



# NATIONAL RESEARCH COUNCIL OF CANADA'S ADVANCED MANUFACTURING RESEARCH FACILITY

## ABOUT THIS PROJECT

- + Two-storey laboratory and office building, including 10 modular lab spaces, administrative and support spaces, and a large lunch room.
- + Includes a pilot plant and test labs designed to advance process design, manufacturing systems engineering, and manufacturing life cycle assessment, as well as repair and overhaul research, and house composites and bio-composites.
- + Designed the modular lab space mechanical systems to support tenant fit-up modifications as different research groups utilize the space.
- + Accommodated the modular nature of each lab space by utilizing cap connections that increase or decrease mechanical systems capacity, depending on tenant needs.
- + Utilized full variable control to tie available services from the modular lab spaces into the capacity of the pilot plant to accommodate all research activities.
- + Leveraged lab exhaust contaminant monitoring system to monitor all lab contaminants in the exhaust air and adjust as needed by each research project.
- + Included energy conservation measures throughout the design, such as demand control ventilation in office spaces, a variable air volume fan-coil system with enthalpy wheel, and increased solar heat gain through a high performance roof.
- + Energy model determined 44 per cent energy savings compared to the Manitoba Energy Code for Buildings (MECB 2013) baseline.

**LOCATION**  
Winnipeg, MB

**SMITH + ANDERSEN  
SERVICES PROVIDED**  
Mechanical,  
Sustainability (Footprint)

**KEY TEAM MEMBERS**  
Diamond Schmitt Architects  
Number TEN Architects  
LDA Engineers  
Public Services &  
Procurement Canada

**SIZE**  
83,550 sq. ft. (7,762 sq. m.)

**BUDGET**  
\$25 Million

**COMPLETION YEAR**  
2021

**SUSTAINABILITY**  
Three Green Globes (Shadow)

## HOT BUTTONS

INDUSTRIAL

MANUFACTURING

MECHANICAL

SUSTAINABLE

GREEN GLOBES

DESIGN-BID-BUILD

LABORATORIES

CIVIC



RENDERING COURTESY OF DIAMOND SCHMITT ARCHITECTS