

SEP 26 2012

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BIG PROJECTS, INTERVIEWS

## THE BIG DIG: "INFRAECTURE" - BLENDING INFRASTRUCTURE AND ARCHITECTURE

Today, we continue digging into the Big Dig. As Collaborative Services continues to explore communications for Big Projects and how they come to be and how they are communicated, we once again look into a Boston transportation project that still sparks spirited debate six years after its completion because of its cost – \$24.3 billion, including debt service – and its scope.

The Big Dig is still a Big Deal.

Today, we hear from an architect on the project, M. David Lee, a partner with [Stull and Lee Inc.](#), a Boston-based architectural and planning firm. He was the Principal-in-Charge for Stull and Lee's role in the award-winning design of Vent Building No. 7 for the Central Artery/Tunnel Project, the technical name for the Big Dig. He has strong, spirited opinions about the project, which he voiced in 2006 in this [CommonWealth Magazine](#) article, "[Learning from the Big Dig.](#)"



Construction of the Big Dig  
(Credit: David L. Ryan, "The Boston Globe")

And he continues to have passionate views on the subject of Big Projects. The stakes are high, he asserts. If the public loses faith in the government's ability to create the path to build high-quality Big Projects, then Big Projects won't be realized. And we may have reached that tipping point, he fears.

So yes, the Big Dig is very much a Big Part of the Big Picture when it comes to our nation's ability to move forward with large-scale projects.

We welcome Mr. Lee's insight:

**You worked on the design of the Central Artery Vent Building Number 7, at the Ted Williams Tunnel. Could you describe that project, and your role a bit?**

Stull and Lee, Inc. was part of the coordinating architectural and engineering team led by the joint venture of the The Bechtel Corporation and Parsons Brinckerhoff. In that role, we were the initial designers of Vent Building 7 through preliminary engineering. Final design and engineering was handled by the TAMS company engineers and architects.

**Did the project pose any unique challenges?**

Vent Building No. 7 was one of several such structures built to provide ventilation to the highway tunnels. On a much smaller scale dimensionally, my firm (Stull and Lee Inc.) designed two ventilation structures for the [Massachusetts Bay Transit Authority's \(MBTA\) Orange Line](#) transit subway tunnels. With these buildings, roughly the size of a Boston row house, the unique challenge in design was how to integrate them into a dense, historic residential fabric.

In contrast, Vent Building No. 7 is several times the size of the Orange Line ventilation structures. Its location on the spacious airport property meant that its design was freed of the constraints on the fine-grained historic fabric which drove much of the thinking about the Orange Line buildings. That said, because of the enormous scale, cost and visibility (thousands of air travelers taxi by this building every week) of this structure, we felt that our charge went beyond meeting its functional requirements to celebrating its status as "civic" design in the best sense of the precedents set by the wonderful bridges, dams, roads and public buildings built in the [Works Progress Administration \(WPA\)](#) era. In fact, I coined a term "infractecture" to describe what we were reaching for.



MBTA's Vent Building on Yarmouth Street

The unique challenge in our view was to find an architectural language using massing, form and materiality that fulfilled necessary engineering parameters but was also visually expressive, well proportioned and detailed without going over the top from a cost perspective. In pursuit of that objective, we, along with TAMS' engineers and architects, exploited opportunities to break up the massing and use formal language such as the sloped end caps on the vent stacks combined with careful attention to the selection and proportioning of the principal components such as the louvers and rain screen cladding. The objective was to produce a building that while clear about its purpose went beyond being simply utilitarian.



Central Artery Tunnel Ventilation Building No. 7  
(Credit: Ryan Iron Works, Inc.)

**Who were stakeholders involved in the project you worked on?**

The primary "stakeholders" in the case of this project were the [Massachusetts Highway Department](#), the [Federal Highway Administration](#) and the [Massport](#) (the airport) and by extension the airline passengers who would view this building as they taxi past.

**What was the timing of their involvement? What worked best for that involvement?**

Stakeholder involvement really came down to the negotiation between design, engineering and cost considerations. Truly an interdisciplinary effort, each discipline shaped the final result.

Ventilation structures the size of several houses – that is definitely an amazing accomplishment!

Part II of our interview with Mr. Lee continues later this week as he describes how project evolve over time and why keeping stakeholders engaged throughout the process is important.

**Mike Stetz, Senior Writer**

Collaborative Services, Inc.

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BIG PROJECTS, INTERVIEWS

## THE BIG DIG: WHOSE PROJECT IS IT ANYWAYS?

Is San Diego's Petco Park a downtown ballpark or a regional asset? How about the Inner Harbor in downtown Baltimore? Local or regional? Or, Staples Center and the L.A. LIVE entertainment complex in downtown Los Angeles?

When Big Projects are debated, it's hard not to focus on where the most immediate impact – positive and negative – will be. That zoomed in focus can cause the communications strategy to be zoomed in, too. The risk – a miss of the regional story that could be told.

How'd that work for the Big Dig? In part two of our interview, M. David Lee from Stull and Lee, Inc. describes his take on the communications strategy for the project and the opportunities to reach farther and broader both for the good news and tough news. We welcome his insights:

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### **What if you could do over, would you change about the involvement process?**

In terms of what I would do over relative to the involvement process, I would double down on my previous observations in the article for *Commonwealth Magazine*. The public at large should have been engaged in the enormity of the challenges and the considerable opportunities the Central Artery/Tunnel Project represented from a city building perspective. In the final analysis, I think it was viewed too much as a "downtown" project of interest primarily to the immediate abutters of the Greenway, as opposed to a broader regional civic improvement or even "beautification" project with collateral benefits far beyond the downtown for employment and economic development.



Rose Fitzgerald Kennedy Greenway

**And, what advice would you recommend for stakeholder involvement on large-scale projects like the Big Dig?**

It should have been promoted at the scale of the grand WPA projects which it certainly matched in ambition, if not narrative. That narrative should have started with school kids who would have been brought into the process to see it unfold in parallel with their own lives.

Unfortunately, it got bogged down too narrowly around cost, resulting in cost reductions that in many cases were more symbolic than substantive.



Works Progress Administration Poster

**In your 2006 commentary on the Big Dig featured in *Commonwealth Magazine* you said that you felt the public should have been engaged from the first moment of the project and made to feel a sense of ownership. Now six years later, do you still feel this way? Have you seen the public's opinion change in the past six years now that they have had more time to experience the Big Dig as a final product?**

Six years later the Central Artery/Tunnel Project suffers in the public's image as a result of unfortunate occurrences including loss of life as a result of ill-advised construction details, execution, and in the underwhelming (in my opinion) visual qualities of certain aspects of the final product. Like most designers (admittedly with some self-interest), I pine for things that were on the table but not executed.

**The public sector often gets a bad wrap. How can the public sector more positively promote itself when it comes to infrastructure projects that often take a long time to design and construct but provide a necessary improvement once they are complete?**

In terms of the public sector's bad rap, as a nation (and I believe that it is evident in the current presidential election), we have demonized the value of the public sector to the extent that we no longer have the ability to craft a compelling narrative around a large inspiring vision for building in the public realm. I believe that on a national scale, we need to demand (and be willing to pay for) more, not less, from the public sector. There is no reason why this cannot be accomplished with bipartisanship utilizing creative public-private partnerships and innovative marketing strategies that build the case.

**How has the Greenway been an additional opportunity for the public to see the benefit of the Big Dig after years and years of drawn out construction and billions of dollars spent? Have you seen a shift in public opinion about the Big Dig since the completion of the Greenway?**

The benefits of the Greenway continue to unfold each year as it becomes a more vibrant place. It is worth remembering though, many of the truly great public spaces evolved over decades. There is still time.



Os Gemeos Mural at the Rose Fitzgerald Kennedy Greenway

**When projects need to scale back and cut costs, some of the first items to go are public art, landscaping, and other aesthetic elements like the Greenway. How do these elements contribute to the overall success of a project and why is it so important that they aren't cut from the budget?**

In the final analysis, too often, the low-hanging fruit when it comes to cost cutting is art, landscaping and "aesthetics." These are usually not big-ticket items but they are the things that the public engages and embraces the most (or not). In the short run, purging such things may seem responsible, but they risk becoming "fools gold" in the long run.

Thank you Mr. Lee. The Big Dig shows that Big Projects are more than Big Investments of time and money. Big Projects also require the investment of people's energy and imagination. Big Thinking. Urban planners, engineers, architects and contractors can invest years of their careers involved in such bold works. Big Projects bring Big Hopes as well, so much emotion rides on their unfolding.

**Mike Stetz, Senior Writer**

Collaborative Services, Inc.