Section 3

Update on the implementation of recommendations from:

Planning for School Seismic Safety

December 2008

April 2010

BRITISH COLUMBIA
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Our Ref: 137714

March 10, 2010

Norma Glendinning
Assistant Auditor General
Office of the Auditor General of British Columbia
8 Bastion Square
Victoria BC V8V 1X4

Dear Ms. Glendinning:

Thank you for your letter dated January 29, 2010, requesting an update on the Ministry of Education's progress in response to the Office of the Auditor General's report: "Planning for School Seismic Safety."

I am pleased to provide the enclosed document, which details the work completed and underway, and the Ministry's commitment to the Seismic Mitigation Program.

Sincerely,

James Gorman
Deputy Minister

Enclosure

pc: Keith Miller, Assistant Deputy Minister

Ministry of Education
Office of the Deputy Minister

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RECOMMENDATION STATUS SUMMARY
Planning for School Seismic Safety
as at January 31, 2010

(*Please tick implementation status for each recommendation*)

Auditor General's Recommendations	Implementation Status				
	Fully	**Substantially**	**Partially**	**Alternative Action**	**No Action**
1. The ministry identify how much of the program it can deliver within the available budget, and use this information to confirm future priorities and funding for the structural program.			☑		
2. The ministry confirm whether the current levels of funding to school districts for non-structural remediation are sufficient to address non-structural needs.			☑		
3. The ministry consolidate its current risk management activities into a comprehensive risk management framework, including the monitoring of significant external risks.			☑		
4. The ministry: • make it a matter of urgency to implement a program delivery model and commit sufficient resources to it, and; • fully evaluate all options before deciding on how the program will be delivered.			☑		
5. The ministry and boards of education work together to ensure future seismic projects are integrated into a long-term capital planning framework.		☑			
6. The ministry require boards of education to collect information about the progress and status of non-structural mitigation programs, and use this information to assess whether the status and rate of progress of non-structural mitigation is acceptable and whether funding is adequate.			☑		
7. The ministry work in partnership with boards of education to develop and implement an information plan that will inform the public about seismic hazard, risk and the constraints around the program, and give the public opportunities to provide input on future program objectives and priorities.			☑		

PROGRESS IN IMPLEMENTING RECOMMENDATIONS FROM
Planning for School Seismic Safety
as at January 31, 2010

General comments

Please provide an introductory statement summarizing progress.

Progress by recommendation

For each recommendation, provide your assessment of implementation status as per the legend at the bottom of the page, and information on actions taken and results to support the status reported. Also include a work plan schedule for any recommendations not yet implemented.

Self-Assessed Status	Actions Taken Since Report Issued	Results of Actions and/or Actions Planned (with information on implementation, including dates)
Recommendation 1: The ministry identify how much of the program it can deliver within the available budget, and use this information to confirm future priorities and funding for the structural program.		
P	APEGBC/UBC continued development of the enhanced risk calculator tool based on research and analysis of the performance of over 30 building types and the three types of earthquakes (subduction, subcrustal and crustal). A pilot project was initiated to evaluate structural upgrade strategies for three clay brick masonry schools. The analysis has confirmed the risk associated with these buildings. Implementation of the two projects which were determined to be very high risk is being initiated to verify the costs and effectiveness of the solutions. Worked with APEGBC to complete a reassessment of seismic risk of all schools in the seismic zones using the enhanced risk calculator and 2004 data. Engaged a quantity surveyor very experienced with school seismic projects to provide a global estimate of the upgrade costs by risk category. Typical structural costs and soft costs were included in the estimates. Trained nine additional Structural Consulting Engineering Firms on the use of the enhanced risk assessment tool so a total of 15 firms have been engaged to re-assess all identified high risk schools to confirm the seismic risks on a block by block basis.	The enhanced risk assessment tool considers the type of earthquake and building structure which allows for a more accurate determination of risk. The updated risk assessment work, when complete, is anticipated to reduce the number of buildings at risk and the overall cost of the seismic mitigation program. The number of high and moderate risk blocks has been reduced and the number of low risk blocks has increased. The upgrades will focus on the high risk blocks within a school. The scope and cost will be managed by engaging the Technical Review Board established by APEGBC to review each project to confirm the latest innovative design solutions have been employed and the work is focused on the high risk block. The new assessment data will be used to prioritize future seismic upgrading projects. Funding can be more strategically directed at those structural elements in the schools which are of the highest priority for seismic upgrade using life safety criteria.

Status

F or **S** – Recommendation has been fully or substantially implemented
P – Recommendation has been partially implemented
AA – Alternative action has been undertaken, general intent of alternative action will addresses OAG finding
NA – No substantial action has be taken to address this recommendation

Self-Assessed Status	Actions Taken Since Report Issued	Results of Actions and/or Actions Planned (with information on implementation, including dates)
Recommendation 2: The ministry confirm whether the current levels of funding to school districts for non-structural remediation are sufficient to address non-structural needs.		
P	Engaged expert consultant (VFA Canada) to complete a building condition assessment of all schools in the province. UBC assisted VFA in developing assessment methodologies (based on Canadian Standard CSA-S832) to evaluate non-structural building components. VFA will record the status of non-structural upgrades for all schools in the seismic risk zones.	VFA has completed the assessment of a third of the schools in the province. The database is now under review. The level of funding required, the program for the implementation of non-structural projects and the strategies for monitoring and tracking completed work will be determined over the next year. Non-structural deficiencies in the high risk blocks will be addressed as the structural upgrades are implemented; the non-structural work is included in the structural cost estimates.
Recommendation 3: The ministry consolidate its current risk management activities into a comprehensive risk management framework, including the monitoring of significant external risks.		
P	Ministry has engaged APEGBC who is working with Canadian Society of Civil Engineering and UBC Soder Business School to assist with the development of the risk management framework.	The preliminary framework is in development.
Recommendation 4: The ministry: • **make it a matter of urgency to implement a program delivery model and commit sufficient resources to it, and;** • **fully evaluate all options before deciding on how the program will be delivered.**		
P	Due to the complexities of the Vancouver School Board's Long Range Facilities Plan, the Ministry has provided additional resources to VSB for a comprehensive review of 60 schools. The development of the comprehensive plan for VSB which will serve as a template for other large School Districts. Based on the findings from the Clay Brick Pilot Analysis, the Ministry is considering additional capital funding to expedite the construction phase of two VSB schools as the next phase of the pilot project.	In 2009/10 the Ministry provided $4.8 million to school districts to enable districts to manage their seismic program. The VSB comprehensive plan will form the basis for comprehensive planning and program delivery in all seismic-zone districts. Clay Brick Pilot Analysis will be initiated by summer 2010.
Recommendation 5: The ministry and boards of education work together to ensure future seismic projects are integrated into a long-term capital planning framework.		
S	School Districts are required to update their Long Range Facilities Plan as part of the annual Five Year Capital Plan Process.	The Ministry has accepted project submissions from School Districts which are still working on their Long Range Facilities Plan as long as the rationale for specific projects is clearly defined in the Project

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Self-Assessed Status	Actions Taken Since Report Issued	Results of Actions and/or Actions Planned (with information on implementation, including dates)
		Identification Report accompanying the Capital Project submissions.
Recommendation 6: The ministry require boards of education to collect information about the progress and status of non-structural mitigation programs, and use this information to assess whether the status and rate of progress of non-structural mitigation is acceptable and whether funding is adequate.		
P	VFA has been engaged to complete a building condition assessment of all schools in the province. They will record the status of non-structural upgrades for all schools in the seismic risk zones.	The level of funding required, the program for the implementation of non-structural projects and the strategies for monitoring and tracking completed work will be determine over the next year. Non-structural deficiencies in the high risk blocks will be addressed as the structural upgrades are implemented and are included in the structural cost estimates.
Recommendation 7: The ministry work in partnership with boards of education to develop and implement an information plan that will inform the public about seismic hazard, risk and the constraints around the program, and give the public opportunities to provide input on future program objectives and priorities.		
P	School Districts were informed of the advances in the research and analysis and the development of the enhanced risk assessment calculator.	The enhanced risk assessments will be completed in March 2010. Based on the revised risk assessments the public engagement process will be implemented. Included in the expanded contract with APEGBC referred to in Recommendation 1 is the provision for UBC and APEGBC to assist the Ministry in two ways: i) providing technical support in the development of the Ministry's communication strategy ii) development of web based materials for public access which will be coordinated between the APEGBC School Seismic Upgrade Program website and the Ministry's website on the school seismic upgrade program. This will allow the public to have direct access to material related to such matters as seismic hazard, risk and constraints around the program so they are better informed.

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