
ROBERT J. TAIT ELEMENTARY SCHOOL SEISMIC UPGRADE

CONSTRUCTION START:	May 2019
FINAL COMPLETION:	December 2020
PROJECT BUDGET:	\$5.84 Million
FUNDING SOURCES:	Ministry of Education Capital Plan - \$7.59 Million (maximum)
CONSULTANT:	Craven Huston Powers Architects
CONSTRUCTION MANAGER:	Unitech Construction Management Ltd.
PROJECT MANAGER:	Richmond Project Team Enquiries: Frank Geyer, 604-668-6180

BACKGROUND

Robert J Tait Elementary School originally opened in 1955 with renovations and additions in 1965, 1968, 1972, 1976, 1980, 1993, 1998, and 1999 to serve Kindergarten to Grade 7. A comprehensive building envelope upgrade was completed in 2015. School District No. 38 (Richmond) has confirmed that Tait Elementary is needed for the long term as part of the overall long-range strategic planning.

Tait Elementary, which consists of three distinct blocks, was seismically assessed using Version 3 of APEGBC's Seismic Retrofit Guidelines. The entire school has a high risk of liquefaction potential requiring substructure upgrades, with Block 1 (1965 addition) having a Seismic Risk Category H2, requiring a superstructure seismic resistance upgrade.

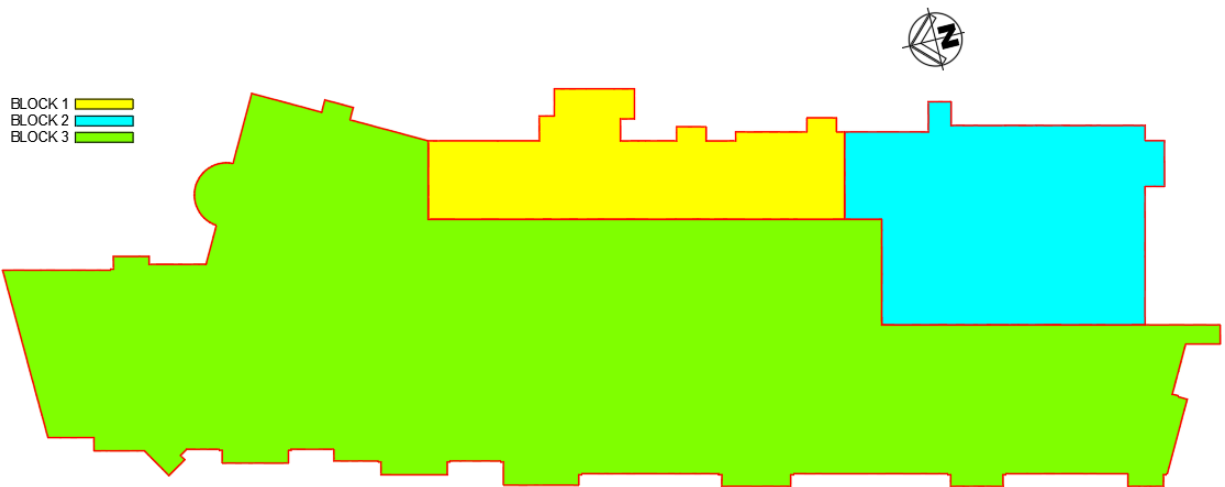
PROJECT SCOPE

- Block 1 (1965 Classrooms) - structural upgrades consisting of: additional shear capacity through new plywood sheathing, blocking and hold-down anchors added in selected locations to existing wood stud walls; vertical reinforcement, grouting and upgraded connections to the roof diaphragm added to concrete block walls in the mechanical room; and plywood sheathing added to the existing timber roof complete with diaphragm chords as required. To mitigate the high risk of liquefaction, structural composite lumber framing and strapping will be added in the crawlspace to reinforce the existing floor diaphragm.
- Blocks 2 (1976 Gymnasium) and Block 3 (1955 Original School, 1980-1998 Additions) - seismic retrofit to achieve a life-safety level for liquefaction mitigation including adding concrete grade and tie beams to the building core as well as reinforcing the existing floor diaphragm by installing strapping complete with structural composite lumber framing.
- Non-structural seismic resistance upgrade to the entire school (added restraint of lighting, HVAC, plumbing and cabinets).
- Restoration of wall/floor/ceiling/exterior finishes and hard/soft landscaping affected by the structural work, addition and demolition.

- Minor removal and replacement of mechanical and electrical equipment to accommodate structural work.

PROJECT STATUS

- Final occupancy: September 2020
- Final project completion: December 2020



Seismic Block Map – Robert J. Tait Elementary School