Parsons Buildings, Health and Education (BHE) Project Iraq

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Parsons was founded by Ralph Parsons, an aeronautical engineer. He was one of the founding members of the pioneering engineering company Bechtel-McCone-Parsons Corporation in the 1930s. In 1944 Ralph Parsons sold his shares in that company and formed the Ralph M. Parsons Company. Today Parsons is a leader in many diverse markets such as infrastructure, transportation, advanced technologies, telecommunications, aviation, commercial, environmental, planning, industrial manufacturing, pharmaceuticals and homeland security. Parsons provides technical and management solutions to federal, regional and local government agencies as well as private industries worldwide.

Parsons, being no stranger to the Middle East, was in the process of building a subway system in Baghdad in 1990 but had to abandon that job when the first Gulf War broke out. Parsons built oil and well power systems in Kuwait in the 1960s and then won contracts to go back and re-build those facilities following the 1991 Gulf War.

Parsons has been awarded several contracts in Iraq since 2003 to include the Buildings, Health and Education (BHE) contract that was awarded on 24 March 2004 for a not to exceed amount of $500 million to renovate, rebuild and construct new “public buildings, hospitals, healthcare clinics and housing throughout Iraq. Originally, the contract was to include the renovation of 1,400 schools however, this portion of the contract was removed from this contract and added to another.

The Parsons Team recognized the importance of bringing together a world-class team in medical facility design that has unparalleled experience in working across the spectrum from medical clinic repair and refurbishment to design of complex medical centers. Our team incorporates the comprehensive medical facility design capabilities of Odell, our teaming partner. Founded in 1940, Odell has planned, designed, engineered, and managed major medical facilities and construction sites throughout the United States and the world, and has a staff of medical design facilities professionals skilled in planning; management consulting; architecture; civil, structural, mechanical and electrical engineering; graphic design; interior design; landscape design; and procurement.

Odell International recently led a similar effort in the United Arab Emirates Military healthcare Upgrade Program. While performing facility assessments on 77 medical clinics throughout the United Arab Emirates, developing three new standard designs for medical clinics, and designing a new 1,200,000-square-foot, state-of-the-art replacement hospital, Odell International mastered regional issues and concerns critical to creating culturally sensitive, effective facilities. This project required management of a myriad of consultants. Odell International incorporated leading U.S. medical facility medical teams, including Johns Hopkins and Carolina Healthcare System, as active partners in developing the state-of-the-art replacement hospital. Odell utilized regional and local healthcare consultants such as Allied International and Shankland Cox, both of which are included in the subcontracting plan for Iraq Health Care Facilities Reconstruction. In addition, the leader of Allied International, Osama Madanat, was senior project manager on the King Hussein Medical Center in Amman, Jordan.

The Parsons team has leveraged the capabilities of Odell and our group of international consultants in providing simple, efficient, and timely design of every type of medical facility required in Iraq.

The BHE contract will:

- Upgrade two Ministry Government Buildings
- Upgrade 19 Hospitals located throughout the country to elevate the quality of each facility to a higher standard comparable to international standards.
- Design and construct 150 Primary Healthcare Centers (PHCs) (ambulatory care clinics) throughout the country based on population and the Iraqi Ministry of Health vision.
- Improve the Iraqi Healthcare infrastructure.
- Put Iraqis to work.
- In addition, train Iraqis to assume key roles on large Design and Construction Programs and Projects.

The general intent of this project is not only to provide the Iraqi people with the necessary basic public facilities and infrastructure with sufficient space accommodations and reliable public works, electrical, plumbing, mechanical and communication resources that are easy to maintain, upgrade, and repair, but also to provide employment opportunities, important skills and personal pride.

As swiftly as possible, many Parsons positions in safety, building systems management, scheduling, budgeting, and quality control will be filled by skilled Iraqis. Hands-on training will be provided in scheduling, business practices, safety, building management systems, basic computer and internet skills, project management, incident investment, quality control and construction.

The BHE Rebuilding Project will directly improve the quality of life for millions of Iraqis through the renovation or building of new healthcare centers, hospitals and other public buildings. The renovated hospitals and newly constructed healthcare centers will bring modern-day state-of-the-art healthcare to millions of Iraqis. The overall goal of this contract is to assist in the restoration of the Iraqi infrastructure through the delivery of projects that will provide the maximum benefit to Iraq's citizens.

This project will be no easy undertaking to accomplish. There have been no new hospitals built in Iraq since 1984. Decades of conflict and neglect have taken their toll on existing buildings and continued regional fighting makes work difficult and dangerous but not impossible. The on-going conflict with the insurgency and security issues cause significant delays as well as working through all the governmental bureaucracy.

A major portion of this BHE project is the outfitting of 18 hospitals and 150 primary healthcare centers (PHCs) with new state-of-the art bio-medical diagnostic equipment. The PHCs were awarded approximately $70 million to purchase medical equipment. Additionally, the 18 hospitals are expected to be awarded approximately $41 million to purchase medical equipment in the near term. Once the PCO in conjunction with the Iraq Ministry of Health approves the final medical equipment list of items to be purchased, Parsons/Odell sends the lists out for estimates from major vendors. This estimate, called a Rough Order Magnitude, is returned to the PCO for review. If the estimated pricing is fair and reasonable then the PCO gives it final approval, referred to as definitization, for Parsons/Odell to release a Request for Proposal to numerous vendors to submit bids. Once the bids are received they are reviewed and analyzed and those vendors that provide the best quality products that meet the required specifications at the most reasonable price are awarded the contract to provide the medical equipment for the project. The 150 PHCs have over 100 individual pieces of

equipment and the 18 hospitals have approximately 70 individual pieces of equipment. With so much equipment to procure numerous vendors were selected to provide for this project. The competitive bidding process and volume purchasing ensured that the U. S. Government received the lowest prices possible.

The medical equipment lists for the PHCs and the hospitals includes a wide range of state-of-the-art bio-medical diagnostic equipment and appliances. Some of these items include digital, analog and portable x-ray, mammography, x-ray film processors, ultrasound, infant incubators, dental chairs, chemistry and hematology analyzers, bilirubinmeters, spectrophotometers, ventilators, centrifuges, ecg, defibrillators and various surgical, diagnostic emergency, laboratory and dental appliances.

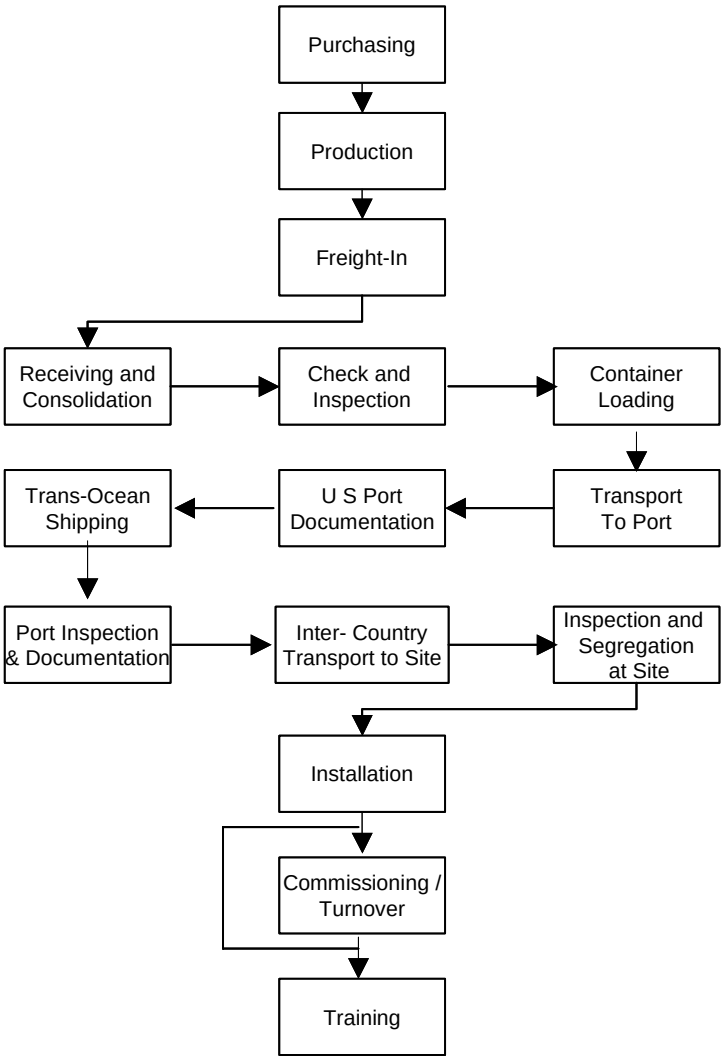
The difficult part is purchasing all this medical equipment and getting it shipped and installed and fully operational in 150 PHCs and 18 hospitals. To accomplish this major undertaking, Parsons/Odell subcontracted with Symphony Medical Products Corporation a medical equipment integrator in Miami, Florida. As a medical integrator, Symphony Medical will receive all the equipment from the various vendors in their warehouses in Miami for consolidation, inspection, testing and packing in shipping containers. Each of the 150 PHC and 18 hospitals will have their respective medical equipment containerized separately and shipped directly to its construction site in Iraq. The shipping of all this medical equipment will also be a major undertaking. Parsons/Odell subcontracted to Eagle Global Logistics (EGL), also with offices in Miami, Florida, to provide this logistical service. EGL will move the containerized medical equipment from Symphony Medical warehouses to the port at Miami, clear customs, load on one of their ships for trans-atlantic shipping. The medical equipment will be shipped to three or four different ports of entry (POE) depending on the geographic location of its destination in Iraq. Once it is in the POE, EGL will then will process the shipment through the country's customs and ensure that it clears and all duty exemptions are applied. This process can take up to 15 days to complete. At this time, EGL will then load the medical equipment onto trucks and drive it to the construction site were the equipment is to be installed. To help insure that the medical equipment actually arrives at the construction site, EGL provides private security teams to escort the equipment. They also have transponders installed in their escort vehicles that communicate directly with the Coalition's Quick Response Force that can respond within minutes should the convoy come under attack. Once the equipment is delivered safely and unloaded and inventoried at the construction site EGL's responsibility for that shipment is complete. In case the medical equipment is damaged during shipment and /or stolen it is insured by Lloyds of London.

Symphony Medical subcontracted to four local Iraqi medical equipment repair and installation companies to install the medical equipment once it arrives at their respective PHC or hospital site. The goal is to deliver the medical equipment directly to the construction site during the final phase of site construction. This is the optimal time for the medical equipment to arrive since the construction is approximately 90% complete and all mechanical, electrical and plumbing has been completed and certified and the facility is ready to receive the equipment for installation. This also allows for Parsons/Odell to turn the facility over to the Iraqi government on schedule fully operational.

The four medical equipment installer subcontractors will have the capability to provide up to 24 separate installation teams of 7-8 individuals each throughout Iraq at any given time. This allows for keeping up with the construction schedules of all 150 PHCs and 18 hospitals. Each Installation Team will be responsible to install all medical equipment per manufacturer's specifications and test and inspect all the equipment, to ensure that equipment was installed properly and fully operational. After turn over of the medical

equipment along with the facility to the Iraqi Government the Installation Teams will remain for 10 more days to provide Operation and Maintenance training to the local PHC or hospital staff to ensure that they understand how to operate the new equipment and to properly maintain it.

The below flow chart outlines the entire medical equipment process from purchasing through commissioning/turn over to the Iraqi Government and performing operation and maintenance training for local Iraqi staff.



Best Value Considerations and Purchasing Considerations Utilized:
Although lowest equipment capital expense (CAPEX) costs are desirable, these costs should not be the only factor considered in making a purchasing decision. For example, low CAPEX costs may result in high operational expenses (OPEX). Odell and Symphony considered the following factors in preparing this Best Value proposal:

- Availability of equipment on the market or from the vendor specified
- Appropriateness of equipment with regard to specifications stipulated
- Completeness of equipment sets specified
- Durability / life span
- Quality – craftsmanship, grade of steel, ISO and CE certified

- Supportability – spare parts and consumables availability
- Standardization - impact on on-going service provision and supportability
- Suitability for environment / clinic
- Safety – electrical code compliance, stainless steel vs. chrome plated to ensure adequate sanitization for continual use
- Training
- Competitive / reasonable costs considering all above factors

Pricing Strategy Utilized:
In preparing this proposal, the following strategy based on thorough, detailed medical planning experience, extensive knowledge of industry standards and requirements, bid specifications, the client's desire for low cost solutions, and the above considerations:

All equipment originally specified on approved lists from the Ministry of health and PCO has been reviewed to determine appropriateness with regard to original specifications stipulated. All specified equipment has been priced, as required. Equipment purchase costs and all relevant costs from time of purchase to on-site acceptance in Iraq will be itemized. Total rolled-up costs are to be provided. Alternate equipment recommendations will be provided as well as comparative pricing from a value-engineering standpoint, to recommend the Best Value. A Best Value Cost Option and a comparison to the Government Estimated Cost total will be summarized for comparisons.

Issues/Obstacles Faced:
It is a lesson learned and relearned in Iraq. The Parsons BHE Project is only one of many projects in the billions of dollars the U.S. has awarded to American firms in the most ambitious rebuilding plan since the Marshall Plan in Europe five decades ago. Nearly two years after the fall of Saddam Hussein, the U.S. is still struggling to deliver electricity, clean water, healthcare and other services. Iraq has been different, and the struggle to gain security and overcome bureaucracy helps explain why reconstruction costs so much and takes so long.

Parsons, just like other American firms operating in Iraq, has to weigh its need for profit against the imperative to keep its employees safe. Corporate executives struggle with decisions that risk employees' lives. It is not uncommon for mortar rounds to crash into the company's compound or our numerous work sites all over Iraq. Iraqi employees also risk car bombs on their daily commutes.

Rebuilding has also been hampered by the fragmented bureaucracy. Companies often have to juggle as many as five agencies at a time. Government Contracting officers often serve as little as two months before moving on. There are numerous audits that demand elaborate documentation in a place where deals are often sealed with a handshake. Sometimes the Iraqi Officials intervene just to assist in getting the project moving forward again.

Parsons often has to deal with the quirks of Iraqi customs and history such as local architects being accustomed to using Saddam Hussein's height (6 feet 2 inches) as a standard unit of measure or having to win a tribal leader's permission to undertake a project. Rebuilding Iraq is its own sort of war within itself.

Parsons' Iraqi employees have been followed, threatened, shot and kidnapped. Everyday life in Iraq takes a toll on their lives. In order for Parsons to reduce the risks on their Iraqi workforce, all signs of working for a U. S. firm have been removed from the construction sites. Parsons local employees are also not identified as working for a U.

S. Firm. Parsons has also requested that U. S. troops not visit some of our sites where they were trying to work under cover to protect the local employees.

Current Status:
All Ministry Government building renovations are complete with the exception of one, which is on schedule to be completed summer 2005. All nineteen hospitals are currently being renovated at various construction stages with no major delays. Of the 150 PHC sites construction has commenced at 145 sites. There are currently construction holds at the following PHC sites:

- Four due to security reasons (usually caused by insurgent activity in the area).
- Two due to squatters refusing to move out of existing buildings that are to be demolished.
- One due to finding grave relics on the site in which a new site has been requested from the government.
- One site is on hold due to a zoning issue (to close to a gasoline station). A new site has also been requested from the government.

Many issues can cause delays in construction however they are usually managed expeditiously through working with the Iraqi Government Officials the PCO and the Coalition. All in all, construction is moving along remarkably well considering our project is in Iraq. The current target date for completion of the BHE Project will be 31 December 2005.

Conclusion:
All reconstruction projects throughout Iraq, were provided for and funded primarily by the U. S. Government to help rebuild Iraq's infrastructure and to improve the daily quality of life of the Iraqi people. The Parsons/Odell BHE Project is doing its part in accomplishing this mandate especially with their 19 major hospital renovations and 150 new Primary Healthcare Centers throughout Iraq and outfitting these facilities with new state-of-the-art bio-medical equipment. This large BHE project is certainly a challenge and difficult to manage at times but seeing it through to its final and successful completion is the goal of all the Parsons and Odell management and employees. Seeing first hand the direct and lasting improvements this project is providing to the Iraqi healthcare delivery system is an extremely rewarding experience.

ARTIST RENDERING OF FINAL PRIMARY HEALTHCARE CENTER IN IRAQ

18 OF THE 20 HOSPITALS BEING RENOVATED ACROSS IRAQ WILL RECEIVE NEW BIO-MEDICAL EQUIPMENT