

# ST. EDMUND SCHOOL MODERNIZATION

by CHRISTINA MORRISSEY



St. Edmund School in Edmonton, Alberta has been given a new lease on life following a \$14.9-million modernization that has taken this 1954-year-old building and transformed it into a state-of-the-art school that students and staff can be proud of.

As with most modernizations of this scale, the project (which included the replacement of the roof, mechanical and electrical systems, modernizing the parking space, utility connections, and landscaping) faced a number of hidden challenges, but thanks to a committed team that included Edmonton Catholic School Division, ACI Architects Inc., and Whitson Contracting Ltd., the project is on track for completion in March.

“This project was a complete gut and refurbish ... in fact the only thing that stayed were the foundations and walls,” explains Jade Sawchuk, project manager at Edmonton Catholic Schools, Facility Services. “It’s amazing how we were able to take a very old school and revitalize it to this extent. It is breathtaking when you look at it now.”

For the design of the school, Kevin Osborne and Eddo Cancian at ACI Architects Inc., were asked to join the team and had the challenging task of transforming what was a very typical 1950s’ school and bring it into the 21st century.

“As an existing school with a 50s’ classroom design, we decided we needed to open up as many spaces as we could and bring more light into the building,” says Osborne. “We removed the brick frontage and replaced it with glazing. We opened up the main

entrance and created a two-storey space to allow natural light to penetrate deep into the building. The general office was moved from the back to the front of the building and we reglazed all the stairwells.”

Sawchuk adds that all the corridors have been widened for accessibility and the windows have also been replaced for energy efficiency and now offer great views to the outside.

As is common with most buildings of this age, many of the surprises with the modernization had to do with abatement. “This is an accepted reality of working on schools of this age,” explains Connor Whitson at Whitson Contracting Ltd. “The issue was generally how to physically abate the large areas that were required before/during summer, while keeping enough schedule for the reconstruction behind them.”

The team also had to deal with a building that had three different structural systems. “The original building was wood frame, so we had some additional construction parameters to make the building as fire proof as possible. We re-boarded the entire building with an additional layer of drywall to meet the fire rating. The other piece of the building was concrete block, which received a fairly extensive gut and redo. The last portion of the building was post and beam steel with concrete floors.”

The team also ran into some structural difficulty in the CTS lab as the new air handling unit (AHU) that was placed on the roof was too heavy for the roof structure. “One of the main AHUs placed on the roof required

significant support. The plan was to install 18-metre piles in the middle of a classroom with a headroom of three metres and install four 7,000-lb beams using manual methods. This was one of the most challenging aspects to the project as we had to co-ordinate specialty equipment and contractors,” explains Whitson.

Today, the new structural upgrades for CTS can roughly support four 70-ton tanks in lieu of the new AHU and associated snow loads.

During the modernization the team also discovered that all the existing sewer utilities were 20-feet below slab, plugged, or partially collapsed. “New services needed to be located, tunnelled into place, and connected over summer to maintain school operations,” explains Whitson.

When it came to the mechanical and electrical systems, the school has had a complete electrical and HVAC replacement. St. Edmund has been designed with a 110 KW photovoltaic system and all data servers and service connections have been relocated.

Heading back outside, more space has been given for parking and careful consideration was also given to the drop off area, which ACI Architects relocated to alleviate traffic problems.

Perhaps the most impressive aspect of this project, however, was that all this work was going on while the school was still open.

“The majority of our effort was to come up with phasing plans and then modify them for school occupancy purposes or from existing conditions that changed construction timelines.

## LOCATION

11712 – 130 Avenue, Edmonton, Alberta

## OWNER/DEVELOPER

Edmonton Catholic School Division

## ARCHITECT

ACI Architects Inc.

## GENERAL CONTRACTOR

Whitson Contracting Ltd.

## STRUCTURAL CONSULTANT

RJC Engineers

## MECHANICAL CONSULTANT

Arrow Engineering Inc.

## ELECTRICAL CONSULTANT

AECOM Engineering Inc.

## TOTAL SIZE

4,814 square metres (main);  
3,195 square metres (second)

## TOTAL COST

\$14.9 million

Additionally, the entire project generally coasted and prepared for summer work schedules,” explains Whitson. “In the four months of summer breaks, over 40 percent of the school was renovated – which represented only 15 percent of the project schedule.”

Osborne adds the success of the projects is also thanks to the students and staff who were extremely accommodating and took it all in their stride. “Getting through the phasing, which had to be adjusted three times, and having to take more classrooms away from students and staff but still give them an operating school is something we can all be proud of.”

Sawchuk agrees, adding, “Principal Fernando Runco, along with his staff, have been gracious and accommodating throughout the course of construction at the St. Edmund site. They provided spaces to ensure we were able to carry on and finish all the phases of construction. The positive attitude of the school created a supportive work environment for both Whitson Contracting and ECSD staff.”

As the project now nears completion, Sawchuk says the reaction from parents and teachers, who are all thrilled with the new look St. Edmund Catholic School, is really the best result they could have hoped for. **A**