
JAMES MCKINNEY ELEMENTARY SCHOOL SEISMIC UPGRADE

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| TARGET CONSTRUCTION START: | October 2020 |
| TARGET COMPLETION: | April 2022 |
| PROJECT BUDGET: | \$12.60 Million |
| FUNDING SOURCES: | Ministry of Education Capital Plan - \$12.60 Million (maximum) |
| CONSULTANT: | Craven Huston Powers Architects |
| CONSTRUCTION MANAGER: | Unitech Construction Management Ltd. |
| PROJECT MANAGER: | Richmond Project Team |
| | Enquiries: Steve Ahluwalia, 604-295-7000 ext. 3436 |

BACKGROUND

McKinney Elementary was built in 1965 with renovations and additions in 1974 and 1979 to serve Kindergarten to Grade 7. School District No. 38 (Richmond) has confirmed that Maple Lane Elementary is needed for the long term as part of the overall long-range strategic planning.

Maple Lane Elementary, which consists of three distinct blocks, was seismically assessed using Version 3 of APEGBC's Seismic Retrofit Guidelines. The entire school has a low-moderate risk of liquefaction potential requiring substructure upgrades, with the entire building having a Seismic Risk Category H1 rating.

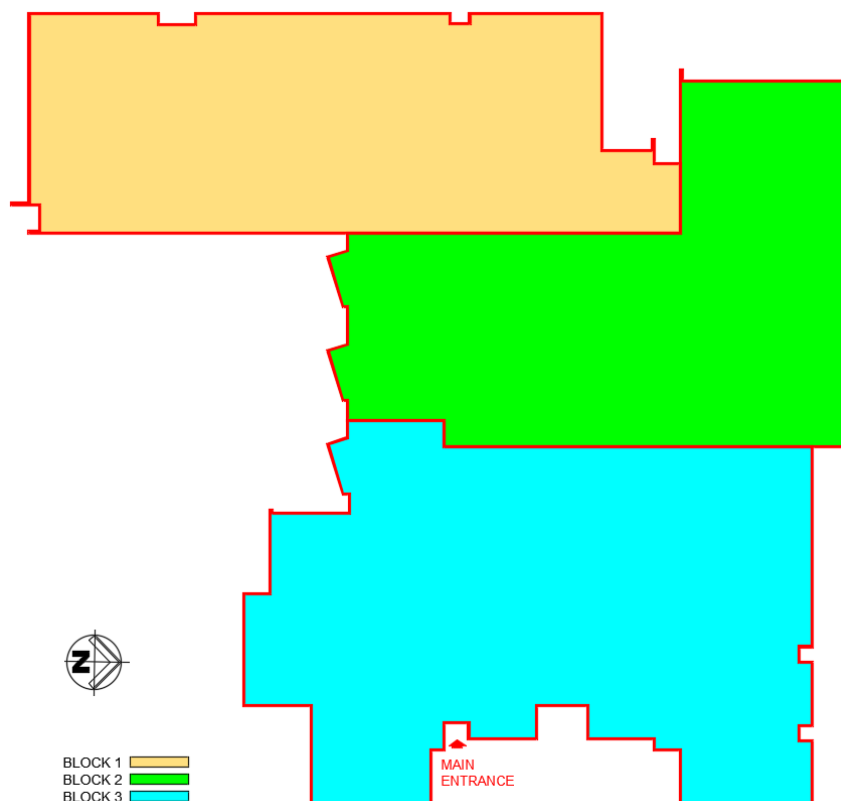
PROJECT SCOPE

- Block 1 (1979 and 1981 Classroom Additions) - structural upgrades to mitigate the high seismic risk consisting of: new plywood shearwalls with hold-down anchors and rods drilled and epoxied to the existing footing; adding new drag/chord members to the underside of the existing roof structure to complete the seismic load path; and connecting reinforced concrete walls to the roof diaphragm using steel angles and epoxy adhesive anchors.
- Block 2 (1974 Central Classrooms and Gymnasium Addition, 1979 West Wing Classroom Addition) - structural upgrades to mitigate the high seismic risk consisting of: new plywood shearwalls with hold-down anchors and rods drilled and epoxied to the existing footing; adding new drag/chord members to the underside of the existing roof structure to complete the seismic load path; and where uplift resistance of footings is in sufficient, install new helical piles.
- Block 3 (1965 Original Classrooms and Administration, 1981 Classroom Additions) - structural upgrades to mitigate the high seismic risk consisting of: new plywood shearwalls with hold-down anchors and rods drilled and epoxied to the existing footing; adding new plywood to existing roof structure with new drag/chord members to increase diaphragm capacity and to complete the seismic load path and where uplift resistance of footings is in sufficient, install new helical piles.

- Non-structural seismic resistance upgrade to the entire school (added restraint of lighting, HVAC, plumbing and cabinets).
- Replacement of sanitary drainage in Block 3 washrooms to meet current codes.
- 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. The ventilation system will be upgraded to meet current building code requirements for air quality.

PROJECT STATUS

- The Ministry of Education approved the project in February 2020, funded from the Seismic Mitigation Program.
- Building construction in the north-eastern portion of the building. This involves four classrooms, computer lab, and two washrooms.
- The project is planned to be completed in April 2022.



Seismic Block Map – McKinney Elementary