

Sandia shares design for testing shelters

Engineers took four days to craft prototype

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SANDIA LABS NEWS SERVICE

Sandia National Laboratories is offering free-of-charge the design and complete instruction manual for building a low-cost, drive-up outdoor shelter that shields healthcare workers conducting COVID-19 testing on its licensing and technology transfer website.

Dr. Cody Saxton of Sandia's medical team said that when a patient is swabbed for COVID-19, the swab must be inserted to the back of the nasal passage. When that happens, Saxton said, a patient's initial reaction is to sneeze or cough, potentially spraying thousands of infectious viral particles.

To help protect medical workers taking samples, Sandia designed and built a clear protective shelter that workers can stand inside while testing patients.

Saxton submitted the idea in mid-March when Sandia's leadership team sent out an open call for ideas for rapid projects to help fight COVID-19.

"I was concerned about the pending personal protective equipment short-



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A team at Sandia National Laboratories constructed a clear protective enclosure to help keep health care workers safe while testing patients for COVID-19.

age, the continued safety of patients and healthcare workers and also wanted to minimize waste from test-

ing," Saxton said. "Testing personnel run a high risk of exposure. The booth design provides safe testing conditions for both the tester and the patient, even if PPE resources dwindle."


In just four days, a team of engineers from Sandia's Advanced Materials Lab led by Michael Gallegos and Derek Reinholtz ordered materials and designed, constructed, tested and completed two shelters.


The enclosures are made of aluminum frames, acrylic panels, voice-activated radios and arm-length rubber gloves that enable a healthcare worker to swab a patient while standing inside the shelter. The unit also has a ventilation system that maintains positive pressure inside the box to further protect the worker.

"I think this project really demonstrates the team's commitment to mission and the innovative spirit to really make something happen," said manager James Carney.

Sandia is currently working on more than 50 projects to help fight COVID-19. These projects include research and development in engineering, biological sciences, high-performance computing and computer modeling, materials science, nanoscience, technology transfer and other disciplines.

THE MARKETS

DOW 25,890.18  -396.85

S&P 500 3,145.32  -34.40

NASDAQ 10,343.89 