



Widelity Case Study

International Construction Management, PCS Tower and Infrastructure

Challenge/Opportunity

Evaluate early planning, RF network design and selected tower systems and locations in support of site acquisition, site prep and tower / infrastructure construction based on pre-established planning. Construction manager to utilize customer based resources as much as possible to limit costs while managing East Carribean on island and off island resources in support of required external expertise and cost reduction. Work within cultural norms, international requirements regarding materials and shipping address specific corporate needs and requirements as it applies to existing and sensitive relationships.

Solution

Construction manager experience was a key factor in the success of this project, primarily with experience working in the Carribean Islands and with costs savings and time to completion. The right Construction Manager pays for himself by reducing overall project costs along with timely project completion for bringing systems on line to generate revenue.

The selected construction manager has extensive experience with international construction projects throughout the world and specific experiece working in the Carribean Islands. Excellent experience concerning foundations is key in the construction of telecommunication towers as the site prep, drainage, footings & foundation, soil engineering, subsystem steel, grounding and structural requirements as related to wind load and weight and moment determine if the tower will stand over time. The construction manager was an expert in all these areas as well as in the management of people and establishing the relationships to motivate and drive the project to completion. Additionally, the selected balance of internal, on island and off island resources provided expertise where needed and an opportunity for costs savings. There were several areas which one would expect to find cost savings that would prove to be wrong. See Benefits for key examples.

Benefits

Key Benefits include several categories. These include cost saving in materials, improved labor resource management and vendor management driving delivery and quality. Examples of this projects success include:

Steel supply and fabrication associated with tower foundations. Normally one would expect that local suppliers would have the most competitive pricing. The Construction Managers experience led the project to international suppliers that were able to



prefabricate structural steel rebar for the foundation and ship it to the island in less time at an overall cost savings of greater than 75%. This equated to a total cost savings of over \$90,000.00 on the first 12 sites alone.

Concrete forms: There are no on island companies with reusable concrete forms for setting the foundation. This results in the one time use of lumber materials and five days of crew labor in building each form. The construction manager purchased and shipped in reusable concrete forms. This resulted in a labor and materials savings of over \$40,000.00. Additionally, the local concrete companies are offering to purchase the concrete forms after the completion of the project. This will return an additional \$30,000.00 to the project budget. The resulting savings were not only over \$70,000.00 but a time savings of 4 working days per site which shortens the overall project timeline by 48 crew days on the first 12 towers alone.

Overall planning, on island and international coordination of vendors, contractors and suppliers is the primary driving force behind cost savings and timely project completion.

Smaller countries, especially tropical island countries are used to doing things at their own pace with the same people all of the time which in most cases tends to be slower and more costly as they are not apt to put pressure on their people, local contractors or local suppliers to meet scheduled dates and quality standards. It is a standard reality, in such markets, that the local employees and local contractors will listen to and follow an outside consultant's advice and demands faster than they would for a local manager, therefore a consultant can demand more from their people (within reason) and get it.

Using an outside consultant to manage the project rarely adds cost to the overall project, as normally the initial cost savings results from upfront planning, bidding and material ordering stages will cover the consultant costs. However, there are much larger savings in the long run due to their ability to better coordinate and shorten the overall time duration it takes to complete the project. A project allowing the owner to have their project completed in a much shorter time which can get revenues generated much earlier reducing overall project costs and beginning revenue generation to improve project ROI.

In quantitative terms, the Construction Manager provided a savings of over \$300,000.00 in the construction of the first 12 towers in a six-month period based on planning completed prior to hiring the Construction Manager. Additional cost savings resulted in timely completion and allowing for early activation of each site to begin providing customer services and generating revenue. The use of an experienced Construction Manager for this project resulted in savings that covered all the costs of the Construction Manager and provided additional project savings, reduced costs and earlier revenue generation.

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