

The efforts in Iraq to bring security and stability -

The insurgency war continues in Iraq. The U. S. Marines are in Al Fallujah extricating and capturing foreign fighters from places such as Chechnya, Iran, Saudi Arabia, Palestine, and Syria. Security has moved to the forefront of operations in Iraq. Al Anbar provinces the largest and most untamed; contains the area of western desert and the Sunni Triangle. The province borders three countries, Syria, Jordan and Saudi Arabia along 890 kilometers of inhospitable terrain. It is within this area call AO Denver that the 7th Regimental Combat Team (RCT-7) of the Marine First Division (1MARDIV) operates. The Euphrates River flows west to east and enters from Syria. The Navy Seabees are there to provide construction expertise and contracting capability to employ Iraqi workers and Iraqi contractors to build civil projects such as schools, hospitals, roads and bridges. Because of cross border incursions of foreign fighters and the slowly developing cadre of trained Iraqi Security Forces coming on line a shift of priorities has been to construction of security infrastructure in advance of the January 2005 elections. The infrastructure includes police stations, Iraqi National Guard compounds and Iraqi Border Defenses.

LT James N. Vandenberg, CEC, USNR; a Naval Officer, a Seabee, A&M University class of '83, architect, and 1985-86 AIA-AHA Fellow devised, developed, drew and is now overseeing construction of is leading an architectural design team on the front line of this struggle for improving the national security of Iraq. Assigned to First Marine Expeditionary Force Engineering Group – Officer in Charge of Construction (1MEG-OICC) unit providing the necessary design and construction expertise to improve the conditions in this tenuous area. As program manager of four major project initiatives devotes most of his time to security issues. He works to design, award contracts for and manage 40 million US Dollars worth of construction for: The Iraqi Border Police (IBP) – 12 million; Iraqi National Guard (ING) – 10 million; Iraqi Police (IP) – 10 million, Ar Rutbah Regional Hospital – 1 million; and concept design for seven 1 million dollar schools – 7 million. In order to accomplish his mission to provide technical knowledge and design expertise, LT Vandenberg has to go on ground patrols and air flights to the border and cities up and down the Euphrates River valley.

Iraqi Department of Border Enforcement (DBE) – Iraqi Border Police (IBP) denial forts project: Last year when the Saddam Hussein regime fell, so did the internal security of the country. Police forces and army units were disbanded. The borders that had suffered some coalition attacks on the outset of the war were abandoned, and the small overwatch forts along the remote borders with Syria, Jordan, and Saudi Arabia were vacated. In this vacuum of power, foreign fighters and smugglers began to cross the borders bringing with them people, equipment and weapons. The Army patrolled the border when possible until they turned the Area of Operations (AO) over to the incoming Marines in March 2004. The MEG – OICC unit stood up in mid march and took over the role of providing contracting and construction in this still very expeditionary environment. First on the list of the new office at the once secret and sprawling Iraqi Air Force Base near Al Baghdadi in western Al Anbar, was the establishment and sustainment of the once defunct Border Police Force. This was the first Program to be managed by LT Vandenberg. In meetings in late April with the provincial leadership of the Border Police a strategy was put forth to construct new border denial forts at regular intervals along the most affected parts of the border – Syria. LT Vandenberg with the input from Colonel Ali A. Hady, of the DBE designed a Beau Geste style “Fort” with rounded corner towers, a center courtyard with an array of rooms around the courtyard, that would act as a fortress security point at know crossing points to interdict the “Rat Lines” of smugglers. These would be constructed in very remote locations, and occupied by 28 patrolmen at a time who with provided vehicles would

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patrol up and down the border between the fort strong points. While the Civil Affairs Group would provide material means of clothing, equipment and training to the enthusiastic volunteers swelling the ranks of the reestablished IBP, it was up to LT Vandenberg and the MEG OICC to solicit the design for bids, award contracts and oversee construction of 32 forts along the 890 kilometer border. These are spaces approximately 25-30 kms apart. The first eight done as a test were located nearer the Euphrates River crossing town of Husaybah. An Anti-Coalition Forces (ACF) stronghold and particularly impermissible town. In mid April it was the scene of some of the fiercest fighting in the post combat phase of the war. More Marines and insurgents were killed there in a 56 hour fire fight than in the several weeks long battle in Al Fallujah that spring. This proved to be a fact that created hardships of intimidation, kidnapping and beheading of several contractors working on coalition projects the summer of 2004. MEG OICC awarded 4 contracts to build 2 forts per each contract or 8 initial forts. The schedule for completion was 30 September. This slipped because of material delivery problems to these remote sites. Then the contractor north of Husaybah was attacked and the workers driven off. Adding issues of poor construction and the insurgents destroyed 2 of the forts with Improvised Explosive Devices (IEDs – 155mm and land mines) the work has ground to a halt. South of Husaybah, a third fort was attacked and explosives detonated. It had heavy damage but not destroyed. We are working to have selective demolition and rebuild. In July twenty-four more forts were awarded to three contractors – 8 each. One contractor was threatened with death at home by masked insurgents and quit the job. During an on-site inspection on 3 November, on fort had been attempted to be destroyed with explosives, and booby traps were set, another had six artillery shells rigged to destroy it. During our site visits, we have been bringing and Explosive Ordnance Disposal person. He was able to diffuse the explosives and with C4 explosive destroyed the shells. This saved two more forts from destruction. Despite all of these setbacks, construction progresses daily. LT Vandenberg came back from a border site visit by CH-53E helicopter on Monday 15th of November and reports construction is ongoing on at least 7 forts this week. Visits were difficult at first. During the summer the most reliable method was to hop on a Marine patrol heading up and down the border in Light Armor Vehicles (LAVs) it has hot and dusty. In July and August by afternoon the metal of the vehicle was too hot to touch, and bottle water brought frozen solid was actually hot even if it was in the shade. It was 140 degrees Fahrenheit in the shade. Felt like holding a hair dryer straight in your face on at maximum setting. The patrol can take several days and requires remaining overnight in the desert. It is a no frills camping experience where you sleep on the ground and knock scorpions off you all night.





Aerial View of Border Fort – Note the amount of vegetation and the raised center courtyard roof with windows.



Interior of Border Fort with arched walkway around interior high ceiling courtyard.

There is just one entry on the Iraqi border side. The side that faces the border has no windows so as not to receive small arms fire. Walls are 40 cm (16 inches) thick of heavy rock masonry.

Getting to the sites for visits and inspections is problematic. As said before it is either by LAV or by helicopter, CH-46 (twin rotor) or CH-53 (single rotor). The following photos show modes of transportation in the western desert.

	
LAV patrol driving up the road from the river valley to Qusaybah Bluff	CH-53E making an Desert extraction 15 November 2004 – Saudi border.

Construction techniques are time honored pre-industrial age. Foundations are built of rock, and then walls are built on top of the foundation walls. There are no slab on grade and wood stud walls, There is very little wood. Once the walls are built up to 3 meters in height (10 feet) wood is brought in and a shoring system is installed. A poured concrete roof with steel reinforcing bars inside is placed, supported by the wood shoring. When it is dry, shoring is removed, and soil is brought in to raise the floor up to about 6 inches below finished floor level. A concrete base is poured. Walls are then covered with stucco rough finish, then a finish coat of gypsum plaster is troweled on. To complete the floors tiles are hand set with a thick coat of setting mortar – about 3 inches. To complete the work, glass is cut and put in the steel window frames, walls are painted and electrical and plumbing fixtures are installed. Toilets are eastern style trench toilet like you may still see in Japan and the orient. It is normal to see the toilet combined with a shower unit, the toilet acts as a floor drain.

	
Border Fort Construction: Foundation work. Note the rock foundation wall with concrete cap. Rock walls will be built above this concrete band. The concrete floor will be poured over the sand base between the walls.	Border Fort Construction. Fort near completion. Note the stucco covering the rock work. The rounded corner gun towers and parapet walls. Exterior will be painted a desert tan color and will have security lights on the corners.

Current Iraqi Border Police living conditions are Spartan. Usually in open tents or destroyed buildings. Another reason why it is imperative to get hardened facilities completed to provide border security.

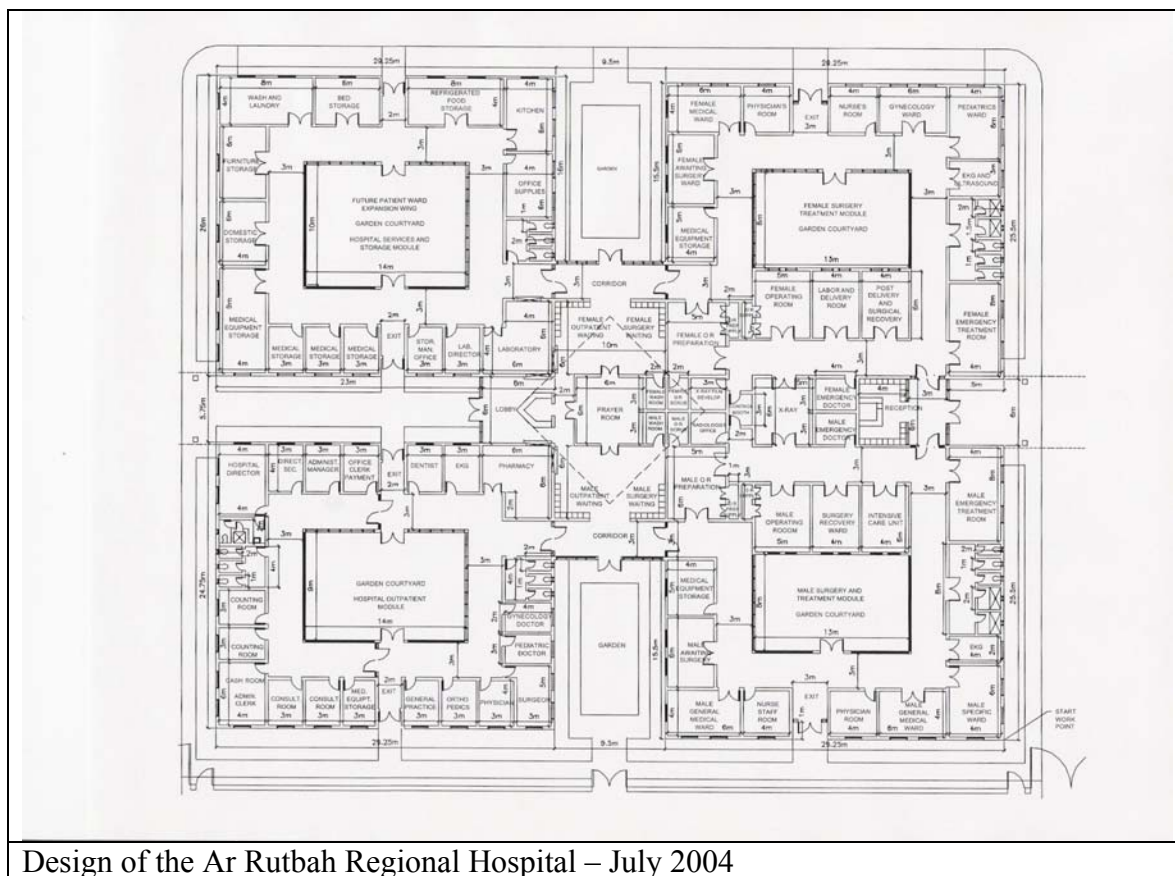


IBP Tent Camp along the Syrian Border



Kitchen and living area in destroyed building

Ar Rutbah Hospital - The town of Ar Rutbah lost its hospital to coalition bombing in the 2003 Operation Iraqi Freedom (OIF). We are now in the middle of OIF II, the second year. Although being used by Iraqi Intelligence services at the time, Ar Rutbah suddenly found itself without a functioning hospital to serve the 25,000-person community and the regional health care provider for all of rural western Al Anbar, an area the size of Utah. Since the loss, the community has struggled to provide medicine and medical care through a 150 square meter (sm) outpatient clinic to 300 patients a day. An architectural design team led by LT James N. Vandenberg devised, developed, drew and is now overseeing construction of a modern 3000 sm 100 bed hospital on the same site as the destroyed hospital. LT Vandenberg proposed and sketched up a plan involving a centralized communicating public space and four modular wings that reduce travel time from the entry reception lobby and waiting and all other functions of the hospital. Based on early training LT Vandenberg received on hospital design it was important for the caregivers to observe and maintain visual control over as many patient treatment and recovery rooms as possible. This was done by providing a central open-air courtyard with glass-enclosed corridors allowing views from one side to the other. And all four wings are quickly accessible by the center public waiting space. Being that space was central and important, and the Islamic religion is important, a prayer space is provided for use by patients and visitors alike.



Design of the Ar Rutbah Regional Hospital – July 2004

Time line after design:

1 August 2004: Hospital funded and ready to put out for bids.

15 August 2004: Bids came back – 25 contractors submitted bids; what was a new concept on this project was to get complete community buy in of the project. It was written in the solicitation for bids the contractor must provide letters of approval and reference from the Ar Rutbah City Council, Mayor, Chief of Police, Iraqi National Guard Commander, and local Imams (Clerics), and Sheiks (Local Tribal Leaders). These reference letters were heavily weighted as a technical evaluation criteria. It weeded out a lot of out of town contractors which if selected may have added to the volatile nature of the city. A contractor was selected that was from the town, had close knowledge of the community and business relationships.

27 August 2004: Contractor short list of 3 created to select. (Design build concept- gave contractor floor plan and they are to do structural and MEP design.

3 September 2004: Contractor selected and contacted.

7 September 2004: Contract signing at Al Asad during Al Anbar security conference in base theater. Because of the deteriorating conditions in Al Anbar, the contract signing was held in a private area of the Al Asad Airbase theater. The reason is as they say here “Ali Baba is everywhere”. So MEG OICC limited participation to the local community leadership, and the Marines involved. Even though there was participation from cities and towns all over western Al Anbar, there is corruption at all levels, and the less other people know about the project the better.

12 September 2004: Hospital Ground breaking at Ar Rutbah. LT Vandenberg flew via CH-53 helicopter overnight to Camp KV to attend the ground breaking of the Hospital. Scheduled completion is 15 March 2005, although with the insurgency disruption of materials on highways, will probably be much later.

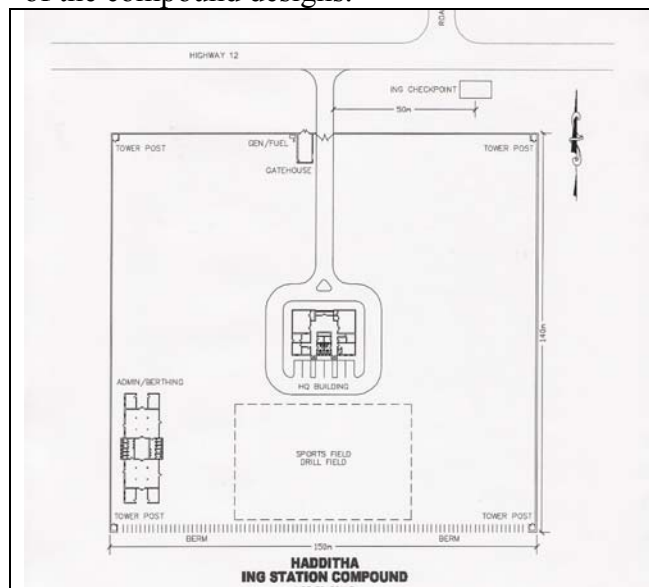


Ar Rutbah Hospital Spring of 2004 – Damage after 2003 bombing campaign.

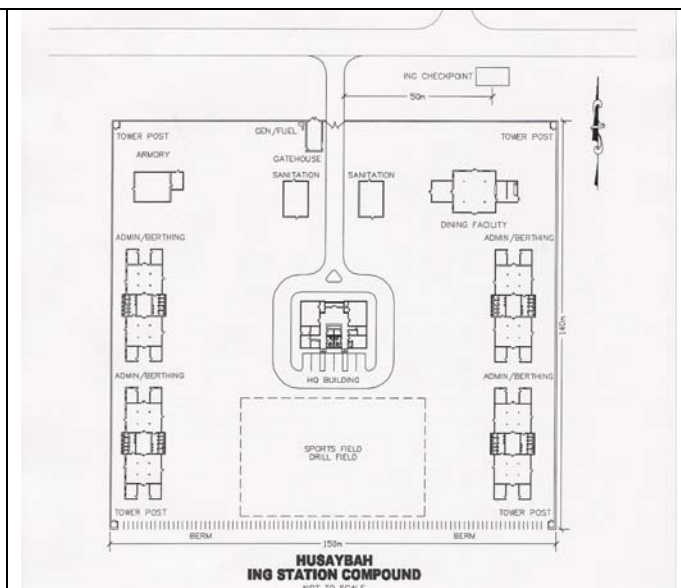


Ar Rutbah Hospital November 2004 – Site is cleared and foundation work is on going.

Iraqi Ministry of Defense - Iraqi National Guard (ING) Compounds: The third program managed by LT Vandenberg is the construction of 8 ING compounds in the cities along the Euphrates River valley. The purpose of these compounds is to provide security for the Iraqis in the areas outside of the cities and towns. Defensive compounds have been designed using a modular concept of a menu of buildings task oriented and tailored to the needs of the area. Every site gets a basic compound of a perimeter wall, an entry control gate and a headquarters building. As the unit is enlarged or requires more facilities, buildings are added to the compound, up to 250 people before the compound needs to be enlarged. As of this writing eight sites have been awarded for construction in two phases of a 3-phase master plan. However, none of the 8 sites has yet begun construction due to insurgent targeting in these areas. Below are examples of two of the compound designs.



ING Compound at Hadditha



ING Compound at Husaybah – larger population

Iraqi Department of Border Enforcement (DBE) – Iraqi Border Police (IBP) Training Academy at Al Asad Air Base project: The fourth program LT Vandenberg created and managed is the design and construction of a modular campus plan for the training academy used

by the Border Police and the national police force. Situated next to an ancient oasis just west of Al Asad Air Base, the plan includes classroom, conference spaces, barracks or living quarters, administrative areas, a dining hall, stores and warehousing for weapons, uniforms and training gear, and finally a mosque or religious prayer space. Ground has broken for this project in mid October, and in mid November, MEG OICC was informed of an expansion program to enlarge the academy to four times its current size. LT Vandenberg is preparing the designs as of this writing.

The site is inclusive of an old village the Saddam Hussein regime removed and relocated during the construction of the base in 1985. The buildings exhibit some ancient construction methods and have been preserved for future study as to their cultural significance. A couple of run down buildings and an old elementary school have been incorporated into the design as training buildings.



LT Vandenberg is helping rebuild Iraq, by providing specific master planning and architectural design in creating very important security and civil –military construction. These are highlighted by the 32 Border Denial Forts, The 8 ING security compounds, the 100 bed hospital in Ar Rutbah and the 500 person training academy in Al Asad. With these projects in place, it is hoped security and the quality of life for Iraqis in Al Anbar province and even Iraq as a whole will improve and move toward a strong democracy.

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