# How We Estimate \$100M For The Construction Of An Elevated Hangar

Also solved flood-damage problems for an international airport in Louisiana





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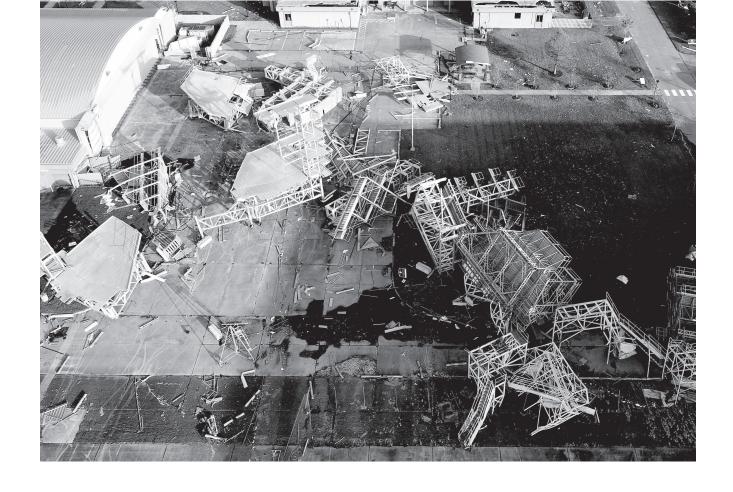


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### Project Background

Our client was a public adjuster hired on retainer by an international airport based in Louisiana.

The airport suffered heavy losses when Hurricane Laura and Delta hit the region in 2020. Both storms resulted in catastrophic damages to the airport's major hangars and this created a slew of issues for the airport administration.

While waiting for the repairs of the damaged hangars, the airport would need temporary facilities to house the planes stationed there.

#### MAIN ISSUE

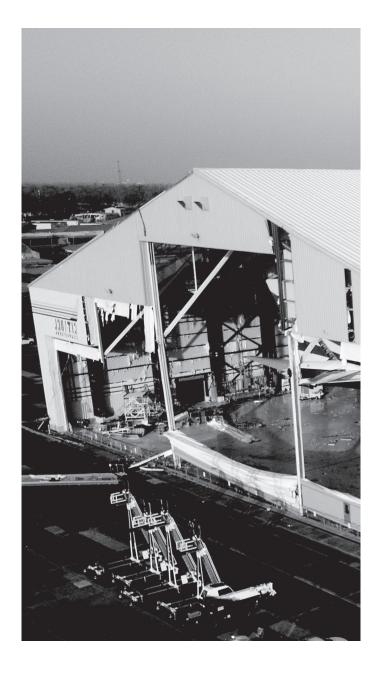
# **Before Mission PLC**

Our client delegated the task of creating an estimate to build a 231,000 square foot temporary hangar. Based on new FEMA flood guidelines, the structure has to be elevated 10 feet. The estimate was a daunting task. The weight of the red iron structural steel, soil compaction rates, and the water run off handling are some of the calculations that had to be completed to have an accurate estimate.

The client had initially contacted a third-party expert to look into the scope and cost of building a temporary hangar that would fit the international airport's needs. They declined to take on the project of creating an estimate.

The expert found it difficult to thread solutions to the multitude of issues that arose from the project. It was not just any normal or straightforward new build.

They needed professionals who could be on-site to look at the direct expenditures and anticipate what other expenses would arise, especially since the new temporary hangar would have to contend with limitations and challenges such as:



- Moving the location of a temporary hangar (while the old and damaged ones were repaired), which entailed that new flood plain requirements had to be brought into consideration. The hangar would need to be elevated at a certain height to safely be above any flood water that might cause water damage should flooding from storms and hurricanes ever flood the area.
- Accounting for soil compaction rates and the depth of the concrete needed to withstand 250,000 tons, which is the typical weight of a single 747 airplane.
- Prinding a solution to manage the water runoff resulting from the elevation of the hangar.

#### **OUR METHODOLOGY**

## **How Mission PLC Helped**



Despite this herculean task, Mission PLC saw an opportunity to showcase their years of experience and expertise in inspection and estimating.

We took on the challenge of solving the cost dilemma of the temporary airport build by meticulously examining every phase of the build, all from the ground up.

First, this meant that the Mission PLC team had to research and study the **local Louisiana code requirements** for how far apart the structural beams had to be placed as well as code for the general building andconstruction of the temporary hangar.

Due to new FEMA flood requirements, Mission PLC brought out the solution of **elevating the hangar at 10 feet** to be safely above any significant water damage during a storm. At the same time, the hangar had to be **accessible to massive jets** that would park inside.

As a solution, Mission PLC proposed to **create a sloped elevation** so that jets of various sizes could safely move up and inside the structure.

To solve the weight capacity issues of the structure, Mission PLC reps also had to accurately estimate for the finer details, such as the **correct tonnage of steel** to be used in giant I-beam structural supports as well as ceiling joist I-beams.

And lastly, to account for the water runoff from the elevated hangar, the Mission PLC team opted to **construct catch-basins** (retention ponds) positioned in the center of the taxiway. The retention ponds would hold and manage the water through a series of pumps and flood gates for the entire airport. They also will provide an exit pathway of all the water runoff from the elevated hangar.





#### **WINS**

## Results

After weeks of on-site inspection, Mission PLC was able to provide a detailed estimate of the new build that covered all the necessary bases to construct a safe, durable, and flood-proofed temporary hangar for the Louisiana airport.

Our estimates totalled approximately \$100 million. We submitted a detailed report to 2 third-party experts who unanimously approved and agreed with the estimate.

Subsequently, our estimate was also deemed complete and accurate enough to be submitted to the Federal Emergency Management Agency (FEMA) for evaluation and approval.



# WE ESTIMATED MORE THAN \$3 BILLION IN DAMAGES.

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