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

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DEC 6 2013

MEMORANDUM FOR

Commander, United States Army Corps of Engineers (CEMP), 441 G Street NW, Washington, DC 20314
Commander, Installation Management Command, 2405 Gun Shed Road, Fort Sam Houston, TX 78234

SUBJECT: Revised Army Standard for Basic Training / One Station Unit Training (BT/OSUT) Complex

1. The enclosed revision to the Army Standard for BT/OSUT complexes supersedes the previous BT/OSUT standard approved on 18 Jan 08. Waivers from the Army Standard must be approved in accordance with AR 420-1 (Facilities Management) and procedures established by the Army Facility Standardization Committee.

2. The Army Standard is mandatory for Military Construction, Army (MCA) projects in the FY15 program and beyond. Designs based on the Army Standard and the Army Standard Design Criteria will be developed consistent with Headquarters, Department of the Army, MILCON Business Process.

3. Installation Status Report-Infrastructure and Real Property Planning and Analysis System methodologies will be updated to reflect the revised standard in coordination with the points of contact listed below.

4. The BT/OSUT Facilities Design Team (FDT) co-chairs are: Ms. Mary Ellen McCrillis, DCS G-3/5/7, ODCS, (703) 614-9702, mary.mccrillis.civ@mail.mil; and, Mr. Dolat G. Desai, OACSIM, DAIM-ISH, (571) 256-9739, dolat.g.desai.civ@mail.mil. The representative from US Army Corps of Engineers (USACE) Centers of Standardization for the BT/OSUT Complex standard is Ms. Sandra E. Allen, (817) 886-1669, sandra.e.allen@usace.army.mil; and for the Dining Facilities is Mr. David A. Gary, (757) 201-7519, david.a.gary@usace.army.mil.

Encl
as

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The Army Standard for Basic Training and One Station Unit Training (BT/OSUT) Complexes

Description:

Basic Training and One Station Unit Training (BT/OSUT) complexes are required by the Army to encompass living, dining, training, and administrative/command operations. BT/OSUT Complexes are comprised of Barracks/Company Operations Facilities (B/COF), Dining Facility (DFAC), Battalion Headquarters (BNHQ), and Lawn Equipment Storage Buildings (LEB). These facilities, with outdoor training areas and any additional support facilities are arranged on the site as a unit to allow the battalion to live, eat, train, and work together. This statement of requirements does not address facilities for permanent party personnel; those are defined in other Department of the Army standards.

B/COF is comprised of sleeping, latrine, classrooms, storage, and company operations components. DFAC is comprised of delivery, storage, preparation, cleaning, serving, seated dining, and field feeding components. BNHQ is comprised of administration, special functions, storage, and classroom components for personnel assigned to work in those facilities. LEB provides storage for maintenance equipment and materials. The site includes a running track, physical training (PT) pits, vehicular and service access drives, and parking areas.

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.
- BT/OSUT projects must be reviewed by the USACE designated Center of Standardization (COS) for compliance with the Army Standard.
- All USACE geographic districts shall incorporate the mandatory design features described herein in close coordination with the COS for BT/OSUT complexes.
- This Army Standard supersedes space allowance standards contained in AR 405-70 and serves as the primary authority for BT/OSUT facilities worldwide.

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 IMCOM 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 shall 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 shall be documented in installation master plans thereby serving as the installation's modified standards.

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THE ARMY STANDARD FOR BT COMPLEXES

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<tr><td>Gross Area of Facilities</td><td>
BT COMPLEX FACILITIES MAXIMUM GROSS AREA:

Gross Square Footage (GSF) Deviation: The facility constructed gross area shall not exceed 105% of the space allocation set forth in this document to accommodate site, construction, or environmental factors. Such deviations must be authorized as part of the DD1391 allowed total square footage (SF).

B/COF: 1,200 total PN per Complex (five 240 PN Companies per BN)

B/COF 60,100 GSF (each, five B/COF per BN)
BNHQ 20,150 GSF (one per BN)
1300 PN DFAC 31,250 GSF (one BN serving capacity)
2600 PN DFAC 56,200 GSF (two BN serving capacity)
LEB 2,000 GSF (serves one BN)

Where used in this document, PN = personnel

The requirement is based on population and whether the installation has existing facilities on-hand, or if the installation master plan involves constructing more than a battalion size BT/OSUT complex.

All square footages listed above include covered training/assembly and queuing areas (as applicable).

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.

Scope adjustments (such as half-scope spaces), where applicable, ARE INCLUDED in the GSF number of this Army Standard. For details on calculations of GSF, refer to the Guidance section of this Army Standard and to TI-800-1.
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<tr><td>Facilities Allowance</td><td>
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<tr><th>Category Code</th><th>Allowance</th></tr>
<tr><td>14183 Bn HQ</td><td>7,614 GSF per Battalion</td></tr>
<tr><td>14185 Co Opns Facility</td><td>4,586 GSF per Company</td></tr>
<tr><td>17119 Org Classroom</td><td>23,454 GSF per Battalion</td></tr>
<tr><td>17139 Covered Training Area</td><td>7,717 SF per Company Operations Facility</td></tr>
<tr><td>44220 General Purpose Storage, Installation</td><td>2,000 GSF per Battalion for Lawn Equipment Building</td></tr>
<tr><td>72181 Trainee Barracks</td><td>167 GSF per Space</td></tr>
<tr><td>72210 Dining Facility</td><td>[Number of Large DFACs X 56,200 GSF] + [Number of Medium DFACs X 31,250 GSF]</td></tr>
</table>

Methodology:

a. Number of Large DFACs = Round Down [(Number of BT/OSUT
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	Trainees X 0.95 Utilization) / 2,600] b. Number of Medium DFACs = 1, if [Number of Trainees – (# Large DFAC X 2,600)] > [1,300 X 0.80 (minimum utilization)] c. BT/OSUT Trainee Load Populations are provided by the Army Stationing and Installation Plan (ASIP) for each Army Training Center (ATC) location (Ft Jackson, Ft Benning, Ft Sill, Ft Leonard Wood). ASIP calculates a 50-week annual trainee load for each ATC location based on the Army Training Resource Requirements System (ATRRS) structure load. ATRRS structure load is based on the class size and course length at each location. ASIP uses this ATRRS structure load, and if appropriate, increases it by using a billet load factor to account for recycles, medical holdovers, etc. RPLANS only uses BT/OSUT unit trainee loads identified as Active Component (COMPO 1), Type Code (TYPCO) 6 to generate BT/OSUT Complex allowances. d. Lawn Equipment Building allowances are generated as a functional area under 44220, General Purpose Storage, Installation. e. Allowances for 17139, Covered Training Area will only be visible when this category code is included in the RPLANS reports. f. Currently, there are no special conditions or exceptions that need to be applied when generating RPLANS allowances.
Energy Performance	Facilities shall be designed in compliance with prevailing policy and mandatory requirements for Federal facilities and Army engineering documentation in force at time of project definition and cost estimating.
Sustainable Design Development	Facilities shall be designed to meet current sustainable development and design policy requirements as established by the Department of the Army.
Antiterrorism / Force Protection	Facilities shall meet security requirements (IAW) UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings, latest edition.
Technical Design Criteria and Standards	International Building Code except where Installation Design Guide or military standards are required to meet specific operational needs.
Outdoor Training Areas	The minimum mandatory exterior training areas include: • One closed quarter mile running track (one per BN) • One 18,500 SF physical training pit per company (five per BN) • Six / 4-Station pull-up bar sets per company (thirty per BN) • PT pits shall be synthetic material, such as rubber mulch, color as selected by the Installation.
Exterior Lighting	Exterior lighting systems shall be provided for parking areas, sidewalks, interconnecting buildings, service yards, service drives, outdoor training areas, and any required security lighting.
Parking	Private Operated Vehicle (POV) Parking: Parking shall be provided for BNHQ staff, Company cadre within B/COF, DFAC staff, government and

	service vehicles, and visitors. Total parking space allocation for the complex shall be designed based on current Tables of Distribution and Allowances (TDA) plus 120% of maximum DFAC work shift.
Accessibility	BNHQ - Shall be fully accessible in compliance 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, 2004 version as currently amended. DFAC - Administrative areas (including approach to the public entrance) shall be fully accessible in compliance 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, 2004 version as currently amended. B/COF - This facility is for use by able-bodied military personnel only. Accessibility is not required.
Telecommunications	• Telecommunications infrastructure will meet the United States Army Information Systems Engineering Command (USAISEC) Technical Criteria for the Installation Information Infrastructure Architecture (I3A) 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 shall apply. • The facility must connect to the Installation telecommunications (voice and data) system through the outside plant (OSP) underground infrastructure per I3A criteria. Connections to OSP cabling system shall be from each facility main cross connect located in main telecommunications room or telecommunications room closest to OSP access point. • Telecommunications outlets will be provided per I3A criteria based on functional purpose of the various spaces. Outlet locations may be modified by special operations requirements identified by the end-user. • A Telecommunications Room (TR) shall be provided for the voice and data network in accordance with the I3A Guide and ANSI/EIA/TIA-569-B.
Maximum Site Planning Distances	Maximum travel distances, on walkways, between facilities and supporting amenities shall not exceed: • B/COF to DFAC - 1,680 feet • B/COF to PT Pits and Track - 1,200 feet • BNHQ to DFAC - 1,800 feet • B/COF to BNHQ - 1,680 feet • Parking Space to Facility Served - 1,680 feet
Signage	Adequate interior and exterior signage shall be provided for all public amenities and spaces.
Lawn Equipment Storage Building (LEB)	Provide a LEB, based on 400 GSF per Company. The purpose is to store lawn maintenance equipment and miscellaneous items as determined by the Company Command. The LEB will be subdivided to provide securable storage space with separate access for each Company.

BARRACKS / COMPANY OPERATIONS FACILITY (B/COF)

ITEM	MANDATORY CRITERIA
Capacity vs. Population	Each B/COF shall be designed for an able-bodied, single training company of 240 personnel, with a surge capacity of 288 personnel per company. Mechanical, electrical, plumbing, and sewer systems shall be designed to accommodate the maximum surge population requirement.
Gross Area of Facility	Barracks Company Operations and Support Total 60,100 GSF / 240 PN B/COF Gross building area consists of exterior covered training/assembly area and all enclosed spaces.
Sleeping Bay	• 4- 60 PN Sleeping Bays shall be provided for each 240 personnel training company. • Each Sleeping Bay shall provide a minimum of 5185 NSF. • Design to provide surge capacity to accommodate 72 PN per sleeping bay. • HVAC system shall avoid "sweeping" room return or exhaust air over multiple beds to reduce the likelihood of spreading respiratory infections. Return air shall flow over no more than two (2) bed rows in the sleeping bay.
Private / Semi-Private Offices	Provide private offices for: *Command Suite*- Company Commander (150 NSF); Executive Officer (110 NSF) *Training Offices* – Training Sgt (110 NSF); 1st Sgt (110 NSF) *Platoon Offices*- A minimum total of 1,400 NSF shall be provided for Platoon Office Space. Platoon Office Space shall include: Four (4) Drill Instructor Offices (350 NSF per office) each with 3 Drill Instructors per office). Each Drill Instructor Office shall have a private toilet and shower.
Classrooms	Provide four (4) classrooms total, at 1,400 NSF minimum each, located adjacent to each sleeping bay and each capable of training a seventy-two (72) person surge.
Laundry	Provide designated laundry facilities adjacent to each sleeping area. Laundry areas shall be equipped with large capacity washers at a ratio of 8:1 and stackable dryers at a ratio of 6:1. Ratios shall be based on maximum surge capacity per Company.
Arms Vault	For each company, provide a 380 NSF minimum arms vault, in accordance with AR 190-11. Vault door shall incorporate a steel Dutch-door type day-gate with a steel issue shelf built into the lower leaf of the day-gate.
Reception Charge of Quarters (CQ)	Provide one (1) reception area near the main entrance of each B/COF. The Reception CQ station shall have an unobstructed view of the main building entrance. Stations shall accommodate an optional camera-assisted visual surveillance system. The CQ Station desk shall be sized to accommodate one (1) PN per company housed in the B/COF.

Luggage Storage	Provide secure luggage storage for each Company. Luggage storage shall consist of eight (8) luggage rooms per Company. Each room shall be a minimum of 60 NSF and equipped to store soldier's suitcases.
Supply Storage	Provide one (1) Company Supply space for each Company. Space shall be 830 NSF minimum, designed for storage of general equipment and supplies.
Mask/Secure Storage	Provide one (1) Secure Storage area for the storage of 288 gas masks, night vision goggles and higher-value equipment. Secure Storage area shall be 280 NSF minimum and accessible only through the Company Supply space.
Scrub Room	For each company, provide a minimum of 950 NSF (two (2) 475 NSF rooms), designed to accommodate the cleaning of field equipment and TA-50 gear. This space shall be situated to provide direct access from the outdoors prior to entering the primary building spaces. The room shall also include floor mounted (or braced) scrub sinks and tables.
TA-50 Storage	Provide four (4) storage rooms, for a total of 960 NSF minimum.
Covered Training/Assembly Area	Provide covered training areas for soldiers to conduct assembly formations and to perform calisthenics during period of inclement weather. Provide one (1) 7,717 NSF covered training/assembly area per Company. A minimum of ten (10) public telephone stations shall be provided for each Covered Training/ Assembly Area. Covered Training/Assembly Area shall be located a minimum of ten feet (10') away from the B/COF.
Boot Cleaning Stations	Two (2) boot cleaning stations shall be provided at the building's rear entrance and one (1) additional boot cleaning station shall be provided at the building's primary front entrance. Boot cleaning stations shall be the dry brush type. Provide 1 water spigot at each of the rear stations.
Profile Recovery	For each company, provide one (1), 870 NSF minimum profile recovery room designed to accommodate fitness equipment and promote aerobic conditioning for injured trainees. Space should be sized and oriented to allow installation of treadmills, stationary bikes, or similar equipment designed to improve a trainee's recovery from minor physical injuries. This space is not intended to serve as a company weight-room or duplicate services that are provided at fitness centers or elsewhere on-post.
Common Restrooms	Separate male and female restrooms shall be provided on the first floor for common use by administrative personnel and other building occupants. Each restroom shall have a minimum of one (1) shower.
Janitor Closets	Each laundry area shall include a 40 NSF minimum janitor's closet for mop storage that includes a floor drain and a built-in mop sink (either wall-hung or floor mounted). Provide a total of eight (8) laundry area janitor closets.
Recyclable Storage	Provide recyclable storage area(s), located as required by the Installation.
General Storage	Provide two (80 NSF minimum each) general storage rooms for each sleeping bay. Also, provide one (220 NSF minimum) general storage room centrally located on each floor.

BATTALION HEADQUARTERS (BNHQ)

ITEM	MANDATORY CRITERIA
Gross Area of Facility	Battalion Headquarters Total 20,150 GSF
SIPRNET	Secret Internet Protocol Router Network (SIPRNET) is not authorized for training facilities. Requests for inclusion of SIPRNET shall be made, in writing, to the G-3/5/7. Written approval must be obtained as preliminary documentation for request of an Army Standard Waiver for this criterion.
Private/ Semi-Private Offices	Provide private offices for: *Command Suite*- Battalion Commander (150 NSF); Executive Officer (110 NSF); CSM (110 NSF) *Cadre Offices*- S-1 (110 NSF); S-3 (110 NSF); S-4 (110 NSF) Note: An S-2 office is not authorized in training battalions. *Chaplain Suite*- Chaplain (150 NSF); and Chaplain Assistant (110 NSF) with Waiting Area Note: The Chaplain Suite shall have a separate exterior entrance located away from the primary facility entrance and shall not be immediately adjacent to the Command Suite. Provide a waiting area with seating for four (4). Provide semi-private offices for: Cubicle work areas accommodating four (4) standard 6'x6' workstations for S-1 personnel, one (1) receptionist-type workstation in the S-1 work area, fourteen (14) standard 6'x6' workstations for S-3 personnel, one (1) receptionist-type workstation in the S-3 work area, and four (4) standard 6'x6' workstations for S-4 personnel. Provide one (1) receptionist-type U-shaped workstation in the Command Suite. Cubicle work areas shall be open-plan to allow maximum flexibility for adjustments based on future TDA assignments.
Telecommunications Room	Provide a 120 NSF minimum secured communications room to accommodate facility telecommunications equipment.
Staff Duty/Message Center	Provide a 200 NSF minimum Staff Duty/Message Center adjacent to the Lobby Corridor. Provide a lockable pass-through opening with a counter from the Staff Duty/Message Center to the Lobby. Additional shelving and storage shall be built-in to accommodate holding of pre-screened packages and letters. Provide a supply closet adjacent to the Staff Duty/Message Center.
Classrooms	Provide two (2) classrooms, each 3,600 NSF minimum and each capable of accommodating a minimum of 288 personnel.
Reception	Provide a 295 NSF minimum Reception area with Coffee Station (25 NSF) located within the Command Suite. Provide a waiting area with seating for four (4).
Classroom Hall	Provide a 1,800 NSF minimum Hall to provide access to the classrooms from the lobby. Provide a minimum of five (5) drinking fountains in the Hall. Provide open space sized to accommodate a minimum of three (3) vending machines (beverage, snack and ice). Include floor drains and plumbing as appropriate.

Lobby	Provide a 300 NSF minimum Lobby, centrally located in the building to provide access to each section of the building.
Conference Room	Provide a 435 NSF minimum Conference Room capable of accommodating at least fourteen (14) chairs around a central conference table and twelve (12) along the Conference Room walls, and equipped to provide video teleconferencing capability.
Storage	S-4 Storage: Provide an 800 NSF minimum storage room located adjacent to the S-4 office area. Classroom Storage: Provide one (1) 300 NSF minimum storage room located adjacent to each classroom for a total of two (2) Classroom storage rooms. Audio/Visual Storage: Provide one (1) 35 NSF minimum storage room located adjacent to each classroom storage area for a total of two (2) A/V storage rooms. General Storage: Provide 65 NSF minimum storage room located off the Classroom Hall.
Restrooms	Staff Restrooms: Provide separate male and female restrooms adjacent to the Lobby Corridor for visitors and building occupant use. Provide 325 NSF minimum for female restroom and 325 NSF minimum for male restroom. Each restroom shall have at least one (1) shower. Provide at least one "high" and one "low" drinking fountain adjacent to the exterior of the Staff Restrooms. Classroom Restrooms: Provide separate male and female restrooms adjacent to Classrooms. Provide 260 NSF minimum for female restroom and 440 NSF minimum for male restroom.
Lactation Room	Women's restroom shall include a separate room to accommodate nursing mother lactation with a compact refrigerator, power outlet, countertop, sink and seating for one (1) person. Door shall be lockable from the interior with an occupancy indicator. When facility staffing does not warrant use as lactation room, space may be repurposed for facility storage.
Janitor Closet	Provide a minimum 50 NSF janitor closet and include a floor drain and a built-in mop sink (either wall-hung or floor mounted).
Recyclable Storage	Provide recyclable storage area(s), located as required by the Installation.

DINING FACILITY (DFAC)

ITEM	MANDATORY CRITERIA
Population	DFAC capacity is based on a maximum 95% utilization factor • 1300 Soldier serving capacity within 90 minutes • 2600 Soldier serving capacity within 90 minutes Where requirements exist for the larger facility and the complex is provided in a consolidated area, it shall be constructed in lieu of constructing two 1300 Soldier DFACs.
Gross Area	Gross building area consists of exterior covered queuing, covered loading dock and all enclosed spaces. Dining Facility 1300 PN 2600 PN Total GSF 31,250 GSF 56,200 GSF
Operation	• This facility must enable concurrent and segregated company operation. This includes separate queuing, entrances, hand wash, toilets, head-count stations, serving lines, self-service lines, dining rooms, beverage refill line and exits. • A consolidated soiled dish drop-off and dish wash area shall be located immediately adjacent to the exits. • Provide facilities and equipment for short order, hot food, and specialty service lines. Patron flow through serving lines shall minimize backtracking for desserts and beverages. • Provide beverage refill stations in each main dining area.
Seating Capacity and Arrangement	1300PN – Seating capacity is 520 seats. Provide two separate main dining areas. Provide separate area adjacent to each main dining area, each with 16 seats for cadre/training staff. 2600PN – Seating capacity is 1040 seats. Provide four separate main dining areas. Provide separate area adjacent to each main dining area, each with 16 seats for cadre/training staff.
Receiving Area	Provide a minimum of 2 truck dock spaces with one dock leveler at 47" above grade. A ramp and stair shall provide access from dock to dumpster/trash area. A can wash area shall be located adjacent to the loading dock.
Field Feeding Area	Provide an area adjacent to the dock for preparation and storage of field feeding items. This area shall include equipment for hot and cold beverage preparation, an icemaker, and space for handling and storage of insulated containers.
Other Support Areas	Provide handicapped accessible staff toilets with adjacent unisex locker and break area. Provide a manager's office and adjacent staff office with lockable administrative storage. Provide janitor closets accessible to both the kitchen and the dining area.

BACKGROUND

Basic Training/One-Station Unit Training Complex Composition: A BT/OSUT Complex consists of several facilities types with emphasis on the following facility categories:

Category Code	Description
14183	Battalion Headquarters Building
44220	Storage Building, General Purpose (used for LEB)
72181	Trainee Barracks
72210	Dining Facility

Facilities covered in this standard may have functional elements included in category codes 14185 (Company Headquarters Building), 17119 (Organizational Classroom), 17139 (Covered Training Area), or other related category codes.

General Design Philosophy: BT/OSUT Complex is programmed as a unit, rather than as individual facilities as the complete BT/OSUT battalion drives the overall functionality of the facility. The facilities, outdoor training areas, and any additional support facilities, shall be arranged on the site as a unit to allow the battalion to live, eat, train, and work together and ideally should be planned within a 1,680 foot maximum diameter circle.

Functional, operational, and spatial relationships critical to meeting battalion training requirements are embedded in the operational layout of facilities. By definition, the use of the term complex in this standard refers to multiple facility types that are packaged to meet the training mission objectives while minimizing (to the extent feasible) the complex footprint. The facility planner contacts the COS to consider alternatives to minimize or preclude functional and operational impacts on training requirements when there is a critical need for spatial or land use consideration for siting and implementing this Army Standard.

Planning and Land use: Site selection and real property master planning for all BT/OSUT complexes should, to the maximum extent possible, meet layout and configuration for spatial relationships between the BNHQ, B/COF and DFAC as depicted in the BT/OSUT Complex Standard Design.

Specific Design Considerations:

- Maximum use of natural light so facilities remain usable during periods of lost utility support.
- Economy of construction is a design prerequisite.
- Facilities must be durable to withstand the rigors of multiple users.
- Pre-fabricated construction components and/or modular construction is encouraged as long as facility durability requirements and other design criteria, such as progressive collapse requirements, are satisfied.

GUIDANCE

Operational Configuration: battalion typical BT/OSUT Complex includes five BCOF, one BNHQ, one DFAC, an outdoor training area with a quarter mile running track, parking and service access. The BNHQ is typically located at entrance to BT/OSUT Complex where visitors can be received and entry into the complex controlled. The BNHQ should also have a clear and convenient pedestrian access to the various Barracks/Company Operations Facilities and the Dining Facility. The Standard Design does not include a Central Chiller or Energy Plant.

"Typical" Battalion BT complex has:	Total GSF
• 1200 PN Barracks/Company Operations Facility	300,500 GSF (incl. Covered Training Area)
• Battalion Headquarters	20,150 GSF
• 1300 Soldier Dining Facility	31,250 GSF (incl. Covered Queuing Area)
• Lawn Equipment Storage Building	2,000 GSF

Accessibility: The Barracks/Company Operations Facilities are for able-bodied personnel and are not required to meet ADAAG requirements. The mission is for transient training and there is no visitor requirement.

Arms Vault: Secure arms vault requires 288 PN arms storage for each B/COF. Weapons racks are typically Government furnished and contractor installed. Weapons racks are securely anchored to building structure.

Net Floor Areas: Where NSF is identified in this Army Standard those numbers shall be actual constructed sizes and are calculated by measuring the inside clear dimensions from the finish surfaces of walls.

Gross Floor Areas: For scoping purposes, compute the "gross area" and GSF in accordance with the following:

- Enclosed Spaces: The "gross area" is the sum of all floor spaces with an average clear height ≥6'-11" (as measured to the underside of the structural system) and having perimeter walls which are ≥4'-11". The area is calculated by measuring to the exterior dimensions of surfaces and walls.

- Half-Scope Spaces: Areas of the following spaces shall count as one-half scope when calculating "gross area":
  - Balconies
  - Porches
  - Covered exterior loading platforms or facilities
  - Covered but not enclosed spaces, canopies, training, and assembly areas
  - Covered but not enclosed passageways and walks
  - Open stairways (both covered and uncovered)
  - Covered ramps

- Excluded Spaces: The following spaces shall be excluded from the "gross area" calculation:
  - Crawl spaces
  - Uncovered exterior loading platforms or facilities
  - Exterior insulation applied to existing buildings
  - Open courtyards
  - Open paved terraces
  - Uncovered ramps
  - Uncovered stoops
  - Utility tunnels and raceways
  - Roof overhangs and soffits measuring less than 3'-0" from the exterior face of the building to the fascia

Division of NSF Among Spaces: In various portions of this Army Standard, spaces are designated as sum total NSF values. These totals are to be divided between each building floor. In some cases, these totals are designated "per company" (such as Platoon Sgt Offices). In other cases, these totals are simply "per building." Each sub-section of the Army Standard identifies that intent. For those portions that are considered "per company," it is important to understand the intended functional division of BT/OSUT Soldiers inside the building. It is intended that each occupant Company be provided one of the building wings. Certain spaces, such as laundries and day rooms, are duplicated per floor to maintain unit integrity and functional responsibility.

Private Operated Vehicle (POV) Parking: The location of the POV parking area(s) are designed based on each Installation's specific site constraints and can either be consolidated or spread out along the perimeter of the BT/OSUT Complex. Distance is measured based on a pedestrian's path of travel and should not exceed 1,680 feet. (For example, add distance of midpoint of car to end of parking stall, stall to sidewalk, and sidewalk to building entrance. Account for any obstacles into distance measurement.) POV parking areas must meet standoff distance requirements dictated IAW UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings. The dining facility space requirement is based on 120% of maximum shift staffing.

Example POV Parking Requirements for Typical Complex (Based on Current TDA Guidance):

- B/COF: 18 Spaces per Company x 5 Companies = 90 Total Spaces
  (Note: The B/COF is for able-bodied personnel)
- BNHQ: 33 Personnel + 3 visitor + 2 Handicap = 38 Total Spaces
- DFAC: 120% (54 PN for a 1300 PN facility) = 65 Total Spaces
  (Note: 3 Handicap Spaces included in DFAC total requirement)
- ➢ TOTAL: 90 + 38 + 65 = 193 Total Spaces per Typical Complex

Laundry Facilities: Provide large capacity washers and dryers at a ratio of 8:1 (washers) and 6:1 (stackable dryers) based on surge capacity. Laundry facilities are located adjacent to sleeping areas.

- Calculations: Provide a minimum total of 36 washers (288 PN/8 washers) and 48 stackable dryers (288 PN/6 dryers) per B/COF building.
- Washers and dryers are evenly distributed on each barracks floor. Provide 18 washers and 24 stackable dryers on each floor.
- Provide a minimum total of 180 washers (36 x 5 bldgs) and 240 stackable dryers (48 x 5 bldgs) per a typical BT/OSUT complex.

Energy Performance & Sustainable Design: BT/OSUT Complex facilities shall be designed to meet current sustainable development and design policy requirements as established by the Department of the Army. At a minimum, facilities must be designed to achieve LEED Silver. (Scoring criteria and LEED Version shall be in accordance with current policies as established by the Department of the Army.) Higher sustainability levels may be established above this minimum by other applicable Army or DoD policy, regulation, or criteria.

- Exterior Construction: Utilize sustainable, low-maintenance finish materials. Roofing materials shall 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 shall be designed to utilize no potable water for irrigation after a one-year establishment period. Irrigation shall be minimal and achieved through ground-water collection and grey-water reuse.
- Site Utilities: Where feasible, all site utilities should utilize underground distribution methods.
- Mechanical Systems: Facilities shall utilize the most energy efficient solution for HVAC design available within budget. Mechanical system design shall not be required to accommodate older, less-efficient legacy systems.

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.

Renovation: Renovated facilities are designed in compliance with prevailing policy and mandatory requirements for Federal facilities and Army engineering documentation in force at time of project definition and cost estimating. The USACE Center of Standardization is an excellent source to engage when considering renovation due to their subject matter expertise. A new facility is necessary if renovation criteria identified below cannot be met:

a. Assure that minimum requirements for seismic issues, fire protection, life safety, and sustainable design can be met with the buildings intended for renovation.

b. Seismic mitigation must occur if renovation cost is greater than 30% of building's replacement value as determined by the Installation.

c. Fire Protection/Life Safety upgrades are required if renovation cost is greater than 50% of the building's replacement value as determine by the Installation.

d. LEED Silver rating from US Green Building Council (USGBC) must be obtained when renovation provides significant opportunities for substantial improvement in sustainable design elements of building, including energy efficiency, or any renovation that exceeds $7.5M.

e. AT/FP upgrades (setbacks) are required if renovation cost is greater than 50% of building's replacement value as determine by the Installation.

f. Comply with AR 420-1, Table 3-7 for minimum standards of acceptable space and privacy for Soldier sleeping areas.

g. Review BT/OSUT Complex Army Standard mandatory construction criteria for facility being considered for renovation to ensure each mandatory criteria item is met. Obtain a signed memorandum from the facility proponent (HQDA, G-3/5/7, Training Directorate, Institutional Training Division) approving lesser standard where renovation does not meet the Army Standard mandatory criteria identified for new construction.

Reference Criteria: The designs use latest adopted editions of the following design criteria:

- Americans With Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines, 2004 as amended
- 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
- DA PAM 415-28, Construction Real Property Category Codes
- UFC 3-600-01, Design: 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 4-722-01 Dining Facilities
- TB MED 530 Occupational and Environmental Health Food Sanitation
- ETL 1110-3-491, Sustainable Design for Military Facilities
- United States Army Information Systems Engineering Command (USAISEC) Technical Criteria for the Installation Information Infrastructure Architecture (I3A)
- UFC 3-580-01 Telecommunications Bldg Cabling Systems Planning/Design
- ANSI/TIA/EIA-568-B Commercial Building Telecommunications Cabling Standard
- ANSI/TIA/EIA-569-B Commercial Building Standard for Telecommunications Pathways and Space