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Vested For Success Case Study

I-35W Saint Anthony's Bridge Case Study How the Minnesota Department of Transportation Turned the I-35 Bridge Tragedy into Triumph

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The world held its collective breath during rush hour, August 1, 2007, as Minnesota's Bridge #9340, also known as the I-35W Bridge, buckled and then collapsed into the mighty Mississippi River 64 feet below, trapping more than one hundred vehicles. Thirteen people, 8 men and 5 women, died and 145 were injured.

The catastrophic bridge failure resulted in immediate monetary consequences. The Minnesota Department of Transportation (MnDOT) Office of Investment Management estimated the daily cost to motorists at $400,000. The State Department of Economic Development estimated an additional net economic impact of $113,000 daily. And the Minneapolis Chamber of Commerce claimed the daily cost to business exceeded half a million dollars.

Time was of the essence. Minnesota Governor Tim Pawlenty challenged MnDOT to complete a replacement bridge within 18 months. Considering it typically takes that long (or longer) just to identify the scope of a project the size of the I-35W Bridge, MnDOT approached the rebuild in a radically different way. Within 18 hours of the tragedy, stakeholders met to decide how to proceed. MnDOT decided to employ a rarely used law (Minnesota Statute §161.3410) that granted authority to use a *best value* approach versus the conventional cost plus lowest bid approach. MnDOT set out to find the right partner – a contractor that accepted the aggressive goals, understood the sensitive nature of the Project, and brought unique skills to the table.

Laying the Foundation – Getting to We

A progressive approach known as Design-Build or Construction Management At Risk was selected. The method enables construction to begin even while architectural drawings and approvals are in process. Using a combination of Best Value and Design-Build, the plan stimulated speed of project delivery, design flexibility, and construction innovation.

MnDOT selected Flatiron Manson, a joint venture between Flatiron Constructors, Inc. and Manson Construction Company, as the contractor and architect Linda Figg of Figg Engineering. Jon Chiglo, MnDOT Project Manager, and Peter Sanderson, Flatiron Manson Project Manager led the team to mutual goals and commitment to the rebuild. The collapse damaged public trust and confidence about MnDOT's ability to provide appropriate safety. The nature of the tragedy demanded sensitivity as well as haste. Everyone agreed "business as usual" was not an option.

Chiglo and Sanderson steered a tight ship, setting the standard for collaboration and candid conversation. They used a framework that fits neatly into the Five Rules of Vested to ensure the infusion of flexibility, accountability, quality, communication, and safety throughout daily activity.

Together, the team triumphed when the new state-of-the-art I-35W ST. Anthony Falls Bridge was opened for traffic ahead of schedule. The 1,223-foot span bridge was the Grand Prize Winner from America's Transportation Awards for "representing the best in innovative management, accountability, and timeliness and won numerous other awards.

What were the secret ingredients to architecting a contract that drives the right behaviors? In short, MnDOT and Flatiron Manson established a business agreement where both parties have a Vested

interest in each other's success. They are most successful when they are both successful. Their secret sauce, per se, involved constructing a business agreement that rigorously adheres to five key rules – or tenets. Each of the five rules is explained below.

Rule 1: Focus on Outcomes, Not Transactions

While MnDOT could not legally relinquish total control to a contractor, Chiglo knew MnDOT would need to leverage an outcome-based approach if they were to meet the challenging cost and time objectives. The agreement was a unique hybrid that granted wide latitude for big picture issues and detailed instructions regarding necessary requirements such as safety.

Big picture outcome thinking enabled MnDOT to focus on outcomes – not activities. MnDOT limited its list of primary objectives to six categories – safety, quality, schedule, environmental compliance, budget, and aesthetics. Within these objectives, MnDOT granted substantial autonomy and flexibility to Flatiron Manson to determine how to design a bridge that met the desired outcomes. MnDOT stipulated geometric layout, environmental and drainage requirements, and a deadline for completion of December 24, 2008.

It was Flatiron-Manson's job to choose bridge and wall types, propose geometric solutions to correct substandard elements, and develop visual quality components. When a contractor makes basic design decisions like this, they also accept basic responsibility for the design. They are no longer entitled to change orders based on quantities or design conflicts.

Rule 2: Focus on the What, Not the How

Final contract language could not be clearer that it was Flatiron-Manson's responsibility to make and take ownership for major decisions. Clause 5.1 reads, *"Control and Coordination of Work – Contractor shall be solely responsible for and have control over the construction means, methods, techniques, sequences, procedures, and Site safety, and shall be solely responsible for coordinating all portions of the Work under the Contract documents, subject, however, to all requirements contained in the Contract Documents."*

Clearly, Flatiron Manson shared in the risk for successful completion. Provisions like this exemplify Vested partnerships and encourage innovation.

Rule 3: Clearly Defined and Measureable Desired Outcomes

Because MnDOT made the critical decision to use non-conventional Best Value and Design-Build approach, it was incumbent upon the agency to make certain the bidding process was fair and transparent. The exhaustive, upfront work was worth the effort because it led to extremely clear expectations for the desired outcomes. The technical scoring and priorities were clearly identified, which provided an even playing field as well as the blueprint for measurement once the contract was awarded.

The bid process clearly spelled out MnDOT requirements for how they would determine best value. For starters, the bidders would need to construct a replacement bridge, below budget and within an

eighteen-month target completion date. MnDOT made it clear cutting corners would not be acceptable, requiring community involvement, quality and safety levels be met.

The Flatiron Manson proposal demonstrated the firm understood the Project priorities and offered innovation and proven expertise. Under the best value provision, MnDOT selected Flatiron Manson – even though they had the highest price. Interestingly, the firm with the lowest price actually had the worst overall score due to its low technical competencies and lack of significant public engagement.

Rule 4: Pricing Models with Incentives

Pricing a project the size of the I-35 bridge project can be contentious. After all, who will bear the risk? MnDOT and Flatiron Manson used a Vested shared risk/shared reward philosophy. As a base, the agreement relied on a firm fixed price base contract $233,763,000. The fee represented MnDOT's maximum cost liability and the only guaranteed payment for the contractor. However, MnDOT incorporated a savvy contract provision concerning certain unknown, potentially pricey situations. For example, the site included an old coal plant and creosote. Neither MnDOT nor Flatiron knew the condition of the soil and abatement required. MnDOT accepted the risk and cost associated with soil contamination and, thus, saved the inflated pricing that would have been requested otherwise.

With risk balanced fairly – the parties turned to incentives to further align interests. A key incentive was speed. Time was money. A "cost" of $200,000 per day was assigned for project duration. If the bridge opened prior to deadline, Flatiron Manson would earn $200,000 for each day saved. If the Project exceeded the deadline, $200,000 per day would be deducted from Flatiron's earnings. Flatiron Manson was willing to accept the risk because it was confident their professional experience would prevail to earn incentives and increase their profit. The incentives prompted the firm to work around the clock, which meant good jobs and extra pay for workers. As long as safety and quality remained high, it was a win for everyone concerned.

More opportunities for bonus payments and incentives were available in areas of quality, safety, and exceeding expectations. As Flatiron Manson achieved cost savings, they shared in the savings as long as they came under the agreed upon $234 million.

Rule 5: Insight versus Oversight Governance Structure

This project differed from others. Political and moral forces were at work, shining a spotlight on each and every move that was made. Sometimes, it felt more like a goldfish bowl than a regular construction site. Flatiron Manson determined early to "get it right the first time." Flatiron Manson hired additional staff to ensure the safety and quality components of each day's efforts. Keeping the emphasis on safety and quality ensured orderly, constant progress to goal, early Project completion at below target price. Having confidence that regular, standard inspection and reporting was routine diminished MnDOT's need to perform extensive oversight.

Confidence that the basics were under control allowed the parties to move beyond oversight and into a relationship that provided deep insight into how to solve tough problems. Non-stop collaboration within a proactive, team environment became the norm. MnDOT officials moved their offices to work side-by-side with contractor personnel, creating opportunity for constant conversation and immediate problem solving. It was an example of peer-to-peer relationships on steroids, with an extensive over-arching framework that prioritized and streamlined multiple regulations and governmental oversight.

The hyper-collaborative effort was a huge success for a project as complex as the I-35 Bridge. Surprises came on a daily basis, and when they did Peter Sanderson conferred with Jon Chiglo as often as eight to ten times a day. Sanderson explained simply, “It’s the walk as opposed to the talk. Right from very beginning, when we had quality problems, we called MnDOT right away. This is the problem. This is what we’re going to do about it. We were proactive. We made sure we didn’t hide anything. Mistakes were made. We rectified them. We fixed it straight off the bat.”

Resisting “business as usual” also helped. "On a traditional job, when there are issues out in the field, typically the contractor comes to MnDOT and says, 'What do you want us to do?” said Terry Ward, MnDOT's deputy manager for construction of the bridge. "On this job, when issues come up, we get together in a room and we talk about it -- from the construction side, from the design, from our side -- and we resolve it."

Vested For Success - The Results

Together, MnDOT, Flatiron Manson and FIGG triumphed when the new state-of-the-art I-35W St. Anthony Falls Bridge was opened for traffic ahead of schedule saving taxpayers millions of dollars. The job was finished 90 days early, earning a Flatiron Manson a tidy sum of $25 million in incentive payments – 92 percent of the incentive pool.

The 1,223-foot span bridge was the Grand Prize Winner from America’s Transportation Awards for “representing the best in innovative management, accountability, and timeliness as well as winning many other prestigious awards.

Challenging the status quo paid off. The move from conventional low price and design-bid-build to the progressive best value, design-build approach paid huge dividends. Not only in cost and timesaving, but also innovations and break-through technologies MnDOT utilizes regularly on other projects. The collaborative partnership between government and private industry proved clearly that a Vested approach works to gain results and save taxpayer dollars.

Acknowledgments

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For More Information

Visit the University of Tennessee's website dedicated to Vested Outsourcing at www.vestedoutsourcing.com where you can download white papers, watch videos, read articles and subscribe to our Vested Outsourcing blog or register for one of Vested Outsourcing classes.

We encourage you to read our other books:

The Vested Way: How a "What's in it for WE Mindset" Revolutionizes Business Relationships (Palgrave Macmillan, 2012)

Vested Outsourcing: Five Rules That Will Transform Outsourcing (Palgrave Macmillan, 2010)

The Vested Outsourcing Manual: A Guide for Creating Successful Business and Outsourcing Agreements (Palgrave Macmillan, 2011)

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Kate Vitasek is an internationally recognized innovator in the practice of supply chain management and outsourcing. Named as one of World Trade Magazine's "Fab 50" people influencing global trade, Vitasek's approaches and insights have been widely published in over 300 articles and four books. She is a faculty member at the University of Tennessee's Center for Executive Education.

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