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Lab Scientist Assists Artist with High-Impact Technique

By Monica Abeita, Regional Development Corporation for Los Alamos Connect

The work of artist and Santa Fe native Nicola López explores how human-built constructions like cities, buildings and technologies grow organically and become increasingly complex over time.

“Like the biblical Tower of Babel, the complexity is an immense opportunity that becomes more and more difficult to manage,” López said. “There is an element of destruction here, which gave me the idea to use explosives in my works.”

To express this idea artistically, López wanted to explore a new printmaking technique that used explosives to etch metal. She appealed to the New Mexico Small Business Assistance (NMSBA) program, through which the state's small businesses can tap into the scientific expertise of the two national laboratories based here — Los Alamos and Sandia — to overcome a technical challenge at no cost to the business. Help includes testing, design consultation and access to special equipment or facilities.

Given the demonstrated importance of art to the state's economy — especially in Santa Fe — NMSBA agreed to help López and fellow artist Gandalf Gaván. The organization offered the artists the services of LANL scientist Bryce Tappan, who helped them transfer original drawings to copper plates through an explosive impact. The resulting prints are titled *Ideal Structures for a Dubious Future*.

“Art is central to the culture and economy of New Mexico,” Tappan said. “The project helped reinforce the idea that art and science complement and support each other.”

Tappan's assertions were underscored in 2004, when the city of Santa Fe released a study that revealed 40 percent of the dollars spent in Santa Fe by out-of-towners are directly related to the arts and culture — a sector that accounts for 22 percent of the city's jobs. According to that study, the impact of arts and culture on Santa Fe's economy is six times the national average.

Tappan also helped López and Gaván in blast loading welded metal structures. The artists plan to feature the structures and videos of the explosions in upcoming exhibitions. For now, the

explosion can be viewed on the NMSBA website at <http://www.nmsbaprogram.org/news/detail/24>.

Working with Tappan and NMSBA was rewarding for the artists as well. “I had the opportunity to engage with art in a new way,” López said. “Working collaboratively with a scientist informed the work in wonderful ways that I did not anticipate.”

Ideal Structures for a Dubious Future is part of López’s Notes on the Tower exhibition, which runs through Dec. 22, 2012, at the Tamarind Institute in Albuquerque.

Notes on the Tower was part of the annual International Symposium on Electronic Art in Albuquerque in September. The symposium was sponsored by ISEA International, a nonprofit that fosters communication and collaboration among organizations and individuals working with art, science and technology.

The state Legislature created NMSBA 12 years ago to bring national laboratory technology and expertise to small businesses in New Mexico, especially in rural areas, with an eye toward economic development. Assistance takes the form of laboratory staff hours worth up to \$20,000 per calendar year for businesses in rural New Mexico counties and \$10,000 for businesses in Bernalillo County. The total amount of assistance is capped at \$2.4 million annually for each of New Mexico’s two national laboratories.

For more information on NMSBA, visit the organization's website at www.nmsbaprogram.org.

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