

HAITI

Partnership to Restore Vital Hospital Facilities in Port-Au-Prince



PROJECT DESCRIPTION

Country: Haiti

Project location: Port-Au-Prince

Disaster: Earthquake

Disaster date: January 12, 2010

Project timescale: 5 years

Target population: 1.2 million people of Port-Au-Prince and nearby cities

Project Budget (USD): \$22.95 million

Donors: Catholic Health Association, Catholic Relief Services and Sur Futuro Foundation

Partners: MSAADA Architects, Notre Dame University, Maryland University, International Medical Equipment Collaborative (IMEC), HKS Architects, HSFS medical doctors, Haiti Ministry of Health



What did CRS do?

In partnership with Haitian authorities, national and local religious groups and international medical advisors, CRS re-constructed a core hospital facility to ensure health services to the most vulnerable in Port-au-Prince, and provide a state-of-the-art teaching resource to grow Haiti's healthcare capacity.

Background

On Jan. 12, 2010, a powerful 7.0 magnitude earthquake devastated Port-au-Prince and its neighboring cities, killing over 200,000 people and leaving an estimated 895,000 people homeless. Critical infrastructure services - including ports, airports, roads, government offices and all hospitals - in the area were either severely damaged or totally destroyed. Due to many severe injuries caused by the earthquake, the needs for the re-construction of hospital and other clinical infrastructure was enormous.

Problem Statement, including core questions

With poor quality health care services in Haiti prior to the earthquake, and many injured people caused by the earthquake, the country was struggling to meet the medical services demand, especially from poor and vulnerable people. The re-construction of Hospital St. Francois De Sales, which would serve the poor who are unable to afford medical treatment, was intended to fulfill this need.

Inception and Design

A joint steering committee (JSC) was formed soon after the quake given the massive need. The JSC was composed of the Archdiocese, CRS, the Catholic Health Association and Sur Futuro Foundation, each with their own tasks and mandate. The JSC met once every 6 weeks during the project implementation, and provided oversight of construction.

The design consultation was broad, bringing expertise from the following, who contributed on the design flow and analysis:

- MSAADA Architects based in Minneapolis USA,
- Notre Dame University,
- Maryland University,
- International Medical Equipment Collaborative (IMEC),
- HKS Architects,
- HSFS medical doctors,
- Haiti Ministry of Health officials and many medical professionals who contributed on the design flow and analysis.

In collaboration with Partners for Health, CRS engaged in a selection process for the construction firm and medical equipment suppliers, which was ratified and approved by Sur Futuro partnership. IMEC contributed to the design of patient flow and installation of equipment.



CRS delegates participate in the opening of the St. Francois de Sales hospital in Port-au-Prince, Haiti, January 15, 2015.

Photo: CRS



Workers make the finishing touches to the hospital grounds before handing over for opening.

Photo: CRS

Construction

Since the project was complex, CRS' Project Management Team brought in an international construction company from Dominican Republic. Through this company, the hospital project benefited from good quality construction materials which were not available in Haiti and were imported from neighboring countries.

Government agencies - including the Ministry of Health, Electric D'Haiti (EDH) - were especially supportive in their contribution/services by providing a power source, which came from the nearby main grid supply line, which was in the same zone powering the Haiti National Palace. EDH also provided sets of power transformers solely for the hospital power supply.

Constructed on 11,280 m² land, the hospital has a covered floor area of 11,358 m². Fifty two percent of the land area is allocated to public spaces (carpark, road, sidewalk, landscape areas), and the remaining 48% is allocated for the five hospital buildings, each of which are two-story, and are linked by footbridges.

Key features include the following:

- The building structures are earthquake resistant, with soil-ballasted foundation and reinforced masonry shear wall providing the main lateral-force resisting system. The use of wood is avoided to eliminate termite infestation.
- The roof structure was designed to withstand 130mph wind speed equivalent to category 2 hurricane.
- Roof trusses are made of light gauge steel and gauge 24 aluminum zinc roof sheets, which are more durable than the commonly used galvanized iron sheets.
- The main source of water is a deep well system backed up by a Haitian local water authority source, a 10,000 gallon underground cistern tank and water softener filtering system. This feeds a 40,000 gallon elevated water tank. Raw water is filtered by water softener to remove contaminants and purify as potable water.
- The hospital waste and drainage system had been equipped with septic system to filter drainage water to irrigation water.

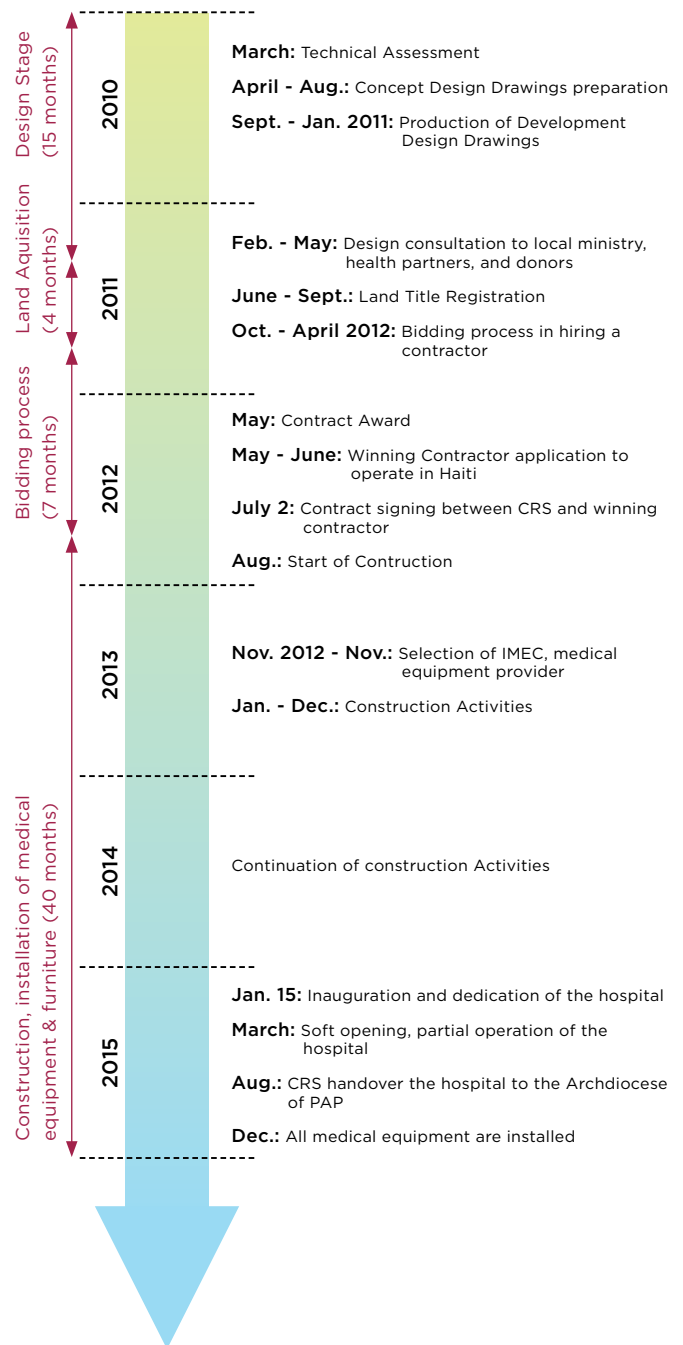
Service Provision

The new state-of-the-art university teaching hospital is a testament to Saint Francois de Sales' commitment to serving the poor, and serves as a model for providing quality care around the country. This hospital provides five essential clinical services:

- Emergency & trauma care
- Maternal health care
- Pediatrics
- Surgical unit
- Internal medicine

Patients benefit from several comfort and aid systems that were 'firsts' in Haiti: air-conditioning in both private and public wards, with a nurse call system and telemedicine system. Doctors, nurse and medical staff are on call at all times - 24/7. An elevator system has been installed at out-patient and in-patient buildings by easy access for patients and staff. Solar water heaters are provided in all critical areas and private rooms

Additionally, this is the first hospital in Port-au-Prince with an oxygen filling plant that can generate up to 100 cylinders per day.



Project Timeline
Credit: CRS

Teaching Hospital

The Hospital St. Francois De Sales not only serves the poor population in Haiti but is also a teaching facility. Haitian medical students and young medical practitioners benefit from the knowledge transfer brought by medical experts from the US and in-country professionals. Through this knowledge transfer, these young professionals will help Haiti bridge the gap in the field of medicine and, through the innovative equipment installed in the hospital, more people can be reached. This hospital is a model in providing state-of-the-art health care, saving lives and nurturing young medical professionals to become the best in the country.

Outcomes

- An average of 1,426 out-patients treated per month and 290 patients admitted monthly.
- Overseas doctors are in residency at the hospital, teaching student doctors, nurses and healthcare professionals.
- Serves as a reference center for the Haitian Catholic Hospital network.
- The oxygen filling plant system has just recently been commercialized and, to date, has generated \$16,385 USD in revenue. A contract has been signed to provide oxygen to the nearby state hospital, and possibly three others.
- It is expected to use telemedicine equipment to support surgical services, which will improve quality and reduce the cost for both patient and hospital.

“This is not about humanitarian works, but saving lives is primary obligation of each human being, and you can only do this by providing good quality infrastructure facilities and state of the art medical & health services”.

– CRS Country Representative, Darren Hercyk

Learnings & Recommendations

Challenges

- The certificate of land title was buried in the rubble of the old hospital, meaning that a legal firm had to be engaged to process the re-issuance of land title at the Land Registry, which delayed the start of CRS procurement process.
- Coordination with local government, partners, contractor and sub-contractors required more time and efforts than was expected.
- Political instability during the 2011 presidential election. It slowed down the design approval process and the reconstruction of phase 1, HIV and Laboratory Building.
- Seasonality factors: The project foundation excavation was submerged by flood waters due to hurricanes in October 2012.
- Lack of good quality construction materials in Haiti required the contractor to import materials from neighboring countries. Haiti's varying importation taxes and duties caused delays and significantly increased the project cost during construction.
- Supply chain: Due to volatile market prices, locally available construction materials prices also increased during the construction period.
- Due to a lack of skilled workers in Haiti, it was necessary for the contractor to bring in skilled workers from the Dominican Republic, resulting in increased labor costs.
- Due to prolonged delays after the inauguration and dedication of the hospital on January 15, 2015, CRS took the initiative to takeover the remaining work and directly implemented until completion.

Learnings

- Initiate from the start the study related to financial access for the poorest. This study will decide the design ratio of private rooms vs paid-for service rooms vs non-paid for services, which is a vital aspect for the financial sustainability of the hospital.
- A higher level of coordination by CRS' Senior Management Team, the Joint Steering Committee Chair, the project management team, and the members of the JSC helped greatly and was a key factor in the project's success. The project implementation required significant investment in trust building and emotion management.
- Contracts should not be awarded solely based on the lowest bid. The overall methodology should be considered, along with an evaluation of the recommendation of the technical team.
- Construction duration should have been longer than the planned 24 months, with contingency time included and greater flexibility from CRS management.
- Due to the project complexity and considering the poor local supply chain, an additional construction budget on top of the 10% contingency should have been allocated.
- To ensure the sustainability of the hospital, a robust marketing strategist team should have been formed earlier to facilitate a fundraising campaign to sustain the financial operational needs of the hospital.
- Time should be allowed for advocacy with key stakeholder groups for consensus and buy-in before construction is commenced to ensure smooth management. Staff secondment to the archdiocese helped in facilitating the understanding by the archdiocesan leaders, and expediting the signing of key documents. Trust among partners needs to be carefully managed throughout the project.
- The collaboration with PIH and with IMEC helped to avoid some mistakes. Consultation with other stakeholders is key. However, the project would have benefited from more involvement from former HSFS Pre-earthquake senior medical staff (heads of 5 basic wards).

Where can I find out more?

[CHA Article](#)

[Haiti Hospital](#)

[Hospital construction](#)

[CHA video](#)

Acknowledgements

Beth Carroll - Head of Program

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