



G2 Designed Retention Wall Holds as 2,000 Tons of Brick Implode Upon It

TROY, MI, August 5, 2015 -- By design, G2 Consulting Group, one of Michigan's fastest growing engineering firms, was one of the first contractors to begin work at the new Red Wings Arena site in downtown Detroit. Their assignment: to design and build an earth retention wall to maintain stability of the 500x600-foot area underneath the arena floor.

As a result of their early start on the project, and their over 20 years experience in major construction projects nationally, G2 Consulting was asked to perform an analysis of the retention wall it had designed and built under the massive arena to confirm that it would be able to withstand the loading of the Park Avenue Hotel after its implosion in July. In other words, the company's project engineers had to analyze the security of their own project to verify that it was up to a task different than the one it was originally intended to perform.

This was a critical task in more ways than one. First of all, the implosion of the historic 13-story Park Avenue Hotel immediately adjacent to the construction site was not part of the original construction plan. It was added when the Detroit City Council approved demolition of the building after original construction plans for the arena district had already been approved. Supporting the shock and weight of a falling building was an added starter and G2's analysis of its own project was central to being able to conduct the implosion.

Imploding the building rather than simply tearing it down through standard building demolition techniques, saved both time and money and kept the project on schedule.

"This was a tricky and difficult assignment," says G2 Consulting Partner Mark Smolinski. "We designed the retention wall to support a relatively stable environment, one that we could closely monitor throughout the entire construction process and beyond. But dropping a literal 2,000 tons of bricks all at one time from as high as 13 stories put a whole new kind of strain on the system and we had to know that our wall could accept it.

"After our analysis we were confident that it *would* handle it but it's much better when you're able to say with authority, 'It *did* handle it.' It was a tense couple of days getting ready for that implosion but it will help to keep the project on time to meet the target completion date in time for the drop of the puck for the '17-'18 season. This is Hockeytown after all!"

Working with Hardman Construction, subcontractor to lead contractor Barton Malow-Hunt-White, G2 is responsible for design of the earth retention systems for this massive excavation. Because construction is occurring in an urban environment, protection of underground infrastructure is critical. G2 is proud to be a part of this professional design and construction team for this iconic Detroit project.



About G2 Consulting Group:

G2 Consulting (G2consultinggroup.com and twitter.com/G2_consulting) is a geotechnical, geoenvironmental, and construction engineering firm that has delivered thousands of telecommunications, land development and civil infrastructure projects for two decades across the United States. Based in Troy, Mich., G2 also has offices in Ann Arbor, MI and suburban Chicago, Ill.

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