



PROJECT PROFILE

SDSU Animal Disease Research and Diagnostic Laboratory

Building Enclosure Commissioning | Brookings, SD



CLIENT

Cornerstone Commissioning, Inc.
SDSU Facilities and Services

BACKGROUND

The new Animal Disease Research and Diagnostic Laboratory (ADRDL) is the State of South Dakota's only accredited, full service, all-species veterinary diagnostic laboratory. The ADRDL facility is located on the campus of South Dakota State University (SDSU) in Brookings. The project consisted of two phases, including a partial renovation of the existing ADRDL and an addition that housed new laboratory and support facilities. The Clark Enersen Partners served as the architect of record, and McCownGordon Construction was the general contractor. The project was completed in 2019 at a cost of \$58 million.

WJE was retained by Cornerstone Commissioning, Inc. on behalf of the owner to provide building enclosure commissioning (BECx) services for the new Animal Disease Research and Diagnostic Laboratory. As the building enclosure commissioning provider for the project, it was WJE's responsibility to implement the BECx process and, along with the client, to verify that the final product met the owner's project requirements.

SOLUTION

SDSU required that the ADRDL enclosure be designed and constructed to be air tight, water tight, and thermally efficient. Commissioned enclosure systems included air and water barriers, thermal insulation, vapor retarders, joint sealants, fenestration, roofing, below-grade waterproofing and cladding assemblies. WJE performed design phase reviews of the project drawings and specifications and provided review comments identifying areas of performance concerns to the architect and owner for consideration. In addition, WJE developed a BECx plan and a BECx specification and testing regimen intended to verify and document performance of the components of the building enclosure assembly. Submittal reviews were also performed concurrent with the design team.

During construction, WJE responsibilities included participation in preinstallation meetings for various enclosure systems, and implementation of the BECx plan by making regular construction observation site visits. During the mockup, WJE identified concerns with the attachment of the integrated sheathing, which was intended to be an all-in-one integrated moisture, air, and thermal layer. Air infiltration and water penetration testing confirmed that the installation method allowed for air and water leakage, which was corrected before widespread installation.

WJE also witnessed air infiltration and water penetration testing of the curtain wall and storefront window systems to verify performance.

