may then be applied with preference given to classroom spaces, which are critical to supporting the training mission.

5.0 REFERENCE CRITERIA

Use the latest adopted editions of the following design criteria:

Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines
IBC – International Building Code
AR 405-70, Utilization of Real Property
AR 420-01, Army Facilities Management
AR 380-05, Department of the Army Information Security Program
AR 190-11, Physical Security of Arms, Ammunition, and Explosives
DOD 5100.76-M, Physical Security of Sensitive conventional Arms, Ammunition, and Explosives
DA PAM 415-28, Construction Real Property Category Codes
UFC 1-200-01 DOD Building Code (General Building Requirements),
UFC 1-200-02, High Performance and Sustainable Building Requirements
UFC 3-600-01, Fire Protection Engineering for Facilities
UFC 4-010-01, DOD Minimum Antiterrorism Standards for Buildings
UFC 4-023-03, Security Engineering: Design to Resist Progressive Collapse
UFC Series 3-100 Architecture and Interior Design
UFC 3-580-01 Telecommunications Building Cabling Systems Planning/Design
Army Standard for Permanent Party Enlisted Personnel Dining Facilities (EPDF)
TB MED 530 Occupational and Environmental Health Food Sanitation
ETL 1110-3-491, Sustainable Design for Military Facilities
ANSI/TIA/EIA-568-B Commercial Building Telecommunications Cabling Standard
ANSI/TIA/EIA-569 Telecommunications Pathways and Spaces