

# Design and construction of a state-of-the-art facility for the Rhode Island State Health Laboratories



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CATEGORY: **Epidemiology and Laboratory Capacity (ELC)**

The Rhode Island State Health Laboratories (RISHL) used Epidemiology and Laboratory Capacity for the Prevention and Control of Emerging Infectious Diseases (ELC) funding to move forward with the planning and construction of a new facility. The new facility will promote partnerships, expand capacity, and help modernize data and information technology systems.



## The “What”

In Rhode Island, the current facility that houses RISHL was constructed over 40 years ago and is no longer sustainable due to the aging building support systems required for safe and efficient laboratory functions. RISHL is a consolidated laboratory that includes testing for biological, environmental, forensic, and clinical toxicology services for a wide variety of programmatic needs at the Rhode Island Department of Health and federal partners. The continued expansion of laboratory testing services over the years has strained the current facility’s ability to support equipment and staff space and functional needs. The COVID-19 pandemic highlighted the needs for RISHL to rapidly scale testing capacity and implement emerging technologies for disease surveillance. Prior to the pandemic, laboratory management conducted feasibility studies to identify right-sizing of the facility and options for modern, flexible design to meet future laboratory testing needs.

The ELC one-time supplemental construction award allowed the RISHL management team to move forward with the selection of a developer, design, and construction contractors.



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## The “So What”

One unique aspect of the development project for the new RISHL facility is that the chosen developer will also be constructing private laboratory space within the larger building to allow for efficiencies of laboratory support systems and provide partnership opportunities with industry and academic laboratories. RISHL will occupy the first 2.5 floors of the building and the remaining 5.5 floors will include shared common elements and private laboratory space. For example,

**This will ensure that RISHL stays on the forefront of public health laboratory science across biological, environmental, and forensic analytical domains.**

Brown University has provided a letter of support committing to utilization of a portion of this available space. This design concept provides unique opportunities for RISHL to partner for the implementation of new technologies and approaches to laboratory testing and data analysis. This will ensure that RISHL stays on the forefront of public health laboratory science across biological, environmental, and forensic analytical domains.

Since the fall of 2022, the design team has been working to ensure the RISHL facility optimizes the space, equipment, laboratory support functions to meet current needs along with future flexibility. The facility will provide about a 20% increase in usable laboratory space over the current RISHL building. This will allow for optimization of laboratory workflows and expansion of new technologies including genomic sequencing and wastewater. RISHL has also planned for flexible use spaces that would allow for surge laboratory capacity for emergency testing needs.

## The “Now What”

While RISHL is still very much in the process of design and construction of the new facility, we continue to keep an eye to the future. We are in the process of using this project to modernize a variety of data and information technology systems across the laboratories' functions. These include enabling greater connectivity of analytical instrumentation into Laboratory Information Management System, and expansion of Electronic Test Orders and Results systems. These improvements allow for more timely processing and reporting, leading to quicker disease intervention response times and other public health actions.

Ongoing needs for the project are focused on future maintenance and sustainability of the new facility and support systems. While the new facility will have benefits in enhanced efficiency of all

mechanical; heating, ventilation, and air conditioning; and electrical systems we aim to ensure that ongoing investments are made to maintain these systems to prevent systems failure and future downtime of the facility. The systems in the new facility will also provide a safer working environment for staff.

Beyond the immediate impacts of the construction project, the engagement of RISHL laboratory management with other state agencies, congressional members, and the public through press releases and announcements has helped to raise the profile of the wide range of analytical testing provided by the laboratories. We aim to continue this momentum to identify new opportunities for partnerships and funding sources to continue the investments in the laboratory after this project is complete.

Key contributors to this project include The office of Governor Daniel McKee, Rhode Island Congressional Delegation, The Rhode Island Executive Office of Health and Human Services, The Rhode Island Department of Health, The Rhode Island Department of Administration, The Rhode Island Executive Office of Commerce.