LSA ANACONDA

MASTER PLAN

301st ASG (GSU)

Garrison Command

September 2005

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A. EXECUTIVE SUMMARY

The purpose of the Logistics Support Area (LSA) Anaconda Master Plan is to provide zoning for the LSA, footprints for its MACOM tenants and to establish the future direction, requirements and rationale to meet the long term goals and objectives of the LSA which include:

(1) Enhance Force Protection

(2) Enhance, build, and maintain airfield infrastructure in order to support the Joint Theater Logistics and Strategic Air missions.

(3) Improve Living Conditions / the condition of Existing Facilities by identifying deficiencies and cost.

(4) Ensure an Efficient Investment of resources by establishing a framework to manage limited resources.

(5) Establish a vision and future direction to efficiently manage LSA resources to support the unit missions.

Logistics Support Area Anaconda (LSAA) has been identified by Combined Joint Task Force 7 (CJTF7) / Multinational Corps Iraq (MNCI) as an enduring base in support of Operation Iraqi Freedom. The LSA was occupied in late May 2003 by U.S. Forces. LSA Anaconda, known as Republic of Iraq Project 202-C, was an Iraqi Air Base (Al Bakir) built in the early 1980's with two satellite sub installations for ammunition and fuel storage. These sub installations are known as FOB O'Ryan, formerly FOB Lion (b)(1)1.4a and FOB Vanguard (b)(1)1.4a.

The facilities and infrastructure on the LSA were designed and built for a population of (b)(1)1.4a, (b)(1)1.4g . As of Fiscal Year 2005, over (b)(1)1.4a, (b)(1)1.4a, (b)(1)1.4g (b)(1)1.4a, (b)(1)1.4g . Its LOGCAP Alphanumeric Code is A-00 and its center of mass is located at (b)(2)High . The major missions of the LSA include the Air Force's strategic hub, the theater Aerial Port of Debarkation (APOD), the Army's theatre logistics, postal, and medical hubs; AMC's forward repair activities, theater combat engineer support

base, and Theater Aircraft Maintenance Center, and Special Operations headquarters.

The first master plan was developed after a review of existing documentation, command guidance and interviews with local commanders, representatives of force protection, the US Air Force, Army Aviation, Special Forces, Fire & Rescue Team, Prime Power, FET-15, and the USACE FEST-A and Area Office. Subsequent master plans have been updated with input from major tenants in November 2003, April 2004, November 2004, and May 2005.

This update was generated to incorporate the current increase in personnel, the projected increase in personnel brought about by the FOB consolidations, and final set for the (b)(1)1.4a, (b)(1)1.4g .

(b)(1)1.4a, (b)(1)1.4g

LSA Anaconda is expected to house 26,000 permanent party personnel for the next several years. The expansion and utility upgrades under construction (utilities and housing) will sustain this population. In addition to verifying the requirements necessary for the infrastructure of (b)(1)1.4a, (b)(1)1.4g , several recommendations are proposed. Implementation of the recommendations will ensure that the LSA is postured for success. The findings and recommendations are:

(b)(1)1.4a, (b)(1)1.4g

These containerized units meet the definition of temporary structures and require only

1/3 the space per person that conventional trailers need. While contractor issues have delayed the construction the CHU's they are 95% constructed, and expected to be completed at the end of June 2005, bringing total capacity to 18,200.

This CHU construction meets the immediate need, but leaves a significant projected housing shortfall of 4500 troops, prior to TOA surge. The Garrison command initiated PR&C and received JARB approval for an additional 600 CHU's. However, funding was subsequently denied at echelons above Corps, leaving the projected shortfall intact. The CMU barracks were since converted to a MILCON project, with funding projected for May 2006.

The LSA tactical commander was replaced as the garrison commander when the 301st Area Support Group (ASG) took over the function of Garrison Command. The ASG is structured to effectively execute most base operations support command roles, allowing the tactical commander to focus on tactical missions. The exception is the Base Engineering and Planning function previously executed by FET teams 21 and 15, and DET 15. I recommend that the MNC-I C7 task organize an element staffed like a FET under direct operational control of the garrison command, in order to execute the increasingly demanding technical requirements in the are of engineering base operations support functions. The 35th ASG (GSU) is scheduled to TOA in OIF4-7.

Due to the ongoing tactical situation, force protection operations impact the LSA's ability to hire Local National contractors to accomplish major on post construction projects. There are two operational facets that need to be restructured. First is access to the installation by local national (LN) contractor personnel once the tactical situation permits. Under the current threat level, procedures reduce the construction workday to as little as four hours for LN contractors. These procedures need to be revised to allow a full workday, while still ensuring the safety of LSAA. Options under consideration are vetting contractors and establishing on-post contractor laydown / sustainment areas. The concept of housing LN contractors in adjacent Bakir Village is being developed at this time.

TCN contractors, most of whom are subcontractors to KBR, are allocated space on the

LSA for their employees. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g . The Garrison Operations office has redesigned the badging process for convoys entering the South ECP, immediately establishing transient trucker accountability for the duration of the truckers' transition through the LSA.

The existing water and wastewater facilities are currently non-functional and not capable of supporting the population at LSA Anaconda. However, two waste water treatment plants are under construction, designed to alleviate the problem and provide adequate capacity for anticipated growth in a cost effective manner for the government. The LOGCAP STP will be operational in July 2005, while the MILCON STP will be operational in September 2005. While the original design sited the MILCON plant outside the perimeter, the GSU relocated it inside the perimeter to increase force protection and base defense viability. The revised location also is more efficient in that it maximizes access to the effluent pipelines running from the LOGCAP plant to the Tigris River. Water and wastewater conveyance systems are under construction planned on the western portion of the base. They are planned to be completed in June 2005.

The previous (OIF 2) leased power distribution network provided 16 MW (deregulated to 12MW) of prime power to portions of the installation, but was not able to meet the needs of the entire population. In February 2005 the installation completed replacing the leased power plant with a permanent one. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

Page 9 redacted for the following reason:
- -
(b)(1)1.4a, (b)(1)1.4g

B. Introduction

Purpose and scope of the report. The LSA Anaconda Master Plan is a living document whose purpose it is to develop and reflect the LSA goals and objectives. It should be updated annually to reflect any significant changes in the base mission. It describes the steps necessary for the LSA to improve its facilities, infrastructure, and quality of life for its joint population to better accomplish their wartime mission capability. (b)(1)1.4a

(b)(1)1.4a

(b)(1)1.4a . In the format presented, this master plan is a summary document. It contains essential text, maps, and tabular data for installation and command level decision makers to understand and make informed decisions related to the force structure of LSA Anaconda.

Summary of goals and planning objectives. The vision, goals and objectives for the LSA are as follows.

Vision and goals consist of: 1) Enhanced force protection, efficient Mission Accomplishment, increased Quality of Life, enhanced Flight Operations Security, effective investment in limited resources and no improving the degraded environmental quality.

The objective of this plan is to provide a premier power projection platform to coalition forces as they provide theater logistics support in order to restore the infrastructure, government, and economy to the people of Iraq.

Planning assumptions. Some planning assumptions included in this report are that the LSA will maximize efficiency in construction by using all available resources and fund streams (LOGCAP, Contractors, Engineer Troop Labor, MILCON, OMA). Additionally, all facilities will be sized per the CENTCOM Sandbook and force protection will be accomplished using the UFC guidance.

History, mission and organizations. LSA Anaconda, located approximately 68 km north of Baghdad, was originally built in the late 1980's as an Iraqi airbase (Al Bakr airbase) with two satellite sub installations for ammunition and fuel storage. These sub

installations, known as FOB O'Ryan, formerly FOB Lion (b)(1)1.4a and FOB Vanguard b)(1)1.4i were constructed in the same timeframe. There are over 400 buildings on LSA Anaconda, consisting primarily of hangars, barracks, administration, dining facilities, movie theatres, etc. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

(Figure 1).

The missions for LSA Anaconda are as follows: the LSA serves as the Theater Logistics Hub for both air and ground cargo for Iraq which includes operation of a Corps Distribution Center. The airfield serves as the Strategic Air Hub for Iraq. The enduring population is expected to average (b)(1)1.4a .
Other missions of the base camp include theater Air Point of Debarkation / Embarkation (APOD / APOE), Theater Ammunition Supply Point, Theater and CJTF-7 (MNCI) Mail Distribution Center, Theater Class VIII, AAFES Distribution Center, AMC Forward Repair Activities Center, and Army Airfield for fixed and rotary wing aircraft. The LSA serves as the COSCOM Headquarters. The Kellogg Brown and Root (KBR) Theater Transportation Center, Theater Cold Storage and DS Maintenance will operate on LSA Anaconda.

As of May 2005, LSA Anaconda is occupied by the following types of organizations / MACOMS – While this force structure is expected to be in place until FY08, the COSCOM presence will be significantly reduced beginning in FY 06, as LOGCAP will assume the primary load for the Theater Logistics mission.

COSCOM - Includes a CSG & Theater Transportation Battalion (3370)(6500)

Infantry Division BCT for outside the LSA security (788)(950)

Engineer Group (2061)(2230)

Signal Battalion (607)(680)

BCT for inside the LSA / ECP security (1730)(1320)

ASG (GSU)/MP/MI/EOD/FN/PSB (428)(720)

Aviation Task Force (2796)

Medical Brigade (861)(960)

KBR (LOGCAP) (5000+)

Special Forces (2,250)

AMC (600-1000)

MP Convoy Security (250)

MI (520)

Air Force to include F16's (2,500)(2700)

Civilian DOD Contractors (CACI, Titan, PM KCC, etc) (2500)

Interface with Higher Headquarters. The ASG DPW or a FET team maintains the Master Plan, coordinates updates with the impacted parties to include the Air Force and sends the document through the Garrison Commander through COSCOM to MNCI, C7 located at Camp Victory. The current Master Planning process and core responsibilities are in transition from FET to GSU ownership. Future GSU's should have master planning/ FET assets organic or attached to the garrison command DPW.

C. Developmental Analysis – Requirements and Mission

The LSA mission, goals, objectives and units listed above are projected to be the final set for the LSA. References used to develop this plan include input from the tenant units, C7 guidance, Army Master Planning regulation and previous editions of this plan.

Standard Master Plan. The LSA Master Plan still resides with Facilities Engineer Team 15. Upon completion of the transition, it will reside with the Garrison DPW Engineering and Plans section. The Plan is an integrated Army and Air Force plan with projects and their priorities added to the Master Integrated Project List (MIPL) by the FET and presented to the Base Camp Master Planning Board for approval. An analysis of the existing real property compared with the minimum military necessity needs of the supported units results in the proposed development of infrastructure required for LSA Anaconda. Typical criteria considered in meeting the LSA's functional requirements include the ability to efficiently accomplish operations, compatibility of land use based on

proximity and intensity of use, quality of life, accessibility, separation of hazardous operations from billeting / populated areas, efficiency of utility services, maximization of use of existing assets, availability of additional property for acquisition, avoiding impacts to environmentally sensitive areas and assurance of operational safety clearances.

Planning Factors. This master plan is based on a periods of 1,3 and 5 years, during which time the transition to the Iraqis and U.S Forces exit strategy should be published. The 1 year plan consists simply of procurement of temporary office space to meet the needs of the units, beginning construction, Personnel Processing Center, Chapels, Base Headquarters, rehabilitation of MWR facilities, maintenance pads, runway and taxiway repair, SOF relocation, billeting building renovation and completing the Corps Distribution Center. At 3 years 36 CMU barracks as well as 8 administrative buildings and the listed MILCON projects will have been constructed or near completion. At 5 years the CMU barracks would be complete and other construction will have been programmed based upon the requirements at that time. Throughout the implementation of the plan continued integration with the USAF XP / Base Civil Engineer (BCE) shall be maintained to ensure the plans of the two services continue to be in consonance.

Installation Overview. LSA Anaconda, located approximately 68 km north of Baghdad, was originally built in the late 1980's as an Iraqi airbase (Al Bakr airbase). There are over 400 buildings on LSAA, consisting primarily of hangars, barracks, administration, dining facilities, movie theatres, etc. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g . Construction of the Apache ramp is completed, and will be operational in June 05. The helicopter parking ramp has begun construction, and the Aviation office spaces moved outside the airfield fence area. The ramp will be completed in August 2005. Repair of the main runway is expected to begin

in the first quarter of FY06.

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g . These two FOBs were constructed in the same timeframe as LSA Anaconda and are currently designated by Multinational Corps Iraq (MNCI) as temporary base camps. FOB O'Ryan) is due south of the installation and encompasses approximately 1,800 acres. The site was an ammunition storage complex for the Iraqi Air Force and has approximately 42 hardened ammunition bunkers. The LSA Anaconda Garrison Commander has worked with the Corps of Engineers to deliver large amounts of aggregate to FOB O'Ryan to relieve a significant operational need caused by insurgent forces interdicting gravel supplies to the north LSA gravel yards. FOBs O'Ryan and Vanguard are now under the operational responsibility of LSA Anaconda.

FOB Vanguard is approximately 1.5 miles west of FOB Lion and encompasses approximately 130 acres. (b)(1)1.4a, (b)(1)1.4g
(b)(1)1.4a, (b)(1)1.4g, two administrative buildings and two storage areas. (b)(1)1.4a, (b)(1)1.4g
(b)(1)1.4a, (b)(1)1.4g . There are also maintenance, prime power, and pump buildings on the site (Figure 4, Photo 2). An Environmental Baseline Survey was performed due to the evidence of a fuel spill at the site and is on file at the FET. There is an inactive potable water supply main from LSAA to both FOBs. The PM KICC commercialization of communications 340ft tower is planned to be located at Vanguard, acting as a relay for the 63 ft. communications tower that will be installed on LSAA in late FY05. However, the command is evaluating the environmental impact study results, out of concern for troops posted at Vanguard. Depending on the results, troops may be

relocated from Vanguard to LSAA for health and safety reasons. In that case, the PM KICC tower would have to relocate. FOB O'Ryan is a possible option, in the event that Vanguard becomes unfeasible.

Vicinity Overview. The immediate area surrounding the base is level, agricultural farmland; a man made canal forms the northeast boundary. There are small, scattered villages to the north, east, and west. A military village formerly used by the Iraqi Air Force lies to the east of the post and houses approximately 2,400. A majority of these personnel are employed by the LSA and work primarily at the LSA Directorate of Public Works (DPW). The local population moved into this area during and after the war and still lives there. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g .

Approach. This master plan was prepared by GSU DPW in a phased manner to integrate land use, future construction and MACOM footprints. First, the land within the LSA was zoned into areas to reflect its end state usage. The zoning templates were adjusted from the previous templates, in order to facilitate clarity. The zones are Industrial, Light Industrial, Commercial, Residential, Airfield, and Contractor zones.

The concept of zoning execution is that the heavy industrial processes will operate around the perimeter. There are two perimeters: The outer perimeter and the inner perimeter. The outer perimeter is bounded by the LSA Anaconda external fence. The inner perimeter is bounded by the airfield fence. The zones move away from the perimeter from heavy to lighter, resulting in residential areas in the interior. Services around the housing areas should be around the outside of the housing areas, so that service vehicles maintain standoff distance from living structures. In this OIF, the emphasis is on precision, as the population is too great to approximate locations. There is a premium put on survey and formal site design. By the end of the rotation, the GSU will have implemented a building permit process.

The next step is to template in the follow on OIF rotations beginning with OIF 4 once this information is disseminated. Depending on the follow on force structure land requirements, MACOM footprints may need slight adjustment. After completion of the map, analysis of the MACOM space with the CENTCOM Sandbook was then performed to determine the necessary operational requirements for the base and the prospective

order of importance. LSA Anaconda is an enduring base that once the infrastructure is completed will support the end state population of up to 26,000.

As stated above, the feasibility of the LSA to support expansion given the current force structure is non-existent on the LSA without construction of multi story facilities, or a reduction in the force structure, neither of which are envisioned. Two options do exist for expansion. First, the physical boundaries could be expanded. This is generally agricultural land utilized by the local community and would involve obtaining an interest in the real estate. The second is to locate the AHA's to the adjacent FOB's (Vanguard and O'Ryan). This would allow for the current AHA locations to eliminate the QD arcs, and allow for additional housing and facilities.

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g . The other primary mission specific requirements are the Strategic Hub for Iraq, APOD / APOE, Corps Distribution Center, Theater Postal Distribution, Corps Class V Storage Area and Class VIII Warehouse.

The overall capabilities of the LSA are to conduct the missions as stated above. The primary constraints include a lack of facilities and utilities to meet the administrative, billeting and community services needs of the population. Only a small portion of the land has land use controls for no digging.

D. Development Components. Development components at the LSA are assessed based upon requirements in accordance with the Sandbook or value engineering solutions, constraints and limitations, capabilities and opportunities, condition upon occupation, current situation, desired end state and costs. Development components assessed include: Utilities, Force Protection, Base Defense, Medical, Health, and Safety Services, Fire Protection, Transportation / Road Network, Administrative Areas, Billeting,

Army Aviation, Maintenance Areas, MWR Facilities, Community Services, and Law and Order.

Utilities – Water System.

(b)(1)1.4a, (b)(1)1.4g

Requirements. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

Utilities - Wastewater System

(b)(1)1.4a, (b)(1)1.4g

Through OIF 2, FET provided engineering and contracting support for maintenance on the Bakir Village facility and the DPW provided funding for the labor force to run the plant. By June 05, the 3 BCT will have responsibility for funding the labor force, and overseeing security of the village, while DPW will assume responsibility for sourcing engineering and contracting support for the plant. This will require significant amounts of coordination with KBR engineering, combat engineers, and USACE, since DPW (GSU) is neither staffed nor supported with organic civil engineering assets.

(b)(1)1.4a, (b)(1)1.4g

A 1391 has been approved as part of this effort to provide all remaining required facilities to complete the LSA Anaconda wastewater system and they include: Installing a collection and conveyance system of gravity sewers and lift stations to serve all waste producers either by direct individual connections or by holding tank connections serving multiple producers; Upgrade sixteen existing lift stations and installation of four new lift

stations. Constructing the LOGCAP STP with capacity of 16MGD treatment. This treatment plant has been designed in concert with the water treatment plant and- with the MILCON STP- will meet the needs of the current population, as well as all additional needs in the future. Funding for improvements in the collection and treatment system, particularly for the west side of the installation are approved for LOGCAP as part of reducing the expense of trucking both water and wastewater.

Utilities - Electrical System

(b)(1)1.4a, (b)(1)1.4g

Current Status. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

Utilities - Storm Drainage System

The original 1980s base design included conventional roadway drainage systems with catch basins at designed low points with storm drains carrying runoff away from roadways and hardstand areas. A map of the system is available and it is apparent that most runoff is eventually discharged to one of three pond areas within the base; one in the north corner, one in the west corner and one at the southeastern perimeter halfway between the south east corners. Some areas of the installation drain to low areas between the roads and the water eventually evaporates or is slowly absorbed into the ground.

Current Status. Recently, significant Master Planning attention has been shifted to the storm drainage system. In the past, operations tempo relegated storm drainage to an "as needed" basis. The system appears to be functional in the developed areas and along the runways and taxiways. The west side system is currently under construction, using open trench concept. This technique will serve a dual purpose of providing surface water storm drainage in addition to force protection standoff features. Plans are also being developed to create a collection system with detention ponds for this area. The development is a combined effort, including GSU DPW, LOGCAP cooperation, Air Force, Engineer Brigade, and tenant units.

Requirements. As the western portion of the base is being developed and as new projects are planned, designed, and built through out the base, storm drainage should be a consideration in the process. Detailed field investigations will determine if existing storm drains are available, if they are useable and properly sized, and if not, provisions should be made to include storm drainage facilities to avoid site flooding at the planned project and all downstream facilities. LOGCAP and the EN Grp are ~~is~~ executing this mission on the LSA.

Force Protection

An LSA Force Protection Plan was published in JUN 04. Prior to this, the tenant units rotated force protection duties and achieved inconsistent results.

Force protection now receives the attention it requires at the LSA. It is the commander's top priority. In looking at the project lists (funded, planned, etc.) there are force protection projects listed to include: upgrades at the ECPs, concrete bunkers in housing areas and T Panel and sandbagging projects are ongoing. The GSU FP has emplaced 7200 force protection barriers and bunkers thus far. Force protection around recreational spaces like the perimeter-facing softball field and basketball court have been areas of CG emphasis. Overhead cover retrofits for the DFACs are in the planning phases, as directed by MNC-I.

Additionally, new facilities are sited and renovated in accordance with the UFC. The existing facilities are sufficiently constructed, with the exception of laminated 6mm glass, to provide force protection against the threat of indirect fire.

Current Status. The current perimeter fence is a (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

The use of the three ECPs are as follows:

East ECP: (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

South ECP: (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g .

North ECP: (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

Local workers and ICDC personnel using this gate are screened, separated, placed in holding areas, searched, processed through the installation pass and I.D. office, met and escorted on base to their respective work area.

(b)(1)1.4a, (b)(1)1.4g

Medical Services

Current Status. LSA Anaconda currently provides medical services through four Troop Medical Clinics (TMC) located on the east and west side of the LSA and a Theater Hospital (TH). The two east TMCs are housed in existing structures and are expected to stay in their locations. The two west side TMCs are operating out of a room in an existing building and a tent, both need a permanent facility sized appropriately for the population on the west side of the installation. Locations for these facilities have been

identified, one is under construction and a request for funding of the other is forthcoming. A contract for demolition of the damaged portion, and renovation of, the undamaged portion of the existing hospital is underway. Construction of a MILCON hospital is funded and will begin in FY06. The Iraqi hospital was damaged during the war so the TH is operating in a tent facility adjacent to the future hospital site. Once complete, the LSA Anaconda Hospital will be the primary facility for the theatre.

Requirements. The existing design for the hospital has been developed in concert with the Hospital Facility Planning Agency (HFPA) and will provide a complete facility.

(b)(1)1.4g

(b)(1)1.4g . The Army should evaluate the need for this system in the new Hospital before construction begins.

Fire Protection System

Current Status. Current fire protection operations are being conducted out of several different buildings. The previous airfield operations center and airfield fire/rescue station were severely damaged during the war and the operations center portion was demolished in June 2003 for safety and health reasons. There is an existing project to rebuild the operations center. The present fire and rescue operation on the airfield is a make shift fire station with offices constructed over the bay area by the fire station staff. The Emergency Operations Center (EOC) houses the fire department, Provost Marshall, and Explosive Ordnance Disposal (EOD). This is setup in a set of adjacent garage style buildings. (b)(1)1.4g

(b)(1)1.4g

Requirements. As part of the USACE effort, 1391s were approved to replace all three existing fire stations. Several of the buildings being used were damaged during the war. In addition, the mix of types of buildings that are currently being used will not support the storage and maintenance of the fire departments vehicles. (b)(1)1.4g

(b)(1)1.4g

conducted to decide if a lab truck and trailer for NBC emergencies should be assigned to the Fire/Rescue team at LSA Anaconda. The ERC renovation is at 30% completion.

Transportation / Road Network

The existing road network will be functionally related to the land use and activity pattern it serves with a few modifications. Primary (Victory Loop, Pennsylvania Avenue), Secondary (Texas, All American) and Tertiary roads exist on the LSA and are classified by their directness and access to other routes. The LSA is served by two main roads, Victory Loop which runs around the inside of the perimeter fence and Pennsylvania avenue which bisects Victory Loop on the east side of the LSA.

Victory Loop is well constructed and can handle Class 70 Traffic to include M1A1 tanks. The inbound lanes on Victory Loop between the North Gate and Pennsylvania Ave are failing due to the heavy truck load and a portion requires rebuilding. This is the main road all units use to get to where they need to be on the LSA. Pennsylvania Avenue, on the east side of the LSA should be limited to wheeled vehicles (HEMMT). To meet the needs of the LSA and access previously undeveloped areas, several road widening projects are in the works to decongest collection point for traffic and facilitate future flow. These are: The widening of Pennsylvania Avenue from Sustainer Circle to Victory Loop, the extension of Sapper Lane on the west side of the airfield, the extension of Tolbert Road to connect into Marne and Sustainer, a bypass road around the fixed wing hangar apron (Bldg 4032) and the construction of an alternate road around the Aviation Task Force.

There is no rail service on the LSA.

A water terminal for non-potable water is located adjacent to the east gate and manned by the CSG. Busses for transportation are available for dedicated routes on the LSA and operated by LOGCAP as part of their TMP services.

Administration Areas

The goal is to centrally locate administrative buildings onto built up areas on both sides of the LSA on direct routes. There are several central administration areas at the LSA. As units move onto the installation they are assigned to fall into the footprint of the

associated MACOM. Additional units may be accepted once future construction completion opens up additional ground that can be rezoned. Administration areas are either hardstand buildings or prefabricated office trailers.

Current Status. The main camp administration areas (COSCOM (B4123), JDOC (B4130), Base Headquarters (TBD)) are currently located in the eastern central portion of LSAA. Administration areas are located in three individual areas within ¼ mile of each other. Other administrative areas are currently located throughout the installation with an emphasis on being close to the unit center of mass.

Requirements. The LSA has relocated units so that zoned areas / facilities are used for their intended purpose. In order to meet the CENTCOM Sandbook space standards for the population, as well as establish operational space for the increased number of personnel, new facilities need to be constructed. A central administration building is recommended to facilitate this requirement.

Billeting Areas

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g The CMU's and

stackable containers, along with existing buildings, tents and living trailers will have to meet this requirement. The stackable containers also reduce the footprint as they can be grouped in 1,600 square foot structural units versus 480 square feet for standard trailers. An additional 800 Container Billets are required to provide for the OIF 4-6 population. The CMU billets in FYs 06-08 are expected to supplement and replace significant portions of the initial trailer housing would become unserviceable to obtain and maintain the design capacity.

Army Aviation

Army aviation assets at LSA Anaconda include fixed and a rotary wing. Current units with aviation assets at LSAA are the Aviation Task Force (rotary), MI Aerial Exploitation (fixed wing / UAV), SOF (rotary / fixed), MED CO (rotary) and SHERPA.

Current Status. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

Requirements. There are several projects being integrated into the aviation Master Plan. A Fixed Wing Hangar is an approved MILCON project awaiting funding. It will be located adjacent to the hanger the MI and SHERPA's use. The Aviation Task Force has several projects being developed: a new maintenance hangar, a helicopter parking apron (To be completed by the Air Force to allow access to the west side runway), a clearwash facility, FOD mitigation and a maintenance and repair facility for their ground assets. SOF forces have several projects under construction with one apron paving project still awaiting funding. The apron paving project will move the SOF aircraft off the adjoining taxiway as a step to permit fixed wing operations on the west runway

Airfield.

Air Force aviation assets include fixed and rotary wing which operate on the LSA as well as in theater movements. These, coupled with Army Aviation assets account for the average of 450 air movements a day. Movements above this number increases risk and operational delays as dissimilar aircraft require airspace sector, altitude and time deconfliction. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

Maintenance Areas

Similar to the administration areas at LSAA, maintenance areas were set up in or adjacent to those facilities that were previously used as such.

Current Status. The installation has approximately 280 acres dedicated to vehicle maintenance areas. In addition, approximately 21 acres is set aside for a theater-wide Forward Repair Area (FRA).

Requirements. The current plan for vehicle maintenance area is sufficient for the activities at LSA Anaconda. Additional work is required for company level vehicle maintenance areas as they are consolidated into the planned areas. Should additional units are assigned to the LSA, additional construction may be required. Once the CDC becomes operational maintenance facilities will be integrated into that portion of the LSA.

Morale, Welfare, and Recreation (MWR)

Based on an end state troop population of (b)(2)High
the following MWR facilities are required by the Sand Book. MWR facilities on the LSA fall under the responsibility of LOGCAP.

Current Status. Fitness Centers are programmed for both sides of the installation. The east side center (15,037 square feet) is operational and the west side center (21,000 square feet) was completed in Feb 05. The existing 19,793 square foot Field House/Fitness Center was recently renovated under LOGCAP.

Other non-required but available facilities include an indoor pool, an outdoor pool, a tennis court, a stadium complex, and softball fields. There are community sand volleyball courts, horseshoe pits, paved basketball courts and outdoor pavilions throughout the LSA. New indoor and outdoor theatres are open (tactical situation permitting for the outdoor theater).

Requirements. A new 21,000 square foot fitness center is planned for construction on the west side of the installation. KBR has planned for a 15,307 square foot addition to the fitness center being rehabilitated, based on an expected population of (b)(1)1.4a. An additional 8,900 square feet fitness center is required based on the revised end state population. A total of 48,000 square feet for Community Activities Center use is required. The initial plan was to utilize the 20,000 square feet PX building, a new 12,134 square foot addition (includes 1,710 square feet for the Education Facility and 1,624 square feet for religious support), and a new 16,800 square foot facility to be built on the west side of the airfield. This is 2,400 square feet short of the required space. A 20,000 square foot MWR warehouse / maintenance facility is required for the installation. Both indoor and outdoor pools exist on the LSA and both are operational with some repairs necessary on the indoor pool. The LSA has a stadium and running track that also serves as a main stage for AFN Entertainment tours. (b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g . Fencing is In the 1391 process seeking to continue the fencing initiative around MWR centers and housing areas.

AAFES has prepared a design for a new facility at LSA Anaconda on the east and west sides. Approval of the facility is pending finalization of the MOU between MNCI an AAFES. Status was working as of JUN 04. Since LSAA will be under coalition control for many years, the footprint is recommended to provide the soldiers with the improved service and selection this will allow.

Other required facilities include; 20 volleyball courts, 20 horseshoe pits, 20 outdoor paved basketball courts, 20 outdoor pavilions and an outdoor running trail of 2 +/- miles with 8 fitness stations. A majority of these facilities, to include softball and soccer fields are expected to be operational by the end of 2004.

Community Services

Dining facilities – There are scheduled to be 5 dining facilities (DFACs) on the LSA, four of which are currently operational and one (DFAC 5) scheduled to open July 2005. DFAC 2 is scheduled to be replaced in late FY05. When all are operational they will serve the needs of the LSA.

Hospitals: The LSA Hospital is the Theater Hospital (TH) which operates adjacent to the east gate. It contains a helipad capable of handling 2 UH-60's. The Hospital will relocate from tents to its permanent facility upon completion of the MILCON project.

Dental: The dental facility currently operates out of building 4003 and will move into the hospital upon completion of the MILCON project.

Medical Clinics: Four Medical Clinics are operation on the east and west side of the LSA. The two on the east side are run by the ASMB unit and the Air Force, and the two on the west side are run by the Aviation Task Force and ID FSB.

Emergency Response Centers. The ERC is located in building 4253 and Fire Stations exist on both sides of the LSA. The military working dogs and holding cell are in close proximity to this location.

Education Center. The education center, which serves all of Iraq, exists in Building 4250. It has undergone an extensive renovation by a local contractor, and will be completed in Jun 2005. The quality of work is consistent with local standards, and may therefore be problematic.

Laundry. A LOGCAP run laundry point exists on the LSA and is located near the intersection of Pennsylvania and Victory Loop on the southeast side of the LSA. Satellite pickup locations exist and are planned for the large (H) housing areas.

Safety and Health

Aviation Air Operations. The limitations for both fixed and rotary wing aircraft have been considered. The airfield commander is the Air Force and that individual has approval authority for activity that goes on inside the airfield fence.

Outdoor Ranges. Three outdoor ranges exist. One, Smith Range is on the LSA and for small arms fire. It is located in the northern portion of the LSA and scheduled by the Garrison Commander's office. The second, located on FOB Vanguard and also for small arms, is scheduled through the inside the wire BCT. The third is in the SOF compound and can handle 50cal firing.

Hazardous material. U.S generated hazardous material is stored at the MNCI DRMO yard on the LSA. The inventory is maintained by their onsite personnel and ultimate disposal is pending the finalization of a contract. Some hazmat no digging sites exist on the LSA and are listed in this report.

Composite Constraints and Opportunities (CCAO).

The CCAO is an assessment of the installation's existing situation with analysis to prioritize the work effort and resources to achieve the desired end state of development. It assesses the infrastructure, zoning, safety, and other common systems required to support base development. The CCAO establishes the basic framework for developing and managing the base camp while documenting base camp capabilities, constraints, and opportunities. It specifies optimum land use for enhanced mission accomplishment and quality community support. It also identifies expansion capabilities based on current or known future missions. The CCAO provides the basic building blocks upon which all other master plan development components are based.

Base Command. The Base Commander at LSA Anaconda is the Garrison Commander (ASG). Separating the tactical and base commands enables full and adequate resources being available for either missions.

Force protection requirements for TCN / local employees Some of the construction contracts at LSAA utilize Iraqi laborers. Current force protection requirements require Iraqi citizens to leave the installation by 1500 daily. This, coupled with the long wait to get on post in the morning (can be in excess of four hours), limit the average workday to four to five hours. As a result, contracts using local national contractors can take twice

as long to complete as estimated. Until the tactical situation allows full utilization the LN workforce is utilized on short duration projects and those outside of the established boundaries.

Airfield. The two runways are the most prominent geographical feature at LSAA. The safety buffer areas for the airfield, consisting of the approach/departure surface, clear zone, and primary zone cover approximately nine square kilometers of the installation. The use restrictions in these buffer areas, the area between the runways, the flight path and clear zone are limited to non-permanent vehicle parking. Activity proposed in these areas must be coordinated with the FET and Air Force.

Explosive Safety Zones. There are two Ammunition Holding Areas at LSA Anaconda; one in the southeast corner and the other along the northwestern border. The northwestern AHA is Air Force hosted and contains Air Force and SOF munitions while the southeastern AHA is hosted by the COSCOM. Development in the safety buffers around these areas (approximately ¼ mile) is not allowed There are also explosive safety zones around the loaded aircraft parking areas.

E. Data Collection

Environmental Constraints. An Environmental Baseline Study was performed and updated by the FET. Areas on the LSA have been marked as no digging / improvements until the contamination can be addressed. MNCI is currently developing the procedure and contract to dispose of POL products at the Baji Refinery and the LSA is contracting with a local national contractor for disposal of non-coalition generated POL products at the LSA and FOBs at the same refinery. The plan will portray constraints to base camp development with proper zoning taken into consideration.

Cultural Resources. There are no known cultural resources that impact the LSA.

Natural Resources. (b)(1)1.4a, (b)(1)1.4g . The terrain between the installation and the river is relatively flat; however, there is no indication that the LSA lies within the flood plain. The areas to the south of LSAA (FOB Lion and Vanguard) are surrounded by water, swampy and have standing water during most of the year. The vegetation found at the FOB's are indicative of a riverine system. In addition to indicating that the FOBs are within the flood plain, the water table is very

high in this area. The soil in the area is a silty clay that extends many feet below the ground surface. These sedimentary soils are developed over long time periods of deposition from water systems. The clays are very prone to swelling and shrinking with changes in soil moisture. In order to prevent damage to new structures this must be considered in the design of facilities.

Topography and Physiography. The footprint of the installation and the surrounding areas is very flat. The elevation change across the installation is only a few feet. There are local depressions on post that were created by the Iraqis to collect surface water runoff from sheet flow and storm drainage system. Outside of addressing surface water drainage in construction projects, there are no other related impacts to base development.

Underground Hazards. There are two underground hazards that impact development of the LSA and FOBs. The depth to groundwater is eight to ten feet across the installation. This will impact structures with basements or deep foundations, of which none are planned. The other hazard is unmarked utilities. There are maps of the original utility placement; however these are not as builts and water and electric lines are often broken during shallow earthwork. The Dig Rite program to coordinate all utility installation transitioned to LOGCAP (DPW) In Jun 05 it will integrate into the Planning and Terrain Management office of the Garrison Command (GSU DPW), and become an integral part of the building permit process.

Climate and Weather. The winters at the LSA are relatively mild, with mean high temperatures in the low-60's. There are very few days below freezing, and there is no frost layer. The summers are quite severe with a mean temperature of 95. Daily high temperatures can reach in excess of 150. It rains at LSA Anaconda between November and March, with average rainfall only 15.7 cm (6.2 inches) per month. Localized flooding occurs during heavy rain events, resulting in standing water which will slow construction operations. Typically the water remains standing for a week after any significant rain event. The dry climate, high temperatures, winds and silty clay soil combine to create a dust problem on the LSA. The problem is most extreme during the spring months when moderate to severe dust storms occur and impact ground and air operations. During the summer and autumn months, the dust is problematic, but does not impact base

development. Gravel is used as dust abatement along with lesser quantities of concrete and asphalt. FOD damage from landing rotary wing assets is being addressed with asphalt on areas adjacent to the A Taxiway.

Pest Management. The main hazards are sand fleas and mosquitoes. These two pests can be dealt with on a personal level at LSAA with the use of appropriate repellants (DEET for mosquitoes and permetherin for the sand fleas. Most of FOB Vanguard and portions of FOB Lion are swampy during the winter and spring months and have the same hazards. Active vector management is needed for the FOBs. The LSA and FOB's are located in a malaria zone so personnel are required to take medication weekly from April until November.

Hazardous and Toxic Waste. Environmental stewardship was not prevalent at LSA or the FOBs prior to occupation. As such, there are numerous small contaminated areas on the post. The following table lists contamination problems known at this time.

Table 1: Known contamination locations

Location	Contaminant
	Suspected potassium permanganate
	Red fuming acid buried underground. A rock covers the vent and the entire area is fenced off. Fatal if ingested or on skin.
	Undefined hazardous waste
(b)(2)High	Undefined hazardous waste
	Undefined hazardous waste
	Undefined hazardous waste
	Undefined hazardous waste
	Undefined hazardous waste

The contaminants listed above can be treated/analyzed in the following ways:

Potassium permanganate – placed in waste containers, tightly sealed and kept away from acids and oxidizers. Residue can be washed away with water. The rinse water must not be allowed to go down drains.

Red fuming acid – can be neutralized with sodium bicarbonate and vapor suppression foam may be used to reduce vapors.

Undefined hazardous waste – requires sampling with Level B protection to determine contaminant and concentration prior to disposal.

(b)(1)1.4a, (b)(1)1.4g

There is currently a burn pit along the northern border of the installation. The prevailing winds at LSAA are from the north and northwest, causing the smoke to blow across the main populated area of the installation. New incinerator(s) are to be installed and operational in early 2005. These will be installed along the southeastern boundary, mitigating the current health hazard from the smoke. When operational the existing dump will be closed and zoned as maintenance/industrial.

UXO. A UXO sweep was performed across the installation when the US first arrived at LSAA and the area is stated to be free from ordinance. However, UXO is occasionally found on post and areas requiring future sweeps have been identified.

FOB O'Ryan was an ordnance storage area for the Iraqis. Certain areas of the FOB are heavily contaminated with UXO; however some areas have been cleared of UXO. The installation is planning to rehabilitate some of the bunkers.

F. Existing Land Use

Land use at LSAA is a very critical issue. The greatest opportunity for maximizing land use, given the anticipated FOB consolidation, on the West side of the installation.

Master planning efforts are focused on designing the west side neighborhood, and implementing a "Build to" approach. The design will incorporate effective drainage and erosion control, traffic flow, force protection standards, utility easements, power station requirements, and operational efficiency. It will maximize by proximity dining facility use of DFACs 5 and 4, AAFES services, and MWR facilities.

Upon the JDC opening in the north, the Victory Loop traffic will increase significantly, requiring an alternate traffic route through the west side. Compounding the problem is the Aviation Villages that will frustrate a portion of Texas Avenue, the primary route on the west side. Therefore, there is a need to build a two mile road through the center of the west side in keeping with the west side development concept (attached).

Contractors on the installation are located in variable locations, instead of in one coherent location. That will change as the GSU moves tenants toward compliance with the newly-established planning zones.

Space Analysis.

Ground Space. The current CJTF-7 / MNCI concept of operations calls for a staged transition of power and security within Iraq from coalition forces to Iraqi Security forces (ISF). As conditions are reached for transition to each next stage, the number of base camps and number of coalition troops will decrease until a relatively steady state is achieved at strategic overwatch. The expected impact to the LSA in the future is that FOB populations may be relocated may have requirements that need to be implemented.

LSA Anaconda has been designated as the Air Port of Departure (APOD) for Iraq. As the APOD, priority will be given to procurement of real property assets that support this mission. Construction of the associated PPC is expected as an FY06 project. In partnership with the Air Force planners, a jointly integrated Personnel Processing Center is in design stage. The design concept will allow APOD personnel and baggage flow, as well as some transient billeting to occur in a most efficient operational and space-saving manner. (Figure: 9.0- Figure: 9.4).

Air Space. The capacity of the LSA is maximized given the existing airspace and airframes. The LSA is currently operating at maximum safe level for air space available. More aircraft will increase risk and result in operational delays. The LSA supports Rotary

Wing (AH-64, AH-1W, UH-60, CH-47, CSAR, MEDEVAC, Transient, QRF), Fixed Wing (C-130, C-23, RC-12, C-12, SHERPA), UAV Operations (Predator, Hunter, IGNAT, F-Pass) and Fighter Alert (F-16) sorties.

Existing Open Areas

(b)(1)1.4a, (b)(1)1.4g

The Sapper-to-Letterman area is targeted for first development. It includes the West Side AAFES (Figure : 10), CMU Billets (Figure: 7), CMU HQ clusters (Figure: 8).

The aviation Motor Pool-to-Truck Lanes area is the development site targeted for Contractor Village and laydown areas. (Not Pictured).

(b)(1)1.4a, (b)(1)1.4g

In the future, due to construction, various parcels will be opened and returned to their intended Master Plan use. Upon relocation of the CDC (JDC), the current area will revert to maintenance. As the fuel storage capacity increases and the bag farm decreases the additional area will support LOGCAP operations. Finally, as the incinerator opens in early FY05 and the dump closes, the area will transition to supply and services. The GSU Commander has hired a contractor to remediate the dump, recycling the concrete with rebar, and using the crushed aggregate as base course for critical projects on the

installation. Prime beneficiaries are USACE and LOGCAP.

As the installation matures, LSAA planning zones will include more complex integrated-use areas. Examples are the Air-Ground Movement Area (Figure: N/A) and the KBR Southwest Industrial Area (Figure: 12).

Off LSA. If expansion of the LSA is considered the acquisition of land needs to be addressed up front in the planning process to ensure G5 and CREST are integrated into the process. As much of the land surrounding the LSA is agricultural and actively farmed by local nationals, communication of intent and obtaining a real estate interest is key to the process.

Capital Improvements Program / Way Ahead

Facility Development. The Facility Development Plan is the physical culmination of the planning process. It integrates the requirements derived from the previous sections of this Chapter. Programmed and un-programmed requirements are defined and described, and a direction for future development is established. GSU DPW is the primary agency responsible to consolidate and execute these requirements. All requirements from tenant units should be coordinated through GSU DPW or Terrain Management for approval and siting.

Existing Facilities LSA Anaconda is supported by numerous existing facilities (primarily on the east side of the installation and surrounding the flight line) and some recently constructed modular facilities. The enclosed tables show awarded MILCON projects and additional required projects (funded and unfunded).

Siting of New Facilities. The siting of new facilities on the LSA is governed by the following basic principles: the location is coordinated with the customer, the functional relationships with complementary facilities must be maintained, be flexible for change when the requirements change and compatibility with adjacent uses and conflicts with existing facilities should be prevented.

Buildings should be related in groups and the distance between new facilities and from

streets and roads will meet the UFC. (New Construction)

Facilities which serve large numbers of personnel should be sited and placed in prominent sites for access (Chapels, Base HQ)

Maximize joint use of common areas

Design for maximum use of shade and grass, in order to positively impact heat categories in the interest of life-safety considerations.

Plan and design adequate parking for new facilities. Create parking for existing facilities.

Maintain right of way for all facilities to take parking, site access, utilities, drainage and roadways into consideration.

Summary. The purpose of the LSA Anaconda Master Plan is to outline the strategy for guiding the present and future development of the LSA. The development priority is focused on enhancing Force Protection, developing the Airfield construction projects, improving of Quality of Life, and improving the Condition of Facilities. To achieve these priorities requires an efficient investment and prioritization of the limited resources available on the LSA is made. Three major types of data were analyzed: off post, on post and mission requirements. The overall purpose of this updated master plan is to identify requirements that directly impact the installations ability to support its anticipated population and identify constraints that will affect existing conditions or future needs..

The Base Commanders priorities in September 2005 for use of these resources were: 1) Force Protection; 2) Airfield Projects; 3) Efficient and equitable space utilization; 4) Water and Waste Water projects; and 5) Developing a sufficient GSU operating infrastructure for future Area Support Groups (ASG) to adequately operate the installation. The overall purpose of this updated master plan is to identify requirements that directly impact the installations ability to support these priorities and the anticipated population.

POC's. Master Plan POCs. The Master Plan is held by the GSU DPW with input from the tenants at the LSA. This is the 6th Revision of the LSA MP. The original Master Plan was completed in November 2003 by FET-21. The First Revision was completed

by USACE and its contractor in April 2004 and focused on generating 1391's. The Second Revision was completed in June 2004 by FET-15. The Fourth Revision was completed in November 2004 by FET-15. The Fifth Revision was completed in May 2005 by 301st ASG (GSU) DPW. GSU DPW can be reached at Building 4005 on the LSA, DSN (b)(6) (MAJ (b)(3), (b)(6) @us.army.mil); or at the Garrison Headquarters, Terrain Management Section, DSN (b)(6) (MSG (b)(3), (b)(6): (b)(3), (b)(6) @us.army.mil).

Table x: MILCON PROJECTS PROCESSING – LSA Anaconda

Project	Est Cost (M)	Construction Duration	FY of Construction	Remarks
Joint Distribution Center	$9.0	10 months	FY04	ECD Aug 05. USACE and LOGCAP
Hospital A Wing	$2.3	5 months	FY04	ECD Sep 04Aug 05
AF Strategic Ramp	$20.0	7 months	FY04 - 05	ECD Nov 04Feb 05
AMC Repair Facility	$30.0	3 months	FY-05	ECD JUL 05
AF Control Tower	$3.0	7 months	FY04 - 05	ECD Mar 05
Wastewater Treatment Plant	$11.8	9 months	FY04 - 05	ECD Aug 05
Postal Distribution Center	$7.4	6 months	FY04 - 05	ECD Nov Jul 05

AF Tactical Ramp	$26.0	6 months	FY04 – 05	ECD Oct 05
AF Navigation System	$3.0	6 months	FY04 - 05	ECD Nov 05
AF Ops Planning Bldg	$2.1	6 months	FY04 – 05	Start Oct 05 (AF)
Fixed Wing Hangar	$25	8 months	TBD	Unfunded
New AAFES	$2.3	TBD	FY06	Awaiting Funding (Prior to JFUB)
LSA Postal Annex	$2.6	TBD	TBDFY06	Unfunded (Prior to JFUB)
Water Treatment Plant	$9.8	11 months	FY04 – 05	ECD Oct 05
LSA Hospital	$18.2		FY06	Contract Award: Sept. 05
Class VIII Warehouse	$3.3	5 months	FY04 - 05	ECD Oct 05
South Side Water				Working 1391

Table x: MILCON / Other PROJECTS DEVELOPMENT – LSA Anaconda

Project	Est Cost (M)	Construction Duration	FY of Construction	Remarks
Avn Hangar	$8.6	TBD	TBD	1391 Working (AF)
Avn Maint Facility	$12.6	TBD	TBD	1391 Working (AF)
Avn Rinse Facility	$.7	4 months	FY05	Local Contract Working
Admin Buildings AVN				(AF)
Admin buildings (BN/ BDE HQ CMU's)				Approved. Award Sept 05.

Perimeter Fence	$10			Force Protection. CVAMP.
ERC	$4.9			(AF)
Billeting – Fire / Rescue	$1.0			(AF)
N ECP Upgrade				Troop Labor.
SE ECP				Troop Labor. Awaiting Funding. 1391 Pending (Pavement).
Personnel Processing Center		6 months	FY05	MILCON: Awaiting Funding
Helo parking Ramp	$33	5 months	FY-05	Complete (AF)
Em Helo Ramp				(AF)

Assumptions made in developing cost estimates included; Projects would be bid among prequalified US, international and local contractors. Local labor to be used whenever possible. Local materials will be used as much as possible. Costs have been burdened with appropriate overheads, profit, contingencies for unforeseen and differing site conditions, and supervision and administrative (S&A) costs. Projects are compliant with the standards and intent of the Sand Book.

Plan Findings and Recommendations. The following is a summary of the most significant issues affecting development on LSA Anaconda.

LS ANACONDA MASTER PLAN FINDINGS AND RECOMMENDATIONS			
Finding	Recommendation	Action Offices/ Agencies	Target Completion Date

CONSTRAINTS AND OPPORTUNITIES			
(b)(1)1.4a, (b)(1)1.4g	Recommendation: (b)(5)	Garrison Headquarters, and USACE	Summer FY05
	Recommendation: (b)(5)	MNC-I	Sept 05
INFRASTRUCTURE			
(b)(1)1.4a, (b)(1)1.4g	Recommendation: (b)(5)	GSU DPW USACE LOGCAP	Working. Projected completion Oct 05 for MILCON. July 05 LOGCAP STP
	Recommendation: (b)(5)	Prime Power	Overhead distribution ECD Jan 06.

(b)(1)1.4a, (b)(1)1.4g	Recommendation: (b)(5) Recommendation: (b)(5)	GSU DPW USACE	Relooking NECP upgrade, S ECP, & gravel yard upgrade ongoing. ESD: August 05 for CMUs

(b)(1) 1.4a, (b)(1) 1.4g

Figure 1: LSA Anaconda Aerial View

(b)(1)1.4a, (b)(1)1.4g

Figure 2: Planning Zones

(b)(1)1.4a, (b)(1)1.4g

Figure 3: Real Estates Plot System (example)

(b)(1) 1.4a, (b)(1) 1.4g

Figure 4.1: Water Utilities

(b)(1)1.4a, (b)(1)1.4g

Figure 4.2a: Power

(b)(1)1.4a, (b)(1)1.4g

Figure 4.2b: Power Distribution and Peak shaving Plant (Planned)

(b)(1)1.4a, (b)(1)1.4g

Figure 4.2c: Pennsylvania North and South Extensions (Planned)

(b)(1)1.4a, (b)(1)1.4g

Figure 4.2d: Overhead Power Distribution (In Progress)

(b)(1) 1.4a, (b)(1) 1.4g

Figure 4.3: Theater Hospital Complex Actual (CASH) and Planned (Crusader Loop Complex)

(b)(1)1.4a, (b)(1)1.4g

Figure 5: Communications C4 Complex (PM KICC)

(b)(1)1.4a, (b)(1)1.4g

Figure 6: New Joint Distribution Center (In construction)

(b)(1) 1.4a, (b)(1) 1.4g

Figure 7: CMU Barracks, MILCON Proposed Sites (Funded)

(b)(1) 1.4a, (b)(1) 1.4g

Figure 8: CMU Offices –BN & CO HQ CMU's, MILCON Proposed Sites (Funded)

Joint Integrated Personnel Processing Center (Concept)

(b)(1)1.4a, (b)(1)1.4g

(b)(1)1.4a, (b)(1)1.4g

Figure 9a: Personnel Processing Center (Component of Joint Integrated Air-Land Movement Area (JIALMA)

PPC Inprocessing Building

(b)(1)1.4a, (b)(1)1.4g

Figure 9b: PPC Inprocessing Building (Planned)

Inbound Processing

(b)(1)1.4a, (b)(1)1.4g

Figure 9c: PPC Inprocessing view #2 (Planned)

Outbound Processing

(b)(1)1.4a, (b)(1)1.4g

Figure 9d: PPC Outbound Processing (Planned)

(b)(1)1.4a, (b)(1)1.4g

Figure 10: West Side AAFES Complex (Construction Complete 1 October 2005)

(b)(1)1.4a, (b)(1)1.4g

Figure 11: Army Material Command Battalion Operations Complex (80% Constructed)

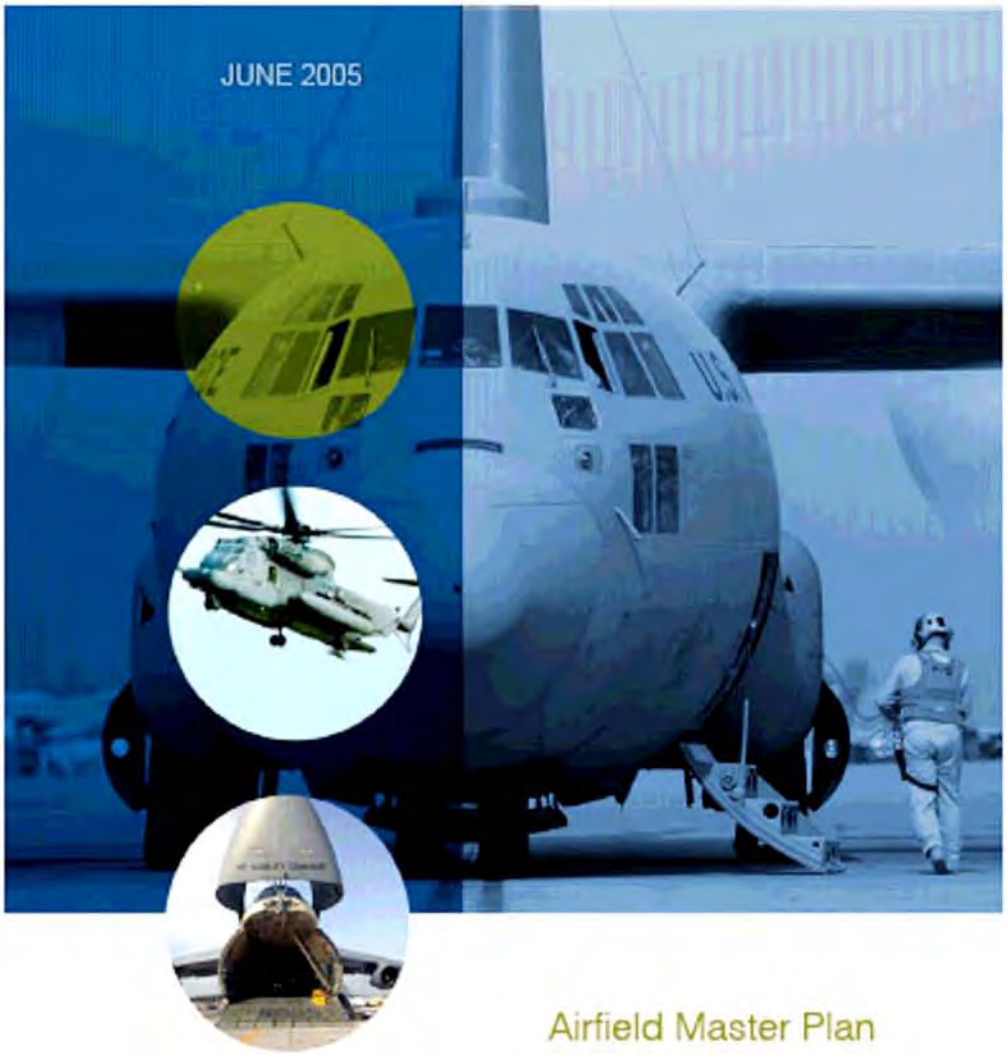
(b)(1)1.4a, (b)(1)1.4g

Figure 12: Southwest Industrial Area (KBR) (70% Complete)

(b)(1)1.4a, (b)(1)1.4g

Figure 13: LSA Anaconda Utilities Easements Construction Template (Installation Standard)

Figure 13: Utility Easement Template



Airfield Master Plan

BALAD AIR BASE
IRAQ

U S ARMY CORPS OF ENGINEERS • TRANSATLANTIC PROGRAMS CENTER

Master Plan Annex A: Airfield Master Plan (Attached to LSA Master Plan Document)