OF HIGGS AND HIGHWAYS

WITH A SINGLE brief announcement on July 3, Rolf-Dieter Heuer marked the end of years of trials and tribulations. “I think we have it,” the director general of the European Organization for Nuclear Research said in announcing the discovery of what is believed to be a subatomic particle that could be the long-theorized but previously undetected — Higgs boson, or “God particle.”

The discovery would be one of the major scientific achievements of the last 50 years. It was accomplished at the Large Hadron Collider, a $10 billion facility with a 16-mile circumference built on the France-Switzerland border.

President Obama may have had a similarly pithy comment when he signed the Moving Ahead for Progress in the 21st Century, or MAP-21, legislation on July 6. The signing was the coda to an interminable 30-month period in which funding was maintained in a hand-to-mouth series of nine successive extensions after the September 2009 expiration of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users.

I view both results against the backdrop of the recent conflict over the intended monument for Dwight D. Eisenhower. The effort to honor the 34th president and supreme commander of allied forces in Europe led to an unusual war of words between Eisenhower’s grandchildren and Frank Gehry, one of the nation’s foremost architects.

Decades before the nation had “No Drama Obama,” it had a relatively “boring” Eisenhower administration. Two lasting legacies from an eight-year presidency generally devoid of crises were the interstate highway system and a renewed focus on basic scientific research. Both were driven by Eisenhower’s sense that national defense mandated a strong, government-funded foundation.

During World War II, Eisenhower had seen how military logistics required a highway network. After Sputnik’s launch in 1957, there was a national resolve to improve scientific research and education. He ensured significant funding for both, although they were historically viewed as pork barrel politics.

The European Organization for Nuclear Research, known as CERN, has continually addressed this traditional skepticism on its Web site by describing fundamental science “where new ideas and methods begin that later become commonplace from the electric light, which originated in 19-century curiosity about electricity, to the World Wide Web, invented at CERN to allow international teams of particle physicists to communicate more easily. No amount of applied research on the candle would have brought us the electric light; no amount of R&D on the telephone would have brought about the Web. Science needs the space for curiosity and imagination.”

Could this discovery have been made in the United States? The Superconducting Super Collider was intended to be the world’s largest collider, almost twice the size of the Large Hadron Collider. Construction on the Texas complex began in 1991, but by 1993, cost estimates increased from $4.4 billion to more than $12 billion. Congress canceled the project later that year after $2 billion had been spent.

Myriad explanations were offered. Like many transportation projects, cost overruns and poor management plagued the Superconducting Super Collider. Many believed, however, that the Soviet Union’s demise obviated the need to continually prove the supremacy of American scientific expertise. The result was CERN’s ascendance.

Also in 1993, the federal fuel tax was increased (for the last time) to ensure the Highway Trust Fund’s future solvency. Only two years earlier, the passage of the Intermodal Surface Transportation Efficiency Act of 1991 refined Eisenhower’s vision of a national transportation network by recognizing intermodal’s essential role in our nation’s surface transportation system, now a significant part of a global marketplace.

Since then, the national consensus on transportation infrastructure seems to have dissipated, just as it has for basic science. Although MAP-21 passed the House and Senate with large bipartisan margins, the undeniable fact is the legislation has a shorter duration than the combined nine SAFETEA-LU extensions. In Washington’s current brinkmanship (which passes for governance), the bill passed because looming deadlines for construction funding — and student loan interest rates — made inaction politically untenable.

Although the bill also addresses some safety issues, it ignores the fact that the fuel tax is insufficient to support the Highway Trust Fund. The TEA-21 “firewall” is moot because the fund is no longer self-sufficient — and requires funding from the budget. The bill does not seriously address alternatives such as a vehicle mile tax and tolling.

Our nation’s scientific pre-eminence has been compromised. Will our transportation lifeblood continue to be sacrificed, too? National leadership is required for both to flourish and benefit all citizens. Ted Prince is principal, T. Prince & Associates. Contact him at ted@tpassociatesllc.com.

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