

APPENDIX A: MODERNIZATION PROJECTS**Proposed Five-Year Project List (FY 12-16) (Not In Priority Order)**

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Fire Station

Physical Fitness Center

PTA Industrial Area

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 Troop Issue Subsistence Activity (TISA) Relocation

 Range Maintenance Facility

Range Maintenance Facility (Navy)

Storm Drainage System (Cantonment Area-wide)

Communications System (Installation-wide)

Urban Close Air Support (UCAS) Range (Marine Corps)

PROPOSED FIVE YEAR PROJECT LIST (FY 12-16) (NOT IN PRIORITY ORDER)

Infantry Platoon Battle Course (IPBC), Range 10 Upgrade

The Army proposes to modernize the existing Infantry Platoon Battle Course (IPBC) located at Range 10 on PTA.

Purpose

The purpose of this project is to replace targetry and targetry mechanisms at Range 10. The targetry there is old, not modern, and does not aid an infantry unit in meeting its full training objective based upon current Army doctrinal standards. In other words, modern targetry helps to provide a simulated, realistic battle environment that enables units to advance on target objectives in a tactical array and practice to gain and maintain the advantage over an enemy. The targets on the existing Range 10 IPBC do not fully support tactical maneuver and therefore, do not provide for a realistic combat scenario.

Need

This upgrade is needed to support continued infantry collective training while the proposed IPBC portion of the IPBA is under construction, and serves as an interim solution that will replace obsolete targetry. While modernizing the targetry at Range 10 would not bring the IPBC to current Army design standards, it would provide a more realistic training environment than what is offered at that range currently.

Description

The number of targets to be upgraded is not fully determined at this time. The current standard range design requires 6 stationary armor targets (SAT), 1 (moving armor targets (MAT), 43 stationary infantry targets (SIT), 14 (moving infantry targets (MIT), 1 trench obstacle, 9 machine gun bunkers, 2 LZs, and 1 assault/defend house. The Range 10 IPBC design is outdated and the range is not to current standard size. The Army would need to determine which targets require updating, and to what extent, before work could begin on that range.

Infantry Squad Battle Course (ISBC), Range 1 Upgrade

The Army proposes to modernize the existing Infantry Squad Battle Course (ISBC) located at Range 1 on PTA. Figure 1.3-2 in Chapter 1 shows the location of the existing Range 1 at PTA along with other existing ranges. The range targetry is outdated and the range itself does not meet the standard design specifications of TC 25-8. A standard ISBC is 500 m (1,640 ft) at the entrance, 1,000 m (3,281 ft) long, and 1,000 m (3,281 ft) at the end of the course. The existing ISBC (Range 1) is 282 m (925 ft) at the entrance, 730 m (2,395 ft) long, and 391 m (1,283 ft) wide at the end; which is substantially smaller than a standard ISBC, and therefore, does not have the space for the correct amount of objectives and targets needed to train an infantry squad to proficiency. A diagram of Range 1 is provided for comparison with a standard ISBC (TC 25-8) (following page).



Diagram of Range 1 ISBC at PTA

Purpose

The purpose of this project is to replace obsolete targetry mechanisms at Range 1. The ISBC provides year-round, comprehensive, and realistic live-fire training for infantry squads and is used to train and test infantry squads on the skills necessary to conduct tactical movement techniques, detect, identify, engage, and defeat stationary and moving infantry and armor targets in a tactical array. The ISBC provides squad-level collective training to permit higher level platoon training at the IPBC. The squad is the smallest unit level. Soldiers operating in a squad must be trained to work in small units to deploy and report on an enemy (or make enemy contact to isolate or separate its forces and achieve fire superiority); evaluate the situation; select a course of action to best meet the mission requirements while considering the on-the-ground situation; and to execute the course of action.

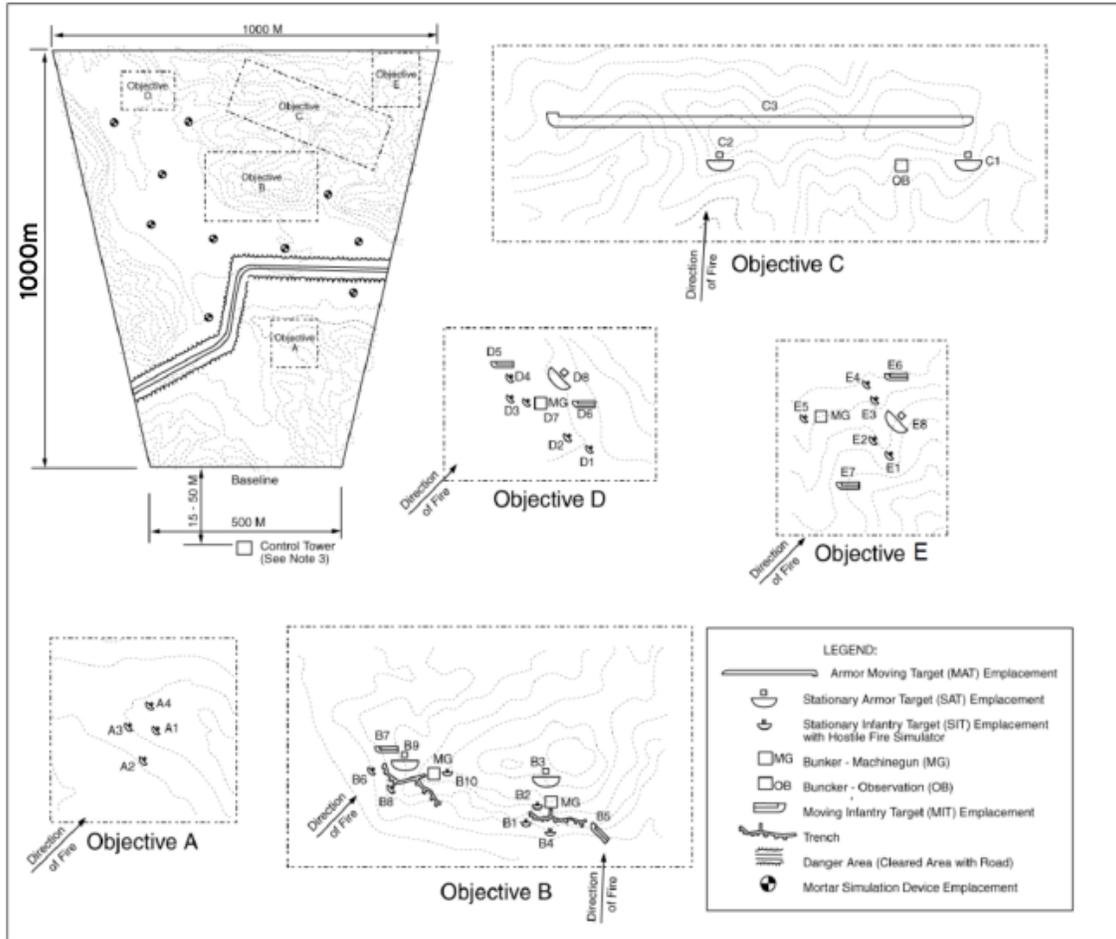


Diagram of standard ISBC from TC 25-8, page D-72

Need

Infantry squads must train in a live-fire mode to accurately replicate those tasks they must perform in combat operations. The Army at PTA needs a standard ISBC in order for units stationed in Hawai'i to meet their semi-annual doctrinal full spectrum operations (FSO) mission essential task list (METL) training requirements. No other range at PTA is designed to support this critical training requirement.

Description

The ISBC supports unit live-fire collective (group) training and is used to train and test infantry squads and other small units on the skills necessary to conduct tactical movement techniques, and detect, identify, engage, and defeat stationary and moving infantry and armor targets in a tactical array. Soldiers engage targets with small-arms, machine gun, and other weapon systems as part of live-fire exercises.

The current ISBC includes objectives, helicopter landing areas, a range operations center, and other support facilities. Target arrays include stationary and moving armor targets, stationary and moving

infantry targets, trench obstacle (s), machine-gun bunkers (with sound effects simulator), and an assault/defend house. Trenches, bunkers, and target emplacements simulate typical threat scenarios and contain battle/sound effects simulators. Mortar simulation device emplacements are located in areas from where unfriendly mortar fire would be simulated.

Example of a Training Event

Unit leaders and possibly the entire training unit would complete a ground reconnaissance, dry run, and/or blank ammunition run before beginning a live-fire exercise. In the movement to contact and assault/defense exercise, the squad would prepare in the assembly area and move down range through a series of engagements and objectives until reaching the final object and limit of advance. In the defense exercise, the squad would start at the final objective or limit of advance and move backward through a series of engagements and defensive positions to the ISBC entry point (firing line).

Duration

In order to complete the reconnaissance, one or more practice runs – which are determined by the leader’s evaluation of the squad’s proficiency – and a live-fire exercise each squad would require two hours of daylight and two hours of reduced visibility (night). When combined with the time required to set up and close down the

ISBC, safety briefings, and After Action Reviews (AAR), this would be equivalent to three squads (one platoon) per day.

Weapons and Ammunition Authorized for Use on the ISBC

Weapons authorized for use at the ISBC are M16 Rifle; M14 Carbine; M2, M240, and M249 machine Guns; and M203 40mm Grenade Launcher (TPT only). Ammunition authorized for use includes 5.56 mm, 7.62mm, .50 caliber, and 40mm Grenade (TPT only).

Military Operations on Urban Terrain (MOUT) Assault Courses

The Army proposes to build up to three MOUT Assault Courses in the Ke’āmuku Maneuver Area (KMA) at PTA. There is no standard design for a MOUT; rather, a MOUT is used to integrate tactics, techniques, and procedures (TTP) into unit training¹.

Purpose

Urban areas are expected to continue to characterize the current and future battlefield for U.S. Forces. Realistic training must include tactical urban settings. Soldiers must be taught to shoot, move, and communicate in urban warfare settings, to instinctively see and use urban features that provide cover or concealment. The Army must provide realistic scenarios where units can establish squad and platoon

¹ FM 7-0 identifies TTP as new conditions or tasks that may not have established standards, but where commanders in the field redefine an existing task or may establish a standard to be successful in a new situation. TTPs are integrated with standards so that Soldiers may both meet and exceed their FSO requirements.

positions, conduct roadblocks and vehicle searches, and practice communication skills in battle-simulated environments. This kind of training requires mock structures that are as realistic as possible and are large enough to simulate a variety of training scenarios and missions.

Need

PTA does not have sufficient simulated urban facilities to provide units with training under the conditions found in an urban or semi-urban environment. Lessons learned in Afghanistan and Iraq drive a need for sufficient MOUT capability to insure that Soldiers deployed to the operational environment are sufficiently trained to meet threats in an urban setting. While MOUT training is not required as part of a unit's FSO METL, unit commanders have flexibility to plan and conduct unit training based upon the commander's evaluation of his missions and training readiness (DA Pam 350-38, paragraphs 5-7c(5)).

Description

The structures that comprise a MOUT are meant to be modular (moveable within the range footprint) so that the range may be redesigned as needed for units to experience variation in target identification and engagement and to conduct a variety of tasks in a simulated urban or semi-urban environment. Often, the Army uses containers as MOUT structures that are similar to those used for trucking, shipping, and rail transport of goods. Containers would be manufactured off-site and transported to the site by commercial vendors. The containers would sit on the ground and would not require concrete footings. Openings would be pre-cut in the containers to simulate window and door openings.

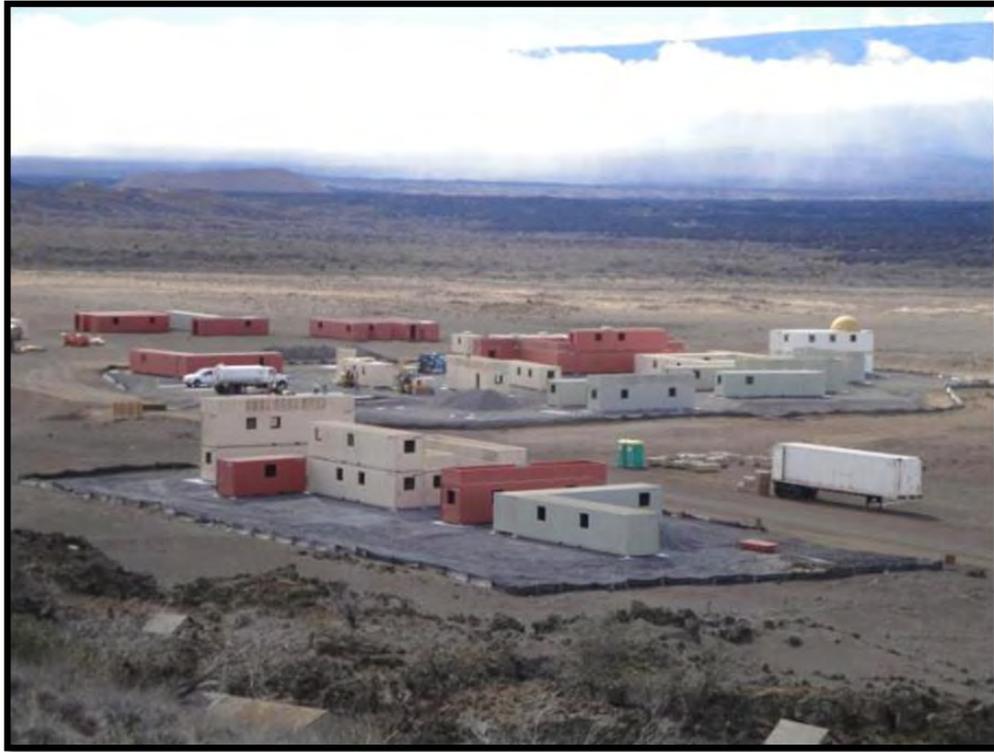
No utilities such as electricity, plumbing, or sewer would be required at the site. Site preparation for modular MOUT containers would consist of site leveling as necessary, using construction equipment such as graders, bulldozers, and front-end loaders. While some site leveling may be necessary, no excavation or fill using material outside of PTA would be needed.

The MOUT facilities planned at KMA are still in the initial planning process; therefore sufficient details on size (land requirements) and number and type of modular facilities is not yet available. Proposed locations of these facilities in KMA are found on Figure 2.2-1. In the absence of a MOUT design, a picture of an existing MOUT at PTA can be found in Section 2.1.3. Small MOUT facilities have up to 10 modular structures that may cover an area approximately five acres (2 ha) in size; or may be larger such as the MOUT proposed as part of the IPBA in this PEIS that may have 30 or more modular buildings that cover an area of more than 14 acres (5.67 ha).

There would be no live-fire at any of the MOUTs in the KMA.

Example of a Training Event

Common missions are patrolling, security operations, clearing, and attack and defend. Exercises can use dry-fire, blank ammunitions to include force-on-force exercises.



Existing MOUT facility at PTA. Proposed MOUTs at KMA may be of similar design.

Duration

In order to complete the unit commander's walk through, one or more practice runs that is determined by the unit commander's evaluation of the platoon's proficiency. Each platoon would require four hours of daylight and four hours of reduced visibility (night) if approved by range control. When combined with the time required to set up and close down the MOUT, conduct safety briefings and AARs, this would be equivalent to one platoon per day.

Multipurpose Storage Facility (Marine Corps)

The Marine Corps proposes to construct a permanent storage facility at PTA to gain efficiencies in meeting semi-annual training requirements at the installation.

Purpose

Each time a Marine Corps unit deploys to PTA for training, the unit is required to transport all of the equipment they plan on using during training, including large equipment, to PTA and then redeploy the equipment back to Marine Corps Base Hawai'i (MCBH). The purpose of the proposed facility would be to gain efficiencies in cost and time for transporting unit equipment to PTA.

Need

The Marine Corps has a need to reduce transportation costs while ensuring combat units are prepared to meet mission requirements.

Description

The proposed project would construct a permanent storage facility at PTA for the Marine Corps to store unit equipment for use during training. This project is still in the planning phase, but includes construction of a 2,323 m² (25,000 ft²) permanent facility capable of storing enough equipment for a company.

Ammunition Storage Facilities (Army)

The Army proposes to construct three concrete oval-arched, primary ammunition igloos at PTA, of standard design, that would be sited adjacent to the eight existing ammunition storage facilities at PTA.

Purpose

There are currently not enough ammunition igloos at PTA to accommodate the storage requirements for multiple Battalions to train at the installation simultaneously. An Army unit deploying to PTA transports its ammunition allotment for temporary storage at the existing igloos during the deployment; and transport unused ammunition back to O‘ahu.

Need

If this project is not implemented, most ammunition would be required to be stored in outdoor ASPs with armed guards, security lighting, and other security requirements. The outdoor storage would make the ammunition more susceptible to weather exposure. The outdoor storage requires temporary storage vans and thus would create larger explosive safety arcs than igloo storage. The larger explosive security area would reduce the training area available at PTA. In addition, the use of Soldiers as armed guards reduces the training opportunities for those Soldiers.

Description

This project would construct three standard design, concrete, oval-arched primary ammunition igloos sited adjacent to existing ammunition storage facilities at PTA. Each ammunition igloo would be 627 m² (6,750 ft²) in size and earth-covered. Work would also include installing pole-mounted security lights, floodlights above each entrance, and telephone and computer systems. Supporting facilities would include utilities, electrical service, stormwater drainage, paving, and access roads. The Army would further construct an ammunition holding area for daily distribution of ammunition to safely hold loaded vehicles. Each igloo would be connected via an underground duct system to the administrative building of the main supply point.

Range Road Improvements

Several roads in the Range Area at PTA require extensive repair and improvement to be capable of managing existing use, and future range construction and operations. Three roads reviewed as projects in this document include the East-West Main Supply Route through KMA, an upgrade (widening and structural improvements) to Charlie's Circle Road, and widening of the road adjacent to the convoy live-fire (CLF) range located in the Southeast Range Area. More information on these projects follows below.

East-West Main Supply Route (MSR)

The Army proposes to construct a gravel range road extending to, and through, the KMA to allow for improved safe access throughout the area and easier transport for Soldiers and equipment. Part of this MSR was analyzed in the 2004 Final EIS for the Permanent Stationing of the 2/25th Stryker Brigade Combat Team (SBCT), and in the Final EIS for Army Transformation of the 2nd Brigade, 25th Infantry Division (Light) to a SBCT in Hawai'i (U.S. Army, 2004). Since that time, a portion of the trail road is expected to be re-routed. Army planners are in the process of determining the best and final route the road would follow; and further, would work with the State and County of Hawai'i, if needed, to ensure the East-West MSR does not present conflicts with the Saddle Road realignment nearing the KMA.

Purpose

The East-West MSR would reduce safety conflicts between military and civilian vehicles travelling on Saddle Road when military units travel to the KMA.

Need

The East-West MSR would be used by all tactical vehicles, including the Stryker, Mine Resistant Ambush Protected (MRAP) vehicles, and other vehicles in the maneuver training area.

Description

Construction would include, as required, grading, paving, drainage improvements, and storm drainage structures and lines to preclude excessive amounts of stormwater runoff from sheet water flowing over the road and endangering vehicular traffic on the road. A tiered NEPA document would further discuss more detailed plans and potential impacts once this project is more mature.

Road Widening, Southeast Range Area

The Army proposes to widen roads adjacent to the Marine Corps-built CLF Range to minimize conflicts with units that would need to utilize ranges in the southern portion of the impact area at PTA. Roads to be widened would be portions of Hilo Kona Road and Red Leg Trail.

Purpose

The purpose of widening roads in that area would be to minimize safety conflicts between users of the CLF range and other military units using the road. In addition, units have limited access to PTA and

therefore, must be able to maximize the use of their time at the installation without causing delay due to other training conflicts.

Need

Units using the southern ranges at PTA must have adequate access to range facilities there. The current range is not adequate to support other military traffic when the CLF is in use. Units accessing future ranges in the southern portion of the impact area must be able to conduct training without unnecessary delays.

Description

The upgraded range road would comply with the Military Standard and UFC 3-250-09FA Aggregate Surfaced Roads and Airfields Areas. This project is still in the planning process. No additional information on road width or other improvements is available at this time.

Charlie's Circle Road Upgrade

The Army proposes to increase the width of Charlie's Circle Road to a size capable of handling military training and construction vehicle traffic. The existing Charlie's Circle Road is a gravel road located west of the PTA impact area. The road provides access to the Western Range Area, conservation areas near that point, and range locations north of the Western Range Area. The road is currently 14 feet wide. The Army intends to improve access to currently underutilized portions of the impact area at PTA.

Purpose

Many of the live-fire ranges are focused on the east side of the impact area where there is little room for improvements and new ranges. Many of PTA's ranges are obsolete or outdated, do not meet the current doctrinal standard, and do not support doctrinally required training tasks. Access to other portions of the impact area is desirable in order to minimize or avoid safety conflicts (SDZ overlap) with planned range upgrades.

Need

The Army needs a road of adequate width at Charlie's Circle to help facilitate construction of the IPBA, and also to support long-term improvements or construction in the western side of the PTA impact area. Charlie's Circle Road would be widened by at least two feet on either side, and the Army would use stone aggregate as surface material laid at a depth capable of handling construction and training load, and graded to promote proper stormwater drainage.

Description

The range road would comply with the Military Standard and UFC 3-250-09FA Aggregate Surfaced Roads and Airfields Areas. This project is still in the planning process.

Production Water Well

The Army proposes to tap and utilize a deep water production well to provide adequate water supply to PTA, and to construct a water distribution system that would extend throughout the Cantonment Area.

Water consumption at PTA may be as low as 37,854 liters per day (10,000 gallons per day) corresponding to minimal troop presence and up to approximately 946,353 liters per day (250,000 gallons per day) when PTA is near full training capacity. During heavy water usage days, the installation may contract up to 14 tanker trucks of potable water to deliver water to the installation².

Purpose

Through use of a production water well, the Army would identify efficiencies over trucking water daily to the installation. A readily available water supply at PTA is vital to supporting the military mission there. The Army is proposing a number of construction projects in the Cantonment Area at PTA. Some of those projects would rely on a water well and effective water distribution system. An on-site water distribution system would also have an added a level of security to water consumed by the units using PTA.

Need

The Army has a need to have an on-site water source and water distribution system that meets the sustainable and long-term use of PTA. The Army must modernize PTA to meet its long-term mission requirements, and requires supporting infrastructure in order to accomplish its mission. Modernization would be better supported through use of a production well that can provide adequate water supply to help run and maintain other planned headquarters and mission support facilities in the Cantonment Area.

Description

The Army plans to drill test wells beginning at a depth of 457 m (1,500 ft.) beneath the installation. A test well would first help determine the existence of water, in what quantity, and also sampling could be conducted to determine water quality. Plans for both the test well and larger production water well are in progress and are addressed in a separate NEPA document.

A Cantonment Area-wide water distribution system would require extensive clearing, grubbing and trenching, and grading of soils to run piping underground to reach existing and newly planned facilities. A tiered NEPA document would further discuss more detailed plans and potential impacts once this project is more mature.

Training Aids Support Center / Multipurpose Training Facility

The Army proposes to construct a multipurpose facility that would provide enhanced (constructive, Virtual, and Simulator) training support to unit commanders and prepare them for FSO tasks in a joint, interagency, intergovernmental, and multinational environment. This facility would also house the Joint

² If current demand cannot be met by the existing Waimea well, excess demand can be supplied by the City of Hilo.

Training and Experimentation Network (JTEN) to enable the Joint National Training Capability (JNTC) for Army, Joint, and Sister Service Training.

Purpose

Over the last decade, the Army has experienced a greater need for Live, Virtual, and Constructive (LVC) training to better meet the Army's training mission on installation lands where the pressures of encroachment continue to grow from outside the installation (public pressures) and inside the installation (e.g., environmental compliance responsibilities for protected species). There is also a greater requirement for joint training and learning to operate large units (platoons through brigades) effectively and communicate successfully over a noncontiguous land area. Providing units an area to train in modern technological scenarios would increase survivability in real time combat operations.

This project is required to provide a modern, functional, low-energy use, and economically efficient facility that would meet mission needs at PTA. Construction and eventual use of this facility would increase operational efficiencies and command and control through centralization of functions and brigade activities.

Need

There is no currently LVC facility at PTA. Without this capability, large and jointly operated units will limit their ability to operate effectively and cohesively in combat and their survivability.

Description

The proposed TSC is approximately 3,252 m² (35,000 ft²) in area and would require paving, sidewalks, curbs and gutters, and electrical utilities. No additional information is available at this time.

Ammunition Storage Facilities (Marine Corps)

The Marine Corps proposes to construct three standard design, concrete, oval-arched primary ammunition igloos that would be sited adjacent to existing ammunition storage facilities at PTA.

Purpose

The purpose of this project would be to provide the Marine Corps with permanent ammunition storage facilities at PTA that would permit units to draw ammunition from there during training events versus transporting ammunition to PTA with every training event. There would be a considerable cost savings realized through implementing this project.

Need

Current procedure is to ship ammunition to PTA with every training event. This procedure has been increasingly cost prohibitive due to military budget constraints and can additionally cause delays in training. The Marine Corps needs permanent storage facilities at PTA to better meet their mission training requirements.

At the present time, the PTA Ammunition Storage Point (ASP) consists of eight non-standard igloos. If this project is not implemented, most new ammunition would be required to be stored in outdoor ammunition supply points (ASP) with armed guards, security lighting, and other security requirements. Outdoor storage would make the ammunition more susceptible to weather exposure (i.e. lightning, rain, ultraviolet [UV] degradation, etc.). Outdoor storage requires temporary storage vans and thus would create larger explosive safety arcs than igloo storage. The larger explosive security area would reduce the training area available at PTA. In addition, use of Marines as armed guards also reduces the training opportunities for those individuals.

Description

This project would construct three standard design, concrete, oval-arched primary ammunition igloos sited adjacent to existing ammunition storage facilities at PTA. This project would include providing a pre-engineered metal roof, covered storage shed, entry control facility, concrete pad, ammunition work area, electrical service, and storm drainage. These facilities would be approximately 776 m² (8,356 ft²) in size.

Electrical Upgrade

The Army proposes to modernize the electrical grid at PTA, specifically by upgrading the main transformer in the Cantonment Area, and also by replacing, as necessary, wires running on poles throughout the installation, or installing new poles and wires where required.

Purpose

This system would provide better support to the Cantonment Area, airfield, and range facilities infrastructure. Upgrades would encompass the entire PTA installation.

Need

The electrical grid at PTA is old and cannot meet demand for new range and Cantonment Area facilities post-modernization. The scope includes constructing a new substation transformer with a structure to house it and protect it from weathering.

Description

New infrastructure would meet utility codes established by the Hawai'i Electric Company and the Military Standard and the Unified Facilities Code (UFC) 3-550-01 Exterior Electrical Power Distribution. The system would use, to the extent possible, existing utility poles to run electrical cabling throughout the Cantonment Area and to some portions of the Range Area. A tiered NEPA document would further discuss more detailed plans and potential impacts once this project is more mature. No additional information is available at this time.

Tactical Equipment/Vehicle Maintenance Shop

The Army proposes to construct a full-capability tactical equipment and installation maintenance facility that would allow for the repair of an assortment of Army, Marines, and other vehicles ranging from Stryker and MRAP vehicles to Heavy Expanded Mobility Tactical Truck (HEMTT), Heavy Equipment Transporter System (HETS), and various engineer and other types of equipment.

Purpose

PTA currently has a small motor pool with very limited capacity to repair and service vehicles. This needs to be replaced with a permanent full-capability motor pool to allow training units to bring vehicles and equipment back from deadlined (inactive) to operational status during their valuable training period at PTA.

Need

PTA needs a full-capability tactical equipment and installation maintenance facility to repair vehicles and equipment of Army, Marines, Air Force, and Reserve and Army National Guard units training at PTA. The Army and Marines also have plans to preposition a number of vehicles and equipment at PTA due to the high costs of transporting vehicles between O‘ahu and Hawai‘i Island.

Description

The Army would construct a standard design Tactical Equipment Maintenance Facility complex to include a small maintenance facility, limited tactical/organizational vehicle parking, petroleum and other hazardous material storage, information systems, fire protection and alarm systems, Intrusion Detection System installation, and Energy Monitoring Control Systems connection. Supporting facilities would include site development, utilities and connections, lighting, paving, parking, walks, curbs and gutters, storm drainage, information systems, landscaping, and signage. Heating would be provided. Comprehensive building and furnishings related interior design services are required. The facility would be ADA compliant. The facility would be 1,672 m² (18,000 ft²) in size. The Army is still in the planning process for improvements to the Cantonment Area and would determine the appropriate sized facility in a future tiered NEPA document.

Unmanned Aerial Vehicle (UAV) Facilities

The Army proposes to construct a standard design Unmanned Aircraft Systems (UAS) operations and maintenance hangar at Bradshaw Army Airfield (BAAF).

Purpose

The Army, to meet the requirements of UAV usage in combat operations, must provide the proper facilities necessary to fully train and operate these delicate and highly sophisticated equipment.

Need

Proper facilities would preserve the Army's investment as well as aspects of training and operation of these technical equipment. The current facilities where UAVs operate from at PTA are interim facilities that are inadequate to properly maintain UAV systems per their operational criteria. If adequate facilities are not provided, the Army's UAVs at PTA would continue to experience undue deterioration that currently reduces their capability to operate in the field.

Description

The proposed facilities would include an aircraft hangar, associated maintenance shops, administrative space, aircraft pavements, storage and loading dock information systems, fire protection and alarm systems, and Energy Monitoring Control Systems connection. Supporting facilities would include site development, utilities and connections, lighting, paving, parking, walks, curbs and gutters, storm drainage, information systems, landscaping and signage. Heating and air conditioning would be provided by self-contained system/connection to the existing energy plant. The total facility size is planned to be 335 m² (3,600 ft²).

Brigade (Bde) Headquarters (HQ) and Exercise Control Facility

The Army proposes to construct a facility that would improve operational readiness of larger collective units and joint forces through instruction and command and control training. Brigade and Battalion Headquarters are required by the Army to house administrative and command operations. Brigade (Bde) Headquarters (HQ) are comprised of administration and special functions that support Army Brigades such as: BCTs, CABs, Combat Support Brigade (CSB), Fires Brigade (FB), Battlefield Surveillance Brigade (BFSB), and Sustainment Brigade (SB); and are adaptable for other non-standard Brigade structures. These facilities are also comprised of administration, special functions, and classroom components for personnel assigned to work in those facilities; and may include Sensitive Compartmented Information Facility (SCIF), Brigade Operations Center (BOC), and Network Operations Center (NOC).

Purpose

Previously, the functions and requirements of Bde HQ and their subordinate Battalions were not that different with regard to facilities. Transformation has fundamentally altered this. Brigades now perform intelligence, operations, and communications functions that were formerly associated with a division headquarters. In contrast, the Battalion's operational requirements have remained largely unchanged. The most significant difference is the inclusion of an S-6 office – Information Management.

Brigades have missions and capabilities that require specialized spaces. These missions and capabilities translate into the need for most Brigades to have a BOC for controlling mission operations while they are in progress, a SCIF for processing certain types of classified information, and a NOC to manage the information systems inside their footprint. Each of these types of space has special security requirements that dictate specific construction standards. They also have access restrictions that suggest traffic patterns and control points within the facility.

Need

The Army has no existing facility at PTA to support mission readiness and training effectiveness instruction for large units and units operating in joint or multi-national components. Army Transformation and mission success is dependent upon increased battle command, situational awareness, and situational understanding, as well as unprecedented fielding of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) technology creating a fundamental mission requirement to modernize Brigade and Battalion Headquarters buildings.

Description

The Army would construct a small, two-story general purpose administration operations center from where Brigade staff may control unit field training and perform Command post exercises. The facility would be 2,899 m² (31,200 ft²) in size.

For “Green Grass” situations where the complete construction requirement exists, the Brigade and Battalion Headquarters would be consolidated into a single building. The building gross square footage limit for Brigade, Battalion, BOC, NOC, SCIF and classrooms is 12,904 gross m² (138,900 gross ft²). However, when Brigade and Battalion Headquarters are consolidated into a single building, the number of classrooms would be reduced by 50 percent since the consolidated headquarters allows shared use of the classrooms by multiple Battalions. This proposal would equate to a significant cost savings over alternative solutions.

Telecommunications infrastructure would meet Installation Information Infrastructure Architecture (I3A) and industry standard cabling compliance requirements. Telecommunications lines would be installed underground from the installation’s telecommunications system. A telephone system would be installed within the SCIF and would meet requirements outlined by the Director of Central Intelligence.

Construction would include redundant mechanical and electrical systems with installation of backup power, secure organizational vehicle parking, loading/service areas, building information systems, fire protection and alarm systems, Intrusion Detection System installation, and Energy Monitoring Control Systems connection. Other supporting facilities would include lighting, walks, curbs, and storm drainage.

Aerial Gunnery Range (AGR)

The U.S. Army proposes to construct, operate, and maintain an AGR on PTA. The AGR would meet critical collective unit training needs for both active and reserve component aviation units that train on the installation as well as for other military Services who may use the range.

Purpose

The purpose of the AGR would be to provide a year-round, comprehensive, and realistic aviation training range facility for the training of aviation crews, teams, platoons, and companies/troops. The range would be used primarily by the Combat Aviation units stationed at PTA. In addition, the AGR would support individual crew training of National Guard aviation units that habitually train on the installation. The AGR provides training that aviation units need to build skills in weapons use, target observation, and engagement, team building, and leadership development.

Need

The AGR supports aviation live-fire gunnery training. There is an existing AGR at Range 20. This range is undersized and does not meet current Army standards.

Description

This range is used to train and test aviation, unstabilized platforms and crews, teams, platoons, and companies/troops on skills necessary to detect, identify, and effectively engage stationary and moving infantry and/or armor targets in a tactical array. Company-level combined arms live-fire exercises (CALFEX) may be conducted on this facility. This complex also accommodates training with subcaliber and laser training devices. This complex supports dismounted infantry platoon tactical live-fire operations either independently of, or simultaneously with, supporting vehicles. MOUT and CLF facilities are required to enable diving engagement to specified streets/intersections and engagements in close proximity on adjacent terrain. Additionally, the AGR enables critical air-ground integration TTP training to ensure the optimum teaming of Army ground and aerial platforms. Primary features include a Primary Area (threshold) and an Alternate Area (objective). An AAR facility, aviation forward arming and refueling point (FARP), tower, aerial firing points, and aircraft holding area are also required.

The AGR would include a large range operations control area (ROCA) with AAR facility, latrines, ammo breakdown area, storage, forward aerial rearm and refuel point (FARRP), ammunition holding area (AHA), instruction building, and a surfaced staging area. Supporting facilities would include electrical service, transformers and lighting, surfaced roads and tank trails, parking, drainage ditch, and a water storage tower. Supporting facility force protection includes security fencing and gates.

The range would be embedded with the necessary information and telecommunications technologies to safely manage all personnel undergoing crew live-fire training and qualification. All targets would be fully automated, utilizing event-specific, computer-driven target scenarios and scoring. Targets would receive and transmit digital data from the range operations center.

Primary Features Include

Primary (threshold) - footprint is 4,000 meters (m) (13,123 ft) X 6,000 m (19,685 ft) (meets minimum standards of Aviation unit table's IXII and CALFEX).

- 50 SATs
- 246 SITs (35 clusters with 6 SITs ea.)
- 12 facades
- 1 CLF lane
- 1 Air/Ground Integration Village (13 buildings, surrounded by stationary targets to enable live-fire engagement by aviation assets).
- 8 MATs
- 4 stationary 3-D diving fire targets
- 35 MITs
- 12 aerial firing points

Alternate (objective) –

1 kilometer (km) (3,281 ft) lateral extension on both sides of threshold, and a 3 km (9,843 ft) extension in depth (allows greater dispersion of targets and separation of firing vehicles to maximize capabilities of digital platforms during advanced tables).

- 15 SATs
- 60 SITs
- 1 urban cluster (7 buildings)
- 2 MATs
- 10 MITs
- Static targets (supports indirect fire/CAS engagements).

Up-range facilities/components

Aviation/range control tower, 10-point FARP, and adequate AAR facilities are provided as basic infrastructure.

Additional Information

This complex uses thermal targets, muzzle flash simulators, and hostile fire/target-kill simulators. Location of the boresight target and weapon harmonization target must be coordinated with the trainer. Gunnery tasks requiring the use of dud-producing ammunition cannot be fired on the complex. Provisions for these tasks must be made in impact areas adjacent to the complex or specified areas in objective areas of the complex (if these areas overlap existing permanently duded terrain). The range operations center/tower must have the capability to communicate with firing platforms. All stationary/moving infantry targets would be equipped with a muzzle flash simulator.

Example of a Training Event

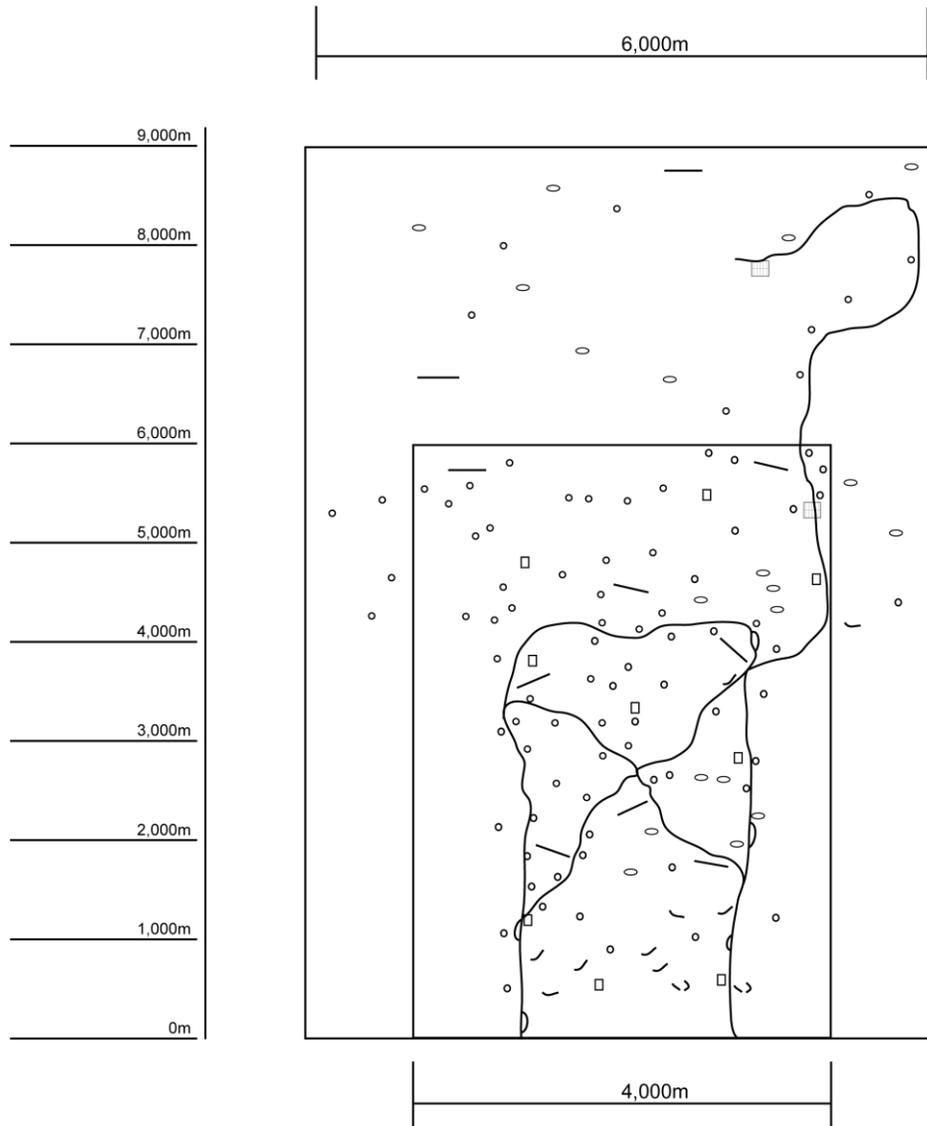
Single or multiple helicopters would assemble in a location away from the AGR to await required safety and firing clearances. Once cleared and the range is “HOT,” helicopters would move on to the range and engage targets according to the tactical scenario. Helicopters would engage the targets by hovering, running fire or diving fire. Command and control can be executed by leaders in helicopters or by Soldiers on the ground.

Duration

Single or multiple helicopter crews would conduct practice exercises before live-fire as determined by the unit commander’s evaluation of their proficiency. Live-fire exercises would be accomplished in daylight and under reduced visibility (night), for the duration of the operation. When combined with safety briefings, arming and refueling, and after action reviews, one aerial gunnery exercise is equivalent to one day on the range.

Aircraft, Weapons and Ammunition

Aircraft operating at the AGR may include: OH-58 Kiowa, UH-60 Black Hawk, and AH-1 Cobra. The Marine Corps may use the AH-1W, AH-1Z, or AH-1S Cobra; the CH-53D/E Sikorsky; and the Marine UH-1 Huey Gunship, and AH-1S Cobra (modernized). The Marine Corps may further use the MV-22 Tiltrotor Osprey. Weapons authorized for use are 7.62 mm and .50 caliber machineguns, and the 20mm cannon. Ammunition authorized for use at the AGR includes 7.62 mm and .50 caliber, and 20 mm projectiles. The Army or Marine Corps may also request the use of the HA 13 2.75 inch rocket (captive trainer).



LEGEND	
	Moving Armor Target (MAT) Emplacement
	Stationary Armor Target (SAT) Emplacement
	Infantry Target Emplacement Cluster (6 SIT's and 1-15m MITs)
	Infantry Target Emplacement Cluster (6 SIT's and 1-40m MITs)
	Urban Cluster
	Diving Fire Target
	Facade
	Aerial Firing Position
	Defilade
	Hasty Battle Position
	Trail
	Ground Platform Free Maneuver Area

AGR Diagram from TC 25-8, page D-86

EXTENDED PLANNING ANNEX PROJECTS (NOT IN PRIORITY ORDER)

BAAF Improvements

In addition to the near-term UAV facilities, the Army and Marine Corps propose long-term improvements to the BAAF that would support the airfield's tactical mission capability. These improvements include realigning the airfield to mitigate limitations on proposed construction in the Cantonment Area, lengthening the runway to enhance fixed-winged aircraft capability, and accommodate and maintain additional rotary-winged aircraft. These projects are grouped separately from the UAV facilities project because they currently do not have the same level or priority. Project priorities may shift as funding availability and the training mission evolves over the next five to 10 years. These projects are discussed in greater detail below.

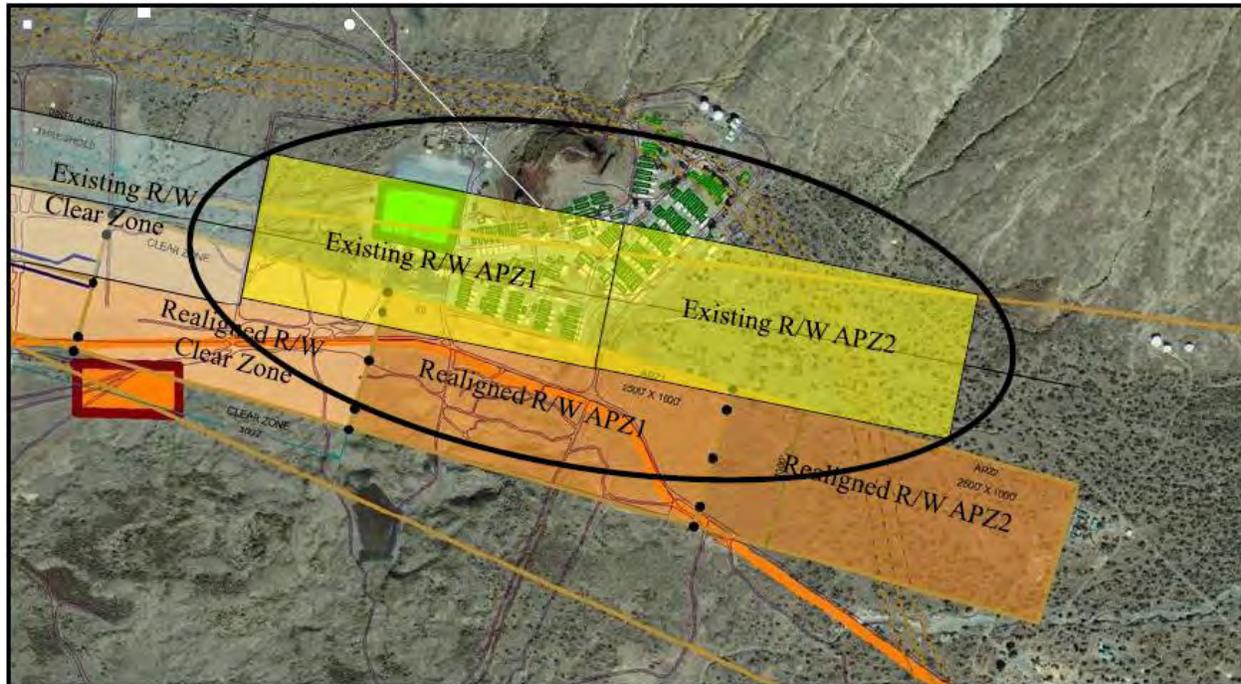
BAAF Runway Realignment (Marine Corps)

The BAAF is used for deploying, redeploying, and resupplying all military units training on the Hawai'i Island. The airfield has one runway that is 1,128 m (3,700 ft.) long from east to west, with a total of 335 m (1,100 ft.) of overruns. The airfield's relatively high elevation of 1,890 m (6,200 ft.) above mean sea level impedes aircraft performance and limits the weight of cargo aircraft can safely carry. The airfield operates under substandard conditions due to a relatively short runway, limitations imposed by mountainous terrain, presence of man-made obstructions to the east, winds from the east that increase throughout the day, and maximum tailwind landing restrictions for the C-130 (15 knots) aircraft impede mission accomplishment. Current operations are limited to visual flight rules (VFR) and approaches and departures only from the west. The pavement is deteriorated in many areas and structurally inadequate for C-130 loading operations.

The Marine Corps proposes to construct a 1,707 m (5,600 ft.) long full strength paved runway with 91.4 m (300 ft.) long full strength paved overruns on each end. Total length of full strength pavement would be 1,890 m (6,200 ft.) long. The runway would be 30.5 m (100 ft.) wide with 7.6 m (25 ft.) wide paved shoulders on either side. The first 152.4 m (500 ft.) of each runway end would be paved with rigid pavement. The remainder of the runway and shoulder pavements would be flexible pavement³. This configuration would create a Class A Army airfield with the capabilities to operate as a training assault runway. A new runway threshold and visual approach slope indicator lighting system and edge lighting would also be required for the extension.

The runway would also be realigned by a minimum of 5 percent, possibly to the south, to avoid conflicts and limitations posed by Cantonment Area construction.

³ Rigid pavements are made of cement concrete that may be reinforced or pre-stressed, and built to distribute the weight and approach characteristics of an aircraft over a wide area of the subgrade soil. Flexible pavement is designed to transmit vertical and compressive stresses of the load. Both are used during construction to insure safe landing and operation of aircraft runway and airfield surfaces.



Depiction of proposed runway realignment

Purpose

The current size and orientation of the BAAF runway applies strict limitations to aircraft operations using the airfield and places limitations on construction in the Cantonment Area. Both hinder the training mission of PTA by creating costly and time consuming work-arounds. For example, limited flight operations result in a greater reliance on transporting equipment into Kawaihae Harbor or flying equipment into commercial air facilities; both require convoying to PTA. Further, limitations on construction in the Cantonment Area mean longer term reliance on aging Quonset Huts until these limitations are resolved, thereby equating to greater long-term facility maintenance costs, the inability to meet Army and PTA energy requirements and goals, and continued dependence on poor quality of life conditions in the Cantonment Area.

Need

PTA needs modernized airfield facilities to continue to support the mission of the installation, promote the readiness of units deploying to combat operations overseas, and further improve safety on public roadways leading to PTA by redirecting equipment directly to the BAAF.

Description

Construction mobilization and demobilization requirements are part of the primary facility cost. PTA's remoteness from major commercial centers presents special logistic demands in transportation to and from the installation, including heavy equipment, project office trailers, telephone communication connections, restroom facilities, and other miscellaneous requirements. Supporting facilities would require site preparation (clearing/grubbing, excavation, grading, and storm drainage); a mobile asphalt

concrete batching plant' water supply source; and extension of the primary electrical service line from the base camp. The runway would be designed and lengthened to accommodate C-130 aircraft under assault landing zone criteria.

This project was originally proposed and analyzed in the Final EIS for Army Transformation of the 2nd Brigade, 25th Infantry Division (L) to a Stryker Brigade Combat Team in Hawai'i (U.S. Army, 2004). This project is assessed primarily as part of the cumulative impacts analysis.

Rotary Wing Apron, Hangar, Air Traffic Control Tower, and Aircraft Maintenance Facility

The Army and Marine Corps propose to enhance PTA's capability to provide air combat support through enhancements to the BAAF, including adding a rotary wing apron, maintenance hangar, and air traffic control tower. Also proposed is a 4,510 m² (48,540 ft²) aircraft maintenance facility to support added aviation maintenance requirements.

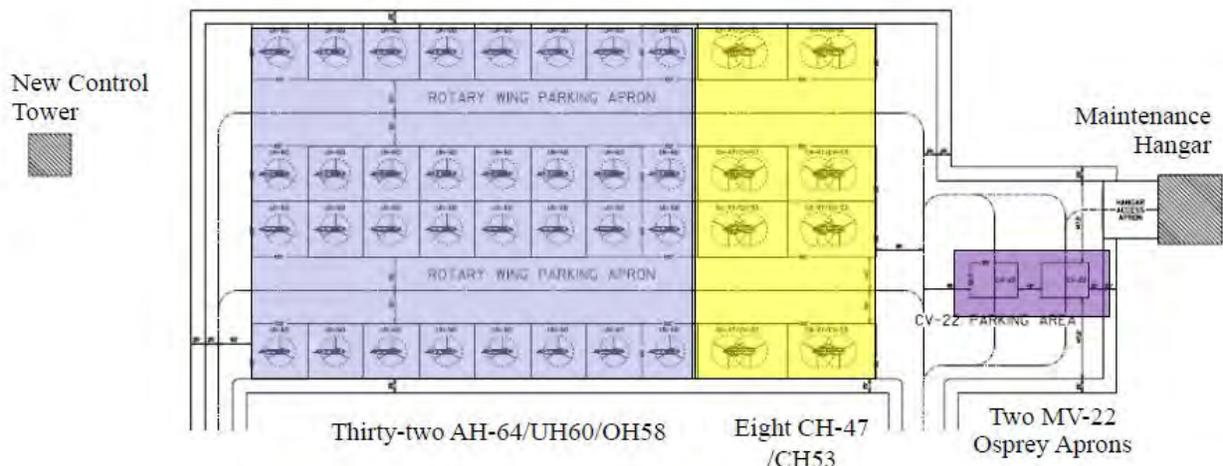
Purpose

This project would insure adequate mission support facilities are available to the 25th CAB and Navy and Marine Corps aviation units when maneuvering at PTA.

Need

The BAAF is currently constrained for space. Existing aircraft aprons and maintenance facilities at the BAAF are aged and do not meet current requirements for the CAB to utilize the airfield fully at PTA. The Airfield needs additional aprons to accommodate the authorized number of aviation assets that require training at PTA.

Proposed Rotary Wing Apron, Control Tower & Aircraft Maintenance Hangar



Description

The proposed project enhance the BAAF, including adding a rotary wing apron, maintenance hangar, air traffic control tower, and a maintenance facility. There is no standard size for rotary-wing aircraft aprons. The actual dimensions are based on the number of authorized aircraft, the maneuvering space, and the type of activity that the apron serves. The BAAF currently serves 18 UH-60 Blackhawks/ OH-58 Kiowa helicopter aprons, eight CH-47 Chinook / CH-53 Sikorsky helicopter aprons, and limited C-130 operations. Based upon current authorized units in Hawai'i, the BAAF has the potential to serve up to 32 AH-64 Apache/ UH-60/ OH-58 Aprons for one Assault or Cav Aviation Battalion, eight CH-47/ CH-53 aprons for Army General Support Aviation Battalion (GSAB) and Marine Corps requirements, and two MV-22 Osprey aprons as a Marine Corps/Navy requirement.

Construction would also include a new air traffic control tower. The maintenance facility would provide standard repair space for rotary-wing aircraft. Until further scoping would be required, as the total space requirements, including water and power needs, are undetermined.

Construction of a standard design aviation maintenance facility for rotary-wing aircraft would include maintenance shops and offices; parts and tool storage; aviation operations; and all support equipment and facilities, administrative operations, aviation operations area, a hazardous materials storage facility; information systems; fire protection and alarm systems; and Energy Monitoring Control Systems connection.

Packaged Sewer System

The Army proposes to construct a sewer system at PTA to provide an advanced level of sewage treatment along with a collection and discharge system for Cantonment Area effluent. This system may include a packaged system with lagoons that would have the capability to meet the effluent limitations identified in the installation NPDES permit.

Purpose

This project would provide the garrison with a greater capability to handle wastewater and achieve efficiencies over current processes. For example, wastewater resulting from use of vehicle wash racks at PTA is entirely self-contained, non-discharging of wastewater. All sediment used in the filtration process would be collected and water would be recycled continuously. The planned system would have 378,541 liters per day (100,000 gallon per day) capacity.

The system would be equipped with an odor control system and the capability to produce R-1 quality water, the highest quality of recycled water. R-1 recycled water has a significant reduction in viral and bacterial pathogens over disinfected water, and may be reused for any sort of irrigation, landscaping, high pressure water blasting, laundry, industrial cooling, and bathroom facilities (Hawai'i SDOH, 2002).

Need

PTA has a need to modernize its facilities within the Cantonment Area and move away from World War II era infrastructure that is cost intensive to maintain. A packaged sewer system would be necessary for the Army to construct and operate many of the facilities (efficiently) that is planned for the Cantonment Area.

Description

Sewage facilities would comply with the Military Standard and UFC 3-240-07FA Sanitary and Industrial Wastewater Collection. The packaged sewage system would require extensive clearing and trenching, and grading of soils to run piping underground to reach existing and newly planned facilities. A tiered NEPA document would further discuss more detailed plans and potential impacts once this project is more mature. This project would be dependent upon successful implementation of the PTA Production Water Well project. No additional information is available at this time.

Access Control Point (ACP)/Military Police Station

The Army proposes to construct a new ACP/Military Police (MP) station near the main gate facility of the PTA Cantonment Area. An MP station currently exists at the installation, but this project would relocate that facility to become compliant with the requirements outlined in Field Manual (FM) 19-10 Military Police, Law and Order Operations (HQDA, 1987).

Purpose

Prior to the realignment of Saddle Road Section II (located to the north of the PTA Cantonment Area), Saddle Road ran through the Cantonment Area, and the former access gate and MP station were co-located at that point. Since the realignment of Saddle Road Section II, the Army constructed only a new access gate with the MP Station remaining at its original location. The Provost Marshal's Law and Order Purview, Chapter 1 of FM 19-10 (HQDA, 1987), requires that the MP station be as near as possible to a point on the installation that provides effective direction and centralized control of all MP operational elements. For PTA, that point would be co-located with the access gate to provide control over admittance to the installation, provide effective force protection measures and safety for those who work at PTA, and to act as an information center for visitors to PTA.

Need

As discussed in *The Army Standard for Access Control Points* (U.S. Army, December 2004), Army physical security policy requires all Army installations to restrict access. MP stations (or Access Control Points) are the physical assets, along with manpower and operational procedures, which commanders employ to control access to Army installations.

Description

The Army proposes to construct a new MP station within the PTA Cantonment Area near the access gate created with the realignment of Saddle Road Section II. The project would include parking, lighting, information systems, fire protection and alarm systems, Intrusion Detection System, Energy Monitoring Control Systems, curbs and gutters, storm drainage, landscaping, and signage.

Dining Facility (DFAC)

The Army proposes to construct a new DFAC of standard design at PTA that would effectively consolidate the dining facilities located at the installation, and provide adequate capacity for the units and civilians that use those facilities. The current capacity of the four Quonset Huts dining facilities at PTA is as follows: Buildings T-185/186 (100 individuals), T-190 (40 individuals), and T-270 (40 individuals).

Purpose

U.S. Army Technical Instruction (TI) 800-01 requires that maximum effort will be directed in planning enlisted personnel dining facilities toward the consolidation and modernization of existing permanent facilities, and the replacement of existing temporary facilities with permanent consolidated facilities, when appropriate. At this point, the Army anticipates construction of a Training Dining Facility, of standard design, with a capacity of up to 2,600 Soldiers.

Need

PTA needs to consolidate facilities throughout the Cantonment Area to make room for improvements that support large unit training at PTA. The installation currently has too many scattered dining facilities that take up space and hinder construction if they remain unconsolidated. PTA also needs dining facilities with adequate capacity to serve Soldiers and civilians that work at the installation, and temporary billeted units that deploy to PTA for training. This project is still in the planning process. Details on capacity would be provided in a future tiered NEPA document.

Description

The consolidation and replacement of the DFACs into one DFAC would have enough capacity to accommodate a BCT sized unit (up to 2,600 Soldiers), and would be up to 5,203 m² (56,000 ft²) in area. The project would include food preparation and cooking areas, entrance/control area, serving, dining, dishwashing, pot wash, administration, locker area, waste disposal, receiving and loading dock, cold and dry storage, information systems, fire protection and alarm systems, Intrusion Detection System, and Energy Monitoring Control Systems connection. Design features would include utilities and connections, lighting, paving, parking, walks, curbs and gutters, storm drainage, landscaping, signage, and heating and air conditioning.

Battalion Billets

The Army proposes to construct up to 37 single story concrete masonry units (CMU) (buildings) to accommodate up to a Battalion of Soldiers training at PTA. The billets would host unaccompanied enlisted personnel (and authorized civilians) who are conducting training at a location other than their assigned home station (such as Army Reserve units at annual training sites, and Active Army units training away from home station).



Conceptual picture of the proposed CMUs

Purpose

The purpose of this project is to provide adequate temporary living facilities for units deployed to PTA for training. Existing Quonset Hut billets are old and were built to be temporary structures; they have inadequate insulation, are energy inefficient, and require an enormous amount of maintenance resources. Existing facilities do not meet the installation's energy goals as defined in Section 3.16. The new CMUs would be built as replacements for Quonset Huts when they are at the end of their serviceable life. CMUs would be sited on roughly the same footprint of Quonset Huts they are replacing, and therefore, would reduce the overall environmental impacts compared to siting new construction. Shower and latrine facilities would also be provided.

Need

Adequate housing is a significant quality of life issue for all Soldiers. The continued rehabilitation of the existing billets (Quonset Huts) is not economically feasible, and could never be accomplished in a way to meet Army standards.

Description

Each billet would be approximately 6.1 m (20 ft.) wide by 30.5 m (100 ft.) long (186 m² [2,000 ft²]), and would accommodate up to 40 Soldiers per CMU. Construction would be accomplished as needed (as Quonset Huts become unserviceable) and therefore would be intermittent.

Fire Station

The Army proposes to construct a Fire Station of standard design to be co-located with the BAAF, and to serve as a first response / emergency response facility and Aircraft Rescue Fire Fighting Fire Station.

Purpose

The standard Army Fire Station is an emergency respondent facility which supports the needs of Soldiers and civilians during fire and medical emergency situations. It is also a comprehensive facility designed to support the military firefighters' mission to protect lives, installation facilities, and military flight-lines. The facility accommodates the firefighters' administrative functions and provides an environment for fire prevention education and training.

Need

PTA's existing fire station is too small, does not have adequate storage space, and cannot currently meet the mission requirements of the firefighters that man and operate the station. In addition, the current fire station is not located in close proximity to the airfield runway and therefore, cannot sufficiently meet its crash rescue mission for protecting the flight line as directed by *The Army Standard for Fire Stations* (U.S. Army, March 2010).

Description

Site planning for the new fire station must include criteria to provide sufficient response time, adequate site space to accommodate firefighting vehicular turning radii, and parking for firefighters, visitors, and delivery vehicles, and to meet storage requirements for firefighting equipment. The planned facility would be approximately 1,533 gross m² (16,500 gross ft²) in size. The facility would be constructed with adequate lighting, stormwater drainage, heating and air conditioning, toilet, information systems, fire protection and alarm systems, Intrusion Detection System, and Energy Monitoring Control Systems connection.

Physical Fitness Center

The Army proposes to construct a physical fitness center of standard design, meeting the criteria for an extra small facility (population capacity of 251 to 1,000).

Purpose

The physical fitness center would address the fitness and well-being of Soldiers. Physical fitness is the cornerstone of Soldier readiness. The Army emphasizes the importance of a high level of physical fitness capability for the occupational tasks that Soldiers are required to perform in training and in combat. Physical fitness centers are required by the Army to promote the strength and fitness of Soldiers. These facilities also boost morale and support Army core values.

Need

PTA does not currently have a physical fitness center. This facility could be used by units deployed to PTA for training that would utilize the proposed Battalion billets in the Cantonment Area, and also used by the Soldiers and civilians that work at PTA on a daily basis.

Description

The physical fitness center would allow for activity functions including cardiovascular and free-weight equipment, exercise areas, a gymnasium, and structured activity module/area. The proposed facility, by Army design standards, would be considered an extra small facility offering capacity for 251 to 1,000 individuals, and would be 2,580 total gross m² (27,771 ft²) in size. Supporting requirements would include laundry, parking, curbs, lighting, toilet, and heating and air conditioning.

PTA Industrial Area

The Army proposes to construct an industrial area centralized in the Cantonment Area that would support field training activities and consolidate the logistical requirements for each Military Service at PTA. The industrial area would include, at a minimum, a Directorate of Logistics (DOL) Base Yard, Department of Public Works (DPW) Maintenance Shop, Tactical Equipment Maintenance Shop, and also includes relocation of the existing Troop Issue Subsistence Activity (TISA), and construction and colocation of a Range Maintenance Facility. These facilities are described below.

DOL Base Yard

The Army proposes to build a DOL Base Yard within the Cantonment Area consisting of an open storage area, storage building, and storage shed.

Purpose

PTA does not have adequate storage to support the training mission at the installation. Currently, units that deploy to PTA to conduct higher-level echelon FSO METL tasks (semi-annual training) must transport all equipment to and from the installation. A DOL Base Yard would provide some infrastructure at PTA to support long-term storage of unit equipment.

Need

The Army has a need to reduce the costs of deploying to PTA for training and the time it takes to ready and prepare units to deploy to the installation to conduct their higher-level echelon FSO METL tasks.

Description

The DOL Base Yard would be sized to meet unit mission requirements. The open storage area would be similar to a parking area, suitable for the storage of material and equipment that does not require protection from the elements. The storage building would be enclosed with a roof, side and end walls, and possibly include loading docks and material handling equipment. The storage shed would be a roofed structure that is not fully enclosed, and would be used for storing material that requires maximum ventilation, or material that does not require complete protection from the weather.

The Army has not yet determined a suitable Base Yard size. The storage area is generally located on improved or semi-improved area to allow for grading, drainage, and surface cover using concrete, asphalt, or other materials in order to stabilize the supporting ground. The storage area is usually fenced-in for security purposes with a single entry/exit point. The fencing is normally 1.8 m (6 ft.) to 2.4 m (8 ft.) high, and may be topped with three strands of barbed/concertina wire. Perimeter and interior lighting (light

poles 6.1 m [20 ft.] high) would be installed according to the size of the storage area and the materials and equipment stored there.

DPW Maintenance Shop

The Army proposes to construct a maintenance shop within the Cantonment Area to provide regular upkeep and repair of non-tactical vehicle and equipment assets used for daily operations at PTA.

Purpose

Current DPW maintenance facilities at PTA do not provide adequate storage or work bays to serve sustainment maintenance and repair functions for DPW vehicles and equipment.

Need

At PTA, the Army needs a maintenance shop of the correct capacity to service the non-tactical fleet and equipment, and ensure efficient operation of the installation.

Description

The DPW Maintenance Shop would be located within the industrial area of the installation co-located with the DOL Base Yard and tactical vehicle maintenance shop. Planners have not yet selected a design size for this facility. The facility would be constructed with parking, lighting, stormwater drainage, heating and air conditioning, toilet, information systems, fire protection and alarm systems, Intrusion Detection System, and Energy Monitoring Control Systems connection. The Army is still in the planning process for improvements to the Cantonment Area and would determine the appropriate sized facility in a future tiered NEPA document.

TISA Relocation

The mission of the TISA is to provide subsistence support to dining facilities, units undergoing field training exercises, contingency operations, and other [mission] authorized activities. For example, the TISA provides stockage/storage for a unit's basic subsistence provisions when training in the field at PTA. The Army proposes to relocate the existing TISA to the PTA Industrial Area.

Purpose

As several units regularly train at PTA simultaneously, the TISA must have sufficient subsistence storage facilities to cover the training capacity of the installation. The existing TISA is dispersed throughout modified Quonset Huts that are old and rapidly degrading, and do not offer adequate storage capacity to accommodate more than one brigade training at PTA.

Need

PTA is designated as a Major Training Area (MTA), and therefore, must offer maneuver training for up to Brigade-sized units. PTA needs a consolidated TISA to offer the storage capacity needs for the installation.

Description

The TISA would be of standard design and replacing a facility that is currently not of standard design. The TISA would include construction of an administrative area, warehouse office area, and storage and support areas. There are three standard facility design sizes for the TISA; these are small 4,358 m² (46,914 ft²) gross area, medium 5,533 m² (59,627 ft²) gross area, and large 8,316 m² (89,519 ft²) gross area. The appropriate baseline size for a project would form the basis from which the total storage gross square area requirement would be determined. The Army is still in the planning process for improvements to the Cantonment Area and would determine the appropriate sized facility in a future tiered NEPA document.

Range Maintenance Facility

The Army proposes construction of a new building that would centralize range maintenance storage, communications, and equipment. Range control and maintenance operations are housed in eight temporary buildings dispersed throughout the PTA Cantonment Area, leading to inefficiencies, excessive travel, reduced response times, and miscommunications between different range elements. Most of these facilities are located Quonset huts with characteristic curved roofs that render much of their interior space useless. The electrical and mechanical systems are antiquated and require excessive maintenance funding. The shop facilities lack adequate ventilation and operating sprinkler systems. As a health and safety issue, all welding must be conducted outside by order of the PTA Fire Department. Dispersal of maintenance activities has reduced the quality of service provided to range users due to inefficient split functions.

Purpose

PTA does not have adequate facilities of this type to centralize range maintenance requirements and to meet existing mission requirements by ensuring Soldiers using PTA have access to ranges that can meet their training needs.

Need

Funding shortfalls over the years have limited maintenance and renovations in the range area, resulting in increased requirements to overcome existing backlogs. The need for these buildings is also centered on demands of the transformed forces and units for specific functions that support mission or equipment maintenance needs.

Description

The Army would construct a consolidated Range Maintenance Facility at PTA on a previously developed site within the Cantonment Area. The project would include administrative space for range maintenance, a carpentry shop, a welding shop, target and raw material storage, and parking for personally operated

vehicles and other vehicles and equipment. Supporting facilities would include potable water system, septic system, electric service and 150-kVA, three-phase transformer, paving, walks, parking, security fencing, information systems, and site improvements. Existing structures would be demolished and replaced by the proposed facility.

Existing electrical lines are approximately 30.5 m (100 ft.) north of the project site, and these resources are expected to continue to be available. Power requirements to operate building systems and equipment would include single-phase, 250-amp service in the administrative space; three-phase/four-wire, 250-amp service in the carpentry shop; and three phase/four-wire, 400-amp service in the welding shop. A 150-kilovolt transformer would also be required. Air conditioning, estimated at 10 tons, would be provided for administrative space only. Mechanical ventilation would be provided in the warehouse and shop areas. Water would be connected to an existing line approximately 45.7 m (150 ft.) north of the proposed site. Sewage would be collected and treated by a standard septic system, including septic tank and leach fields, to be located immediately to the west of the proposed site.

Range Maintenance Facility (Navy)

The Navy proposes construction of a new facility to provide range maintenance storage space, communications, and equipment, to be co-located with the Army's proposed Range Maintenance Facility.

Purpose

Similar to the other Services using of PTA, the Navy has a training mission at the installation that requires the service and storage of equipment. This function is currently provided at great expense in transportation costs when training is conducted at the installation. The purposes of this project would be to reduce equipment transportation costs.

Need

Recent budget constraints require that the Navy consider cost saving measures and preserve mission critical dollars where feasible.

Description

No design criteria are provided on the Navy Range Maintenance Facility. A future NEPA document will provide specific design criteria for this facility, and will explore alternative locations within the installation Cantonment Area.

Stormwater Drainage System (Cantonment Area-wide)

The Army proposes to construct a Cantonment Area-wide stormwater collection and drainage system.

Purpose

The purpose of this storm drainage system is to simply drain excess rain water from paved streets, parking areas, sidewalks, and roofs within the Cantonment Area, and to discharge the stormwater safely away from the main portion of the Cantonment Area.

Need

A re-designed Cantonment Area with new construction and more paved and covered areas would require stormwater diversion from impervious surfaces to avoid pooling and damage to infrastructure.

Description

The stormwater drainage system design, which is undetermined at the present time, would depend upon the final planned design of the Cantonment Area with new construction. A Cantonment Area-wide system would require extensive clearing, grubbing and trenching, and grading of soils to run piping underground to reach existing and newly planned facilities. A tiered NEPA document would further discuss more detailed plans and potential impacts once this project is more mature.

Communications System

The Army proposes an installation-wide communications system at PTA. The system would use, to the extent possible, existing utility poles to run fiber optic cabling throughout the Cantonment Area and to some portions of the Range Area. A satellite dish would also be installed at a location within the Cantonment Area. The Range Area may be supported by telecommunication towers. This plan is still in the early development phase. Limited additional information is available.

Purpose

This project would improve communications throughout the installation, and the technology capability (to support some digital capability) at some locations in the Range Area. The installation currently has dedicated telephone lines, but digital or cellular communications is not reliable.

Need

The Army at PTA needs reliable, full-time telecommunications capability to support mission operations at the installation, and to communicate more effectively with military elements off the installation.

Description

To the extent practicable, telecommunications lines would be run along existing poles. New poles could be built to support additional lines. The Army may trench or bore in the Cantonment Area to run subsurface telecommunication lines. Boring is generally identified as being more costly than trenching, but inflicts less damage to the ground surface and telecommunications lines be run several meters below grade to avoid buried artifacts near the soil surface. The Army may, if needed, construct communication towers that may require grading, fencing, foundation (concrete slab), and an on-site generator. If towers are necessary, a tiered NEPA document would further discuss more detailed plans and potential impacts once this project is more mature. In addition, the Army would comply with all Federal Communications

Commission (FCC) regulations, and U.S. Fish and Wildlife (USFWS) regulations governing protected species and migratory birds.

Urban Close Air Support (UCAS) Range (Marine Corps)

The Marine Corps proposes to construct an UCAS range, located adjacent to the recently built Navy Mock Runway, in the southern portion of the PTA impact area (Preferred Alternative).

Purpose

This range would be used to train Marine aviators in conducting precision support fire to ground-based troops, simulating combat in an urban environment. Close Air Support (CAS) tasks challenge the aviator to acquire and engage enemy ground targets, and integrate air and ground combat maneuvers in close proximity to friendly forces. Ground forces have increasingly relied on airpower integration to be successful in Iraq and Afghanistan.

Need

Marine Corps units have a need to train to proficiency on air-ground integration; practice command, control, and unit communication; maintain air superiority over a controlled area; perform target marking and acquisition; practice tactical procedures to ensure mission success in combat; and become more effective with use of the appropriate ordnance in an urban setting.

Description

Marine aviators would fly mainly Cobra Attack helicopters (different variants), and the MV-22 Osprey. The UCAS would employ use of unimproved roads capable of supporting tank and heavy wheeled vehicle traffic. Roads would be approximately 6 m (20 ft) in width to support tactical vehicle movement throughout the range. The site would require erosion control permits and management plans, and stormwater permits and management plans to support environmental compliance and minimize damage to the range from weather when combined with ground maneuver. The selected range area may require ground softening, grading, construction of firing pads / firing points, and placement of several shipping containers (sea/land storage units) to simulate buildings. Each container would be approximately 2.4 m (8 ft) wide x 2.4 m (8 ft) high and 6 m (20 ft) long, stacked adjacent to- and on top of each other, from one to five levels high. The selected site would further require EOD support for the survey and clearance of MEC/UXO to facilitate a safe construction and operation area.

The range would incorporate targets, to include hard wired and remote controlled systems that are programmable (e.g., SITs, SATs, MITs, MATs, and full size replica targets of armor vehicles and infantry). Targets systems would be protected from damage by live-fire using dirt berms, steel or concrete coffins, and use steel plates to withstand .50 cal projectiles. Target emplacements include the following:

- 25 SITs
- 25 SIT door targets
- 8 MITs
- 8 MATs

- 50 SIT window targets
- 10 SATs
- 10 full size replica armor vehicle targets
- 50 full size replica infantry targets

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