



Office of the Auditor General/ Bureau du vérificateur general

AUDIT OF EIGHT SPECIFIC BUILDING CODE SERVICES FILES

2009

**VÉRIFICATION DE HUIT DOSSIERS PRÉCIS DES SERVICES DU
CODE DU BÂTIMENT**

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EXECUTIVE SUMMARY

Introduction

This audit was conducted as a result of report to the Fraud and Waste Hotline. This audit was not originally identified in the Audit Plan that was presented to Council.

The Office of the Auditor General received a report regarding concerns with the activities of a Program Manager in the Building Inspections Section of the Building Code Services Branch. The report indicated that some building inspections in a specific division of Building Code Services had not been carried out as required and that in some cases the property owners have not had to obtain a building permit as a result of decisions by the Program Manager.

The Office of the Auditor General decided to examine the approvals and inspections processes undertaken by the Program Manager to determine if he had followed the requirements of required standards, regulations and policies.

The Fraud and Waste Hotline information referred to two specific issues, but also stated that the investigation should review the other instances of alleged non-compliance with the Building Code, the Building By-law, and the City's policies and procedures. Consequently, the review was expanded to include other files, based on information obtained during the audit.

Audit Objectives

Audit Objective No. 1 – Examine and evaluate the processes and methodologies used for the review and approval of the first file reported in the Fraud and Waste Hotline Report.

Audit Objective No. 2 – Examine the methodology used for the inspections of the second file reported in the Fraud and Waste Hotline report, to determine how the areas of poor soils affected the inspections and approvals.

Audit Objective No. 3 – Examine the methods and procedures used for inspections by the specific Building Code Services division.

Audit Objective No. 4 – Examine the methods used by the City to enforce the Ontario Building Code, the Building By-law, and the policies and procedures for building inspections.

Audit Objective No. 5 – Evaluate the role of the Program Manager and the Building Code Services Branch in relation to the specific files.

Audit Scope

The Audit Scope encompassed the inspections carried out by the inspectors reporting to a specific Program Manager in the Building Code Services Branch.

Two specific files were examined initially. Based on the information obtained during the audit, six additional files were reviewed.

Geotechnical reports were reviewed to evaluate the investigations regarding sensitive clays and other poor soils, and the information processed during the building permit reviews and the inspections.

Summary of Findings

A total of two subdivisions and six addresses were reviewed. The Fraud and Waste Hotline initially reported one address and a subdivision, but the review was widened based on the interviews and the findings in the email system.

File No. 1

1. The Building Inspector found that a 2.7 m high concrete wall and foundations were under construction in the property without a building permit. On the basis of the investigation, the Inspector proceeded to prepare an Order to Comply (OTC) to require the owner to submit a building permit application for the structure.
2. The Program Manager, Building Inspections Unit (PMI) reviewed the OTC and requested additional information from the property owner. The drafting service retained by the property owner to provide architectural design and drawing services informed the PMI that the project consists of three components, namely a custom home, a garden shed and the concrete wall and foundations. The letter indicates that the concrete wall is a fence to an 18th century landscape park garden and will not be attached to the garden shed.
3. The PMI agreed with the opinion of the drafting services firm and classified the structure as a fence; on this basis, the PMI concluded that no building permit would be required, and revoked the OTC. In our opinion the OTC should not have been revoked.
4. On the basis of our analysis, we have concluded that the PMI should have required a building permit for the construction of the concrete wall because the overall project comprises the custom house, the shed and the concrete wall (fence). The custom house and the shed each require a building permit and the concrete wall as part of the project would also require a permit.
5. As the fence is over 1.8 m high (it is in fact 2.7 m high), is constructed of reinforced concrete, and is part of the overall project that requires a building permit, the fence falls under the provisions of Part 4 of the Building Code.
6. The PMI should have examined the entire project, which requires building permit, rather than allow it to be piecemealed.

File No. 2 - Subdivision

1. The complaint indicated that the PMI had allowed the builder to build houses when there are structural issues with the soils without addressing those issues. Review of the files and relevant correspondence showed that the Program Manager, Building Inspections Unit (PMI) undertook the inspections based on the building permits issued.
2. Approximately 100 building permits were issued during 2008 for residential buildings (houses and townhouses) located in an area of sensitive clays. The foundation design for these houses did not take into account the sensitive clays, although the geotechnical report prepared for the subdivision had identified the presence of the sensitive clays. These building permits should not have been issued based on the design submitted, as further discussed in the following section.
3. The files do not contain all the documentation that is required based on the Policies, Guidelines and Standards. For example, the inspection files do not always contain a copy of the approved roof truss drawings; in some cases, the structural engineer's letter in the file does not correspond to the approved version of the letter.
4. We found that in some instances the site review structural engineer reported errors or omissions in the placement of reinforcing steel in some footings and foundation walls; however, the City's inspector did not insist that the engineer return to confirm and sign-off on the correction of the noted deficiencies. Instead, the City's inspector performed the review of the deficiencies and signed-off on the corrections. This procedure unnecessarily transfers the workload, responsibility and potential liability for the review to the City.
5. In two inspection reports for two different buildings the building inspector provided an inspection report indicating that the inspection of the building plumbing had passed the inspection, but he had not done an inspection because the plumbing had been covered over by the basement concrete slab. This is a misrepresentation of the results of the inspection, as the inspector passed the un-inspected plumbing without actually inspecting it. The inspections should have been given a "Fail", and the inspector should have required that the contractor uncover the covered plumbing for inspection. The inspector indicated that he had done the same in two other sites; he also affirmed that the PMI had been apprised of the situation and had agreed to it.
6. The Building By-law provides that a Refundable Inspection Fee must be deposited with each building permit application. The amount of the fee refunded to the owner is reduced if the owner causes repeat inspections by not being ready for inspection or by not providing sufficient notice. The inspector is required to mark on the inspection form when the owner caused a repeat

inspection. However, in the specific subdivision, the inspectors did not mark the box for charging of repeat inspection fees even though there were several repeat inspections caused by the builder not being ready for the inspection. Our review found there was approximately \$5,000 in fees not charged to this developer. The City should charge the developer their fees.

Sensitive Soils

1. Sometime in 2008 the Program Manager, Permit Approvals Unit (PMA) decided to request the January 2007 geotechnical report prepared for the particular stage of the subdivision, as he had not received a copy with the submissions for building permit made by the developer. He reviewed the report in August 2008 and at that time became aware of the problem in this particular stage of the subdivision. The PMA stopped issuing building permits until he could be satisfied that the design of the houses met the requirements of the Building Code. The specific requirements for the design of the foundations were provided by the PMA to the developer.
2. The PMA informed the PMI and the developer of the concern and required that the foundations for all buildings in that stage of the subdivision be designed by professional engineers. Approximately six houses had been completed by this time, and the foundations of seven others had been completed and backfilled, before the PMA had read the geotechnical report and taken the action noted above. These buildings require special remedial measures to prevent differential settlement and to achieve allowable total settlement. At the time of the audit work in early 2009, the City was reviewing these special remedial measures.
3. During an interview, the PMA indicated that the reason he was not aware of these facts during the review of the building permit applications was that he had not received the geotechnical report prepared for the subdivision, notwithstanding that the report was submitted to the City in early 2007. The PMA indicated that he had specifically requested a copy of the geotechnical report, and that otherwise he would not have received one. We asked the PMA for copies of the geotechnical reports for previous stages of the Subdivision, but he did not have them in his files; they were provided during this Audit by the Planning and Infrastructure Approvals (PIA) branch of the Infrastructure Services and Community Sustainability Section (formerly Planning, Transit and the Environment Section).
4. According to the PMA, the PIA receives a copy of the geotechnical report with the engineering drawings for the subdivision. However, there is no established mechanism for a copy of the geotechnical report to be forwarded to the PMA. Consequently, recommendations regarding building foundations, although provided in the geotechnical report, are not known to the PMA as he reviews

the building permit drawings. Although the PMA requested a copy of the geotechnical report in this instance, this is not done in all cases – as evidenced by the fact that the PMA did not have copies of previous reports – and there is no formal procedure to ensure that a copy of the report be sent to the PMA.

5. We consider that the PMA must not issue any building permits until the geotechnical information has been provided by the developer and the PMA has had adequate time to review the geotechnical report. Therefore, the City should revise the Policies, Guidelines and Standards to require submission of a copy of the geotechnical report with the building permit applications.
6. Based on his work approving building permits applications for buildings in this subdivision, the PMA was aware (or ought to have been aware) that there had been sensitive clay problems in the subdivision and its vicinity in previous stages of construction.
7. The PMA did not require that the geotechnical report be submitted prior to issuing the building permits.
8. We consider that information about sensitive soils should be shared between all divisions that could be affected by them, including Planning and Infrastructure Approvals, Infrastructure Management, Building Code Services, etc.
9. During the interviews it was learned that houses constructed in an area had required repairs as a result of movement of the foundations due to the underlying sensitive clays. The files for the repairs to the house foundations and foundation walls located in this vicinity were also reviewed to determine the available information regarding the location of sensitive soils in the vicinity of the subdivision.

File No. 3 - Subdivision

1. This subdivision was reviewed as a result of information provided during the audit.
2. In some cases, the final occupancy permit was issued almost three years after the partial occupancy permit was issued. A Partial Occupancy Permit is issued when the permit holder wishes to allow occupancy to occur in an unfinished building. A Final Occupancy Permit is issued when construction is complete and all outstanding Code deficiencies, as listed in Inspection Reports, have been addressed.
3. The concern with the very long time between the Partial and the Final Occupancy Permits is that any deficiencies noted in the inspection reports prepared for the Partial Occupancy Permit could remain uncorrected for a significant period.

4. The City has now implemented a mechanism to reduce the occurrence of these situations by stipulating in the Building By-law that the refundable inspection fee shall be forfeited by the person named on the fee receipt issued by the City upon payment of the fee, if the final occupancy permit has not been issued within three years from the date of issuance of the permit to construct.
5. In some instances, the partial occupancy inspections indicated conditions which may not have been checked properly before the final occupancy permit was issued. For instance, in one occasion the partial occupancy permit required that the tele-posts (i.e., columns) be secured to the foundation, but the inspection noted that the inspection had passed. In our opinion, the inspection should have been a fail with a requirement for re-inspection.
6. In some cases, the final occupancy inspections for mechanical give as a condition "Ventilation Section 9.32 OBC", but do not provide any further details or are sufficiently specific to permit follow-up. In the first place, there should be no conditions in the Final Occupancy Permit inspection forms, as it is issued when all the requirements have been satisfied. If a condition is to be placed, it should be specific. The condition noted above refers to a section of the Code that covers every aspect of the ventilation in a building constructed under Part 9 of the Code.
7. The documentation in the files is not always complete. For example, a number of files did not have one or several of the required Plan of Survey denoting the as-built survey, soils engineering report, roof truss drawings, and engineering review letter.

File No. 4 - House

1. This house was constructed with a building permit issued on November 25, 2004, but the owner/builder did not call for a number of inspections, including foundations, basement insulation, final plumbing, final mechanical, and occupancy permit.
2. The Building Inspector issued an Order to Comply on January 12, 2009, requiring that the owner obtain an occupancy permit. The deadline in the OTC was January 19, 2009. The PMI provided an extension to the owner for one month on January 20, 2009.
3. The owner did not obtain the required inspections during construction.
4. The lack of inspections during construction is mostly due to the owner not following the requirements provided by the City. As the inspections are programmed when the owner requests an inspection, it is easy for several weeks to pass before the inspector carries out a progress visit to the site.

5. The PMI provided the owner a 30-day extension to cover the combustible insulation in the basement. This delay places undue potential liability on the City in the case that the illegally occupied building caught fire and the combustible insulation became a factor in any casualties.
6. The work required to comply with the OTC could have been completed in less than one week, as stipulated in the OTC. There is no valid reason for the owner to require one month to complete the work, particularly in light of the delay in getting the required occupancy permits. It should be noted that the building was occupied without an occupancy permit from the City.
7. The PMI indicates that “the owner meets the criteria to be exempt from having to provide an as built survey”. The City’s Inspection Policies, Guidelines and Standards do not allow exceptions to the requirement.
8. The requirement for an as-built survey is included in both the City’s Inspection Policies, Guidelines and Standards and in the Building By-law. The concern with allowing some owners to not provide a survey is that it creates an atmosphere of favouritism, plus it unnecessarily transfers potential liability for the correct location of the building to the City.
9. The PMI directed the Building Inspector to issue a Partial Occupancy Permit that would exclude the use of the basement.
10. In this particular case, the fact that the combustible insulation was not properly covered means that the fire separations were not complete. A Partial Occupancy Permit should not be issued.

File No. 5 - House

1. Communications in the file indicate that the PMI told the owner that an as-built survey is not required for this location, when in fact the Policies, Guidelines and Standards require one, without exceptions. The Building Inspector issued a Final Occupancy Permit based on the direction from the PMI. Furthermore, the PMI required the inspector to ascertain the location of the house with respect to the property boundaries using landmarks.
2. The concerns with this file are that the Policies, Guidelines and Standards state that there are no exceptions to the requirement for an as-built survey. A survey was required. In addition, asking the inspector to verify the correct emplacement of the house with respect to the property boundaries essentially removes the responsibility for meeting the requirement from the owner and transfers it, unmitigated, to the inspector and hence to the City. In our opinion, this is a case in which the PMI is trying to not inconvenience the owner, but in effect is not acting in the best interest of the City.

File No. 6 - House

1. The Building Inspector noticed on November 13, 2008 that the owner had started construction with no permit or application. The owner informed the Building Inspector that he had a meeting scheduled with the PMI on November 21. The Building Inspector wrote to the PMI on November 17, to request instruction on whether to issue an OTC; the application for permit was submitted on November 14th.
2. The PMI wrote to the Building Inspector indicating that the file had been re-evaluated and that he had allowed construction of the foundation to proceed without a permit because of the impending cold weather; no construction beyond the foundation should be allowed until the building permit is issued. The PMI should not have allowed construction to proceed without a permit.

File No. 7 - Vars Fire Hall

1. The Vars Fire Hall at 6090 Rockland Road was constructed in 2006 and completed in 2007. For the purposes of the Building Code, the owner is the Real Property Asset Management Branch; the operator is the City of Ottawa's Fire Services Branch.
2. RPAM and Fire Services decided to install an underground cistern with treatment system to provide storage for two weeks of demand for the building. Drinking water would be supplied using bottled water.
3. The PMI issued an Order to Comply, indicating that four contraventions of the Building Code had to be corrected before an Occupancy Permit could be issued, namely a) Complete the building exterior; b) Provide sealed general review letter from the civil engineer regarding the fire fighting water supply; c) Provide general review letter; and, d) No potable water is provided.
4. Discussions regarding the suitability of the drinking water supply and whether it met the requirements of the Building Code and the Safe Drinking Water Act led to a Partial Occupancy Permit being issued with the condition that the building water supply would be treated as non-potable and all drinking water requirements would be met using bottled water.
5. The Final Occupancy Permit was issued in December 2007, with the condition that the water supply be tested every two weeks in accordance with Ontario Regulation 252/02.
6. Our review of the file did not find any items of concern with respect to the actions taken by the PMI.

File No. 8 - House

This residence was constructed in 2002. The main issues that were found in the file documentation are as follows:

1. The professional engineer report on the foundation soils was not available at the time of the footing construction, but the inspector provided a Pass in the Inspection Report, and indicates that the soil “appears Ok”. The inspector should have insisted in receiving the report before the concrete was placed. As in other instances discussed in this report, the action of the inspector creates a transfer of liability to the City. Although the inspector is qualified to do the inspections, the inspector must insist that the owner follows the rules.
2. A note to file by the inspector on June 11, 2003 indicates that the house was built without the required inspections. The note further indicates that the last inspection was done June 6, 2002 for the insulation and did not pass; framing deficiencies were not corrected; occupancy inspection was not completed; well water test required, but not provided; and the permit was issued for a single attached garage, not a double garage as built.
3. Subsequent documentation in the file, prepared by another inspector, indicates that the required inspections were not required because the house was pre-fabricated. However, the fact that the house may be prefabricated does not remove the requirement for inspections.
4. A note on June 25, 2003 by another inspector indicates that the soil bearing report by a professional engineer was not required. This is not in accordance with the Policies, Guidelines and Standards. The note further indicates that the footings and pad footings are now approved (in June 2003), but does not provide any documentation on why they were approved.
5. The final occupancy inspection for mechanical gives as a condition “Ventilation Section 9.32 OBC”, but does not provide any further details or is sufficiently specific to permit follow-up. This condition is extremely vague, apart from the fact that it should not be required if the house is constructed in accordance with the Code.

Document Retention Requirements

1. Section 20 of the Policies, Guidelines and Standards prepared by the Building Code Services Branch list the documents that must be preserved with the building file.
2. The results of the review of the various files found that several of them do not contain all the documentation that is required based on the Policies, Guidelines and Standards. For example, the inspection files do not always contain a copy of the approved roof truss drawings, as-built survey and soils report; in some cases, the structural engineer’s letter in the file does not correspond to the approved version of the letter.
3. In addition, in a number of files, the PMI allowed the owner to not submit the required as-built survey. This practice should be eliminated due to the potential

for unforeseen and unnecessary liability to the City. In addition, the requirement by the PMI that one of the inspectors uses visible landmarks to ascertain that the house is located properly within the property is not a proper use of the resources available to the PMI.

4. In reviewing the files with respect to the contractor who covered the plumbing work, Finding 1 (*Inspection Passed Site Unseen*) below, it was noted that they do not contain information on the companies responsible for the various trades. This information is essential in order for the City to be able to keep a complete database of residential construction within the City.

Structural Field Review

1. The protocol for sensitive soils prepared by the Branch (Sensitive Soils Inspection Guidelines) indicates that the structural engineer shall provide site review memos for each lot confirming that the footings and foundation walls sizes and reinforcing, concrete strength, etc. are installed as per the design requirements and approved permit drawings.
2. We found in some instances that the structural engineer's representative responsible for reviewing the foundation and foundation walls during construction found deficiencies in the placing of the reinforcing steel and noted them in the inspection memos; however, the structural engineer did not return for re-inspection. The City's inspector allowed construction of the building to proceed on the basis of the structural engineer's initial memo, instead of requiring that the engineer return to confirm that the footings and foundation walls were reinforced in accordance with the design and his instructions.
3. The concern with the procedure as carried out is that the owner's and engineer's responsibility for the corrections or additions to the reinforcement are assumed by the City's inspector. The inspector must be absolutely clear that the responsibility for the sign-off on the foundation is the owner's and the owner's engineering consultants.

Inspection Passed Site Unseen

1. During the review of inspection files, we found two instances where the building inspector arrived at the site and found that there was no access to the basement to permit inspection of the plumbing; the inspector instructed in writing that the contractor was not to cover the plumbing until the inspector had inspected it; but upon his return a few days later, the inspector found that the contractor had poured the concrete slab for the basement floor, thus covering the plumbing under the slab and preventing its inspection.
2. Nonetheless, the inspector provided a Plumbing Inspection Report indicating that the plumbing had passed, without actually inspecting the plumbing. The

reasoning for this, as written in the Inspection Reports, was that the contractor had done acceptable and similar work in other sites.

3. During the interview the inspector confirmed that there had been two other occasions (a total of four times) where he had approved the plumbing site unseen under similar circumstances. The inspector did not recall the addresses of the other two sites, but indicated that both were also located in the subdivision.
4. When asked if the PMI was aware of these cases, the inspector indicated that he had discussed the matter with the PMI, who had indicated this procedure was acceptable. Discussion of the matter with the PMI during the interview, and subsequent conversations, found that the PMI did not agree with this procedure. Further discussion revealed that another inspector remembered that this had been done in two other sites, located in other subdivisions; however, it was not possible during this Audit to confirm which properties were involved.

Refundable Inspection Fees

1. The Building By-law makes provision for a refundable inspection fee to be deposited with the building permit application. Should the builder call in unnecessary inspections when the work is not ready for inspection, the refundable inspection fee will be charged \$100 per “not-ready for inspection” site visit by the inspector.
2. During the review of the files for a specific subdivision, it was noted that the inspectors did not mark the box for charging of inspection fees even though there were several repeat inspections. We reviewed fifty files at random within the specific subdivision; all fifty files had at least one “not ready for inspection” event and found that none of the cases had been marked for the \$100 fee. This represents \$5,000 that the City did not charge this specific developer. The City should now charge the developer those fees.
3. Review of the files for other developers and building permit files found that other builders are being charged the “not ready for inspection fees”.
4. The City provided list of fees paid by the particular developer, which showed that the last “not-ready for inspection” fee was paid for March 2007.

Inspections by Interns and Summer Students

1. During the interviews and in the examination of email correspondence, it was found that a number of inspections were carried out by summer students without the required qualifications as required by the Ontario Building Code after January 1, 2006. The City provided a list of inspections carried out by students in 2006, 2007 and 2008, to enable evaluation of those inspections done

by students without the qualifications as required under the Ontario Building Code Act (i.e., unqualified interns and summer students).

2. During some of the interviews it was alleged that the PMI had unqualified interns and summer students conduct inspections that must be completed by qualified inspectors. Further investigation of this matter found correspondence involving the Manager, Inspections, and the various Program Managers, Inspections in which they discussed the potential negative impacts on the City should this practice not be stopped and should it come to light.
3. Interviews with the Chief Building Official, the Manager, Inspections, and the PMI confirmed that they were all aware that the practice, in essence, is illegal. The Chief Building Official justified the practice on the grounds that the requirements for timeliness of inspections prescribed by the Building Code plus the dearth of qualified staff had required this action.
4. The Manager, Inspections provide spreadsheets listing all the inspections carried out by interns and summer students during 2006, 2007, and 2008.
5. Based on correspondence and interviews, we found that several illegal inspections were credited to a qualified inspector in the system.
6. The total illegal inspections are summarized in the following table.

Total Illegal Inspections				
	Year			TOTALS
	2006	2007	2008	
Illegal Inspections from MAP	756	537	705	1,998
Illegal Inspections Credited to Inspector	356	151	5	512
Total Illegal Inspections	1,112	688	710	2,510

7. Illegal inspections by summer students comprised building inspections (including inspections of excavations, foundations, and framing, and progress and final inspections); mechanical inspections (heating, ventilation, and air conditioning systems); and plumbing (water lines, sewage lines, and backwater prevention valves).
8. The Building Code Act (the "Act") requires inspectors, and where certain conditions are met, intern inspectors, to carry out building inspections. Persons who are neither inspectors nor intern inspectors are not permitted to carry out inspections of buildings.
9. Conducting inspections by unqualified inspectors are illegal.

10. Building Code Services should take the necessary steps to address potential issues arising from the illegal inspections by summer students.
11. Building Code Services should, on a per file basis, assess whether a further inspection and notice to the building owner is required.

Internet and Email Use

1. We reviewed the email and Internet use of the PMI. We found that he used both the corporate email system and Internet for non-business use and disregarded the City's Responsible Computing Policy and the City's Code of Conduct. As a City employee the computer misconduct (e.g., jokes, and inappropriate materials) is particularly serious. We determined that personal email usage was generally very high averaging 30%. The 30% is based on 5,687 non-business emails of the 19,250 emails reviewed. This employee's non-business related Internet hits amounted to 32% of his Internet traffic.
2. Some of the internal and external emails we reviewed and classified as "jokes" contained offensive and/or inappropriate material.
3. Based on our review, we conclude that the PMI's personal use of the Internet and email were in our opinion excessive and ultimately resulted in his spending less time performing duties for which the position is responsible for. It is also our opinion, based on our review, that staff at the Building Code Services Branch (BCSB) are not properly managing time and actions of some of their staff.
4. As stated in various other audits, IT Services need to enforce the Responsible Computing Policy at all levels of the organization. In addition, stronger measures are needed to address the level of jokes and inappropriate materials received and sent by City employees using the corporate email system. Based on the results of our review of the PMI Internet and emails, we expanded our scope to include the emails and Internet usage of the Building Inspection Unit's remaining managerial staff as well as one Building Official III. In these cases, we found examples of high personal use of both the corporate email system and Internet.
5. We also observed that a management employee had saved on his H drive (personal network drive) on June 6, 2008 a photograph of an office pool under filename: "*(name of builder)* Lottery.jpg". Per the photograph, it appears that 11 of this program manager's subordinates may have been speculating on the number of inspections a specific developer would fail from June 16 to 23, 2008. Given the role and responsibility of staff within BCSB, it is our opinion that this conduct is inappropriate and unprofessional.

Recommendations and Management Responses

Recommendation 1

That the City ensure Building Code Services staff maintains a Building Permit database and that it be reviewed at reasonable intervals to identify cases where the Partial Occupancy Permit had conditions, in order to permit the inspector to return and verify that the conditions have been corrected.

Management Response

Management agrees with this recommendation.

From a Building Code standpoint, the scheduling of inspections is a function of the builder's readiness and is not in the Branch's realm of control. Per section 10.2 (1) of the Building Code Act, the responsibility to schedule the inspections rests clearly with the builder. It is the prerogative of the builder to determine how quickly they wish to complete their construction once the minimum standards for occupancy of an unfinished building have been met (i.e., partial occupancy).

With respect to Findings 1-6 (*File No. 1*), the Auditor has expressed a number of opinions which management would like to clarify as follows:

- Findings 1-6: The PMI directed the building official to issue an Order to Comply (OTC) on the assumption that the structure under construction was a foundation wall for a building. Following further investigation, the PMI determined that the construction was that of a fence, which does not require a building permit. The OTC was therefore lifted. The decision to lift the OTC was within the authority of the Code competent PMI. The Building Code Act does not provide authority to compel an owner to obtain a permit for future phases of a project nor is there authority to compel the owner to connect the fence to the yet to be built building. Further, the fence structure is not subject to Part 4 of the OBC.

An electronic 'bring forward system' will be integrated with enhancements to MAP to improve the tracking of inspections and to equip inspection staff with remote technological capability. The multi-phased four-year project commences in 2010 and will be completed in 2014.

Recommendation 2

That the City ensure Building Code Services Branch provides the Inspectors with a list of conditions that are not acceptable, in order to provide guidance to the Inspectors when deciding whether Partial Occupancy Permits can be issued. Alternatively, a quality control review of the Partial Occupancy Inspection Form could be done by the Program Manager, Building Inspections Unit or a senior inspector acting as his representative.

Management Response

Management agrees with this recommendation.

With respect to Finding no. 5 (*File No. 3 - Subdivision*), it is noted that by the time the Final Occupancy Permit was issued, the deficiency had been addressed and although this incident was a single event, management will provide additional guidance to inspection staff. In addition, program managers are undertaking quality control reviews of a representative sample of inspection files on an ongoing basis.

Recommendation 3

That the City ensure Inspectors are made aware that Final Occupancy Permits should not have conditions, and that if the inspection reveals items where the Code is not met, that the Final Occupancy Permit not be issued until the conditions are remedied and lifted.

Management Response

Management agrees with this recommendation.

To ensure clarity, management will provide additional instructions to inspection staff by the end of Q1 2010. In the audited case, the insertion on an inspection report "Ventilation Section 9.32 OBC" was actually a note to file for the benefit of the inspector and was not a 'condition'. This was not a standard practice of the Building Officials. The inspector has since left the City.

Recommendation 4

That the City ensure Building Code Services Branch files have all the required documentation per the Policies, Guidelines and Standards document.

Management Response

Management agrees with this recommendation.

With respect to Finding 7 (*File No. 3 - Subdivision*), a review of the files subject to the audit confirmed that with the exception of a very small number of files, all were complete as set out in the branch's Policies, Guidelines and Standards. Missing documents have now been inserted in the files. Management will continue to monitor through quality control reviews on an ongoing basis to ensure that documentation within files is complete.

Recommendation 5

That the City require Inspectors to follow up on active building permit files if a reasonable amount of time has passed between inspections and the owner has not called in, with the purpose of ensuring that work is not continuing without

the inspector having an opportunity for timely inspections. The City should define what will be considered to be a reasonable amount of time.

Management Response

Management does not agree with this recommendation.

From a Building Code standpoint, the scheduling of inspections is a function of the builder's readiness and is not in the branch's realm of control. Per section 10.2 (1) of the Building Code Act, the responsibility to schedule the inspections rests clearly with the builder. It is the prerogative of the builder to determine how quickly they wish to complete their construction and to schedule the inspections accordingly.

The assumption of progress or status inspections for all permits irrespective of the permit holder's readiness would increase inspections resourcing requirements significantly and could be misconstrued by the permit holder and the industry that the municipality has assumed statutory responsibilities vested in the permit holder / industry. This would confuse respective legislative roles and responsibilities.

The Building Code Services branch (BCS branch) has instituted other effective processes at minimal cost. In 2006, the BCS branch introduced the Refundable Inspection Fee as an incentive for the builder to complete the inspection process in a timelier manner and make more judicious use of the limited inspection resources. The Fee is reimbursed once the Final Occupancy Permit is issued. Since the introduction of the Refundable Inspection Fee, the timeframe between the start of construction to completion has decreased for low-rise residential construction. A large number of files reviewed in this audit pre-dated the introduction of the Refundable Inspection Fee in 2006.

Regarding Findings 1 to 4 (*File No. 4 - House*), and section 4.1.4 (in the detailed audit report) the Auditor has expressed a number of opinions regarding the regulatory requirements of the building subject of the audit. Management would like to clarify that the building permit was issued for a factory-built home. Building components that are designed and constructed in manufacturing plants in accordance to the applicable CSA standard are deemed to comply with the Code.

In this case, the foundation of the house was constructed outside the place of manufacture and was subject to the required inspections. The foundation inspection was undertaken December 10, 2004. The plumbing underground was inspected May 4th, 2005. However, the homeowner did not schedule the occupancy inspection due to their lack of familiarity with the processes and requirements. It is noted that the final plumbing and final mechanical

inspections are normally undertaken at the time of the Final Occupancy inspection.

Recommendation 6

That the City ensure that the primary responsibility of the Program Managers is to enforce the requirements of the Building Code. In addition, they should take into account the potential risks to the City resulting from their determinations if they decide to not follow the Policies, Guidelines and Standards. Any decision to deviate from the Policies, Guidelines and Standards should be made by the Chief Building Official, and not by the Manager involved or the Program Manager.

Management Response

Management agrees with this recommendation.

BCS branch staff and program managers are fully qualified and aware of their responsibility to enforce the Building Code Act and the Ontario Building Code (OBC). Managers and program managers are required to evaluate the risks of decisions made with regard to each permit application and permit. It is common practice to elevate issues, concerns or questions to the Chief Building Official that have high-risk implications. Policies, guidelines and standards have built in flexibility as appropriate to ensure appropriate decision-making authority supporting effective operation of the branch.

Regarding Findings 5 and 6 (*File No. 4 - House*), and section 4.1.4.1 (in the detailed audit report), the Auditor has expressed a number of opinions regarding the regulatory requirements of the building subject of the audit. Management would like to clarify that the Code does not set specific timeframes for compliance, rather the Act and Code have assigned this task to the Building Official who will determine what is appropriate based on the circumstances of each case and as is necessary to achieve compliance.

Recommendation 7

That the City ensure the Program Managers and Inspectors be clearly directed to follow the Policies, Guidelines and Standards, which provide for no exceptions in the handling of documentation in the files.

Management Response

Management agrees with this recommendation.

Employees have been and will continue to be directed to follow branch Policies, Guidelines and Standards to enhance decision-making, ensure consistency of application and enforcement city-wide, despite operating out of different geographical areas, and to mitigate risk exposure.

These branch Policies, Guidelines and Standards assign specific and discretionary responsibilities to staff in the handling of documentation in the files. For example, the operational policy relating to the requirement by a permit holder to submit a Plan of Survey to confirm the location of a new foundation complies with the setbacks from a lot line is “as determined by the Building Inspector”. This operational policy assigns discretion. Whereas the operational policy requiring the submission of final review letters from an engineer clearly specifies these must be submitted prior to the issuance of the final occupancy permit without exception.

A review of the sampling of the files subject to this audit revealed there were few instances where documentation was missing. Management will continue to monitor on an ongoing basis to ensure that documentation within files is complete.

With respect to Finding 8 (*File No. 4 – House*); Findings 1 and 2 (*File No. 5 – House*); and, Finding 2 (*Document Retention Requirements*), the suggestion that the exercise of discretion, in determining whether a Plan of Survey is required or not, is an inefficient use of resources, it should be noted that the alternative is to require every permit holder to obtain and submit a Plan of Survey prepared by an Ontario Land Surveyor (OLS) to confirm the location of the foundation as against the lot lines. This would needlessly increase the construction costs borne by the property owner (representing an additional \$1,000 - \$2,000 per survey) and is contrary to the principles of Service Excellence. The Building Inspector is quite capable of discerning whether a Plan of Survey is required or not based on a quick assessment of whether the set back requirements from the lot lines have been met .

Recommendation 8

That the City ensure Partial Occupancy Permits be issued only when there are no outstanding safety issues.

Management Response

Management agrees with this recommendation.

The OBC clearly sets out the conditions that must be addressed prior to allowing occupancy of an unfinished dwelling unit. Review of the audited files confirmed the approval to occupy an unfinished building was correct per the Building Code.

Regarding Findings 9 and 10 (*File No. 4 – House*) and section 4.1.4.3 (in the detailed audit report), the Auditor has expressed a number of opinions regarding the regulatory requirements of the building subject of the audit. Management would like to clarify that there are no Building Code requirements to have the basement insulation covered as a requirement of occupancy. There appears to be

an inference that the basement walls are fire separations, which they are not. It should be noted that there are **no** Code requirements for fire separations within a single-family dwelling. Further, Section 3.1.5.12 does not apply to Part 9 buildings. The dwelling unit subject to this audit and recommendation was a Part 9 building.

The OBC minimum requirements for occupancy of an unfinished building were met despite the building still being under construction, thus the building was no longer illegally occupied once the partial occupancy (correct reference per OBC is “occupancy of an unfinished building”) was permitted.

Recommendation 9

That the City ensure the BCSB follow the Policies, Guidelines and Standards, which require the submission of an as-built survey for new housing prior to issuance of an Occupancy Permit. In this case, an as-built survey was not provided.

Management Response

Management does not agree with this recommendation.

The branch Policies, Guidelines and Standards assign discretion to staff to determine whether the requirement for a Plan of Survey is applicable, or not, based on specific site conditions. For example, as in this case, the lot was 5.08 acres and based on the permit plans, the Building Official was able to determine that the foundation of the building was sufficiently set back from the lot lines to satisfy the minimum required set backs for front, side and back yards. In fact, the building was set back approximately 42 m from the front lot line [required set back was 15 m], 16 m in the east side yard [required 10 m], 60 m in the west side yard [required 10 m] and 63 m in the rear yard [required 15 m]. A plan of survey was not necessary to determine compliance.

As previously noted, the operational policy clearly affords discretionary authority to staff:

“It is the policy of the Building Services Branch to require the submission of a plan of survey prepared by an Ontario Land Surveyor for (i) new housing and (ii) additions to housing as determined by the Building Inspector.”

In the review of the sampling of files, there were no instances where a Plan of Survey was omitted contrary to the branch Policies, Guidelines and Standards.

As also noted in the response to Recommendation 7, requiring every permit holder to obtain and submit a Plan of Survey prepared by an Ontario Land Surveyor is inefficient, needlessly increases the construction costs borne by the property owner and runs counter to the principles of Service Excellence.

Recommendation 10

That the City ensure the BCSB be instructed that its primary responsibility is the enforcement of the Building Code, and that BCSB should not be allowing construction to proceed without a permit.

Management Response

Management agrees with this recommendation.

Building Officials are fully qualified and aware of their responsibility to enforce the Building Code Act and the OBC. With respect to Finding 2 (*File No. 6 – House*), the Auditor has expressed a number of opinions regarding the exercise of authority pursuant to the Building Code Act. Management would like to clarify that the property owner made the decision, independently, to commence construction without a permit. Review of the audited files confirmed that staff did not allow construction to proceed. Construction was halted at the direction of staff and a permit was obtained prior to the resumption of construction. The requirements of the Building Code Act were satisfied as a result of staff action.

Recommendation 11

That the City ensure a copy of the soils or geotechnical report is provided to the Building Code Services Branch at the same time that it is provided to Planning and Infrastructure Approvals.

Management Response

Management agrees with this recommendation.

BCS branch will work with Development Review branches and the industry to establish a protocol for the acquisition of copies of subsurface soils investigation reports and updates prior to the submission of building permits for a new subdivision. This will be completed by end of Q2 2010.

Regarding Finding 2 (*File No. 2 – Subdivision*), Findings 1 to 9 (*Sensitive Soils*), and section 4.2 (in the detailed audit report, the Auditor has expressed opinions regarding the carriage of specific building permits of building constructed in an area of sensitive soils. Management would like to clarify that the PMA and PMI acted appropriately. Specifically,

- The PMA reviewed the subsurface soils investigation report upon receiving it and immediately alerted the PMI and the Building Code Engineer of the potential for additional actions the permit applicant/holder would be required to satisfy to address the nature of the soils conditions with regard to the new Code seismic requirements as per the branch's guideline on sensitive soils;

- The builder was advised immediately of the City's concerns and was directed to provide additional information to address the new permit applications, the permits just issued, and the buildings under construction. The PMA advised the builder of a need on their part to devise a plan to address, in a satisfactory manner, the impact of the subsurface conditions on the existing and future foundations;
- Staff met with the builder and their consultants to clarify the branch's requirements in terms of documentation in support of a Part 4 review of foundation designs for foundations located in areas of sensitive soils. Any remediation was undertaken and completed shortly thereafter. In addition, the builder integrated any special considerations, accounting for the condition of the sensitive soils, in the foundation design for the other foundations. Permit applications for subsequent lots included the design considerations related to the sensitive soils and the new seismic requirements;
- The CBO is not authorized under the OBC to require the submission of subsurface soils investigation reports undertaken for a subdivision application review as a blanket requirement of a building permit application for a specific building lot. There must be a factual basis for requiring any technical reports from an applicant. As soils conditions vary from building lot to building lot, a blanket requirement is not legal or enforceable; and,
- There was no basis for the PMA to require a subsurface soils investigation report, as the PMA was not aware of any specific and special geotechnical subsurface conditions based on the previous phases of the development which had not exhibited any specific and special conditions. In addition, the site review memos provided by the soils consultant indicated the allowable soil bearing pressure was 100kPa. This design soil bearing capacity was within the prescriptive parameters of design of the Code for non-engineered foundations. There were no field conditions, which would have triggered the branch requirement for additional submission information prior to the issuance of the permits.

With regard to the Auditor's suggestion of relying on the soils engineering reports prepared in accordance with the Geotechnical Investigation and Reporting Guidelines for Development Applications, as adopted February 2008, BCS branch will certainly review these for identification of general and specific soils conditions, if any, and refer to these for purposes of assisting the permit applicant to understand the additional submission requirements related to the soils and seismic conditions per the branch's guidelines on sensitive soils.

It is noted that the primary purpose of the Geotechnical Investigation and Reporting Guidelines for Development Applications is to quantify the impact of the soils on the design and installation of the infrastructure. There is a direct relationship between the positioning of the foundations and that of the infrastructure such as the sewers and water services. For example, the high water table may affect the footing design and the location of the footings within the soil strata and this may affect the design and location of the services. Hence, the reason why these reports include a section on Foundation Design.

Recommendation 12

As a number of files reviewed did not contain all the required documentation (i.e., copy of approved truss drawings, structural engineer's letter, as-built survey), that the City ensure that the requirements of the Building Code Act and the City's Policies, Guidelines and Standards be followed when reviewing files for completeness.

Management Response

Management agrees with this recommendation.

The Building Code Act and the branch Policies, Guidelines and Standards assign specific and discretionary responsibilities to staff with respect to the handling of documentation in the files.

A review of the sampling of files subject to the audit confirmed there were few instances where documentation was missing. Management will monitor on an ongoing basis to ensure that documentation within files is complete.

With respect to Findings 1 to 5 (*File No. 8 - House*), and Findings 3 and 4 (*Document Retention Requirements*), management would like to clarify as follows:

- The branch guideline for requiring a soils report indicating the allowable soil bearing pressure was not implemented until September 2003. Prior to the introduction of the guideline, the practices of the former municipalities continued pending reviews and the standardization of standard operating procedures. Another practice of the former municipality was the undertaking of excavation inspections to evaluate the soils conditions. This practice was adopted in lieu of requiring a soils report of the soils of the building lot. As the Building Official determined the soils to be sufficient, there was no basis to require any additional evaluation to further confirm what was already established.
- With respect to the Auditor's suggestion that the branch collect and maintain a complete database of residential construction within the City, management would like to clarify that the Building Code Act and OBC do not require the compilation of this information, nor is the permit

applicant or permit holder required to provide this information. In fact, the Province's mandatory application form for a building or demolition permit does not provide for the capturing of this information.

Recommendation 13

As in one of the files reviewed the structural engineer for the builder identified some deficiencies in the foundation and foundation walls, but did not re-inspect them to confirm that the deficiencies had been corrected, that the City ensure that inspectors refrain from signing off without the engineers confirmation that the structures are being built in accordance with the design. Failure to do so results in unwarranted transference of liability from the builder to the City.

Management Response

Management does not agree with this recommendation.

It is not the building official's role to give directions on how the consulting engineer is to discharge his/her responsibilities. Providing directions would effectively transfer the assumption of liability for the design of the reinforced concrete foundations from the qualified designer, the consulting engineer, to the City. It is the building official's role to accept the engineering reports provided on site by the permit holder and to review the information for the purpose of confirming the reports reflect the intended Part 4 design. If deficiencies in the engineer's reports are identified, the building official will request further engineering reports. The consulting engineer, in performing field reviews, accepts responsibility for their design as constructed. The consulting engineer is requested by the permit holder to perform any re-inspections where deficiencies have been observed by the building official.

Contrary to the opinion expressed in Finding 4 (*File No. 2 - Subdivision*), and Findings 2 and 3 (*Structural Field Review*), the City must not assume responsibility and liability that rests squarely with the professional by giving direction, as suggested above, as to how the professional engineer is to manage their responsibility. BCS branch's obligation is to ensure Part 4 design under the OBC for Part 9 buildings or parts thereof, that fall outside the prescriptive standards set out in Part 9, by requiring the design to be carried out by a qualified designer, which the branch has deemed to be a professional engineer. The building official does not manage the permit holder's consultants. Branch Policies, Guidelines and Standards require that the consulting engineer provide the building official the final letter of sign-off prior to the issuance of the Final Occupancy Permit.

The final letter of sign-off by the consulting engineer will include statements of the deficiencies noted, the remedial work completed to address the deficiencies and acceptance of the remedial work. The consultant engineer thereby assumes

responsibility and liability for the work undertaken. The branch's Policies, Guidelines and Standards reflect this delineation of responsibility and risk assumption.

Recommendation 14

That the City ensure Inspectors exercise their responsibility and right to demand uncovering of work that they have not been able to inspect due to premature cover-up by the builder; and, that Inspectors are warned that inspection reports done on a site unseen basis are negligent and that they may be subject to disciplinary action.

Management Response

Management agrees with this recommendation.

The Building Code Act provides for a number of tools and methods for determining compliance with the OBC. In this instance, other means by which the construction could be inspected without destructive investigation were pursued and the building official determined the underground plumbing to be in compliance. When the incidents were brought to the attention of management, the building official was directed to 'fail' such inspections and to use the tools available to determine compliance where construction has been covered prematurely, as appropriate.

In regards to Findings 1 to 4 (*Inspection Passed Site Unseen*), the building official duly reported he had not viewed the construction but had nevertheless passed it based on above surface observations and knowledge of the work throughout this subdivision of the licensed trade.

Recommendation 15

That the City ensure that the Inspectors charge all developers for all the inspection visits where the contractor was not ready in order that the City can obtain reimbursement for unnecessary inspections.

Management Response

Management agrees with this recommendation.

The Refundable Inspection Fee was introduced as an incentive for the industry to complete the inspection process in a timelier manner and make more judicious use of limited inspection resources. The Fee is reimbursed once the Final Occupancy Permit is issued. The Fee is reduced where a builder has called for an inspection prematurely, has failed to give proper notice of cancellation, or has occasioned unnecessary repeat inspections and the Building Official's time has been wasted. A review of the audited files has determined the charges were

collected at the final occupancy permit per the branch's Policies, Guidelines and Standards.

The branch's Policies, Guidelines and Standards related to Refundable Inspection Fees were revisited with the building officials to ensure clarity and consistency of application.

Recommendation 16

That the City charge the developer the Refundable Inspection Fee applicable under Section 39 of the City By-law, including the uncharged fees noted in this audit report.

Management Response

Management agrees with this recommendation.

The branch has processed and will continue to process any draw downs, as applicable, and in accordance with the Building By-law. As the timing of completion of construction is in the control of the permit holder as is the closure of the permit files, completion of the implementation is not identifiable.

Recommendation 17

That the City make qualification under the Building Code a condition of employment for summer students conducting building inspections.

Management Response

Management agrees with this recommendation.

Following 2008, the branch no longer recruits students to undertake completion checks as the branch's Internship Program has now produced sufficient graduates to undertake this work.

Should BCS branch resume employing construction / engineering / architectural students to undertake site completion checks of exterior conditions that are not related to the minimum building standards for health and safety (for example: verifying that the siding is complete, all openings have been caulked, the light fixtures at the entrances have been installed, the vent covers have been installed, the masonry weep holes are clear of debris and whether the ground is sloping away from the foundation), the applicable job descriptions will be revised to require students to be recognized by the Province as an "Inspector" per the Building Code Act and Code.

Prior to 2006, Building Inspectors and students were not required to be qualified by the Province to undertake any inspections. Notwithstanding this absence of a province-wide minimum standard for Code knowledge, and to mitigate risk associated with undertaking inspections, the City ensured proficiency of its

Building Inspectors through extensive training, field experience and by requiring Building Inspectors to be certified as Building Officials under a program established by the Ontario Building Officials Association.

Prior to 2006, the branch relied on construction / engineering / architectural students to undertake the exterior completion checks as part of the final occupancy inspections, status inspections and inspections of components of the building or systems such as final HVAC and final interior inspections, depending on the students' experience and training. The majority of the students who conducted the exterior completion checks in 2006, 2007 and 2008 were employed prior to 2006 and had undertaken the same exterior completion checks and 'other' inspections competently prior to the new provincial requirements.

The branch also had relied upon consultants, who were retired building inspectors, to assist in dealing with the peak workloads experienced May to November each year. Due to the new legislative requirements for qualifications, the consultants opted to discontinue their services. This drop in available resources, together with a vacancy rate of 25% in 2006, and a continued construction boom, necessitated the decision to continue to use students to undertake exterior completion checks despite their not having fully established their qualifications with the Province.

Management considered its options and believed that the continuation of the program using students was in the best interest of new homeowners, the building industry and the City. Not undertaking the completion checks, or reassigning the completion checks to the qualified Building *Inspectors* that would have drawn more experienced *Inspector* resources away from the more critical inspections, would have caused a considerable reduction in service delivery to new homeowners and the industry. The options were untenable.

The Chief Building Official did confirm awareness of the operational decision to continue the practice and had advised the Auditor that the risk was **low**, and that although these completion checks were not crucial for health and safety, they were nevertheless essential for providing a better level of service by ensuring construction was completed within three (3) years of permit issuance.

The operational decision to continue the program was made with full regard to all factors and risks. To mitigate any risk, the students were provided with extensive training to ensure their competence in undertaking the completion checks, and were supervised by the PMIs as well as coached by the Building *Inspectors* who had carriage of the permit files (referred to as the Building *Inspector* of record).

It is noted that meeting the qualification requirements set out by the Ministry of Municipal Affairs and Housing, does not make one an inspector. A prudent

municipality would ensure the newly qualified “*Inspector*” received extensive training, in and out of the field, in addition to being coached by an experienced *Inspector*. Students were also instructed to only perform exterior completion checks. The students were further encouraged to take the Ministry exams and file their information with the Province such that over the summer(s), they could achieve the required level of qualification required by the Province. By 2008, most of the students were qualified as “*Inspectors*” per the OBC.

The exterior completion checks performed by the students represented a small percentage (0.58%) of the total of 281,614 inspections undertaken by the branch over a three (3) year period. The exterior completion checks undertaken by the students involved elective inspections triggered by the Building By-law and were components of the final occupancy inspections (refer to Appendix 2 for a description of all inspections).

The practice of retaining students to undertake exterior completion checks and closing permit files was essential to maintain excellence in service delivery, was unavoidable due to lack of resources (25% vacancy rate), and was pursued only after ensuring public safety would not be compromised. The practice was discontinued after 2008 in view of the BCS branch’s lower vacancy rate.

Regarding Findings 1 to 11 (*Inspections by Interns and Summer Students*), and Section 4.7 (in the detailed audit report) management would like to clarify as follows:

- There were no misrepresentations. The email correspondence involving Building Inspections management expressed concerns as to the accuracy, or lack thereof, of the MAP data on inspections activities and the glitch in the MAP process that required certain fields to be checked off (√) in order to close the file and trigger MAP to produce a standard letter to the permit holder confirming issuance of the final occupancy permit and the amount of refundable inspection fees to be remitted, as applicable.
- Management was noting that the person who processed the file and updated MAP to trigger the letter, would automatically be credited the inspections and be the signatory on the form letter (hence the expression, the last person to touch the [MAP] file was credited the inspections).
- In the correspondence, management debated whether it was more appropriate to ensure MAP was accurate versus ensuring the letter featured as the signatory, the Building *Inspector* of record, instead of the student who in closing the file and updating MAP, became the signatory of the letter. One PMI found a solution to the glitch by having the student insert in MAP the name of the Building *Inspector* of record in the final inspections fields and inserting in the MAP Note field the actual person’s name, who completed the final inspection, in an attempt to ensure veracity of the MAP information.

- The Auditor’s statement that “the system was used deliberately to show a legal inspection in place of an illegal inspection” is contradicted by the facts. Had that been the intent, no note would have been entered in MAP. The notation in MAP denotes honesty.
- In its present state of development, MAP requires an overhaul in order for the system to function as an information management system. Management is aware of this and relies on the actual official business records, the building permit files, as the source of information whether for management purposes, fact verification, court processes (prosecution and defending claims), etc. The MAP data is only relied upon for purposes of measuring metrics, such as the number of permits issued, inspections undertaken, etc, with a full understanding of its strengths and weaknesses.
- The Auditor has confirmed in Section 4.7 (in the detailed audit report) that the data is not reliable, that it is incorrect 25% of the time in relation to the completion checks (Table 1), 40% in relation to the other inspections (Table 2), and 20% for the entire sample (Table 3) of the entries. This is why management does not rely on the MAP data as a management tool and has made the development of the Inspections Tracking Application in MAP a priority in order to transform the database system into a useful and effective management tool.
- Building Inspections management are conducting regular file audits to monitor performance, ensure compliance with established policies, guidelines and standards and to identify training and development needs.

Recommendation 18

That the City develop an Action Plan to deal with all the illegal inspections completed by Building Code Services Branch, including inspections identified in the audit and any other that may exist. The Action Plan should consider notification of the property owners and steps to ensure that corrective measures are taken.

Management Response

Management agrees with this recommendation.

This section of the audit deals with inspections performed by students. Students undertook exterior completion checks as part of an established program as well as ‘other’ inspections. The following table (Table 4 of the full audit report) sets out management’s results of the investigation based on the detailed review of actual official business records, the building permit files and MAP database for the metrics.

Total number of inspections performed by students 2006, 2007 and 2008

	2006	2007	2008	TOTALS
Final exterior completion checks				
• Performed as a qualified <i>Inspector</i>	85	676	833	1594
• Performed without provincial qualifications	986	307	43	1336
Other inspections (Building, Mechanical and Plumbing)				
• Performed as a qualified <i>Inspector</i>	625	5362	2819	8806
• Performed without provincial qualifications	231	10	72	313
Total inspections by students	1,927	6,355	3,767	12,049
Total Building Code inspections by BCS branch	85,335	90,698	105,581	281,614

- *Excludes pools (all years)*
- *Excludes pre-permit inspections (2008)*

In summary, of the total inspections undertaken by students during 2006, 2007 and 2008, only 1,649 inspections were performed by students lacking the requisite provincial qualifications. The majority of these inspections were exterior completion checks. This represents 0.58% of all inspections undertaken by the BCS branch during the three years.

The following response reflects the detailed analysis of the two distinct categories of inspections.

Completion checks:

With respect to the exterior completion checks and the information provided in response to Recommendation 17 above, BCS branch has reviewed the work and has determined that there is no need or basis for duplicating the completion checks that were properly undertaken by well-trained construction /engineering /architectural students. The training and development of the students far exceeded the minimum standards set out by the Province for undertaking completion checks. The decision to continue to use students, following a change in the Act, was necessitated by the peak workloads associated with the

continuing construction boom and the inability to recruit pre-qualified inspectors.

Trained and experienced students viewed the following building elements and conditions to complete exterior checks necessary for the issuance of the final occupancy permits: visual checks to confirm positive drainage from the foundation walls, completion of the siding and fascia, exterior caulking of openings in the building envelope, the presence of guardrails on any decks, etc. Students were supervised and reported to the Building *Inspector* of record any observations of scope outside their training, which would require an inspection for Code compliance.

In view of the Auditor's concern, BCS branch contacted Tarion Corporation to determine whether any of the above referenced elements were the subject of any registered claims. Tarion has confirmed that there were no claims registered for any of the elements viewed as complete by the students from 2006 to 2008.

'Other' inspections:

With respect to the 'other' inspections that entailed components of inspections triggered by the OBC, such as Building, Mechanical and Plumbing, the following information is provided:

- 'Other' inspections involved the inspection of components of the interior of the building such as a review of the vapour barrier for one room (Building), or verifying the location and discharges of required exhaust fans (mostly bathroom exhaust fans) (Mechanical) and witnessing the air pressure test of the plumbing system (Plumbing).
- The Audit revealed that student *Inspectors* performed a total of 8,806 'other' inspections over the three-year period. Management was not aware student *Inspectors* were performing these 'other' inspections despite the formal training program that clearly outlined the expectations of workloads, and the fact the PMIs and/or the Building *Inspector* of record were reviewing their inspection reports. It is now clear that additional tools were required to ensure compliance with the branch's directives.
- These inspections, while performed without the approbation of management, were legal in accordance with the Building Code as these inspections were limited to components of the inspection process which did "*not constitute a substantial part of the plans review or inspection on a project,*" in accordance with the Building Code. A detailed review of 50 permit files containing 'other' inspections performed by student "*Inspectors*" confirmed that these inspections were limited to only components of the inspection process. The complete listing of all the inspections for low rise residential housing comprising of the inspection process is appended to this response - refer to Appendix 2.

- Management's review of permit files identified 313 of the 9119 (3.4%) 'other' inspections undertaken by a student that was not an "Inspector" per the OBC. The remainder of the inspections were completed in compliance with the OBC.
- Management only became aware of these 'other' inspections performed by students on May 18, 2010 following the disclosure by the Auditor of the specific building permit files that founded the Auditor's contentions.
- Up to that point in time, the Auditor's source for his findings was solely the MAP data. Management had identified concerns as to the accuracy and reliability of the MAP data to the Auditor in September 2009 as part of the fact verification process. Management provided specific examples of the disconnect between MAP entries and the actual official business records, the building permit files. The Auditor first responded to these concerns in April 2010.
- Prior to the disclosure by the Auditor, management had initiated its own review of permit files to locate the inspections, other than the exterior completion checks that had apparently been undertaken by students that were not an "Inspector". Management reviewed over 300 permit files and was not able to locate any 'other' inspections undertaken by a student that was not an "Inspector." The findings in fact supported the contention that the MAP data was flawed and unreliable.
- At a May 14, 2010 meeting, the Auditor clarified his concerns regarding the 'other' inspections (other than the completion checks which management was aware of), and as a result, management retrieved specific files to investigate the 'other' inspection (Building, Mechanical and Plumbing).
- On May 19, 2010, management alerted the Auditor that some of the files required further review and that management would report back as to its factual findings on May 21. A legal opinion for the benefit of the Auditor was sought on May 20, 2010. The results of the scrutiny of the official business records were provided to the Auditor at a meeting on May 21, 2010.
- Disclosure by the CBO was timely and in earnest. Management has shared whatever information was available at the time as requested. The CBO needed to rely on factual evidence based on the official business records, the building permit files, before drawing any conclusions.
- It is noted that the review of "Eight Specific Building Service Files" involved over 700 permit files. The branch requested the Auditor identify the permit files that supported the findings in order to enable the fact-finding review and to comment on the Auditor's interpretations of building regulatory processes and building code standards. Close to 200 files were identified by the Auditor, but none related to the inspections undertaken by students.

- Review of the permit file records did reveal that in some of the cases, the inspections were performed to assist the qualified Building *Inspector* who had carriage of the permit file. Students were coached by the Building Inspector as to what to observe and were instructed that if a performance standard was satisfied, to proceed to advise the builder that he/she could proceed with construction.
- Management will review the associated permit files and take appropriate action based on the findings. It is noted that if a deficiency was missed as a result of these inspections, these would have been brought to the attention of the builder, who is responsible for building in accordance with the OBC, or to the Tarion Corporation under the New Home Warranty Act. Management will verify with Tarion whether there have been any deficiencies identified as a result of these inspections. Presently, there has been no indication that these inspections have resulted in deficiencies being missed.
- Further, any determination as to whether these ‘other’ inspections were performed in accordance with the OBC, or not, should be made by an appropriately qualified and Code competent person, informed with the actual documentation of each permit file. At the time of this audit, the Auditor had only reviewed the documentation of approximately 150 permit files, commencing in May 2010, each requiring further review with appropriate staff in order to confirm the facts.

With respect to Section 4.7, management would like to clarify as follows:

The Building Code requires the following for a person to be appointed as an “*Inspector*”:

- To have successfully completed the examination program administered or authorized by the Ministry relating to the knowledge of the Act and the Code in the categories of qualifications set out in Table 3.5.2.1 that correspond to the type of buildings the Inspector will plan review and/or inspect; and,
- To have filed the requisite information with the Ministry.

Thus, an *Inspector* must have successfully completed the examination of the category “House” in order to be able to inspect a detached house or semi-detached house including the building’s systems and any ancillary building. To be able to inspect a substantial part or all of a plumbing system of a ‘House,’ the *Inspector* must also have successfully completed the examination covering Plumbing-House, etc. *Table 3.5.2.1* of the Code sets out the matrix to follow to ensure an *Inspector* is qualified to inspect what they are tasked to inspect.

There is, however, an exception. *Note (1)* to *Table 3.5.2.1* of the Code permits an *Inspector* qualified in one category of qualifications to carry out plans review and

inspections in another category where to do so does not constitute a substantial part of the plans review or inspection of any project.

Thus, if a student was a qualified *Inspector* for 'House,' and many were in 2007 and 2008, he or she was able to inspect components of the building, including, confirming the location of footing pads prior to the pouring of the basement slab, and inspecting the rough-in of the plumbing or witnessing the air test prior to occupancy. A number of students had attained the requisite qualification for 'House' when they undertook the 'other' inspections of components of the building (Table 2) and therefore, these 'other' inspections were performed by "*Inspectors*" in accordance with the OBC.

In Section 4.7 of the detailed audit report, the Auditor refers to four files where a student undertook "Framing or Backfill (Foundation) inspections. Closer scrutiny of these inspections revealed: that two of the four inspections involved confirming the location of footing pads prior to the pouring of the basement slab; one involved the measuring the depth of an excavation for sono tubes for the piers of a sundeck; and the fourth inspection involved the review of the framing of a refab shed. Each of these inspections were performed under the guidance of the Building *Inspector* of record, where required.

Recommendation 19

That the City review the conduct of staff who violated the Ontario Building Code by authorizing the illegal inspections undertaken by unqualified inspectors, and take appropriate disciplinary action.

Management Response

Management agrees with this recommendation.

Management has reviewed the decision to continue a longstanding practice that addressed a significant shortfall in resource allocation from 2006 - 2008, as well as the outcomes of that decision. At the time, the practice was essential to maintain excellence in service delivery, was unavoidable due to lack of resources, and was pursued only after ensuring public safety would not be compromised. A risk assessment indicated the risk was low for the homeowners and the City. The practice was discontinued as soon as the Interns were trained and qualified. No further action is required.

In hindsight, management could have discontinued the final exterior completion checks, which would have necessitated striking out or suspending the By-law section. However, management was concerned with the detrimental effects of not continuing the program, specifically, having open files with unresolved Code issues, incomplete construction three years after a permit has been issued, and an increase in the number of disputes between the builders and the purchasers involving the BCS branch. Further, a decision to strike out the related By-law

sections would have only been required for less than 1% of inspections and was part of a transition process that was complete within three years.

Management was also concerned with the impact of a sudden drop of service level. An operational decision was made to ensure excellent service. The CBO regrets not advising the DCM and Council of the situation in 2006.

Recommendation 20

That the City take appropriate disciplinary action regarding the PMI and others involved with inappropriate use of the City's Internet and email services.

Management Response

Management agrees with this recommendation.

Appropriate disciplinary action has been implemented, a communiqué has been delivered to all branch staff re-affirming the expectations of proper computer use under the City's Responsible Computing Policy and all BCS branch employees received an in-depth briefing of the responsible computing policy from IT Services, in Q4 2009.

Regarding Findings 1 to 4 (*Internet and Email Use*) and section 4.9.1 (in the detailed audit report), management would like to clarify that a detailed examination of the information provided by the Auditor revealed that other than one case where the use and storage of emails by one employee was of concern, the use of the Internet and emails by the branch management was in keeping with the City's Responsible Computing Policy. See management's response to Recommendation 22.

Recommendation 21

That the City ensure all employees abide by the Corporate Responsible Computing Policy through active and documented monitoring practices.

Management Response

Management agrees with this recommendation.

Currently, the ITS department and Labour Relations conduct two Internet usage audits per year that examine the Internet use of 50 employees for each audit cycle. Awareness reminders regarding the City's Responsible Computing Policy are provided twice weekly to all staff with network accounts. City managers are responsible for monitoring their staff and can, where warranted, request technology usage reports and can work with Labour Relations when interpreting certain data sets.

All BCS branch employees received an in-depth briefing of the Responsible Computing Policy from ITS in Q4 2009, in addition to a memo from the Director

of Building Code Services and Chief Building Official in Q1 2010, reminding all staff to comply with the Responsible Computing Policy.

Recommendation 22

Given the level of personal use of Internet and email, that the City perform a review of the staffing requirements in Building Code Services Branch to determine if all existing staff are required.

Management Response

Management does not agree with this recommendation.

Overall there were no substantiated performance issues or evidence of wasted productivity that would warrant such a recommendation.

It is noted that this recommendation contradicts the 2006 Audit of Building Services which stated “Insufficient resources exist within BSB to continue to effectively manage workload”.

Internet Usage

Many sites result in IP address tags. Visiting certain businesses’ websites can generate up to 40 “non-business hits” using the criteria defined by this audit. It is conjecture to conclude that BCS branch program managers were using the Internet inappropriately from the kind of analysis conducted. Reliance on the raw data is not sufficient to clearly and accurately discern intent of use. One would have to sit with an employee at his or her computer to correctly ascertain and categorize the usage. For example, in one case a program manager had been listening to a news piece on a particular building site in preparation for responding to media enquiries and accidentally left his computer running all through the weekend with the browser still open to cbc.ca. This generated a very large number of “hits” which were included in the count as personal use.

The City’s Responsible Computing Policy does not disallow Internet streaming for local media. In a recent presentation to all BCS branch employees an IT Services manager specifically told staff that listening or visiting local media sites is permitted as long as network bandwidth capacity is not impacted.

Emails

The photograph found of an “office pool” was taken by an employee. The program manager will download to his personal drive photographs from City-owned cameras whenever a building official is reassigned with the intent to review these, cull the inventory, and properly store the pictures in the branch’s electronic library at a later time. The program manager had not yet scrutinized the photos to determine their relevancy for work. Since the time of this audit the photograph was removed from the program manager’s drive. There was no lottery as is implied in the audit. The incident was related to several building

officials' unprecedented frustration over a builder's abuse of the inspection process. Eventually the situation was resolved as meetings were held with the builder's representatives to discuss the performance issues. The board was never visible to the general public and was up two to three days at most. Once the program manager noticed the board it was removed. The employees have since been made aware of the inappropriateness of the incident and have been reminded of the Code of Conduct to which they are held.

Since this audit, all BCS branch staff and management have received training on the City's Responsible Computing Policy. In addition, a memo regarding appropriate use of email and Internet use that included a reminder of the Code of Conduct was sent to all staff from the Director/Chief Building Official. In addition, the Director/Chief Building Official has also requested that IT Services conduct periodic reviews of Internet use within the branch.

Please see the briefing note (Appendix 1) dated 25 January 2010 submitted from IT Services to the City Manager regarding the ability to use the City's Internet filtering service for interpreting Internet usage.

Conclusion

The audit revealed that the Program Manager, Inspections is not following the Building Code requirements and the Policies, Guidelines and Standards of the City in some cases. In particular, we found that the Program Manager, Inspections did not follow these requirements with respect to the following aspects:

1. Allowing a property owner to proceed with construction without a building permit.
2. Approving inspections for plumbing without an actual inspection having taken place.
3. Overriding decisions by inspectors to issue Order to Comply even though appropriate permits or inspections had not been completed.
4. Incomplete documentation in the files, such as as-built surveys, soils reports, etc.

The audit found that the BCSB allowed 2,500 illegal inspections to be completed over the past three years (2006 to 2008) by unqualified summer students.

This audit started on January 12, 2009 as an audit of two specific building services files. Based on our work the scope was expanded to eight specific files. Our audit was again subsequently expanded to address the use of unqualified inspectors by the BCS Branch and the resulting risk management issues.

Management made the decision to use unqualified students, being fully aware that this contravened the requirements of the Ontario Building Code Act. Management indicates that this action was taken to deal with peak workloads associated with a

construction boom. Management undertook this action without informing Council, appropriate management tools, legal advice or risk assessment.

Our Office was informed on May 21, 2010 that the CBO was seeking a legal opinion as the applicability of some section of Building Code regarding these illegal inspections. That the CBO, 16 months after the start of the audit, would seek a legal opinion indicates she lacks a full understanding of risk management.

The audit also revealed that the Program Manager, Permit Approvals did not properly assess the potential of sensitive clays in a subdivision, and that the documentation provided for subdivisions is not distributed to all the persons who have a direct interest in that information.

It is our opinion that BCSB should ensure that there is compliance to the Ontario Building Code Act at all times.

We reviewed the email and Internet use of the PMI. We found that he used both the corporate email system and Internet excessively for non-business use and disregarded the City's Responsible Computing Policy and the City's Code of Conduct. As a mid-management level employee the computer misconduct (e.g., jokes and inappropriate materials) is particularly serious. Based on our review, we conclude that this user's extensive personal use ultimately resulted in his spending less time performing duties for which the position is responsible for. Based on these findings, we expanded the scope of our review to include the emails and Internet usage of the Building Inspection Unit's remaining managerial staff as well as one Building Official III.

Following review of the Internet and email use by the Units managerial employees as well as Building Official III, it is our opinion that staff at the Building Code Services Branch are not properly managing time and actions of some of their staff. Disciplinary action should be taken as required in those cases.

As stated in various other audits, IT Services need to enforce the Responsible Computing Policy at all levels of the organization. In addition, stronger measures are needed to address the level of jokes and inappropriate materials received and sent by City employees using the corporate email system.

RÉSUMÉ

Introduction

Cette vérification a été menée à la suite d'une notification à la Ligne directe de fraude et d'abus. Elle ne figurait pas à l'origine dans le Plan de vérification présenté au Conseil.

Le Bureau du vérificateur général a reçu un rapport qui faisait état de questions touchant les activités d'un gestionnaire de programme (GP) de la Section des inspections en bâtiment de la Direction des services du Code du bâtiment (la DSCB). Le rapport signalait que certaines inspections de bâtiments, dans une division particulière de la DSCB, n'avaient pas été effectuées comme l'exigeait le règlement et que dans certains cas des propriétaires avaient été dispensés d'obtenir un permis de construction à la suite de décisions prises par ce gestionnaire de programme.

Le Bureau du vérificateur général a décidé d'examiner les processus d'approbation et d'inspection appliqués par le gestionnaire de programme, afin de déterminer s'il respectait les exigences liées aux normes, aux règlements et aux politiques.

L'information transmise à la Ligne directe de fraude et d'abus portait sur deux problèmes particuliers, mais affirmait que l'enquête devrait aussi se pencher sur d'autres cas d'éventuelles non-conformités au *Code du bâtiment*, au *Règlement municipal sur le bâtiment*, et aux politiques et procédures de la Ville. C'est pourquoi l'examen a été élargi de manière à inclure d'autres dossiers, à la suite d'informations obtenues au cours de la vérification.

Objectifs de vérification

Objectif de vérification n° 1 – Examiner et évaluer les processus et méthodologies utilisés pour l'examen et l'approbation du premier dossier faisant l'objet du rapport déposé auprès de la Ligne directe de fraude et d'abus.

Objectif de vérification n° 2 – Examiner la méthodologie appliquée aux inspections du second dossier signalé à la Ligne directe de fraude et d'abus, afin de déterminer comment les zones de sols fragiles ont affecté les inspections et les approbations.

Objectif de vérification n° 3 – Examiner les méthodes et les procédures appliquées aux inspections par la division de la DSCB en question.

Objectif de vérification n° 4 – Examiner les méthodes appliquées par la Ville en vue de faire respecter le *Code du bâtiment de l'Ontario* (CBO), le *Règlement municipal sur le bâtiment*, ainsi que les politiques et procédures touchant les inspections de bâtiments.

Objectif de vérification n° 5 – Évaluer le rôle du gestionnaire de programme et de la Direction des services du Code du bâtiment, en ce qui a trait aux dossiers précis.

Portée de la vérification

La portée de la vérification comprenait les inspections effectuées par les inspecteurs relevant d'un gestionnaire de programme particulier de la Direction des services du Code du bâtiment.

Dans un premier temps, deux dossiers précis ont été examinés. En fonction des informations obtenues au cours de la vérification, six dossiers supplémentaires ont fait l'objet d'un examen.

Des rapports géotechniques ont été examinés afin d'évaluer les enquêtes en matière de sols argileux sensibles et autres sols fragiles, ainsi que les informations ayant été traitées au cours des examens des permis de construction et des inspections.

Sommaire des résultats

Au total, deux lotissements résidentiels et six adresses municipales ont été examinés. À l'origine, la Ligne directe de fraude et d'abus n'avait signalé qu'une adresse municipale et un lotissement résidentiel, mais l'examen a été élargi à la suite des entrevues et des révélations obtenues par l'examen du système courriel.

Dossier n° 1

1. L'inspecteur en bâtiment a découvert qu'un mur en béton haut de 2,7 mètres ainsi que des fondations en béton étaient en voie de construction, sans permis de construction. En se fondant sur son enquête, l'inspecteur a rédigé un ordre de se conformer (l'ordre) pour contraindre le propriétaire à présenter une demande de permis de construction pour la structure.
2. Le gestionnaire de programme de l'Unité de l'inspection des bâtiments (GPI) a examiné cet ordre et a réclamé au propriétaire des renseignements supplémentaires. L'entreprise de dessin technique retenue par le propriétaire pour des services de conception et de dessin architectural a informé le GPI que le projet comportait trois unités, c'est-à-dire une maison sur mesure, une remise de jardin, et le mur et les fondations en béton. Le rapport stipule que le mur en béton sert de clôture à un jardin paysager de type XVIII^e siècle, et qu'il ne sera pas fixé à la remise de jardin.
3. Le GPI s'est rangé à l'avis de l'entreprise de dessin technique et a défini la structure comme étant une clôture; ainsi, il a conclu qu'un permis de construction ne serait pas nécessaire, et il a révoqué l'ordre. Nous sommes d'avis que l'ordre n'aurait pas dû être révoqué.
4. Notre analyse nous a mené à conclure que le GPI aurait dû exiger un permis de construction pour le mur en béton, parce que le projet global comprenait la maison sur mesure, la remise et le mur en béton (la clôture). La maison sur mesure et la remise nécessitent chacun un permis de construction, et le mur en béton faisant partie du projet exigerait, lui aussi, un permis.

5. Comme la clôture dépasse 1,8 mètre (elle atteint 2,7 mètres), qu'elle est construite de béton armé, et qu'elle fait partie du projet global qui nécessite un permis de construction, elle est soumise aux dispositions de la Partie 4 du *Code du bâtiment*.
6. Le GPI aurait dû faire l'examen du projet en son entier, qui exige un permis de construction, plutôt que d'autoriser que le projet soit fragmenté.

Dossier n° 2 – Lotissement résidentiel

1. La plainte déposée affirmait que le GPI avait autorisé le constructeur à ériger des maisons alors que les sols présentaient des problèmes structurels, sans que ces problèmes aient été résolus. L'examen des dossiers et de la correspondance pertinente a révélé que le gestionnaire de programme du service d'inspection des bâtiments (GPI) avait effectué les inspections en s'appuyant sur les permis de construction émis.
2. Environ 100 permis de construction ont été délivrés au cours de l'année 2008 pour des immeubles résidentiels (maisons et maisons en rangée) situés dans une zone de sols argileux fragiles. Les dessins pour les fondations de ces maisons ne tenaient pas compte des sols argileux sensibles, et ce, en dépit du fait que le rapport géotechnique préparé pour le lotissement signalait leur présence. Ces permis de construction n'auraient pas dû être délivrés, selon les dessins proposés, comme il en est discuté plus en détail dans la section suivante.
3. Les dossiers de ce projet ne contiennent pas tous les documents exigés par les *Politiques, Lignes directrices et Normes*. Par exemple, les dossiers d'inspection ne contiennent pas toujours de copie des dessins approuvés des fermes de toit; dans certains cas, le rapport de l'ingénieur en structures qui figure au dossier ne correspond pas à la version du rapport qui avait été approuvée.
4. Nous avons découvert que dans certains cas l'ingénieur en structures (chargé de l'examen du site) avait signalé des erreurs ou des omissions relativement au placement de l'armature du béton des murs d'assise et des murs de fondation; cependant, l'inspecteur de la Ville n'a pas insisté afin que l'ingénieur revienne pour confirmer de visu et par écrit la correction des défauts signalés. À la place, l'inspecteur de la Ville a effectué lui-même l'examen et inscrit au dossier la confirmation des corrections. Cette procédure transfère inutilement vers la Ville la charge de travail, les obligations et l'éventuelle responsabilité en matière d'examen.
5. Dans deux rapports d'inspection pour deux immeubles différents, l'inspecteur en bâtiment avait déposé un rapport d'inspection affirmant que la plomberie de l'immeuble avait passé l'inspection, alors qu'il n'avait pas effectué cette dernière parce que la plomberie avait été recouverte par la dalle de béton du sous-sol. Cela constitue une fausse représentation des résultats d'inspection, puisque l'inspecteur a accordé une note de passage à la plomberie sans l'avoir réellement inspectée. Cette inspection aurait dû afficher la mention « échec », et l'inspecteur aurait dû

contraindre l'entrepreneur à découvrir la plomberie pour la soumettre à l'inspection. L'inspecteur a affirmé avoir fait la même chose sur deux autres sites; il a indiqué en outre que le GPI avait été mis au courant de la situation et y avait consenti.

6. Le *Règlement municipal sur le bâtiment* exige que des droits d'inspection remboursables soient déposés avec chaque demande de permis de construction. Des sommes sont retenues sur ce versement si le propriétaire oblige la Ville à des inspections multiples parce qu'il n'est pas prêt au moment de l'inspection ou s'il ne donne pas de préavis suffisant. Si le propriétaire est la cause d'un nombre répété d'inspections, l'inspecteur est tenu d'inscrire ce renseignement sur le formulaire d'inspection. Cependant, dans ce cas précis, les inspecteurs n'ont pas coché la case signalant qu'il fallait retenir une somme pour compenser la Ville des inspections supplémentaires, en dépit du fait que plusieurs reprises d'inspections ont été nécessaires parce que le constructeur n'était pas prêt à temps pour l'inspection. Notre examen a conclu que des droits s'élevant à environ 5 000 \$ n'ont pas été facturés à ce promoteur. La Ville devrait lui réclamer cette somme.

Sols fragiles

1. Au cours de l'année 2008, le gestionnaire de programme de l'unité des approbations de permis (GPA) a décidé de demander le rapport géotechnique de janvier 2007, qui avait été préparé pour une étape particulière du lotissement, puisqu'il n'en avait pas reçu copie avec la demande de permis de construction déposée par le promoteur. Il a examiné ce rapport au mois d'août 2008, et c'est à ce moment qu'il a pris connaissance du problème touchant cette étape particulière de la construction du lotissement. Le GPA a interrompu l'émission de permis de construction tant qu'il n'a pas été convaincu que la conception des maisons répondait aux exigences du *Code du bâtiment*. Les exigences spécifiques en matière de conception des fondations ont été fournies par le GPA au promoteur.
2. Le GPA a exprimé ses inquiétudes au GPI et au promoteur, et il a réclamé que les fondations de tous les édifices de cette étape du lotissement soient conçues par des ingénieurs professionnels. Avant que le GPA ait lu le rapport géotechnique et pris les mesures indiquées ci-dessus, environ six maisons avaient déjà été achevées par ce temps-là, et les fondations de sept autres avaient déjà été coulées et remblayées. Ces immeubles nécessitent des mesures correctives spéciales pour empêcher un tassement différentiel et atteindre un niveau de tassement final acceptable. Au moment de la vérification (début 2009), la Ville passait en revue ces mesures correctives spéciales.
3. Au cours d'une entrevue, le GPA a affirmé que la raison pour laquelle il ignorait ces faits au moment de l'examen des demandes de permis de construction était qu'il n'avait pas reçu le rapport géotechnique préparé pour le lotissement, en dépit du fait que ce rapport avait été présenté à la Ville au début de 2007. Le GPA a affirmé qu'il avait expressément demandé un exemplaire du rapport géotechnique, et

qu'autrement, il n'en aurait pas reçu. Nous avons demandé au GPA des exemplaires des rapports géotechniques correspondant à des étapes antérieures du lotissement, mais il ne disposait pas de ces documents dans ses dossiers; ils nous ont été transmis au cours du processus de vérification par la Direction de l'approbation des demandes d'aménagement et d'infrastructure de Services d'infrastructure et Viabilité des collectivités (anciennement Urbanisme, Transport en commun et Environnement).

4. Selon le GPA, la Direction de l'approbation des demandes d'aménagement et d'infrastructure reçoit un exemplaire du rapport géotechnique avec les dessins techniques pour le lotissement. Cependant, il n'existe pas de mécanisme formel assurant qu'un exemplaire du rapport géotechnique est transmis au GPA. Ainsi, les recommandations touchant les fondations des immeubles, bien qu'elles figurent dans le rapport géotechnique, ne sont pas connues du GPA au moment où il examine les dessins relatifs à la demande de permis de construction. Et bien que dans le présent cas, le GPA ait demandé un exemplaire du rapport géotechnique, cela n'est pas toujours fait; la preuve en est que le GPA ne disposait pas d'exemplaires des rapports antérieurs – et aucune procédure formelle n'est en place afin d'assurer qu'un exemplaire du rapport est transmis au GPA.
5. Nous estimons que le GPA ne doit délivrer aucun permis de construction avant que les détails géotechniques n'aient été déposés par le promoteur et qu'il ait disposé du temps suffisant pour l'examen du rapport géotechnique. La Ville devrait donc réviser les *Politiques, Lignes directrices et Normes* de manière à exiger que soit déposé, en même temps que les demandes de permis de construction, un exemplaire du rapport géotechnique.
6. Étant donné les approbations de demandes de permis de construction antérieurs qu'il avait données pour les immeubles de ce lotissement, le GPA était au courant (ou aurait dû l'être) du fait qu'il existait, à des étapes antérieures de la construction, des problèmes liés à la fragilité des sols argileux dans ce lotissement et dans ses environs.
7. Le GPA n'a pas exigé que le rapport géotechnique soit présenté avant l'émission des permis de construction.
8. Nous estimons que toute information relative à des sols fragiles devrait être partagée avec toutes les divisions susceptibles d'en être affectées, notamment la Direction de l'approbation des demandes d'aménagement et d'infrastructure, la Gestion de l'infrastructure, la Direction des services du Code du bâtiment, etc.
9. Au cours des entrevues, il a été révélé que les maisons construites dans une zone avaient nécessité des réparations attribuables au mouvement des fondations dû à la fragilité des sols argileux sous-jacents. On a également examiné les dossiers touchant les réparations apportées aux fondations et aux murs de fondation situés dans les

environs, en vue de déterminer les informations disponibles concernant l'emplacement de sols fragiles dans les environs du lotissement.

Dossier n° 3 – Lotissement résidentiel

1. Le dossier de ce lotissement a été examiné à la suite des informations obtenues au cours de la vérification.
2. Dans certains cas, le permis d'occuper final a été délivré presque trois ans après l'émission du permis d'occuper partiel. Un permis d'occuper partiel est délivré quand le détenteur de permis désire permettre l'occupation d'un immeuble inachevé. Un permis d'occuper final est délivré quand la construction est achevée et que toutes les déficiences restantes aux termes du *Code*, telles que signalées dans les rapports d'inspection, ont été réglées.
3. Le problème causé par un très long délai entre l'émission du permis d'occuper partiel et le permis d'occuper final est que les déficiences figurant dans les rapports d'inspection rédigés pour le permis d'occuper partiel peuvent demeurer telles quelles pendant une très longue période.
4. La Ville a, depuis, mis en place un mécanisme visant à réduire l'occurrence de telles situations en prescrivant dans le *Règlement municipal sur le bâtiment* que les droits d'inspection remboursables seront réputés perdus par la personne dont le nom figure sur le reçu délivré par la Ville au moment du versement des droits, si le permis d'occuper final n'a pas été délivré dans les trois années qui suivent la date d'émission du permis de construire.
5. Dans certains cas, les inspections relatives au permis d'occuper partiel signalaient des conditions qui pouvaient ne pas avoir été vérifiées convenablement avant l'émission du permis d'occuper final. Par exemple, dans un cas, le permis d'occuper partiel réclamait que les colonnes soient fixées aux fondations, mais le rapport d'inspection portait la mention « satisfaisant ». À notre avis, l'inspection aurait dû être désignée « échec », et une inspection ultérieure aurait dû être exigée.
6. Dans certains cas, à la rubrique « mécanique » des inspections relatives au permis d'occuper final figurait, parmi les conditions : « Ventilation, section 9.32 CBO », mais sans offrir plus de détails ou sans être suffisamment spécifique pour permettre un suivi. En premier lieu, les formulaires d'inspection relatifs au permis d'occuper final ne devraient pas contenir de conditions, puisque le permis n'est délivré qu'après que toutes les exigences ont été satisfaites. Si une condition doit être formulée, elle devrait être précise. La condition citée ci-dessus renvoie à une section du *Code* qui couvre tous les aspects de la ventilation d'un édifice construit en vertu de la partie 9 du code.
7. La documentation qui figure dans les dossiers n'est pas toujours complète. Par exemple, un certain nombre de dossiers ne contenaient pas un ou plusieurs rapports

exigés : plans d'arpentage, levés de l'ouvrage fini, rapport géotechnique, dessins des fermes de toit ou examen technique.

Dossier n° 4 – Maison

1. Le permis pour la construction de cette maison a été délivré le 25 novembre 2004, mais le propriétaire/constructeur n'a pas fait de demandes touchant plusieurs inspections, y compris les inspections relatives à la fondation et à l'isolation du sous-sol, l'inspection finale de la plomberie, l'inspection finale du raccordement mécanique et le permis d'occuper.
2. Le 12 janvier 2009, l'inspecteur en bâtiment a délivré un ordre de se conformer, qui exigeait que le propriétaire obtienne un permis d'occuper. L'échéance avait été fixée par l'ordre au 19 janvier 2009, mais le GPI a accordé au propriétaire, en date du 20 janvier 2009, un report d'un mois.
3. Le propriétaire n'a pas obtenu les inspections exigées au cours de la construction.
4. L'absence d'inspections en cours de construction est essentiellement due au fait que le propriétaire ne s'est pas conformé aux exigences formulées par la Ville. Comme on ne programme les inspections qu'au moment où le propriétaire en fait la demande, il peut facilement s'écouler plusieurs semaines avant que l'inspecteur n'effectue la visite du site relativement à l'avancement des travaux.
5. Le GPI a accordé au propriétaire un délai supplémentaire de 30 jours pour lui permettre de recouvrir l'isolant combustible au sous-sol. Ce délai a fait porter à la Ville une responsabilité injustifiée, dans le cas où un incendie se serait déclaré dans l'immeuble illégalement occupé et que l'isolant combustible aurait été un facteur d'accident de personne.
6. Les travaux exigés pour assurer la conformité avec l'ordre auraient pu être exécutés en moins d'une semaine, comme le prescrivait l'ordre. Il n'y a aucune raison valide que le propriétaire réclame un mois pour terminer les travaux, surtout si on tient compte du retard qu'il a pris pour obtenir le permis d'occuper exigé. Il convient de souligner que l'immeuble était occupé sans détenir de permis d'occuper délivré par la Ville.
7. Le GPI signale que « le propriétaire répond aux critères permettant de l'exempter de l'obligation de fournir les levés de l'ouvrage fini ». Les *Politiques, Lignes directrices et Normes d'inspection* ne permettent pas d'exception à cette obligation.
8. L'exigence touchant les levés de l'ouvrage fini figure aussi bien dans les *Politiques, Lignes directrices et Normes d'inspection* de la Ville que dans son *Règlement municipal sur le bâtiment*. Le problème posé par une telle exemption accordée à certains propriétaires est d'instaurer un climat de favoritisme, en plus de faire porter à la Ville une responsabilité potentielle injustifiée touchant l'emplacement exact de l'immeuble en cause.

9. Le GPI a enjoint l'inspecteur en bâtiment de délivrer un permis d'occuper partiel qui exclurait l'utilisation du sous-sol.
10. Dans ce cas particulier, le fait que l'isolant combustible n'était pas convenablement recouvert signifie que les séparations coupe-feu n'étaient pas complètes. Pour cette raison, le permis d'occuper partiel n'aurait pas dû être délivré.

Dossier n° 5 – Maison

1. Des communications figurant au dossier indiquent que le GPI avait dit au propriétaire que les levés de l'ouvrage fini n'étaient pas exigibles pour cet emplacement, alors que dans les faits, les *Politiques, Lignes directrices et Normes* l'exigent, et ne font aucune exception. L'inspecteur en bâtiment a délivré un permis d'occuper final en se fondant sur les directives du GPI. En outre, le GPI a exigé que l'inspecteur détermine l'emplacement de la maison relativement aux limites du lot en s'appuyant sur des points de repère.
2. Ce qui pose un problème, dans ce dossier, c'est que les *Politiques, Lignes directrices et Normes* précisent qu'on ne fait aucune exception en matière de l'exigence des levés de l'ouvrage fini. Un tel document était donc exigible. De plus, en demandant à un inspecteur de confirmer l'emplacement exact de la maison par rapport aux limites du lot, on retire essentiellement au propriétaire la responsabilité de respecter le règlement et on la transfère dans sa totalité à l'inspecteur, et de là, à la Ville. À notre avis, c'est un cas où le GPI cherche à ne pas incommoder le propriétaire; mais ce faisant, il n'agit pas dans l'intérêt fondamental de la Ville.

Dossier n° 6 – Maison

1. Le 13 novembre 2008, l'inspecteur en bâtiment a remarqué que le propriétaire avait démarré la construction sans permis, ni même de demande de permis. Le propriétaire a informé l'inspecteur en bâtiment qu'il avait rendez-vous le 21 novembre pour une rencontre avec le GPI. L'inspecteur en bâtiment a écrit le 17 novembre au GPI, pour demander s'il devait délivrer un ordre de se conformer; une demande de permis avait été déposée le 14 novembre.
2. Le GPI a alors écrit à l'inspecteur en bâtiment, l'informant que le dossier avait été réévalué et qu'il avait autorisé que se poursuive, sans permis, la construction de la fondation, parce que la saison froide allait commencer. À l'exception de cette fondation, aucune construction ne devrait être tolérée avant l'émission du permis de construction. Le GPI n'aurait pas dû autoriser que la construction se poursuive sans permis.

Dossier n° 7 – Caserne de pompiers de Vars

1. La Caserne de pompiers de Vars, située au 6090, chemin Rockland, a été érigée en 2006 et achevée en 2007. Aux fins du *Code du bâtiment*, le propriétaire est la Direction

de la gestion des biens immobiliers de la Ville (GBI); l'exploitant est la Direction du service des incendies de la Ville d'Ottawa.

2. La GBI et le Service des incendies ont décidé d'installer une citerne souterraine avec un système de traitement de l'eau, de manière à assurer à l'immeuble une réserve d'eau suffisante pour deux semaines. Les besoins en eau potable seraient satisfaits par de l'eau embouteillée.
3. Le GPI a délivré un ordre de se conformer, signifiant que quatre infractions au *Code du bâtiment* devaient être corrigées avant qu'un permis d'occuper ne puisse être délivré, à savoir a) parachever les travaux de façade; b) fournir un formulaire d'examen général cacheté préparé par l'ingénieur civil touchant la réserve d'eau pour lutter contre les incendies; c) fournir le formulaire d'examen général; d) aucune eau potable n'était fournie.
4. Des discussions touchant la qualité de la réserve d'eau potable, et si elle respectait ou non les exigences du *Code du bâtiment* et de la *Loi sur la salubrité de l'eau*, ont mené à l'émission d'un permis d'occuper partiel, assorti de la condition que la réserve d'eau de l'immeuble serait traitée comme étant non potable, et que tous les besoins en eau potable seraient satisfaits par l'utilisation d'eau embouteillée.
5. Le permis d'occuper final a été délivré en décembre 2007, assorti d'une condition voulant que la réserve d'eau soit testée toutes les deux semaines, conformément au Règlement de l'Ontario 252/02.
6. Notre examen du dossier n'a soulevé aucune source d'inquiétude quant aux actions prises par le GPI.

Dossier n° 8 – Maison

Cette résidence a été construite en 2002. Les principaux problèmes repérés en matière de la documentation dans le dossier sont les suivantes :

1. Le rapport technique sur les sols porteurs n'était pas disponible au moment de la construction de l'assise, mais dans son rapport d'inspection, l'inspecteur a jugé la situation satisfaisante, signalant que le sol « semble acceptable ». L'inspecteur aurait dû insister pour recevoir le rapport avant que le béton ne soit coulé. Comme c'est le cas ailleurs dans le présent rapport, l'action de l'inspecteur fait porter à la Ville une responsabilité injustifiée. Bien que l'inspecteur dispose des compétences pour effectuer ces inspections, il doit insister pour que le propriétaire respecte les règlements.
2. Une note de l'inspecteur, en date du 11 juin 2003, figure au dossier, et indique que la maison a été construite sans toutes les inspections requises. La note souligne aussi que la dernière inspection effectuée, datant du 6 juin 2002, était l'inspection de l'isolant, qui portait la mention « échec »; que des défauts d'ossature n'avaient pas été corrigés; que l'inspection à des fins d'occupation n'avait pas été complétée;

qu'un test de l'eau du puits avait été réclamé, mais n'avait pas été fourni; enfin, que le permis avait été délivré pour un garage unique, et non pour le garage double qui avait été construit.

3. La documentation ultérieure figurant au dossier, et préparée par un autre inspecteur, indique que les inspections exigées n'étaient pas nécessaires, puisqu'il s'agissait d'une maison préfabriquée. Toutefois, le fait qu'une maison soit préfabriquée ne supprime pas l'exigence d'inspections obligatoires.
4. Une note en date du 25 juin 2003, signée par un autre inspecteur, indique qu'il n'était pas nécessaire de fournir un rapport d'ingénieur sur la capacité porteuse des sols, ce qui n'est pas conforme aux *Politiques, Lignes directrices et Normes*. La note signale en outre que les assises et les socles sont désormais approuvés (en juin 2003), mais elle ne fournit aucune documentation justifiant cette approbation.
5. Dans l'inspection finale à des fins d'occupation, la rubrique « raccordements mécaniques » cite comme condition « Ventilation, section 9.32 CBO », mais sans offrir plus de détails ou être suffisamment spécifique pour permettre un suivi. Cette condition est extrêmement vague, sans parler du fait qu'elle ne devrait pas être nécessaire, si la maison est construite conformément au *Code*.

Règles touchant la conservation des documents

1. À la section 20 du document *Politiques, Lignes directrices et Normes*, préparé par la Direction des services du Code du bâtiment, figure la liste des documents qui doivent être conservés avec le dossier d'un immeuble.
2. L'examen des différents dossiers a révélé que plusieurs d'entre eux ne contenaient pas toute la documentation exigée par le document *Politiques, Lignes directrices et Normes*. Par exemple, les dossiers d'inspection ne contiennent pas toujours un exemplaire des dessins approuvés des fermes de toit, les levés de l'ouvrage fini ni le rapport d'étude des sols; dans certains cas, le rapport de l'ingénieur en structures qui est consigné au dossier ne correspond pas à la version du rapport qui a été approuvée.
3. De plus, dans un certain nombre de dossiers, le GPI a dispensé le propriétaire de présenter les levés de l'ouvrage fini. Cette pratique devrait être éliminée, à cause de la responsabilité inutile que cela peut éventuellement faire peser sur la Ville. De plus, la demande faite par le GPI, qui veut que l'un des inspecteurs s'appuie sur des repères visibles pour déterminer si la maison est convenablement située par rapport aux limites du lot, ne constitue pas un bon usage des ressources dont dispose le GPI.
4. Lors de l'examen des dossiers concernant l'entrepreneur qui a fait recouvrir les travaux de plomberie (voir n° 1 *Inspection réussie sans examen* ci-dessous), on a pu noter qu'il y manque les informations touchant les entreprises responsables des divers métiers. Ces renseignements sont essentiels, car ils permettent à la Ville de

conserver une base de données complète sur la construction résidentielle dans la Ville d'Ottawa.

Examen structurel du site

1. Le protocole en matière d'inspection des sols fragiles, rédigé par la DSCB (Lignes directrices en matière d'inspection des sols fragiles), indique que l'ingénieur en structures fournira des notes de service sur l'examen du site pour chaque parcelle, confirmant que le volume et l'armature des assises et des murs de fondation, la force du béton, etc., sont conformes à la conception et aux dessins approuvés par le permis.
2. Nous avons découvert que dans certains cas, le représentant de l'ingénieur en structures, responsable de l'examen de la fondation et des murs de fondation au cours de la construction, avait constaté des défauts dans le placement de l'armature du béton et avait consigné celles-ci dans les notes d'inspection; cependant, l'ingénieur en structures n'est pas retourné pour faire une nouvelle inspection. L'inspecteur de la Ville a autorisé que se poursuive la construction de l'immeuble en se fondant sur les notes originales écrites par l'ingénieur en structures, au lieu d'exiger que l'ingénieur revienne pour confirmer que les assises et les murs de fondation avaient été renforcés en conformité avec les dessins et selon ses instructions.
3. Le problème qui se pose avec la procédure telle qu'elle est suivie est que la responsabilité touchant les corrections ou les additions à l'armature des structures, qui revient en propre au propriétaire et à l'ingénieur, est endossée par l'inspecteur de la Ville. L'inspecteur doit exprimer très clairement que la responsabilité de l'approbation finale de la fondation revient au propriétaire et à ses ingénieurs-conseils.

Inspection réussie sans examen

1. Au cours de l'examen des dossiers d'inspection, nous avons trouvé deux cas où l'inspecteur en bâtiment, en arrivant sur le site, avait découvert qu'il n'y avait pas d'accès au sous-sol pour permettre l'inspection de la plomberie; l'inspecteur a alors rédigé des instructions selon lesquelles l'entrepreneur ne devait pas recouvrir la plomberie avant que l'inspecteur ne l'ait inspectée; mais à son retour, quelques jours plus tard, l'inspecteur a découvert que l'entrepreneur avait coulé la dalle du plancher du sous-sol, recouvrant ainsi la plomberie sous la dalle et empêchant l'inspection.
2. L'inspecteur a néanmoins déposé un rapport d'inspection de la plomberie indiquant que la plomberie était acceptable, et ce, sans l'avoir en fait inspectée. La justification apportée, qu'on retrouve dans les Rapports d'inspection, était que l'entrepreneur avait exécuté sur d'autres sites des travaux semblables, qui avaient été jugés acceptables.

3. Au cours de l'entrevue, l'inspecteur a confirmé que, dans deux autres cas (pour un total de quatre), il avait approuvé la plomberie sans l'examiner, dans des circonstances semblables. L'inspecteur ne se souvenait pas des adresses des deux autres sites, mais a affirmé qu'elles étaient également situées dans le lotissement.
4. Interrogé quant à savoir si le GPI était au courant de ces cas, l'inspecteur a affirmé qu'il en avait discuté avec le GPI, qui avait répondu que la procédure était acceptable. La discussion de cette question durant l'entrevue avec le GPI et les conversations subséquentes ont révélé que le GPI n'avait pas avalisé cette procédure. Une autre discussion a dévoilé qu'un autre inspecteur se rappelait que la même chose s'était aussi produite sur deux autres sites, dans d'autres lotissements; il n'a pas été possible, au cours de cette vérification, de confirmer quelles propriétés étaient en cause.

Droits d'inspection remboursables

1. Le *Règlement municipal sur le bâtiment* prévoit qu'une somme désignée « droits d'inspection remboursables » soit déposée avec la demande de permis de construction. Si le constructeur fait venir inutilement un inspecteur alors que les travaux ne sont « pas prêts pour l'inspection », on déduira la somme de 100 \$ des droits d'inspection remboursables pour chaque visite de l'inspecteur sur un site qui n'est pas prêt pour l'inspection.
2. Au cours de l'examen des dossiers relatifs à un lotissement résidentiel donné, on a remarqué que les inspecteurs n'avaient pas coché la case prévue pour exiger ces frais, et ce, malgré le fait que plusieurs inspections supplémentaires avaient été exigées. Nous avons examiné cinquante dossiers au hasard, pour ce lotissement particulier; les cinquante dossiers contenaient chacun au moins un cas où les travaux n'étaient « pas prêts pour l'inspection »; dans aucun des cas, on n'avait coché la case relative à l'amende de 100 \$, ce qui représente une somme de 5 000 \$ que la Ville n'a pas exigée de ce promoteur particulier. La Ville devrait maintenant réclamer ces sommes au promoteur.
3. L'examen de dossiers d'autres promoteurs, et d'autres dossiers de permis de construction, a révélé qu'on a réclamé à d'autres constructeurs des frais pour travaux « pas prêts pour l'inspection ».
4. La Ville a fourni la liste des sommes payées par ce promoteur particulier, laquelle a révélé que la dernière amende pour travaux « pas prêts pour l'inspection » avait été payée en mars 2007.

Inspections effectuées par des stagiaires ou par des étudiants occupant un emploi d'été

1. Au cours des entrevues et par l'examen des courriels échangés, on a découvert qu'un certain nombre d'inspections avaient été effectuées par des étudiants occupant un emploi d'été, qui ne détenaient pas les qualifications exigées depuis le

1^{er} janvier 2006 par le *Code du bâtiment de l'Ontario*. La Ville a établi la liste des inspections effectuées par des étudiants en 2006, 2007 et 2008, pour permettre l'évaluation des inspections effectuées par des étudiants sans qu'ils possèdent les compétences exigées par le *Code du bâtiment de l'Ontario* (c.-à-d. les stagiaires et les étudiants occupant un emploi d'été et qui ne sont pas qualifiés). .

2. Au cours de certaines des entrevues, on a allégué que le GPI avait confié à des stagiaires non qualifiés et à des étudiants des inspections qui auraient dû être effectuées par des inspecteurs qualifiés. Une enquête plus approfondie a révélé de la correspondance entre le gestionnaire (Inspections), et les divers gestionnaires de programme (Inspections) qui soulevait les éventuels impacts négatifs que pourrait avoir cette pratique sur la Ville, si elle se poursuivait et si elle devenait publique.
3. Les entrevues avec le chef du bâtiment, le gestionnaire (Inspections) et le GPI ont confirmé qu'ils étaient tous conscients du fait que cette pratique était fondamentalement illégale . Le chef du bâtiment a justifié la pratique par les exigences touchant les délais prescrits par le *Code du bâtiment* en matière d'inspections, doublées de la pénurie de personnel qualifié.
4. Le gestionnaire (Inspections) a dressé des tableaux contenant toutes les inspections effectuées par des stagiaires ou des étudiants au cours des années 2006, 2007 et 2008.
6. 5. En nous fondant sur la correspondance et les entrevues, nous avons constaté que plusieurs inspections illégales avaient été attribuées à un inspecteur qualifié dans le système. Le nombre total d'inspections illégales est résumé dans le tableau ci-dessous.

Nombre total d'inspections illégales				
	Année			TOTAL
	2006	2007	2008	
Inspections illégales dans MAP	756	537	705	1 998
Inspections illégales attribuées à un inspecteur	356	151	5	512
Nombre total d'inspections illégales	1 112	688	710	2 510

7. Les inspections illégales par des étudiants comprenaient des inspections de bâtiments (y compris des inspections de déblaiements, de fondations et de charpentage, ainsi que des inspections intérimaires et finales); des inspections des raccordements mécaniques (chauffage, ventilation, et conditionnement de l'air); et des inspections de plomberie (canalisations d'eau, canalisations d'égout et clapets antiretour protecteurs).

8. La *Loi sur le code du bâtiment* exige que des inspecteurs, et sous certaines conditions des inspecteurs stagiaires, effectuent les inspections des bâtiments. Les personnes qui ne sont ni inspecteurs ni inspecteurs stagiaires ne sont pas autorisées à effectuer des inspections d'immeubles.
9. Faire mener des inspections par des inspecteurs non qualifiés est illégal.
10. La Direction des services du Code du bâtiment devrait prendre les mesures nécessaires pour résoudre les problèmes éventuels issus des inspections illégales effectuées par des étudiants.
11. La Direction des services du Code du bâtiment devrait, pour chacun des dossiers en cause, évaluer s'il convient d'effectuer une inspection supplémentaire et de signaler la situation au propriétaire de l'immeuble.

Utilisation d'Internet et du courriel

1. Nous avons examiné l'utilisation du courriel et d'Internet par le GPI. Nous avons découvert qu'il utilisait le système municipal de courriel et d'Internet à des fins personnelles et ne tenait pas compte de la Politique sur l'utilisation responsable des ordinateurs de la Ville ni du Code de conduite des employés de la Ville. À titre d'employé municipal, l'inconduite informatique (p. ex. des blagues et des documents non appropriés) est particulièrement grave. Nous avons constaté que son utilisation du courriel à des fins privées était généralement très élevée, atteignant 30 % en moyenne. Ce chiffre est fondé sur les 5 687 courriels non liés à ses fonctions professionnelles, parmi les 19 250 courriels examinés. Quant à son usage d'Internet, 32 % des sites visités n'étaient pas liés à son travail.
2. Certains des courriels, internes ou externes, que nous avons observés et classifiés sous la rubrique « blagues » contenaient du matériel offensant ou non approprié.
3. À la suite à notre examen, nous avons conclu que l'utilisation faite par le GPI d'Internet et du courriel à des fins personnelles était excessive, et avait pour résultat qu'il passait moins de temps à s'acquitter des tâches qui relèvent de son poste. Après notre examen, nous sommes également d'avis que la DSCB n'assure pas une gestion adéquate du temps et des activités de certains des membres de son personnel.
4. Comme l'ont signalé diverses autres vérifications, les services de TI doivent faire respecter la Politique sur l'utilisation responsable des ordinateurs à tous les échelons de l'organisation. Qui plus est, des mesures plus strictes doivent être prises pour diminuer la quantité de blagues et de documents non appropriés reçus ou transmis par les employés de la Ville par le biais du système municipal de courriel. Pour faire suite à notre examen de l'utilisation d'Internet et du courriel par le GPI, nous avons élargi notre enquête de manière à inclure l'utilisation du courriel et d'Internet par le reste du personnel de gestion de l'Unité de l'inspection des bâtiments, ainsi que par un agent du bâtiment III. Dans les cas examinés, nous avons également trouvé des

exemples d'un taux élevé d'utilisation à des fins personnelles du système municipal de courriel et d'Internet.

5. Nous avons également constaté qu'un employé de gestion avait, le 6 juin 2008, sauvegardé sur son disque réseau personnel un fichier désigné « *(nom du constructeur) Lottery.jpg* » contenant la photo d'une loterie de bureau. La photo semble indiquer que 11 des subalternes de ce gestionnaire de programme spéculaient sur le nombre d'inspections qu'un promoteur particulier échouerait, entre le 16 et le 23 juin 2008. Vu le rôle et la responsabilité du personnel de la DSCB, nous sommes d'avis que ce comportement n'est ni approprié ni professionnel.

Recommandations et réponses de la direction

Recommandation 1

Que la Ville s'assure que le personnel de la Direction des services du Code du bâtiment entretient une base de données relative aux permis de construction, et que celle-ci fasse à intervalles raisonnables l'objet d'un examen pour déceler les cas où le permis d'occuper partiel contient des conditions, afin que l'inspecteur retourne sur les lieux et vérifie que les conditions ont été respectées.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Aux termes du *Code du bâtiment*, le calendrier des inspections dépend de l'état de préparation du constructeur, et ne relève pas du contrôle de la DSCB. La section 10.2 (1) de la *Loi sur le code du bâtiment* stipule que la responsabilité d'établir le calendrier des inspections revient de toute évidence au constructeur. Il est de sa prérogative de décider à quelle vitesse il désire terminer la construction, une fois satisfaites les normes minimales d'occupation d'un immeuble non achevé (c.-à-d. le permis d'occuper partiel).

En ce qui a trait aux constats 1 à 6 (*Dossier n° 1*), le vérificateur a exprimé un certain nombre d'opinions auxquelles la direction aimerait apporter les quelques précisions suivantes :

Constatations 1 à 6 : Le GPI a demandé à l'agent du service du bâtiment de préparer un ordre de se conformer (ODC) en se basant sur l'hypothèse que la structure encore en construction était un mur de fondation pour un immeuble. À la suite d'une enquête plus poussée, le GPI a établi que la construction était en fait une clôture, qui ne nécessite pas de permis de construire. L'ODC a donc été annulée. La décision à cet effet faisait partie des pouvoirs du GPI ayant les compétences requises quant au *Code*. Le *Code du bâtiment* ne donne pas le pouvoir de contraindre un propriétaire à obtenir un permis pour les phases futures d'un projet et ne lui donne pas non plus le pouvoir de forcer le propriétaire à relier sa clôture à un immeuble qui sera éventuellement

construit. De plus, la structure de la clôture n'est pas régie par la partie 4 du *Code du bâtiment de l'Ontario*.

On intégrera à MAP un système de rappel automatisé doté d'améliorations, en vue d'améliorer le suivi des inspections et d'offrir au personnel d'inspection la capacité technologique à distance. Ce projet de quatre ans, qui comporte des phases multiples, commencera en 2010 et sera achevé en 2014.

Recommandation 2

Que la Ville s'assure que la Direction des services du Code du bâtiment fournit aux inspecteurs la liste des conditions qui ne sont pas acceptables, afin d'orienter la démarche des inspecteurs au moment de décider si un permis d'occuper partiel peut être émis. Une autre solution consisterait à ce que le gestionnaire de programme de l'Unité de l'inspection des bâtiments ou un inspecteur principal agissant à titre de représentant du gestionnaire effectue un examen de contrôle de la qualité du formulaire d'inspection relatif au permis d'occuper partiel.

Réponse de la direction

La direction est d'accord avec cette recommandation.

En ce qui a trait à la constatation 5 concernant le *Dossier n° 3 – Lotissement résidentiel*, il est signalé qu'au moment où a été délivré le permis d'occuper final, la défektivité avait été résolue; bien qu'il s'agisse d'un événement isolé, la direction fournira davantage d'orientation au personnel chargé des inspections. De plus, les gestionnaires de programme ont entrepris d'effectuer, de manière continue, des examens visant à contrôler la qualité d'un échantillon représentatif de dossiers d'inspection.

Recommandation 3

Que la Ville s'assure que les inspecteurs sont conscients du fait que les permis d'occuper finaux ne devraient pas être assortis de conditions, et que si l'inspection révèle des éléments non conformes au Code, le permis d'occuper final ne doit pas être délivré avant que ces éléments ne soient corrigés et confirmés comme tels.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Aux fins de clarté, la direction communiquera des instructions supplémentaires au personnel d'inspection, avant la fin du premier trimestre de 2010. Dans le cas soumis à la vérification, la note intitulée « Ventilation, section 9.32 CBO » qui figurait dans le rapport d'inspection constituait, en fait, un rappel à l'intention de l'inspecteur et non, à proprement parler, une « condition ». Il ne s'agissait pas d'une pratique habituelle des agents du bâtiment. L'inspecteur en question a depuis quitté la Ville.

Recommandation 4

Que la Ville s'assure que les dossiers de la Direction des services du Code du bâtiment contiennent toute la documentation exigée par le document *Politiques, Lignes directrices et Normes*.

Réponse de la direction

La direction est d'accord avec cette recommandation.

En ce qui a trait à la constatation 7 concernant le *Dossier n° 3 – Lotissement résidentiel*, l'examen des dossiers soumis à la vérification a confirmé qu'exception faite d'un tout petit nombre de dossiers, tous étaient complets, conformément au document *Politiques, Lignes directrices et Normes* de la DSCB. Les documents manquants ont maintenant été déposés aux dossiers. La direction continuera sa surveillance, par le biais d'examen du contrôle de la qualité effectués à intervalles réguliers, afin de veiller à ce que la documentation contenue dans les dossiers soit complète.

Recommandation 5

Que la Ville exige que les inspecteurs fassent un suivi des dossiers actifs relatifs aux permis de construction, quand un temps raisonnable s'est écoulé entre les inspections sans que le propriétaire n'ait donné signe de vie, afin d'assurer que les travaux ne se poursuivent pas sans que l'inspecteur ait eu l'occasion d'effectuer les inspections en temps opportun. La Ville aura à déterminer ce qui constitue « un temps raisonnable ».

Réponse de la direction

La direction n'est pas d'accord avec cette recommandation.

Aux termes du *Code du bâtiment*, le calendrier des inspections dépend de l'état de préparation du constructeur, et ne relève pas du contrôle de la DSCB. La section 10.2 (1) de la *Loi sur le code du bâtiment* stipule que la responsabilité d'établir le calendrier des inspections revient bel et bien au constructeur. Il est de sa prérogative de décider à quelle vitesse il désire terminer la construction, et d'établir à sa convenance le calendrier des inspections.

Le fait d'entreprendre des inspections intérimaires ou des inspections d'état des travaux pour tous les permis, indépendamment de l'état de préparation du détenteur de permis, augmenterait sensiblement les exigences en matière d'effectifs d'inspection, et pourrait être perçu à tort par le détenteur de permis et le secteur de la construction comme un signal que la municipalité a endossé des responsabilités légales appartenant en fait au détenteur de permis ou au secteur de la construction, ce qui sèmerait la confusion quant aux rôles et aux responsabilités respectives des parties.

La Direction des services du Code du bâtiment (la DSCB) a mis en œuvre d'autres processus efficaces, à coût modeste. En 2006, la DSCB a mis en place les droits d'inspection remboursables pour inciter le constructeur à compléter le processus d'inspection en temps plus opportun et pour faire un usage plus judicieux des ressources d'inspection limitées de la DSCB. Ces droits sont remboursés une fois que le permis d'occuper final a été délivré. Depuis l'introduction des droits d'inspection remboursables, l'écart de temps entre le démarrage et la fin de la construction a diminué, dans le cas des constructions résidentielles basses. Un nombre important de dossiers faisant l'objet d'un examen lors de la présente vérification était antérieur à l'introduction des droits d'inspection remboursables en 2006.

Pour ce qui est des constatations 1 à 4 concernant le *Dossier n° 4 - Maison* et de la section 4.1.4 du rapport intégral, le vérificateur a émis un certain nombre d'opinions concernant les exigences réglementaires relatives à l'immeuble qui a fait l'objet de la vérification. La direction tient à souligner que le permis de construction avait été délivré pour un domicile préfabriqué. Les composants d'un immeuble qui sont conçus et construits en usine, conformément à la norme CSA applicable, sont jugés a priori conformes au *Code*.

Dans le cas actuel, la fondation de la maison, ayant été construite hors de l'usine, était sujette aux inspections exigées. L'inspection de la fondation a été entreprise le 10 décembre 2004. La plomberie souterraine a été inspectée le 4 mai 2005. Cependant, le propriétaire du domicile, qui connaissait mal le processus d'inspection et ses exigences, n'a pas demandé l'inspection d'occupation. Il convient aussi de signaler que les inspections finales relatives à la plomberie et aux aspects mécaniques sont normalement effectuées au moment de l'inspection qui accorde le permis d'occuper final.

Recommandation 6

Que la Ville s'assure que la responsabilité principale des gestionnaires de programme est de faire respecter les exigences du *Code du bâtiment*. De plus, ces derniers, s'ils choisissent de ne pas se plier aux *Politiques, Lignes directrices et Normes*, doivent tenir compte des risques éventuels que leurs décisions font courir à la Ville. Toute décision de s'écarter des *Politiques, Lignes directrices et Normes* devrait être prise par le chef du bâtiment, et non par le gestionnaire concerné ou le gestionnaire de programme.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Le personnel et les gestionnaires de programme de la DSCB sont pleinement qualifiés et sont conscients de leur responsabilité de faire respecter la *Loi sur le code du bâtiment* ainsi que le *Code du bâtiment de l'Ontario* (CBO). Les gestionnaires et les gestionnaires de programme sont tenus d'évaluer les risques des décisions prises

relativement à chaque demande de permis et à chaque permis octroyé. Il est courant de transmettre au chef du bâtiment les problèmes, les inquiétudes et les questions qui peuvent présenter des risques élevés. Une certaine souplesse, inhérente au document *Politiques, Lignes directrices et Normes*, permet d'assurer qu'une autorité appropriée en matière de prise de décision vient soutenir l'opération efficace de la DSCB.

Pour ce qui est des constatations 5 et 6 concernant le Dossier n° 4 - Maison et de la section 4.1.4.1 (du rapport intégral), le vérificateur a formulé un certain nombre d'opinions concernant les exigences réglementaires de l'immeuble qui a fait l'objet d'une vérification. La direction aimerait préciser que le Code ne fixe pas de délais précis en matière de conformité; la Loi et le Code ont plutôt attribué cette tâche à l'agent du bâtiment, qui devra déterminer ce qui est approprié en tenant compte des circonstances de chaque cas, et ce qui est nécessaire pour atteindre la conformité.

Recommandation 7

Que la Ville s'assure que les gestionnaires de programme et les inspecteurs sont clairement enjointes de se conformer aux *Politiques, Lignes directrices et Normes*, qui ne prévoient aucune exception en ce qui a trait au traitement de la documentation dans les dossiers.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les employés ont été enjointes, et continueront de l'être, de se conformer aux *Politiques, Lignes directrices et Normes* de la DSCB afin d'améliorer la prise de décision, d'assurer la cohérence de la demande et de la mise en œuvre à l'échelle de la ville (et ce, malgré les zones géographiques différentes où elles doivent s'appliquer), et d'atténuer les risques encourus.

Ces *Politiques, Lignes directrices et Normes* de la DSCB accordent des responsabilités particulières et des pouvoirs discrétionnaires au personnel en ce qui concerne le traitement de la documentation qui figure dans les dossiers. Par exemple, la politique opérationnelle en ce qui a trait à l'exigence pour un détenteur de permis de présenter un plan d'arpentage afin de confirmer que l'emplacement d'une nouvelle fondation est conforme, pour ce qui est des marges de recul par rapport aux limites du lot, stipule « tel que déterminé par l'inspecteur en bâtiment ». Cette politique opérationnelle offre une certaine latitude. À l'inverse, la politique opérationnelle qui exige le dépôt du rapport technique final de l'ingénieur indique clairement que ce rapport doit être déposé avant que ne soit délivré le permis d'occuper final; cette politique ne tolère aucune exception.

L'examen d'un échantillon des dossiers soumis à cette vérification a révélé que la documentation n'était incomplète que dans une minorité de cas. La direction continuera une surveillance régulière pour s'assurer que la documentation contenue dans les dossiers est complète.

En ce qui a trait à la constatation 8 (*Dossier n° 4 – Maison*), constatations 1 et 2 (*Dossier n° 5 – Maison*) et constatation 2 (*Règles touchant la conservation des documents*), la suggestion d'exercer un pouvoir discrétionnaire au moment d'établir si un plan d'arpentage est nécessaire ou non constitue une utilisation inefficace des ressources. L'autre solution serait d'exiger de tous les titulaires de permis qu'ils obtiennent et soumettent un plan d'arpentage préparé par un arpenteur-géomètre de l'Ontario (AGO) dans le but de confirmer l'emplacement des fondations par rapport aux limites du lot. Cela aurait pour effet d'accroître inutilement les coûts de construction assumés par le propriétaire de l'immeuble (ce qui équivaut en fait à un montant qui se situe entre 1 000 \$ et 2 000 \$ par plan d'arpentage) et est contraire aux principes de l'excellence en matière de services. L'inspecteur en bâtiments est tout à fait apte à déterminer si un plan d'arpentage est nécessaire ou non en procédant à une évaluation rapide qui lui permettra de voir si les exigences de recul minimal sont respectées.

Recommandation 8

Que la Ville s'assure que des permis d'occuper partiels ne sont délivrés que quand toutes les questions liées à la sécurité des lieux ont été résolues.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Le CBO établit clairement les conditions à satisfaire avant que ne soit accordée l'autorisation d'occuper une unité d'habitation non achevée. L'examen des dossiers qui ont fait l'objet d'une vérification a confirmé que l'approbation d'occuper un immeuble non achevé respectait les dispositions du *Code du bâtiment*.

Pour ce qui est des constatations 9 et 10 concernant le *Dossier n° 4 – Maison* et de la section 4.1.4.3 (du rapport intégral), le vérificateur a formulé un certain nombre d'opinions au sujet des exigences réglementaires de l'immeuble qui a fait l'objet d'une vérification. La direction souhaite souligner que le *Code du bâtiment* ne fait pas état d'une exigence voulant que l'isolant d'un sous-sol soit recouvert avant d'autoriser l'occupation. Il semble y avoir une suggestion implicite que les murs du sous-sol constituent des séparations coupe-feu, ce qui n'est pas le cas. Il convient de signaler que le *Code* ne fait état **d'aucune** exigence relative aux séparations coupe-feu dans les habitations unifamiliales. De plus, l'article 3.1.5.12 ne s'applique pas aux immeubles de la partie 9. L'unité d'habitation qui a fait l'objet de cette vérification et de cette recommandation faisait partie des immeubles de la partie 9.

Les exigences minimales du CBO pour ce qui est de l'occupation d'un immeuble non achevé étaient satisfaites, même si l'immeuble était en voie de construction; ainsi, l'immeuble n'était plus occupé illégalement, dès lors que l'occupation partielle (que le CBO désigne comme « l'occupation d'un immeuble non achevé ») était autorisée.

Recommandation 9

Que la Ville s'assure que la DSCB se conforme aux *Politiques, Lignes directrices et Normes*, qui exigent que soient déposés les levés de l'ouvrage fini pour les nouvelles habitations avant l'émission d'un permis d'occuper. Dans ce cas, les levés de l'ouvrage fini n'ont pas été fournis.

Réponse de la direction

La direction n'est pas d'accord avec cette recommandation.

Les *Politiques, Lignes directrices et Normes* de la DSCB accordent au personnel un pouvoir discrétionnaire pour déterminer s'il convient ou non d'exiger un plan d'arpentage, selon des conditions particulières au site. Par exemple, comme dans le cas présent, le terrain mesurait 5,08 acres et, selon les plans liés au permis, l'agent du bâtiment a pu déterminer que la fondation de l'immeuble était située suffisamment loin des limites du lot pour satisfaire aux exigences minimales du règlement en matière de marge de recul pour les cours avant, latérales, et arrière. En fait, la marge de recul de l'immeuble était d'environ 42 mètres de la limite avant du lot [retrait exigé : 15 mètres], de 16 mètres pour la cour latérale est [retrait exigé : 10 mètres], de 60 mètres pour la cour latérale ouest [retrait exigé : 10 mètres] et de 63 mètres pour la cour arrière [retrait exigé : 15 mètres]. Un plan d'arpentage n'était pas nécessaire pour déterminer la conformité.

Comme souligné précédemment, la politique opérationnelle accorde bel et bien un pouvoir discrétionnaire au personnel :

La politique de la Direction des services du Code du bâtiment exige le dépôt d'un plan d'arpentage préparé par un arpenteur-géomètre agréé de l'Ontario pour (i) un nouveau domicile et (ii) une annexe à un domicile, tel que déterminé par l'inspecteur en bâtiment.

Dans l'examen d'un échantillon de dossiers, on n'a relevé aucun cas où un plan d'arpentage a été omis au mépris des *Politiques, Lignes directrices et Normes* de la DSCB.

Comme souligné également à la réponse de la direction de la recommandation 7, le fait d'exiger que tous les titulaires d'un permis obtiennent et soumettent un plan d'arpentage préparé par un arpenteur-géomètre de l'Ontario est inefficace et accroît inutilement les coûts de construction assumés par le propriétaire, ce qui contrevient aux principes de l'excellence en matière de services.

Recommandation 10

Que la Ville s'assure qu'on rappelle à la DSCB que sa responsabilité première est la mise en application du *Code du bâtiment*, et que la DSCB ne devrait pas permettre qu'une construction aille de l'avant sans permis.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les agents du bâtiment sont compétents, et ils sont conscients de leur responsabilité de faire respecter la *Loi sur le code du bâtiment* et le CBO. En ce qui a trait à la constatation 2 concernant le *Dossier n° 6 – Maison*, le vérificateur formule un certain nombre d'opinions relatif à l'exercice du pouvoir dans le cadre du *Code du bâtiment*. La direction souhaite préciser que le propriétaire a pris de son propre chef la décision de démarrer la construction sans permis. L'examen des dossiers qui faisaient l'objet d'une vérification a confirmé que le personnel n'avait pas autorisé que la construction aille de l'avant. La construction a été interrompue sur les ordres du personnel et un permis a été obtenu avant que ne reprenne la construction. Les exigences de la *Loi sur le code du bâtiment* ont été respectées grâce aux actions prises par le personnel.

Recommandation 11

Que la Ville s'assure qu'un exemplaire du rapport d'étude des sols ou du rapport géotechnique est transmis à la Direction des services du Code du bâtiment au même moment où elle est transmise à la Direction de l'approbation des demandes d'aménagement et d'infrastructure.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La DSCB collaborera avec les directions d'Examen des projets d'aménagement et avec le secteur de la construction pour établir un protocole pour l'acquisition d'exemplaires des rapports d'étude des couches inférieures des sols et des mises à jour avant le dépôt de permis de construction pour un nouveau lotissement. Ce protocole sera prêt d'ici la fin du deuxième trimestre de 2010.

Pour ce qui est de la constatation 2 concernant le *Dossier n° 2 - Lotissement résidentiel*, des constatations 1 à 9 concernant les *Sols fragiles* et de la section 4.2 (du rapport intégral), le vérificateur a exprimé certaines opinions au sujet du traitement de permis de construire précis ou d'immeubles construits dans un secteur dont les sols sont fragiles. La direction souhaiterait apporter certaines précisions qui démontrent que le GPA et le GPI ont agi correctement, notamment :

- le PMA a analysé les rapports d'étude des couches inférieures des sols une fois le rapport reçu et a immédiatement signalé au GPI et à l'ingénieur en Code du bâtiment les mesures supplémentaires possibles qui pourraient être exigées du demandeur ou du titulaire de permis pour parvenir à prendre adéquatement en charge la nature des sols en fonction des nouvelles exigences relatives aux séismes, comme le prévoient les directives pour les sols fragiles élaborées par la direction;

- le constructeur a été immédiatement avisé des préoccupations de la Ville et a été enjoint de fournir plus d'informations relativement aux nouvelles demandes de permis, aux permis venant d'être délivrés et aux immeubles en voie de construction. Le GPA a signalé au constructeur qu'il devait établir un plan pour résoudre, de manière satisfaisante, la question des répercussions que pourrait avoir l'état des couches inférieures des sols sur les fondations existantes ou futures;
- le personnel a rencontré le constructeur et ses consultants afin de mettre au clair les exigences de la Direction en matière de documentation devant accompagner un examen de la Partie 4 de la conception des fondations, dans le cas de fondations situées dans des zones de sols fragiles. Les corrections ont été entreprises et accomplies peu de temps après. Qui plus est, le constructeur a tenu compte, dans la conception des fondations pour les autres constructions, des facteurs particuliers liés à l'état des sols fragiles. Ses demandes de permis pour les parcelles constructibles subséquentes tenaient compte, dans la conception, des facteurs liés aux sols fragiles et aux nouvelles exigences en matière de séismes.
- Aux termes du CBO, le Chef du bâtiment n'est pas autorisé à poser comme condition générale, dans le cadre d'une demande de permis de construction pour une parcelle constructible déterminée, le dépôt de rapports d'étude des couches inférieures des sols effectuée pour un examen d'une demande de lotissement résidentiel. Toute demande de rapport technique adressée à un demandeur doit être fondée. Comme les conditions du sol varient d'une parcelle à l'autre, une exigence généralisée ne serait ni légale ni exécutable;
- il n'y avait aucune raison pour le GPA de demander un autre rapport d'investigation des sols sous-jacents, puisque le GPA, en se fondant sur les phases antérieures de l'aménagement, n'était pas au courant des conditions géotechniques spéciales et spécifiques des couches inférieures des sols, car elles n'avaient pas affiché de telles conditions. Enfin, les notes de service concernant l'examen du site fournies par le consultant en matière de sols indiquaient que la capacité portante du sol était de 100kPa. Cette portance se situe dans les limites des paramètres normatifs de conception du *Code*, pour des fondations non façonnées. Il n'existait pas de conditions en chantier qui auraient déclenché de la part de la Direction une demande pour que des renseignements supplémentaires soient soumis avant que ne soit délivré le permis.

En ce qui concerne la suggestion du vérificateur de se fier aux rapports géotechniques préparés conformément aux Directives sur les enquêtes et les rapports géotechniques pour les demandes d'aménagement, adoptées en février 2008, la DSCB les analysera certainement aux fins d'identification des conditions générales et plus spécifiques des sols, au besoin, et les consultera pour aider le demandeur d'un permis à mieux comprendre les exigences supplémentaires liées aux sols et aux conditions sismiques incluses dans les directives de la direction pour les sols fragiles.

On note que l'objectif premier des Directives sur les enquêtes et les rapports géotechniques pour les demandes d'aménagement est de quantifier les effets sur les sols de l'aménagement et de l'installation d'infrastructures. Il existe un lien direct entre la position des fondations et celle des infrastructures comme les services d'égouts et d'eau. Ainsi, une nappe d'eau élevée peut avoir des répercussions sur la forme et l'emplacement de la semelle de fondation posée sur la couche de terre, ce qui peut entraîner des effets sur la conception et l'emplacement des infrastructures de services publics. C'est ce qui explique pourquoi ces rapports comportent une section sur la conception des fondations.

Recommandation 12

Étant donné qu'un certain nombre de dossiers examinés ne contenaient pas toute la documentation exigible (c.-à-d. copie des dessins approuvés des fermes de toit, rapports techniques, levés de l'ouvrage fini), que la Ville s'assure que sont respectées les exigences de la *Loi sur le code du bâtiment* et des *Politiques, Lignes directrices et Normes de la Ville*, au moment de vérifier si les dossiers sont complets.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La *Loi sur le code du bâtiment* et les *Politiques, Lignes directrices et Normes* de la DSCB accordent des pouvoirs discrétionnaires particuliers au personnel en matière du traitement de la documentation qui figure dans les dossiers.

L'examen d'un échantillon des dossiers soumis à cette vérification a confirmé que la documentation n'était incomplète que dans une minorité de cas. La direction continuera sa surveillance, pour s'assurer que la documentation contenue dans les dossiers est complète.

Pour ce qui est des constatations 1 à 5 concernant le *Dossier N° 8 - Maison*, les constatations 3 et 4 concernant les *Règles touchant la conservation des documents*, la direction souhaite apporter les précisions suivantes :

- Les directives de la direction entourant la nécessité d'obtenir un rapport sur la qualité des sols précisant la réaction aux appuis admissibles des sols n'a pas été appliquée avant septembre 2003. Avant la mise en place de cette directive, les pratiques dans les anciennes municipalités continuaient de faire appel aux rapports en suspens et à la normalisation des méthodes d'exploitation habituelles. Une autre pratique de l'ancienne municipalité consistait à effectuer des inspections des excavations en vue d'évaluer les conditions de sol. Cette pratique a été adoptée en lieu et place de la production d'un rapport sur l'état des sols du lotissement où se trouve l'immeuble. Si l'inspecteur en bâtiment estimait que la condition des sols était adéquate, il n'y avait plus de raison d'exiger des évaluations supplémentaires pour confirmer de nouveau ce qui l'avait déjà été.

- Pour ce qui est de la suggestion du vérificateur général à l'effet que la direction recueille et assure le maintien d'une base de données complète sur la construction résidentielle dans la ville, la direction aimerait préciser que le *Code du bâtiment* et le CBO n'exigent pas la compilation de ce type de renseignements et que le demandeur ou le titulaire d'un permis de construire n'est pas non plus tenu de fournir de tels renseignements. En fait, le formulaire provincial obligatoire pour la demande d'un permis de construire ou de démolir ne comporte aucun espace où fournir de tels renseignements.

Recommandation 13

Étant donné que dans l'un des dossiers examinés, l'ingénieur en structures du constructeur avait signalé des défauts dans les fondations et les murs de fondation, mais qu'il n'avait pas effectué une seconde inspection pour confirmer que les défauts avaient été corrigés, que la Ville s'assure que les inspecteurs attendent, pour finaliser l'approbation, que les ingénieurs aient confirmé que les structures sont construites en conformité avec la conception. Toute inobservation entraîne un transfert injustifié des responsabilités du constructeur vers la Ville.

Réponse de la direction

La direction n'est pas d'accord avec cette recommandation.

Il ne revient pas à un agent du bâtiment de donner des directives sur la manière dont l'ingénieur-conseil doit s'acquitter de ses responsabilités. Donner des directives aurait pour effet de retirer au concepteur qualifié, l'ingénieur-conseil, la présomption de responsabilité en matière de la conception des fondations en béton armé, et de la transférer vers la Ville. Le rôle de l'agent du bâtiment est d'accepter les rapports techniques fournis sur le site par le détenteur de permis et d'en examiner les données afin de confirmer que les rapports reflètent la conception de la Partie 4 prévue. Si des défauts sont décelés dans les rapports techniques, l'agent du bâtiment demandera des rapports techniques supplémentaires. L'ingénieur-conseil, en effectuant des examens sur le site, accepte la responsabilité de leur conception telle qu'elle se manifeste dans la construction. Le détenteur de permis demandera à l'ingénieur-conseil d'effectuer le cas échéant une nouvelle inspection, si des défauts ont été signalés par l'agent du bâtiment.

Contrairement à l'opinion exprimée à la constatation 4 concernant le *Dossier N° 2 - Lotissement résidentiel*, et les constatations 2 et 3 concernant l'*Examen structurel du site*, la Ville ne doit en aucun cas endosser les obligations et responsabilités qui appartiennent manifestement à un professionnel, par exemple en donnant des directives, comme il est suggéré ci-dessus, sur la façon dont l'ingénieur doit gérer ses responsabilités. L'obligation de la DSCB est de s'assurer de la conception telle que décrite à la Partie 4, aux termes du CBO pour les immeubles Partie 9 ou les parties d'immeuble, qui se trouvent hors des normes prescrites à la Partie 9, en exigeant que les dessins soient tracés par un concepteur qualifié, que la DSCB interprète comme

étant un ingénieur. L'agent du bâtiment n'a pas à gérer les consultants engagés par le détenteur de permis. Les *Politiques, Lignes directrices et Normes* de la DSCB exigent que l'ingénieur-conseil fournisse à l'agent du bâtiment son approbation écrite finale avant l'émission du permis d'occuper final.

La lettre définitive signée par l'ingénieur conseil inclura des déclarations relatives aux déficiences relevées, consignera les travaux de réparation réalisés pour résoudre ces problèmes et prendra note de l'approbation desdits travaux. L'ingénieur-conseil sera par conséquent responsable et redevable quant aux travaux entrepris. Les *Politiques, directives et normes* de la direction reflètent ce transfert de responsabilité et de risques.

Recommandation 14

Que la Ville s'assure que les inspecteurs s'acquittent de leur responsabilité et se prévalent de leur droit d'exiger que soient découverts des travaux qu'ils n'ont pas pu inspecter à cause d'une couverture prématurée par le constructeur. Et qu'on prévienne les inspecteurs que des rapports d'inspection effectués sur place sans constat visuel témoignent de négligence et peuvent mener à des sanctions disciplinaires.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La *Loi sur le code du bâtiment* prévoit un certain nombre d'outils et de méthodes pour déterminer la conformité au CBO. Dans le cas actuel, d'autres moyens d'inspecter la construction, sans que l'enquête exige de destruction, ont été adoptés, et l'agent du bâtiment a pu déterminer que la plomberie souterraine était conforme au *Code*. Une fois ces incidents portés à l'attention de la direction, l'agent du bâtiment a été enjoint d'attribuer la mention « échec » à ces inspections et de faire appel, au besoin, aux outils disponibles afin de déterminer la conformité, là où la construction avait été prématurément recouverte.

En ce qui a trait aux constatations 1 à 4 concernant l'*Inspection réussie sans examen*, l'agent du bâtiment a dûment rapporté qu'il n'avait pas vu la construction, mais qu'il l'avait néanmoins déclarée satisfaisante, en se fondant sur des observations effectuées à la surface ainsi que sur sa connaissance d'autres travaux effectués à l'échelle du lotissement par le même professionnel du bâtiment.

Recommandation 15

Que la Ville s'assure que les inspecteurs facturent à tous les promoteurs toutes les visites d'inspection pour lesquelles l'entrepreneur n'était pas prêt, afin que la Ville se fasse rembourser les inspections superflues.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Les droits d'inspection remboursables ont été mis en place dans le but d'inciter le secteur de la construction à terminer le processus d'inspection en temps opportun et de faire un usage plus judicieux des ressources d'inspection limitées. Une fois le permis d'occuper final délivré, ces droits sont remboursés. Le remboursement sera moindre dans le cas où un constructeur a réclamé de manière prématurée une inspection, n'a pas donné un préavis suffisant pour une annulation, ou a causé des reprises d'inspections qui ont occasionné une perte de temps pour l'agent du bâtiment. L'examen des dossiers soumis à la vérification a établi que les droits avaient été perçus au moment de l'émission du permis d'occuper final, conformément aux *Politiques, Lignes directrices et Normes* de la DSCB.

On a passé en revue, avec les agents du bâtiment, les *Politiques, Lignes directrices et Normes* de la DSCB au chapitre des droits d'inspection remboursables, pour s'assurer de la clarté du règlement et de l'uniformité de son application.

Recommandation 16

Que la Ville facture au promoteur les droits d'inspection remboursables applicables aux termes de la section 39 du règlement municipal, y compris les droits non perçus signalés dans le présent rapport de vérification.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La DSCB a traité, et elle continuera à le faire s'il y a lieu, de tous les prélèvements à faire sur ces droits, en conformité avec le *Règlement municipal sur le bâtiment*. Comme le moment de l'achèvement de la construction ainsi que la fermeture des dossiers de permis relèvent du détenteur de permis, l'achèvement de l'implantation n'est pas déterminable.

Recommandation 17

Que la Ville fasse de la qualification aux termes du *Code du bâtiment* une condition d'emploi pour les étudiants qui occuperont un emploi d'été et qui seront appelés à effectuer des inspections de bâtiments.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Depuis 2008, la DSCB ne recrute plus d'étudiants pour effectuer les vérifications d'achèvement, puisque le programme de formation de stagiaires de la DSCB a maintenant produit un nombre suffisant de diplômés pour se charger de cette tâche.

S'il advenait que la DSCB recommence à embaucher des étudiants en construction en génie ou en architecture pour effectuer des vérifications d'achèvement des conditions

extérieures qui ne relèvent pas des normes minimales de construction en matière de santé et de sécurité (p. ex. s'assurer que le revêtement extérieur est terminé, que toutes les ouvertures ont été calfeutrées, que les luminaires aux entrées ont été installés, que les couvertures d'évents ont été installées, que les barbacanes sont libres de débris et que la pente du sol est inclinée à partir des fondations), les descriptions de poste en cause seraient révisées de manière à exiger que les étudiants soient reconnus par la province en tant « qu'inspecteurs » en vertu de la *Loi sur le code du bâtiment* et du Code du bâtiment.

Avant 2006, les inspecteurs en bâtiments et les étudiants n'étaient pas tenus d'être agréés par la province pour procéder à des inspections. Compte tenu de l'absence d'une norme minimale à l'échelle provinciale pour ce qui touche la connaissance du Code du bâtiment, et pour réduire les risques associés à la réalisation d'inspections, la Ville s'est assurée de la compétence de ses inspecteurs en leur offrant une formation intensive ainsi qu'une expérience sur le terrain et en exigeant de ces inspecteurs qu'ils soient officiellement agréés comme agents du service du bâtiment dans le cadre d'un programme mis sur pied par l'Ontario Building Officials Association.

Avant 2006, la direction comptait sur les étudiants en construction, génie ou architecture pour effectuer les vérifications d'achèvement des travaux extérieurs dans le cadre des inspections avant l'occupation définitive, pour les inspections de l'état des travaux et celles des composantes des immeubles ou de leurs systèmes (p. ex. l'inspection des systèmes de ventilation HVAC) et pour les inspections finales de l'intérieur des immeubles, et ce, en fonction de l'expérience et de la formation de ces étudiants. La majorité des étudiants qui ont effectué des vérifications de travaux extérieurs en 2006, 2007 et 2008 avaient été à l'emploi de la Ville avant 2006 et avaient déjà effectué des inspections similaires de travaux extérieurs et d'autres inspections avec la compétence voulue avant que soient mises en place les nouvelles exigences provinciales.

La direction comptait également sur des consultants, qui étaient souvent des inspecteurs en bâtiment retraités, pour les aider à faire face aux périodes où la charge de travail était plus grande, habituellement de mai à novembre chaque année. En raison des nouvelles exigences législatives relatives aux compétences, les consultants ont choisi de cesser d'offrir leurs services. Cette baisse des ressources disponibles, un taux de vacance des postes de 25 % en 2006 et une forte hausse continue dans le secteur de la construction ont expliqué la décision de continuer de faire appel à des étudiants pour procéder aux vérifications d'achèvement des travaux extérieurs bien que ceux-ci n'aient pas pleinement établi leurs compétences auprès de la province.

La direction a analysé les possibilités qui s'offraient à elle et a jugé que le fait de poursuivre le programme qui a recours à des étudiants était dans l'intérêt véritable des nouveaux propriétaires de maison, de l'industrie de la construction et de la Ville. Ne pas procéder à ces vérifications d'achèvement des travaux ou transférer ces tâches

aux inspecteurs en bâtiment qualifiés – ce qui aurait écarté encore plus d’inspecteurs des travaux d’inspections majeurs et essentiels – aurait provoqué une réduction considérable des services aux nouveaux propriétaires de maison comme aux gens de l’industrie. Cette possibilité était tout simplement indéfendable.

Le chef du bâtiment a confirmé qu’il était sensible à la décision opérationnelle visant à poursuivre cette pratique et a avisé le vérificateur que le risque était **faible**, et que même si ces vérifications d’achèvement des travaux n’étaient pas essentielles à la santé et à la sécurité, elles étaient néanmoins essentielles pour offrir un meilleur service en s’assurant que la construction était terminée dans les trois ans suivant la délivrance du permis.

La décision opérationnelle de poursuivre le programme a été prise en pleine connaissance de tous les facteurs et de tous les risques. Pour réduire ces risques, les étudiants ont reçu une formation intensive afin d’assurer qu’ils seraient compétents au moment d’effectuer ces vérifications, et ils ont été supervisés par des GPI et soutenus par des inspecteurs en bâtiment en charge des dossiers des permis (ces inspecteurs sont désignés comme étant les inspecteurs en bâtiment au dossier).

Il est important de noter par ailleurs que le fait de satisfaire aux exigences en matière de compétences précisées par le ministère des Affaires municipales et du Logement ne fait pas de toute personne un inspecteur. Une municipalité prudente s’assurerait que les inspecteurs nouvellement agréés reçoivent une formation approfondie, théorique et pratique, en plus d’être accompagnés par un inspecteur d’expérience. Les élèves avaient également comme directive de ne procéder qu’aux vérifications des travaux extérieurs. Ils étaient ensuite encouragés à s’inscrire aux examens du ministère et à s’inscrire auprès de la province afin qu’au cours de l’été ou des étés passés à l’emploi de la Ville, ils puissent acquérir le degré de compétence exigé par la province. En 2008, la plupart des étudiants étaient agréés comme « inspecteurs » en vertu du CBO.

La réalisation des vérifications des travaux extérieurs par les étudiants constituait un très mince pourcentage (0,58 %) des quelque 281 614 inspections réalisées par la direction en trois ans. Ces vérifications effectuées par des étudiants comprenaient entre autres des vérifications facultatives aux termes des règlements sur le bâtiment et constituaient des composantes de l’inspection finale en vue de l’occupation (on trouvera à l’annexe 2 une description de toutes les inspections).

La pratique qui consiste à avoir recours à des étudiants pour les vérifications des travaux extérieurs en vue de la clôture des dossiers de permis était essentielle au maintien de l’excellence des services. Elle était aussi inévitable, compte tenu du manque de ressources (taux de vacance de 25 %), et n’a eu cours qu’après qu’il a été sûr qu’elle ne comportait aucun risque pour la sécurité du public. Cette pratique a cessé après 2008, en raison du taux de vacance moins élevé au sein de la direction.

Pour ce qui est des constatations 1 à 11 concernant les *Inspections effectuées par des stagiaires ou par des étudiants occupant un emploi d'été* et de la section 4.7 (du rapport intégral) la direction souhaite apporter les précisions suivantes :

- Il n'y a pas eu fausse représentation. Les échanges courriel de membres de l'unité de l'inspection des bâtiments exprimaient des inquiétudes quant à la précision ou au manque de précision des données dans MAP relativement aux activités d'inspection et aux pépins dans le processus MAP, qui exige que certains champs soient cochés (√) pour qu'un dossier puisse être clos et que soit déclenché le processus de production d'une lettre normalisée adressée au titulaire de permis et l'informant de la délivrance d'un permis d'occuper final et du montant des frais remboursables à payer, le cas échéant.
- La direction a relevé que la personne qui a traité le dossier et mis à jour le système MAP pour que la lettre en question soit produite devenait automatiquement la personne responsable de l'inspection et la signataire de la lettre (d'où l'impression que cette dernière personne à accéder au dossier dans MAP était considérée comme celle ayant effectué l'inspection).
- Dans la correspondance, la direction s'est demandé s'il ne serait pas plus opportun de s'assurer que le système MAP soit précis au lieu de se concentrer sur le fait que le signataire de la lettre devrait plutôt être l'inspecteur en bâtiment au dossier au lieu de l'étudiant effectuant la clôture du dossier et sa mise à jour dans MAP. Un GPI a trouvé une solution au pépin informatique en demandant à l'étudiant d'insérer le nom de l'inspecteur en bâtiment au dossier dans le champ touchant l'inspection finale et en insérant dans le champ sur la note MAP le nom réel de la personne qui a procédé à l'inspection finale, ceci afin d'assurer la véracité de toutes les informations entrées dans le système.
- L'affirmation du vérificateur stipulant que « le système était volontairement utilisé pour transformer en inspection légale une inspection qui ne l'était pas » est contredite dans les faits. S'il y avait eu une telle intention, aucune note n'aurait été entrée dans MAP. La note incluse démontre l'honnêteté des utilisateurs.
- Dans l'état actuel de son développement, MAP exige une révision générale afin que le système fonctionne comme un véritable mécanisme de gestion de l'information. La direction en est consciente et se fie aux dossiers officiels et aux dossiers des permis de construire comme source d'information, que ce soit à des fins de gestion, de vérification des faits, de procédures judiciaires (en cas de poursuites ou de défense), etc. Les données du MAP ne sont fiables que dans un contexte de mesure, notamment pour le nombre de permis délivrés, d'inspection réalisées, etc., et ce, en tenant compte de ses forces et de ses faiblesses.
- Le vérificateur a confirmé à la section 4.7 (du rapport intégral) que les données ne sont pas fiables, qu'elles sont incorrectes 25 % du temps pour ce qui est des vérifications d'achèvement des travaux (tableau 1), 40 % du temps pour les autres inspections (tableau 2) et 20 % du temps pour l'ensemble des données entrées

(tableau 3). Voilà pourquoi la direction ne fait pas confiance aux données MAP comme outils de gestion et a fait une priorité du développement dans MAP d'une application de suivi des inspections qui pourrait transformer ce système de base de données en outil de gestion réellement efficace.

- La direction des inspections de bâtiments effectue régulièrement des contrôles des dossiers pour vérifier le rendement et assurer la conformité avec les politiques, directives et normes établies et en vue de préciser les besoins en formation et en développement.

Recommandation 18

Que la Ville établisse un plan d'action pour régler la question de toutes les inspections illégales effectuées par la Direction des services du Code du bâtiment, y compris les inspections identifiées dans la vérification et toute autre inspection illégale. Ce plan d'action devrait envisager d'aviser les propriétaires en cause et proposer des étapes en vue d'assurer la mise en place de mesures correctives.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Cette portion de la vérification traite des inspections effectuées par des étudiants. Les étudiants ont procédé à des vérifications d'achèvement des travaux extérieurs dans le cadre d'un programme établi et ont aussi procédé à d'autres inspections. Le tableau ci-dessous (tableau 4 du rapport intégral), fait état des résultats d'une enquête de la direction à la suite d'un examen détaillé des dossiers officiels réels, des dossiers de permis de construire et des données de MAP aux fins de mesure.

Nombre d'inspections réalisées par des étudiants en 2006, 2007 et 2008

	2006	2007	2008	TOTAL
Vérifications finales de l'achèvement des travaux extérieurs				
• Réalisées en tant qu'inspecteur qualifié	85	676	833	1 594
• Réalisées sans agrément provincial	986	307	43	1 336
Autres inspections (bâtiment, mécanique et plomberie)				
• Réalisées en tant qu'inspecteur qualifié	625	5 362	2 819	8 806
• Réalisées sans agrément provincial	231	10	72	313
Total des inspections réalisées par des étudiants	1 927	6 355	3 767	12 049

	2006	2007	2008	TOTAL
Total des inspections en vertu du Code du bâtiment par la DSCB	85 335	90 698	105 581	281 614

- *Excluant les piscines (pour toutes les années).*
- *Excluant les inspections avant permis (pour 2008).*

En résumé, du nombre d'inspections réalisées par des étudiants au cours des années 2006, 2007 et 2008, seulement 1 649 ont été effectuées par des étudiants qui ne possédaient pas les compétences provinciales requises. La majorité de ces inspections étaient des vérifications d'achèvement des travaux. Ces inspections représentent une proportion de 0,58 % de toutes les inspections effectuées par la DSCB au cours de ces trois années.

La réponse est le résultat d'une analyse détaillée de deux catégories différentes d'inspections.

Vérifications d'achèvement :

En ce qui a trait aux vérifications d'achèvement des travaux extérieurs et à l'information livrée en réponse à la recommandation 17, ci-dessus, la DSCB a examiné le travail effectué dans le cadre de la vérification en cause et a constaté qu'il n'y a ni justification ni nécessité de refaire les vérifications d'achèvement, qui ont été correctement effectuées par des étudiants qui avaient une solide formation en construction, en génie ou en architecture. La formation et les connaissances des étudiants dépassaient de loin les normes minimales établies par la Province en ce qui a trait aux vérifications d'achèvement. Le choix de continuer à faire appel à des étudiants, après la modification de la Loi, qui exigeait dorénavant un ensemble donné de compétences avant d'effectuer des inspections, a été guidé par les charges de travail dans une période de pointe liée au boom continu du secteur de la construction, et par l'impossibilité de recruter des inspecteurs déjà qualifiés.

Des étudiants expérimentés et disposant d'une solide formation ont examiné les conditions et les éléments de construction suivants afin de finaliser les vérifications d'extérieur nécessaires à la délivrance d'un permis d'occuper final : les vérifications visuelles pour confirmer la pente d'écoulement d'eau à partir des murs de fondation; l'achèvement du revêtement et de la rive de toit; le calfeutrage extérieur des ouvertures dans l'enveloppe de bâtiment; la présence de clôtures sur les terrasses, etc. Les étudiants étaient supervisés et signalaient à l'inspecteur en bâtiment au dossier toutes les observations dont la portée dépassait leurs connaissances et qui exigeraient une inspection pour assurer la conformité au *Code*.

Pour donner suite à l'inquiétude exprimée par le vérificateur, la DSCB a communiqué avec la Société Tarion afin de s'enquérir si l'un ou l'autre des éléments

susmentionnés avaient fait l'objet de réclamations formelles. Tarion a confirmé qu'aucune réclamation n'avait été déposée relativement aux éléments notés comme achevés par les étudiants entre 2006 et 2008.

« Autres » inspections

En ce qui concerne les « autres » inspections que supposent les composantes des inspections par le CBO, telles que les inspections du bâtiment, de sa mécanique et de sa plomberie, nous soumettons les informations suivantes :

- Par « autres » inspections, on entend l'inspection de composantes de l'intérieur d'un bâtiment, notamment l'examen du pare-vapeur d'une pièce (bâtiment) ou la vérification de l'emplacement et des sorties exigées pour les ventilateurs d'évacuation (principalement des ventilateurs de salle de bains) (mécanique) et le fait d'assister à un essai d'étanchéité à l'air du système de plomberie (plomberie).
- La vérification a révélé que les étudiants inspecteurs ont procédé à 8 806 « autres » inspections sur trois ans. La direction ignorait que des étudiants inspecteurs procédaient à ces « autres » inspections malgré que le fait que le programme de formation énonçait clairement les attentes en matière de charge de travail et précisait que les GPI ou les inspecteurs en bâtiments au dossier analysaient leurs rapports d'inspection. Il est maintenant clair que des outils supplémentaires étaient nécessaires pour assurer la conformité avec les directives de la direction.
- Ces inspections, même si elles étaient réalisées sans l'approbation de la direction, étaient tout de même légales du point de vue du Code du bâtiment, puisqu'elles se limitaient aux composantes du processus d'inspection qui « *ne constitue pas une portion substantielle de l'examen des plans ou de l'inspection d'un projet* » au sens du Code du bâtiment. Un examen détaillé de 50 dossiers de permis contenant des inspections « autres » réalisées par des étudiants « inspecteurs » a confirmé que ces inspections ne se limitaient qu'à des composantes du processus d'inspection. La liste complète de toutes les inspections des immeubles résidentiels en rangée du processus complet d'inspection est joint à la présente réponse, à l'annexe 2.
- Un examen des dossiers de permis par la direction a permis de déceler 313 « autres » inspections sur 9 119 (soit 3,4 %) effectuées par un étudiant qui n'était pas « inspecteur » en vertu du CBO. Le reste des inspections a été réalisé conformément au CBO.
- La direction ne s'est rendu compte que le 18 mai 2010 de ces « autres » inspections réalisées par des étudiants, à la suite de la divulgation par le vérificateur des dossiers de permis précis sur lesquels les prétentions du vérificateur reposaient.
- Jusqu'alors, les données MAP étaient l'unique source des constatations du vérificateur. En septembre 2009, dans le cadre du processus de vérification des faits, la direction avait fait part au vérificateur de ses préoccupations relativement à la précision et à la fiabilité des données. La direction avait aussi fourni des

exemples précis de disparités entre les données entrées dans MAP, les dossiers officiels et les dossiers de permis de construire. Le vérificateur avait d'ailleurs réagi à ces préoccupations en avril 2010.

- Avant cette divulgation par le vérificateur, la direction avait déjà entrepris son propre examen des dossiers de permis pour relever les inspections autres que les vérifications d'achèvement de travaux extérieurs, qui auraient apparemment été réalisées par des étudiants qui n'étaient pas « inspecteurs ». La direction a ainsi examiné plus de 300 dossiers de permis et n'a pas été en mesure de relever d'inspections « autres » entreprises par un étudiant qui n'était pas « inspecteur ». En fait, ces constatations venaient appuyer la prétention selon laquelle les données MAP étaient sans fondement et non fiables.
- Lors d'une rencontre, le 14 mai 2010, le vérificateur a clarifié ses préoccupations relativement aux « autres » inspections (autres que les vérifications d'achèvement des travaux, dont la direction était déjà au courant) et par la suite, la direction a retiré les dossiers concernés pour enquêter au sujet des « autres » inspections (bâtiment, mécanique et plomberie).
- Le 19 mai 2010, la direction a signalé au vérificateur que certains dossiers devaient faire l'objet d'un examen plus approfondi et qu'elle préparerait un compte-rendu de ses constatations factuelles pour le 21 mai. Un avis juridique à l'intention du vérificateur a été demandé le 20 mai 2010. Les résultats de l'examen détaillé des dossiers officiels ont été transmis au vérificateur lors d'une rencontre le 21 mai 2010.
- La divulgation par le chef du bâtiment a été diligente et effectuée en temps opportun. La direction a partagé toute l'information qui était disponible au moment de la demande. Le chef du bâtiment devait se fier à des preuves factuelles reposant sur les dossiers officiels et sur les dossiers de permis de construire avant de tirer quelque conclusion que ce soit.
- L'examen de « huit dossiers des services du Code du bâtiment » a nécessité la consultation de plus de 700 dossiers de permis. La direction a demandé au vérificateur de préciser les dossiers de permis sur lesquels s'appuyaient ses constatations afin de permettre un examen des faits relevés et de commenter l'interprétation par le vérificateur des méthodes de réglementation des bâtiments et des normes du Code du bâtiment. Près de 200 dossiers ont été dégagés par le vérificateur, mais aucun ne concernait des vérifications réalisées par des étudiants.
- L'examen de dossiers de permis a révélé que dans certains cas, les inspections étaient effectuées dans le but d'aider l'inspecteur en bâtiment chargé du dossier de permis concerné. Les étudiants étaient supervisés par l'inspecteur en bâtiments sur la nature des points à observer et avaient comme directive, si une norme de rendement était atteinte, d'aviser le constructeur qu'il pouvait aller de l'avant avec la construction.

- La direction étudiera les dossiers de permis connexes et prendra les mesures appropriées en fonction de ces constatations. Si une anomalie est passée inaperçue à la suite de ces inspections, elle aurait été portée à l'attention du constructeur, qui est responsable de la construction conformément au CBO, ou à la Corporation Tarion, en vertu du Programme de garantie maisons neuves de l'Ontario. La direction vérifiera auprès de Tarion si des anomalies ont été relevées à la suite de ces inspections. Actuellement, rien ne semble indiquer que des anomalies n'ont pas été relevées.
- De plus, toute analyse qui viserait à établir si ces « autres » inspections ont été réalisées conformément au CBO ou non devrait être effectuée par une personne possédant les compétences et une connaissance appropriées du Code et qui disposerait des documents pertinents pour chacun des dossiers de permis. Dans le cadre de cette vérification, le vérificateur n'avait analysé que les documents relatifs à 150 dossiers, à partir de mai 2010, et chacun nécessitait une investigation plus poussée avec le personnel approprié en vue de confirmer les faits.

En ce qui concerne la section 4.7 (du rapport intégral), la direction aimerait apporter les précisions suivantes :

Pour qu'une personne soit nommée « inspecteur », le Code du bâtiment pose les exigences suivantes :

- la personne doit avoir réussi un examen administré ou autorisé par le ministère et qui permet d'évaluer ses connaissances de la Loi et du Code dans les catégories de compétences précisées au *Tableau 3.5.2.1* et qui correspondent au type de bâtiment que l'inspecteur sera appelé à inspecter ou duquel il devra examiner les plans;
- elle doit avoir fourni au ministère les renseignements requis.

En conséquence, *l'inspecteur* doit avoir réussi un examen pour la catégorie « maison » pour être en mesure d'inspecter une maison simple ou jumelée, incluant les systèmes de cette maison et un bâtiment connexe. Pour pouvoir inspecter une portion substantielle de tout le système de plomberie d'une « maison », *l'inspecteur* doit également avoir réussi un examen sur la plomberie d'une maison, et ainsi de suite. Le *tableau 3.5.2.1* du Code précise les points à observer pour s'assurer que *l'inspecteur* est compétent et apte à inspecter ce qu'on lui demande d'inspecter.

Il existe toutefois une exception. La *note (1)* du *tableau 3.5.2.1* du Code permet à un *inspecteur* qualifié dans une catégorie de compétences de réaliser des vérifications de plans et des inspections dans une autre catégorie lorsque cette vérification ou cette inspection ne constitue pas une portion substantielle de la vérification des plans ou de l'inspection de quelque projet que ce soit.

Conséquemment, si un étudiant est agréé comme *inspecteur* pour les « maisons » – et plusieurs l'étaient en 2007 et en 2008 –, il (ou elle) était en mesure d'inspecter des composantes d'un bâtiment, y compris de confirmer l'emplacement de la semelle de fondation avant le coulage de la dalle de béton du sous-sol et d'inspecter la plomberie brute ou d'assister à un essai d'étanchéité à l'air du système de plomberie avant l'occupation. Un certain nombre d'étudiants ont atteint le degré de compétence nécessaire pour être qualifiés et aptes à inspecter des « maisons » lorsqu'ils ont réalisé « d'autres » inspections de composantes de bâtiments (tableau 2); ces « autres » inspections ont donc été réalisées par des « inspecteurs » conformément au CBO.

À la section 4.7 du rapport intégral, le vérificateur fait mention de quatre dossiers pour lesquels des étudiants ont procédé à une inspection « de la charpente ou du remblai » (des fondations). Un examen plus approfondi de ces inspections a révélé que deux des quatre visaient à confirmer l'emplacement de la semelle de fondation avant le coulage de la dalle du sous-sol; que l'une des quatre consistait à mesurer la profondeur d'une excavation pour la mise en place de tubes sonde pour les piliers d'une terrasse. Quant à la quatrième inspection, elle consistait à vérifier la charpente d'une remise préfabriquée. Chacune de ces inspections a été réalisée sous la supervision de l'inspecteur en bâtiment au dossier, lorsque nécessaire.

Recommandation 19

Que la Ville examine la conduite des employés municipaux qui ont enfreint le *Code du bâtiment de l'Ontario* en autorisant les inspections illégales effectuées par des inspecteurs non qualifiés, et qu'elle prenne les mesures disciplinaires appropriées.

Réponse de la direction

La direction est d'accord avec cette recommandation.

La direction a révisé la décision de poursuivre une pratique de longue date qui répondait à une insuffisance marquée de ressources entre 2006 et 2008, ainsi que les résultats de cette décision. À l'époque, cette pratique était essentielle pour maintenir l'excellence en matière de prestation des services; elle était inévitable compte tenu du manque de ressources, et n'a été adoptée qu'après avoir assuré que la sécurité du public ne serait pas compromise. Une évaluation des risques a démontré que ceux-ci étaient faibles pour les propriétaires du bâtiment comme pour la Ville. Cette pratique a été abandonnée dès le moment où nos stagiaires ont été formés et qualifiés. Aucune action supplémentaire n'est nécessaire.

Rétrospectivement, la direction aurait pu mettre un terme aux vérifications d'achèvement des travaux extérieurs, ce qui aurait nécessité le retrait ou l'annulation d'une section du règlement. Toutefois, la direction était préoccupée par les effets préjudiciables associés à l'interruption de ce programme de vérification, plus particulièrement par le fait que des dossiers contiendraient toujours des portions qui,

aux termes du Code, ne seraient peut-être pas conformes ou encore, que des travaux de construction ne soient toujours pas terminés trois ans après la délivrance d'un permis. Cela sans compter le risque possible d'une hausse des différends entre les constructeurs et les acheteurs, et dans lesquels la DSCB serait impliquée. De plus, une décision d'annuler les sections concernées du règlement n'aurait été nécessaire que dans moins de 1 % des inspections et faisait partie du processus de transition complété au bout de trois ans.

La direction était également préoccupée par les répercussions possibles d'une réduction soudaine des services. Une décision opérationnelle avait été prise pour garantir le meilleur service possible. Le chef du bâtiment regrette d'ailleurs de ne pas avoir avisé le directeur municipal adjoint et le Conseil municipal de cette situation en 2006.

Recommandation 20

Que la Ville prenne des mesures disciplinaires appropriées concernant le GPI et les autres membres du personnel qui ont fait un usage non approprié des services municipaux de courriel et d'Internet de la Ville.

Réponse de la direction

La direction est d'accord avec cette recommandation.

Des mesures disciplinaires appropriées ont été mises en place; un communiqué a été envoyé à tout le personnel de la DSCB rappelant les attentes en matière de l'utilisation convenable du matériel informatique, aux termes de la Politique sur l'utilisation responsable des ordinateurs de la Ville, et tous les employés de la DSCB ont reçu de la Direction des services de technologie de l'information (la STI), au quatrième trimestre de 2009, un exposé détaillé concernant la Politique sur l'utilisation responsable des ordinateurs.

Pour ce qui est des constatations 1 à 4 concernant l'*Utilisation d'Internet et du courriel* et de la section 4.9.1 (du rapport intégral), la direction aimerait souligner qu'un examen détaillé des données fournies par le vérificateur a révélé qu'exception faite d'un cas unique où l'utilisation du courriel et la sauvegarde de messages courriel par un employé étaient un sujet de préoccupation, l'utilisation d'Internet et du courriel par la DSCB était conforme à la Politique sur l'utilisation responsable des ordinateurs de la Ville. Voir la réponse de la direction à la Recommandation n° 22 ci-dessous.

Recommandation 21

Que la Ville s'assure, en adoptant des pratiques de surveillance actives et documentées, que tous les employés se plient à la Politique de la municipalité sur l'utilisation responsable des ordinateurs.

Réponse de la direction

La direction est d'accord avec cette recommandation.

À l'heure actuelle, les STI et les Relations de travail effectuent deux fois l'an une vérification de l'utilisation d'Internet, qui examine à chaque cycle de vérification l'utilisation que font d'Internet 50 employés. Des rappels touchant la Politique sur l'utilisation responsable des ordinateurs de la Ville sont transmis deux fois par semaine à tout le personnel qui dispose d'un accès au réseau. Les gestionnaires municipaux sont chargés de surveiller leur personnel et peuvent, là où c'est justifié, demander des rapports sur l'utilisation de la technologie; ils peuvent collaborer avec les Relations de travail, en ce qui a trait à l'interprétation de certaines données.

Tous les employés de la DSCB ont reçu, au quatrième trimestre de 2009, un exposé détaillé offert par les STI concernant la Politique sur l'utilisation responsable des ordinateurs, en plus d'une note de service de la directrice des Services du Code du bâtiment et chef du bâtiment au cours du premier trimestre de 2010 rappelant à tout le personnel de se conformer à la Politique sur l'utilisation responsable des ordinateurs de la Ville.

Recommandation 22

Étant donné le taux d'utilisation d'Internet et du courriel à des fins personnelles, que la Ville passe en revue les besoins en dotation de la Direction des services du Code du bâtiment, afin de déterminer si tout le personnel en place est nécessaire.

Réponse de la direction

La direction n'est pas d'accord avec cette recommandation.

Globalement, on n'a pas confirmé de problèmes de rendement ni de preuves de rendement insatisfaisant qui justifieraient une telle recommandation.

Nous signalons que cette recommandation contredit la Vérification des Services du bâtiment 2006 qui affirmait que « les ressources internes de la DSCB sont insuffisantes pour que se poursuive la gestion efficace de la charge de travail ».

Utilisation d'Internet

De nombreux sites déclenchent des marqueurs d'adresses IP. Le fait de visiter certains sites commerciaux peut générer jusqu'à 40 requêtes qui seraient classées « non liées aux fonctions professionnelles » aux termes de la présente vérification. De conclure, à partir du type d'analyse effectuée, que les gestionnaires de programme de la DSCB faisaient un usage non approprié d'Internet c'est se livrer à des conjectures. Les données brutes ne suffisent pas à discerner avec précision l'intention de l'utilisateur. Pour déterminer et classer correctement l'usage fait de l'ordinateur, il faudrait être assis aux côtés de l'employé. Par exemple, dans l'un des cas, un gestionnaire de programme, après avoir écouté un reportage sur un chantier de construction en vue de se préparer à répondre aux questions des médias, avait par mégarde laissé son

ordinateur allumé toute la fin de semaine, avec le fureteur ouvert au site cbc.ca. Cela a donné lieu à un nombre très important de « requêtes » qui ont été comptabilisées par la vérification comme des cas d'usage d'Internet à des fins personnelles.

La Politique sur l'utilisation responsable des ordinateurs de la Ville n'interdit pas la lecture en continu des médias locaux sur Internet. Au cours d'une récente présentation qui s'adressait à tous les employés de la DSCB, un gestionnaire des STI a clairement dit au personnel qu'il était autorisé à écouter ou à visiter des sites médiatiques locaux, dans la mesure où la capacité de bande passante n'en était pas affectée.

Courriels

Cette photo d'une « loterie de bureau » avait été prise par un employé. Quand un agent du bâtiment est réaffecté, le gestionnaire de programme télécharge normalement vers son propre disque les photos qui se trouvent dans les appareils photo qui appartiennent à la Ville, afin de les examiner et de les trier, pour plus tard sauvegarder les photos dans la bibliothèque électronique de la DSCB. Le gestionnaire de programme n'avait pas encore examiné les photos en vue de déterminer ce qui était pertinent ou non à la tâche. Depuis le moment de cette vérification, la photo a été retirée du disque du gestionnaire de programme. Il n'y a pas eu de loterie comme le suggère la vérification. L'incident était issu de la frustration aiguë ressentie par plusieurs agents du bâtiment relativement aux abus du processus d'inspection par le constructeur en cause. La situation a été résolue grâce à des réunions avec les représentants du constructeur, où les problèmes de rendement ont été réglés. La photo n'a jamais été accessible au public, et n'a été affichée que deux ou trois jours. Dès que le gestionnaire de programme a remarqué la photo, elle a été retirée. On a, depuis, sensibilisé les employés au fait que cet incident était inapproprié, et on leur a rappelé qu'ils doivent se plier au Code de conduite qui les gouverne.

Depuis cette vérification, tout le personnel et les gestionnaires de la DSCB ont reçu une formation concernant la Politique sur l'utilisation responsable des ordinateurs de la Ville. De plus, une note de service sur l'usage approprié du courriel et d'Internet, contenant un rappel du Code de conduite, a été transmise par le directeur/le chef du bâtiment à tout le personnel. Enfin, le directeur/le chef du bâtiment a aussi demandé que la STI effectuent des examens réguliers de l'utilisation d'Internet à la DSCB.

Voir la note ci-jointe (annexe 1), en date du 25 janvier 2010, adressée par les STI au directeur municipal touchant la possibilité d'utiliser le service de filtrage Internet de la Ville pour interpréter l'utilisation faite d'Internet.

Conclusion

La vérification a révélé que dans certains cas, le gestionnaire de programme (Inspections) n'a pas respecté les exigences du *Code du bâtiment* et des *Politiques, Lignes directrices et Normes* de la Ville. Notamment, nous avons conclu que le gestionnaire de

programme (Inspections) n'avait pas respecté ces exigences en ce qui concerne les éléments suivants :

1. Avoir autorisé un propriétaire à poursuivre une construction sans permis de construction.
2. Avoir approuvé des inspections en plomberie sans qu'une véritable inspection ait eu lieu.
3. Avoir neutralisé les décisions prises par des inspecteurs de délivrer un ordre de se conformer, en dépit de permis manquants ou d'inspections qui n'avaient pas eu lieu.
4. Documentation manquante dans les dossiers, comme des levés de l'ouvrage fini, des rapports sur l'état des sols, etc.

La vérification a révélé que la DSCB avait autorisé, au cours des trois dernières années, (de 2006 à 2008), 2 500 inspections qui étaient illégales du fait qu'elles avaient été effectuées par des étudiants non qualifiés.

La présente vérification a débuté le 12 janvier 2009 en tant qu'une vérification portant sur deux dossiers précis des services du bâtiment. En fonction de notre travail, la portée a été élargie à huit dossiers précis. Notre vérification a de nouveau été élargie par la suite afin d'aborder les questions relatives à l'utilisation d'inspecteurs non qualifiés par la Direction des services du Code du bâtiment et à la gestion des risques qui en découle.

La direction a pris la décision d'utiliser des étudiants non qualifiés tout en étant parfaitement consciente qu'elle contrevenait aux exigences du *Code du bâtiment* de l'Ontario. La direction indique que cette mesure a été prise afin de faire face aux charges de travail de pointe liées à un boum de la construction. La direction a pris cette mesure sans en informer le Conseil et sans les outils de gestion, les conseils juridiques et une évaluation des risques pertinents.

Le 21 mai 2010, notre Bureau a été informé que la chef du bâtiment cherchait à obtenir un avis juridique quant à l'applicabilité de certaines sections du *Code du bâtiment* relativement à ces inspections illégales. Que la chef du bâtiment, 16 mois après le début de la vérification, cherche à obtenir un avis juridique révèle qu'elle ne maîtrise pas complètement la question de la gestion des risques.

La vérification a de plus révélé que le gestionnaire de programme (Approbations de permis) n'avait pas convenablement évalué le danger potentiel des sols argileux fragiles dans un lotissement; également, que la documentation touchant les lotissements n'était pas transmise à toutes les personnes concernées par cette information.

Nous sommes d'avis que la DSCB devrait s'assurer que la *Loi sur le code du bâtiment de l'Ontario* est respectée en tout temps.

Nous avons examiné l'utilisation du courriel et d'Internet du GPI. Nous avons découvert qu'il utilisait de manière démesurée le système municipal de courriel et d'Internet à des fins personnelles, sans tenir compte de la Politique sur l'utilisation

responsable des ordinateurs de la Ville ni du Code de conduite de la Ville. En sa qualité d'employé de gestion de niveau intermédiaire, cette inconduite informatique (p. ex., des blagues et des documents inappropriés) est particulièrement grave. En nous fondant sur notre examen, nous avons conclu que l'utilisation considérable du réseau à des fins personnelles de cet usager avait diminué le temps accordé par lui aux tâches qui relèvent de son poste. En nous fondant sur ces résultats, nous avons élargi notre examen de manière à inclure l'utilisation du courriel et d'Internet des autres membres du personnel de gestion du service d'inspection des bâtiments ainsi que d'un agent du bâtiment III.

À la suite de l'examen de l'utilisation du courriel et d'Internet par les employés de gestion de cette unité, ainsi que d'un agent du bâtiment III, nous sommes d'avis que le personnel de la Direction des services du Code du bâtiment n'exerce pas une gestion satisfaisante du temps et des actions de certains membres de son personnel. Les mesures disciplinaires nécessaires devraient être prises pour y remédier.

Comme il a été signalé lors de vérifications précédentes, la STI doit faire respecter la Politique sur l'utilisation responsable des ordinateurs à tous les échelons de l'organisation. De plus, des mesures plus rigoureuses sont nécessaires afin de contrer le volume de blagues et de documents non appropriés reçus et envoyés par les employés de la Ville en utilisant le système municipal de courriel et d'Internet.

1 BACKGROUND

1.1 Audit

This audit was conducted as a result of a report to the Fraud and Waste Hotline. This audit was not originally identified in the Audit Plan that was presented to Council.

The Office of the Auditor General received a report regarding concerns with the activities of a Program Manager in the Building Inspections Section of the Building Code Services Branch. The report indicated that some building inspections in a specific division of Building Code Services had not been carried out as required and that in some cases the property owners have not had to obtain a building permit as a result of decisions by the Program Manager.

The Office of the Auditor General decided to examine the approvals and inspections processes undertaken by the Program Manager to determine if he had followed the requirements of required standards, regulations and policies.

The Fraud and Waste Hotline information referred to two specific issues, but also stated that the investigation should review the other instances of alleged non-compliance with the Building Code, the Building By-law, and the City's Policies and Procedures. Consequently, the review was expanded to include other files, based on information obtained during the audit.

1.2 Background Information

The Fraud and Waste Hotline information referred to two specific issues, but also stated that the investigation should review the other instances of alleged non-compliance with the Building Code, the Building By-law, and the City's Policies and Procedures. Consequently, the review was expanded to include other files, based on information provided during interviews with managers, program managers and staff, and obtained during the review of the files.

2 AUDIT OBJECTIVES AND CRITERIA

The overall objectives of the audit were as follows:

- a) Independently examine the processes undertaken during the approvals and inspections of selected files pertaining to a specific address and a specific subdivision.
- b) Determine if they are consistent with relevant policies, procedures, legislation, and regulations.
- c) Evaluate the role of the Building Inspection Program Manager and the Building Code Services Branch in relation to the specific files.
- d) Examine the inspections of the relevant files.

- e) Evaluate the role of the Building Inspection Program Manager and the Building Code Services Branch in relation to the specific files.

Following a review of the background information available from the City, the scope of the audit was synthesized in the Audit Objectives. The Criteria attached to each Audit Objective explain the scope of the review.

Audit Objective No. 1 – Examine and evaluate the processes and methodologies used for the review and approval of the file for a specific address.

Criteria:

- Appropriate reviews were conducted to ensure the project was in compliance with the Building Code.
- Criteria used to decide not to require a building permit.

Audit Objective No. 2 – Examine the methodology used for the inspections of the specific subdivision to determine how the areas of poor soils affected the inspections and approvals.

Criteria:

- Inspections based on approved building drawings.
- Remedial measures incorporated into the design of the various buildings to account for the poor soils.

Audit Objective No. 3 – Examine the methods and procedures used for inspections by the Building Code Services East division.

Criteria:

- Inspections were completed at appropriate times.
- Inspection reports were completed and relevant observations were adequately recorded.
- Appropriate engineering and consultant reports were reviewed and are included in the files.

Audit Objective No. 4 – Examine the methods used by the City to enforce the Ontario Building Code, the Building By-law, and the Policies and Procedures for building inspections.

Criteria:

- Methods available by legislation.
- Methods used by the City staff for enforcement.
- Effectiveness of methods of enforcement.

Audit Objective No. 5 – Evaluate the role of the Building Inspection Program Manager and the Building Code Services Branch in relation to the specific files.

Criteria:

- Determine if the decisions made in relation to the files followed the scope of the Program Manager duties and responsibilities.
- Examine whether the procedures used by the Program Manager followed the policies of the overall BCSB.

3 AUDIT SCOPE

The Audit Scope encompassed the inspections carried out by the Inspectors reporting to a specific Program Manager in the Building Code Services Branch.

The audit began by reviewing the legislative framework for the project, to confirm the requirements that should have been followed. Collection and review of the background information were undertaken in light of the Audit Objectives and Criteria. The results of the review are an evaluation of the recommendations to determine whether the interests of the City, including exposure to risk, were adequately considered and protected.

3.1 Legislative Framework

This review is largely governed by the Building Code Act, 1992, Statutes of Ontario 1992, Chapter 23, as amended to 2006, and the requirements of the Ontario Building Code, Ontario Regulation 389/05, made under the Building Code Act.

3.2 Interviews

Interviews were held with City staff involved in the various components of the projects to review the same and to obtain copies of documentation and other background data where available. Specifically, we held interviews with the following staff:

- Director, Building Code Services & Chief Building Official
- Manager, Building Inspections
- Program Manager, Building Inspections
- Program Manager, Permit Approvals
- Past and present Inspectors reporting to the Program Manager, Building Inspections.

3.3 Background Data

Background data available from the City was collected and reviewed. This included the project drawings, building permit files, and building inspection reports related to the projects, the Policies, Guidelines and Standards (also known as the Inspection

Guidelines Binder), the Sensitive Soils Inspection Guidelines, and the Summary Table for Sensitive Soils.

Relevant sections of the Building Code Act and the Ontario Building Code (Code) were reviewed as they pertain to the audit.

In addition, we reviewed the geotechnical reports prepared for the different phases of the specific subdivision.

3.4 Correspondence

The correspondence files maintained by the City were reviewed in detail, including the building permit files, inspection files and working files. In addition, the complaints received by the City were reviewed. The review included the email correspondence as available within the City's email system.

3.5 Documents Examined

Two specific files were examined initially. Based on the information obtained during the audit, six additional files were reviewed.

Geotechnical reports for the specific subdivision were reviewed to evaluate the investigations regarding sensitive clays and other poor soils, and the information processed during the building permit reviews and the inspections.

During the interviews it was learned that the houses constructed had required repairs as a result of movement of the foundations due to the underlying sensitive clays. The files for the repairs to the house foundations and foundation walls located in this vicinity were also reviewed to determine the available information regarding the location of sensitive soils in the vicinity of the specific subdivision.

During the interviews and in the examination of email correspondence, it was found that a number of inspections were carried out by summer students without the required qualifications as required by the Ontario Building Code after January 1, 2006. The City provided a list of inspections carried out by students in 2006, 2007 and 2008, to enable evaluation of those inspections done by students without the required Ministry of Municipal Affairs and Housing registration (i.e., unqualified students).

4 FINDINGS

The results of the analysis and the findings of the Audit are presented in this section. The discussion that follows is organized on the basis of the addresses of the files reviewed, followed by discussion of specific issues that were brought to the attention of the Auditor General staff during the course of the review of files and/or the personal interviews with managers, program managers, and inspectors.

4.1 Files Reviewed

The investigation started on the basis of the two files identified in the Hotline complaint. Following the initial review of these files and the interviews, additional files were examined based on information determined during the review of the files or provided during the interviews.

4.1.1 File No. 1

This property is located in the east area of the City. At the time of the main events and the audit, the property had no dwellings on it.

As a result of a complaint by a neighbour of blasting at night time, the property was investigated by the Building Inspector, who found that a 2.7 m high concrete wall and foundations were under construction in the property. Upon further investigation, the Inspector found that the work was being carried out without a building permit. On the basis of the investigation, the Inspector proceeded to prepare an Order to Comply (OTC) to require the owner to submit a building permit application for the structure.

The Program Manager, Inspections (PMI) reviewed the OTC and requested additional information from the property owner. The drafting service retained by the property owner to provide architectural design and drawing services informed the PMI that the project consists of three components, namely a custom home, a garden shed and the concrete wall and foundations. The letter indicates that the concrete wall is a fence to an 18th century landscape garden and will not be attached to the garden shed.

The PMI agreed with the opinion of the drafting services firm and classified the structure as a fence; on this basis, the PMI concluded that no building permit would be required, and revoked the OTC.

On the basis of our analysis, we have concluded that the PMI should have required a building permit for the construction of the concrete wall. Our conclusion is based on the following considerations:

- a) The overall project comprises the custom house, the shed and the concrete wall (fence).
- b) The custom house and the shed each require a building permit.
- c) As the fence is 2.7 m high and is constructed of reinforced concrete, and is part of the overall project that requires a building permit, the fence falls under the provisions of Part 4 of the Building Code.

It could be argued that the concrete wall is not a fence, but a structure, based on the definition of the Building Code Act, which defines a building as:

(a) a structure occupying an area greater than ten square metres consisting of a wall, roof and floor or any of them or a structural system serving the function thereof including all plumbing, works, fixtures and service systems appurtenant thereto,

In addition, the 2006 Ontario Building Code requires that concrete or masonry fences more than 1.8 m high be designed under Part 4 of the Code if they are ancillary to a building (as defined in the Act).

The PMI has provided reasons for considering the wall a fence and for not requiring a building permit. Among them, he stated that the owner declared that he had constructed a garden fence, designed to reflect an 18th century landscape park, and that the owner had stated that he had no intention of using the concrete fence as part of any future building. On this basis, the PMI concluded that the structure is not serving as a wall and is not part of a building. The PMI states that a fence is not a designated structure in the Code, no matter the construction material.

However, we believe that the position taken by the PMI is expeditious, but not necessarily correct, because the wall forms part of the overall design that involves two buildings, as defined in the Building Code. Section 4 of the Building Code gives the PMI the mechanism to require a building permit for the overall development, rather than allow it to be submitted in parts.

4.1.2 File No. 2 - Subdivision

The complaint indicated that the PMI had allowed the builder to build houses when there are structural issues with the soils without addressing those issues. However, review of the files and relevant correspondence showed that the PMI undertook the inspections based on the building permits issued. As discussed below, further investigation found that the foundation design did not adequately address the presence of the sensitive clays located in the area, and that the building permits should not have been issued for the buildings as designed.

The review and interviews revealed other matters that are briefly introduced in the following sub-sections 4.1.2.1 to 4.1.2.5 below, and are discussed in detail in Sections 4.2 to 4.6 because they affect other files.

4.1.2.1 Sensitive Soils

Review of the files for the subdivision and the results of interviews revealed that approximately 100 building permits were issued during 2008 for residential buildings (houses and townhouses) located in an area of sensitive clays. Review of the files and relevant correspondence showed that the Program Manager, Permit Approvals (PMA) was not aware of the existence of sensitive clays in this particular area of the subdivision when he issued the building permits. However, he had sufficient information that should have warned him of the possibility of finding sensitive clays in this area. The design of these buildings did not make any special provision for the sensitive clays; consequently, about seven houses were completed before the need for special provisions was realized, and revisions to the building permits for houses not yet started were submitted and reviewed by the PMA. The building permits for this house

should not have been issued. Additional discussion on this item is provided in Section 4.2.

4.1.2.2 Document Retention Requirements

Section 20 of the Policies, Guidelines and Standards prepared by the Building Code Services Branch requires that a number of documents and samples must be retained. The results of the review of the various files for this subdivision found that they do not contain all the documentation that is required based on the Policies, Guidelines and Standards. For example, the inspection files do not always contain a copy of the approved roof truss drawings; in some cases, the structural engineer's letter in the file does not correspond to the approved version of the letter.

Additional discussion of this issue is included in Section 4.3, since the same situation was found in the files of buildings in other subdivisions.

4.1.2.3 Structural Field Review

The protocol for sensitive soils (Sensitive Soils Inspection Guidelines) prepared by the PMI requires that the owner's structural engineer shall provide site review memos for each lot confirming that the footings and foundation walls sizes and reinforcing, concrete strength, etc., are installed as per the design requirements and approved permit drawings.

We found that in some instances the site review structural engineer reported errors or omissions in the placement of reinforcing steel in some footings and foundation walls; however, the City's inspector did not insist that the engineer return to confirm and sign-off on the correction of the noted deficiencies. The City's inspector performed the review of the deficiencies and signed-off on the corrections. This procedure unnecessarily transfers the workload and the responsibility and liability for the review to the City.

Additional discussion on this subject is included in Section 4.4.

4.1.2.4 Inspection Passed Site Unseen

During the review of the files we found two inspection reports for two different buildings where the building inspector provided an inspection report indicating that the inspection of the building plumbing had passed the inspection, but he had not done an inspection because the plumbing had been covered over by the basement concrete slab. When asked about this, the inspector indicated that he had done the same in two other sites; he also affirmed that the PMI had been apprised of the situation, and had agreed to it. Further discussion on this matter is provided in Section 4.5, since we found that a similar situation occurred in other developments.

4.1.2.5 Refundable Inspection Fees

The Building By-law provides that a Refundable Inspection Fee must be deposited with each building permit application. The fee is refunded to the applicant after the Final

Occupancy Permit is issued, less \$100 for each repeat inspection required because the builder was not ready for the inspection. It is noted that the builder is required to notify the Building Code Services office to schedule each prescribed inspection.

During the review of the files for the subdivision, it was noted that the inspectors did not mark the box for charging of repeat inspection fees even though there were several repeat inspections caused by the builder not being ready for the inspection. After an initial review, a sample of 50 files selected at random were reviewed, and it was found that none of the inspections where the contractor was not ready were marked for re-inspection fees; all 50 files had at least one “not ready for inspection” event and found that none of the cases had been marked for the \$100 fee. This represents \$5,000 that the City did not collect from the specific developer. This topic is discussed further in Section 4.6.

Recommendations emanating from the review of this development are provided in Sections 4.2 to 4.6, where the subjects initiated above are discussed further.

4.1.3 File No. 3 - Subdivision

This subdivision was reviewed as a result of information provided during the interviews, which indicated that the PMI tended to favour this particular developer.

We found concerns with these files as noted below:

4.1.3.1 Partial occupancy was provided almost three years before the final occupancy permit was issued.

The City’s website¹ states that the occupancy permit attests to the general conformance of the new construction (or renovation) with the Ontario Building Code based on inspections done at completion of key stages of construction, as required by the Code and the Building By-law. The occupancy permit is issued in accordance with the Building By-law when construction of the building has been completed to meet the minimum occupancy requirements of the Code. In the case of a residential building, the minimum occupancy requirements include:

- Required exits, handrails and guards, fire alarm and detection systems, and fire separations must be complete, operational and inspected;
- Water supply, sewage disposal, lighting and heating systems must be complete and operational; and,
- Building water systems, building drains, building sewers, and drainage and venting systems must be complete, operational, inspected and tested.

There are two kinds of Occupancy Permits: Partial Occupancy Permits and Final Occupancy Permits. BCS management indicated that the Building By-law does not establish occupancy permits, nor does the Act or Code. The terms are used to simplify

¹ (http://ottawa.ca/residents/building_code/homeowner_guide/final_en.html)

messaging to the public and permit holders that a specific stage of the inspection review and approvals process has been completed. Approval to occupy an unfinished residential unit is noted on inspection reports, while a unique document, called the Final Occupancy Permit, is used to signal to all that the inspection process is complete and the file is closed.

A *Partial Occupancy Permit* is issued when the permit holder wishes to allow occupancy to occur in an unfinished building. For a residential occupancy, the above minimum occupancy requirements apply.

A *Final Occupancy Permit* is issued when construction is complete and all outstanding Code deficiencies, as listed in Inspection Reports, have been addressed.

The concern with the very long time between the Partial and the Final Occupancy Permits is that any deficiencies noted in the inspection reports prepared for the Partial Occupancy Permit could remain uncorrected for a significant period.

The City has now implemented a mechanism to reduce the occurrence of these situations by stipulating in the Building By-law that the refundable inspection fee shall be forfeited by the person named on the fee receipt issued by the City upon payment of the fee, if the final occupancy permit has not been issued within three years from the date of issuance of the permit to construct.

Recommendation 1

That the City ensure the Building Code Services staff maintains a Building Permit database and that it be reviewed at reasonable intervals to identify cases where the Partial Occupancy Permit had conditions, in order to permit the inspector to return and verify that the conditions have been corrected.

Management Response

Management agrees with this recommendation.

From a Building Code standpoint, the scheduling of inspections is a function of the builder's readiness and is not in the Branch's realm of control. Per section 10.2 (1) of the Building Code Act, the responsibility to schedule the inspections rests clearly with the builder. It is the prerogative of the builder to determine how quickly they wish to complete their construction once the minimum standards for occupancy of an unfinished building have been met (i.e., partial occupancy).

With respect to Findings 1-6 (*File No. 1*), the Auditor has expressed a number of opinions which management would like to clarify as follows:

Findings 1-6: The PMI directed the building official to issue an Order to Comply (OTC) on the assumption that the structure under construction was a foundation wall for a building. Following further investigation, the PMI determined that the construction was that of a fence, which does not require a building permit. The OTC was therefore lifted. The decision to lift the OTC was within the authority of the

Code competent PMI. The Building Code Act does not provide authority to compel an owner to obtain a permit for future phases of a project nor is there authority to compel the owner to connect the fence to the yet to be built building. Further, the fence structure is not subject to Part 4 of the OBC.

An electronic 'bring forward system' will be integrated with enhancements to MAP to improve the tracking of inspections and to equip inspection staff with remote technological capability. The multi-phased four-year project commences in 2010 and will be completed in 2014.

4.1.3.2 Issuance of Partial Occupancy Permit

In some instances the partial occupancy inspections indicated conditions which may not have been checked properly before the final occupancy permit was issued. For instance, in one occasion the partial occupancy permit required that the tele-posts (i.e., columns) be secured to the foundation, but the inspection noted that the inspection had passed. In our opinion, the inspection should have been a fail with a requirement for re-inspection.

The concern that arises in these cases is that the connections of the columns were not completed before the partial occupancy permit was issued. Although in some cases the builder will correct the deficiency as the inspector carries out the partial occupancy permit, there is no record of such action in the files noted.

Recommendation 2

That the City ensure the Building Code Services Branch provides the Inspectors with a list of conditions that are not acceptable, in order to provide guidance to the Inspectors when deciding whether Partial Occupancy Permits can be issued. Alternatively, a quality control review of the Partial Occupancy Inspection Form could be done by the Program Manager, Building Inspections Unit or a senior inspector acting as his representative.

Management Response

Management agrees with this recommendation.

With respect to Finding 5 (*File No. 3 - Subdivision*), it is noted that by the time the Final Occupancy Permit was issued, the deficiency had been addressed and although this incident was a single event, management will provide additional guidance to inspection staff. In addition, program managers are undertaking quality control reviews of a representative sample of inspection files on an ongoing basis.

4.1.3.3 Issuance of Final Occupancy Permit

In some cases, the final occupancy inspections for mechanical give as a condition "Ventilation Section 9.32 OBC", but do not provide any further details or are sufficiently specific to permit follow-up. We found other final occupancy inspections where the inspector noted conditions, but there is no record that they were actually met.

In the first place, there should be no conditions in the Final Occupancy Permit inspection forms, as it is issued when all the requirements have been satisfied. If a condition is to be placed, it should be specific. The condition noted above refers to a section of the Code that covers every aspect of the ventilation in a building constructed under Part 9 of the Code. Other examples of conditions noted in Final Occupancy Permits include missing caulking or lack of weatherproofing between materials.

Recommendation 3

That the City ensure the Inspectors are made aware that Final Occupancy Permits should not have conditions, and that if the inspection reveals items where the Code is not met, that the Final Occupancy Permit not be issued until the conditions are remedied and lifted.

Management Response

Management agrees with this recommendation.

To ensure clarity, management will provide additional instructions to inspection staff by the end of Q1 2010. In the audited case, the insertion on an inspection report “Ventilation Section 9.32 OBC” was actually a note to file for the benefit of the inspector and was not a ‘condition’. This was not a standard practice of the Building Officials. The inspector has since left the City.

4.1.3.4 Documentation

The documentation in the files is not always complete. For example, a number of files did not have the required as-built survey, soils engineering report, roof truss drawings, or engineering review letter. We discuss this issue further in Section 4.3.

The documentation requirements are described in the Building By-law and the Inspection Guidelines Binder (Policies, Guidelines and Standards). We noted that in most instances the inspector makes a clear attempt to ensure that all the documentation is included in the file, the process may need to be adjusted to ensure that the percentage of files with incomplete documentation is reduced to a negligible level.

Recommendation 4

That the City ensure Building Code Services Branch files have all the required documentation per the Policies, Guidelines and Standards document.

Management Response

Management agrees with this recommendation.

With respect to Finding 7 (*File No. 3 - Subdivision*), a review of the files subject to the audit confirmed that with the exception of a very small number of files, all were complete as set out in the branch’s Policies, Guidelines and Standards. Missing documents have now been inserted in the files. Management will continue to

monitor through quality control reviews on an ongoing basis to ensure that documentation within files is complete.

4.1.4 File No. 4 - House

This house was constructed with a building permit issued on November 25, 2004, but the owner/builder did not call for a number of inspections, including foundations, basement insulation, final plumbing, final mechanical, and occupancy permit.

The Building Inspector issued an Order to Comply on January 12, 2009, requiring that the owner obtain an occupancy permit. The deadline in the OTC was January 19, 2009. The PMI provided an extension to the owner for one month on January 20, 2009.

The owner did not obtain the required inspections during construction. The lack of inspections during construction is mostly due to the owner not following the requirements provided by the City. As the inspections are programmed when the owner requests an inspection, it is easy for several weeks to pass before the inspector carries out a progress visit to the site. As we had recommended in the Audit Report on 215 Preston Street, the Building Code Act and the Building Code allow the inspectors to enter the property and the building for the purpose of inspecting it, even without the specific call or authorization from the property owner. We had suggested that the inspectors should create a schedule that includes opportunities for the inspector to carry out the required visits, as they are required, even without a specific call from the owner.

During the review of files we noted that summer students were asked to visit sites where a permit was in process, to assess status and to inform the owner not to start construction until the building permit is issued (labelled a Pre-permit inspection). Similar unscheduled inspections were used for status review or to advise owners for the need to apply for Final Occupancy permit. We suggest that a similar process could be used to follow-up on the status of construction, to make sure that no inspections are missed because the owner fails to call.

Recommendation 5

That the City require Inspectors to follow up on active building permit files if a reasonable amount of time has passed between inspections and the owner has not called in, with the purpose of ensuring that work is not continuing without the inspector having an opportunity for timely inspections. The City should define what will be considered to be a reasonable amount of time.

Management Response

Management does not agree with this recommendation.

From a Building Code standpoint, the scheduling of inspections is a function of the builder's readiness and is not in the branch's realm of control. Per section 10.2 (1) of the Building Code Act, the responsibility to schedule the inspections rests clearly

with the builder. It is the prerogative of the builder to determine how quickly they wish to complete their construction and to schedule the inspections accordingly.

The assumption of progress or status inspections for all permits irrespective of the permit holder's readiness would increase inspections resourcing requirements significantly and could be misconstrued by the permit holder and the industry that the municipality has assumed statutory responsibilities vested in the permit holder / industry. This would confuse respective legislative roles and responsibilities.

The Building Code Services branch (BCS branch) has instituted other effective processes at minimal cost. In 2006, the BCS branch introduced the Refundable Inspection Fee as an incentive for the builder to complete the inspection process in a timelier manner and make more judicious use of the limited inspection resources. The Fee is reimbursed once the Final Occupancy Permit is issued. Since the introduction of the Refundable Inspection Fee, the timeframe between the start of construction to completion has decreased for low-rise residential construction. A large number of files reviewed in this audit pre-dated the introduction of the Refundable Inspection Fee in 2006.

Regarding Findings 1 to 4 (*File No. 4 – House*), and section 4.1.4 (in the detailed audit report) the Auditor has expressed a number of opinions regarding the regulatory requirements of the building subject of the audit. Management would like to clarify that the building permit was issued for a factory-built home. Building components that are designed and constructed in manufacturing plants in accordance to the applicable CSA standard are deemed to comply with the Code.

In this case, the foundation of the house was constructed outside the place of manufacture and was subject to the required inspections. The foundation inspection was undertaken December 10, 2004. The plumbing underground was inspected May 4th, 2005. However, the homeowner did not schedule the occupancy inspection due to their lack of familiarity with the processes and requirements. It is noted that the final plumbing and final mechanical inspections are normally undertaken at the time of the Final Occupancy inspection.

4.1.4.1 Enforcement of Building Code Requirements

The PMI provided the owner a 30-day extension to cover the combustible insulation in the basement. This delay places undue potential liability on the City in the case that the illegally occupied building caught fire and the combustible insulation became a factor in any casualties.

The work required to comply with the OTC could have been completed in less than one week, as stipulated in the OTC. There is no valid reason for the owner to require one month to complete the work, particularly in light of the delay in getting the required inspections and the occupancy permits. It should be noted that the building was occupied before the owner had received an occupancy permit from the City.

Recommendation 6

That the City ensure that the primary responsibility of the Program Managers is to enforce the requirements of the Building Code. In addition, they should take into account the potential risks to the City resulting from their determinations if they decide to not follow the Policies, Guidelines and Standards. Any decision to deviate from the Policies, Guidelines and Standards should be made by the Chief Building Official, and not by the Manager involved or the Program Manager.

Management Response

Management agrees with this recommendation.

BCS branch staff and program managers are fully qualified and aware of their responsibility to enforce the Building Code Act and the Ontario Building Code (OBC). Managers and program managers are required to evaluate the risks of decisions made with regard to each permit application and permit. It is common practice to elevate issues, concerns or questions to the Chief Building Official that have high-risk implications. Policies, guidelines and standards have built in flexibility as appropriate to ensure appropriate decision-making authority supporting effective operation of the branch.

Regarding Findings 5 and 6 (*File No. 4 – House*), and section 4.1.4.1 (in the detailed audit report), the Auditor has expressed a number of opinions regarding the regulatory requirements of the building subject of the audit. Management would like to clarify that the Code does not set specific timeframes for compliance, rather the Act and Code have assigned this task to the Building Official who will determine what is appropriate based on the circumstances of each case and as is necessary to achieve compliance.

4.1.4.2 Policies, Guidelines and Standards

The PMI indicates that “the owner meets the criteria to be exempt from having to provide an as built survey”. The City’s Inspection Policies, Guidelines and Standards do not allow exceptions to the requirement.

The requirement for an as-built survey is included in both the City’s Inspection Policies, Guidelines and Standards and in the Building By-law. The concern with allowing some owners to not provide a survey is that it creates an atmosphere of favouritism, plus it transfers potential liability for the correct location of the building to the City. In addition, the BCSB’s resources are not being used correctly when the inspector is asked to provide information that the owner ought to provide according to the City’s Policies, Guidelines and Standards.

Recommendation 7

That the City ensure the Program Managers and Inspectors be clearly directed to follow the Policies, Guidelines and Standards, which provide for no exceptions in the handling of documentation in the files.

Management Response

Management agrees with this recommendation.

Employees have been and will continue to be directed to follow branch Policies, Guidelines and Standards to enhance decision-making, ensure consistency of application and enforcement city-wide, despite operating out of different geographical areas, and to mitigate risk exposure.

These branch Policies, Guidelines and Standards assign specific and discretionary responsibilities to staff in the handling of documentation in the files. For example, the operational policy relating to the requirement by a permit holder to submit a Plan of Survey to confirm the location of a new foundation complies with the setbacks from a lot line is "as determined by the Building Inspector". This operational policy assigns discretion. Whereas the operational policy requiring the submission of final review letters from an engineer clearly specifies these must be submitted prior to the issuance of the final occupancy permit without exception.

A review of the sampling of the files subject to this audit revealed there were few instances where documentation was missing. Management will continue to monitor on an ongoing basis to ensure that documentation within files is complete.

With respect to Finding 8 (*File No. 4 - House*); Findings 1 and 2 (*File No. 5 - House*); and, Finding 2 (*Document Retention Requirements*), the suggestion that the exercise of discretion, in determining whether a Plan of Survey is required or not, is an inefficient use of resources, it should be noted that the alternative is to require every permit holder to obtain and submit a Plan of Survey prepared by an Ontario Land Surveyor (OLS) to confirm the location of the foundation as against the lot lines. This would needlessly increase the construction costs borne by the property owner (representing an additional \$1,000 - \$2,000 per survey) and is contrary to the principles of Service Excellence. The Building Inspector is quite capable of discerning whether a Plan of Survey is required or not based on a quick assessment of whether the set back requirements from the lot lines have been met.

4.1.4.3 Safety Issues

The PMI directed the Building Inspector to issue a Partial Occupancy Permit that would exclude the use of the basement.

In the case of a residential building, the minimum occupancy requirements include:

- Required exits, handrails and guards, fire alarm and detection systems, and fire separations must be complete, operational and inspected; and,

- Water supply, sewage disposal, lighting and heating systems must be complete and operational. Building water systems, building drains, building sewers, and drainage and venting systems must be complete, operational, inspected and tested.

In this particular case, the fact that the combustible insulation was not properly covered means that the fire separations were not complete. Section 3.1.5.12. Combustible Insulation and its Protection of the OBC requires that the insulation be covered by a thermal barrier. A Partial Occupancy Permit should not have been issued.

Recommendation 8

That the City ensure Partial Occupancy Permits be issued only when there are no outstanding safety issues.

Management Response

Management agrees with this recommendation.

The OBC clearly sets out the conditions that must be addressed prior to allowing occupancy of an unfinished dwelling unit. Review of the audited files confirmed the approval to occupy an unfinished building was correct per the Building Code.

Regarding Findings 9 and 10 (*File No. 4 - House*) and section 4.1.4.3 (in the detailed audit report), the Auditor has expressed a number of opinions regarding the regulatory requirements of the building subject of the audit. Management would like to clarify that there are no Building Code requirements to have the basement insulation covered as a requirement of occupancy. There appears to be an inference that the basement walls are fire separations, which they are not. It should be noted that there are **no** Code requirements for fire separations within a single-family dwelling. Further, Section 3.1.5.12 does not apply to Part 9 buildings. The dwelling unit subject to this audit and recommendation was a Part 9 building.

The OBC minimum requirements for occupancy of an unfinished building were met despite the building still being under construction, thus the building was no longer illegally occupied once the partial occupancy (correct reference per OBC is "occupancy of an unfinished building") was permitted.

4.1.5 File No. 5 - House

Communications in the file indicate that the PMI told the owner that an as-built survey is not required for this location. The Building Inspector issued a Final Occupancy Permit based on the direction from the PMI. Furthermore, the PMI required the inspector to ascertain the location of the house with respect to the property boundaries using landmarks.

The concerns with this file are that the Policies, Guidelines and Standards state that there are no exceptions to the requirement for an as-built survey. In addition, asking the inspector to verify the correct emplacement of the house with respect to the

property boundaries essentially removes the responsibility for meeting the requirement from the owner and transfers it, unmitigated, to the inspector and hence to the City. In addition, having the inspector carry out the verification in the field essentially means that the inspector was working for the owner, providing information that the owner should provide. At a time when the BCSB has indicated a number of times that they are short-staffed, using inspectors in this manner is not a good use of the BCSB resources. In our opinion, this is a case in which the PMI is trying to not inconvenience the owner, but in effect is not acting in the best interest of the City.

Recommendation 9

That the City ensure the BCSB follow the Policies, Guidelines and Standards, which require the submission of an as-built survey for new housing prior to issuance of an Occupancy Permit. In this case, an as-built survey was not provided.

Management Response

Management does not agree with this recommendation.

The branch Policies, Guidelines and Standards assign discretion to staff to determine whether the requirement for a Plan of Survey is applicable, or not, based on specific site conditions. For example, as in this case, the lot was 5.08 acres and based on the permit plans, the Building Official was able to determine that the foundation of the building was sufficiently set back from the lot lines to satisfy the minimum required set backs for front, side and back yards. In fact, the building was set back approximately 42 m from the front lot line [required set back was 15 m], 16 m in the east side yard [required 10 m], 60 m in the west side yard [required 10 m] and 63 m in the rear yard [required 15 m]. A plan of survey was not necessary to determine compliance.

As previously noted, the operational policy clearly affords discretionary authority to staff:

“It is the policy of the Building Services Branch to require the submission of a plan of survey prepared by an Ontario Land Surveyor for (i) new housing and (ii) additions to housing as determined by the Building Inspector.”

In the review of the sampling of files, there were no instances where a Plan of Survey was omitted contrary to the branch Policies, Guidelines and Standards.

As also noted in the response to Recommendation 7, requiring every permit holder to obtain and submit a Plan of Survey prepared by an Ontario Land Surveyor is inefficient, needlessly increases the construction costs borne by the property owner and runs counter to the principles of Service Excellence.

4.1.6 File No. 6 - House

The Building Inspector noticed on November 13, 2008 that the owner had started construction with no permit or application. The owner informed the Building Inspector that he had a meeting scheduled with the PMI on November 21. The Building Inspector wrote to the PMI on November 17, to request instruction on whether to issue an OTC; the application for permit was submitted on November 14th.

The PMI wrote to the Building Inspector indicating that the file had been re-evaluated and that he had allowed construction of the foundation to proceed without a permit because of the impending cold weather; no construction beyond the foundation should be allowed until the building permit is issued. The permit was issued on November 24, 2008.

The concern with respect to this project is that the PMI is adapting the rules to the conditions. In our opinion, the PMI should have directed the owner to wait until the permit was issued.

We note that the procedure used by the PMI is supported by the Chief Building Official.

Recommendation 10

That the City ensure the BCSB be instructed that its primary responsibility is the enforcement of the Building Code, and that BCSB should not be allowing construction to proceed without a permit.

Management Response

Management agrees with this recommendation.

Building Officials are fully qualified and aware of their responsibility to enforce the Building Code Act and the OBC. With respect to Finding 2 (*File No. 6 - House*), the Auditor has expressed a number of opinions regarding the exercise of authority pursuant to the Building Code Act. Management would like to clarify that the property owner made the decision, independently, to commence construction without a permit. Review of the audited files confirmed that staff did not allow construction to proceed. Construction was halted at the direction of staff and a permit was obtained prior to the resumption of construction. The requirements of the Building Code Act were satisfied as a result of staff action.

4.1.7 Vars Fire Hall

The Vars Fire Hall at 6090 Rockland Road was constructed in 2006 and completed in 2007. For the purposes of the Building Code, the owner is the Real Property Asset Management Branch; the operator is the City of Ottawa Fire Department.

During the site selection RPAM investigated a number of potential sites, and selected the current site as the preferred site. The current site is located outside of the service area of the village of Vars, and therefore the fire hall required private services (well and

septic). The purchase offer was conditional on the results of a hydro-geological study and the availability of water. The hydro-geological report concluded that it was possible that a drilled well would produce the maximum daily water supply demand of 7,500 litres per day.

After the property was purchased, three wells were drilled and all were dry. It was necessary to construct a bored well to produce about 620 litres per day, supplemented by storage of 2000 litres. However, the water quality and quantity produced by the well would require treatment, at considerable cost.

After examining the feasibility of extending the water supply from the village, it was concluded that the cost would range between \$150,000 and \$250,000, and that it could take up to two years before water supply could be extended to the site. Furthermore, the Planning and Infrastructure Approvals section indicated that the village water supply system is already close to capacity. Provision was made in the design for the eventual connection of the fire hall to a future water main from the village.

RPAM and Fire Services decided to install an underground cistern with treatment system to provide storage for two weeks of demand for the building. Drinking water would be supplied using bottled water.

The PMI issued an Order to Comply (OTC), indicating that four contraventions of the Building Code had to be corrected before an Occupancy Permit could be issued:

Contravention	OTC Required Action
a. Complete the building exterior.	Complete building exterior and arrange inspection.
b. Provide sealed general review letter from the civil engineer regarding the fire fighting water supply.	Provide general review letter.
c. No potable water is provided.	Take all steps necessary to connect to the municipal water system.
d. Water system not complete and tested.	Connect to a municipal system or approved drinking water system and provide certificate of approval.

Discussions regarding the suitability of the drinking water supply and whether it met the requirements of the Building Code and the Safe Drinking Water Act led to a Partial Occupancy Permit being issued with the condition that the building water supply would be treated as non-potable and all drinking water requirements would be met using bottled water.

Subsequent discussions with the Ministry of the Environment and the Ministry of Municipal Affairs, and the site servicing engineering consultant concluded that the fire hall's water supply system is considered a small municipal non-residential drinking water system. The requirements of the Safe Drinking Water Act for municipal non-residential drinking water systems are that the water must be tested biweekly for *E. coli* (*Escherichia coli*) and total coliforms; if the results of the test exceed the standards in Ontario Regulation 252/02, they must be communicated to the Medical Officer of Health or a person in the office of the MOH, or if the MOH office is closed to the MOE Spills Action Centre.

The Final Occupancy Permit was issued in December 2007, with the condition that the water supply be tested every two weeks in accordance with Ontario Regulation 252/02.

Our review of the file did not find any items of concern with respect to the actions taken by the PMI.

4.1.8 File No. 8 - House

This residence was constructed in 2002. The main issues that were found in the file documentation are as follows:

- a) The professional engineer report on the foundation soils was not available at the time of the footing construction, but the inspector provided a Pass in the Inspection Report, and indicates that the soil "appears Ok".

The inspector should have insisted in receiving the report before the concrete was placed. As in other instances discussed in this report, the action of the inspector creates a transfer of liability to the City. Although the inspector is qualified to do the inspections, the inspector must insist that the owner follows the rules.

- b) A note to file by the inspector on June 11, 2003 indicates that the house was built without the required inspections. The note further indicates that the last inspection was done June 6, 2002 for the insulation and did not pass; framing deficiencies were not corrected; occupancy inspection was not completed; well water test required, but not provided; and the permit was issued for a single attached garage.

Subsequent documentation in the file, prepared by another inspector, indicates that the required inspections were not required because the house was pre-fabricated. However, the fact that the house may be prefabricated does not remove the requirement for inspection.

- c) A note on June 25, 2003 by another inspector indicates that the soil bearing report by a professional engineer was not required.

This is not in accordance with the Policies, Guidelines and Standards. The note further indicates that the footings and pad footings are now approved (in June 2003). Once again, the decision by the inspector has the effect of transferring liability to the City.

- d) The final occupancy inspection for mechanical gives as a condition “Ventilation Section 9.32 OBC”, but does not provide any further details or is sufficiently specific to permit follow-up.

As noted in Sub-section 4.1.3, this condition is extremely vague, apart from the fact that it should not be required if the house is constructed in accordance with the Code. At this point it is not possible to determine with confidence what the condition should be.

4.2 Sensitive Soils

As discussed in Sub-section 4.1.2.1, approximately 100 building permits were issued during 2008 for residential buildings located in an area of sensitive clays. The Program Manager, Permit Approvals (PMA) was not aware of the existence of sensitive clays in this particular area of the subdivision. The design of these buildings did not make any special provision for the sensitive clays. About seven houses were completed before the need for special provisions was realized, and revisions to the building permits for houses not yet started were submitted and reviewed by the PMA.

Management indicated that, the PMA advised that sometime in 2008 the report was forwarded to him by an unknown source and was unsolicited. He reviewed the report on August 12, 2008 and at that time became aware of the problem in this particular stage of the subdivision. The PMA stopped issuing building permits until he could be satisfied that the design of the houses met the requirements of the Building Code. The specific requirements for the design of the foundations were provided by the PMA to the Developer as follows:

Geotechnical Engineer:

1. Provide a letter under seal and signature by a soils engineering firm confirming that the geotechnical consultant has reviewed the City of Ottawa approved grading plan and soil parameters for the soil bearing and settlement as per a soils engineering firm, Report No. PG0377-5 January 26, 2007 and that the soils engineering firm is satisfied that based on the grade raises, underside of footings, their foundation design soil parameters for bearing and settlement are still valid.
2. Provide lightweight fill details, where required, including plans, sections details and material specifications.
3. The soil design bearing pressures based on settlement criteria (**consolidation issues**) used to determine the width and areas of the footings. *(The foundation settlements are not to exceed a maximum of 25 mm total and a maximum of 20 mm differential and may require wall reinforcing where so noted by the structural engineer to mitigate foundation wall cracking.)*
4. State the site seismic site class per OBC 2006, for the subdivision.
5. Confirm whether or not the soils are liquefiable under seismic events as per OBC 2006 and what remediation recommendations are required if they are.

Structural Engineer:

1. Provide foundation design to suit the requirements of the geotechnical report prepared by a soils engineering firm noted above and confirm that the foundation design meets the design criteria for soil bearing and settlement.
2. Indicate the design loads used, including for different load criteria for strength and settlement, any necessary wall reinforcing based on the soils engineering firm geotechnical report for the single and multi units proposed in the subdivision.
3. The applicable design loads used for determining the width and areas of the footings, which are normally sustained loads for settlement criteria for soil bearing pressures. *(Sustained loads are service loads and are the full dead load, full snow load plus a minimum of 50% of the floor live loads, as well as increases in loads due to any continuous structural members.)*
4. With the owner's consent, coordinate with the geotechnical engineer and incorporate design drawings for permit. All responses to be sealed and signed by the appropriate engineer

The PMA informed the PMI and the developer of the concern. Management indicated that the PMA did not direct the foundations to be designed by professional engineers, rather he directed the permit holder to submit additional information in line with the branch's protocol or guidelines for sensitive soils. The permit holder had already decided to build foundations under Part 4 but had not provided the additional information to the PMA as part of their submission. It is incorrect to state the PMA "required that the foundations ... be designed by professional engineers". . Approximately six houses had been completed and occupied by this time, and the foundations of seven others had been completed and backfilled, before the PMA had read the geotechnical report and taken the action noted above. These buildings will require special remedial measures to prevent differential settlement and to achieve allowable total settlement.

During an interview, the PMA indicated that the reason he was not aware of these facts during the review of the building permit applications was that he had not received the geotechnical report prepared for the subdivision, notwithstanding that the soils report was submitted to the City in October 2007. The PMA indicated that he had specifically requested a copy of the geotechnical report, and that otherwise he would not have received one. We asked the PMA for copies of the geotechnical reports for previous stages of the subdivision, but he did not have them in his files; they were provided during this Audit by the Planning and Infrastructure Approvals (PIA) branch of the Infrastructure Services and Community Sustainability Section (formerly Planning, Transit and the Environment Section).

According to the PMA, the PIA receives a copy of the geotechnical report with the engineering drawings for the subdivision. However, there is no established mechanism for a copy of the geotechnical report to be forwarded to the PMA. Consequently,

recommendations regarding building foundations, although provided in the geotechnical report, are not known to the PMA as he reviews the building permit drawings. Although the PMA requested a copy of the geotechnical report in this instance, this is not done in all cases – as evidenced by the fact that the PMA did not have copies of previous reports – and there is no formal procedure to ensure that a copy of the report be sent to the PMA.

Management indicated that the Geotechnical Investigation and Reporting Guidelines for Development Applications were adopted by Council on a temporary basis on February 27, 2008. This document addresses the requirements for foundation investigations for developments. Given that this information is available, the plans review process must take it into account in the review of building permit applications.

We consider that the PMA must not issue any building permits until the geotechnical information has been provided by the developer and the PMA has had adequate time to review the geotechnical report. Therefore, the City should revise the Policies, Guidelines and Standards to require submission of a copy of the geotechnical report with the building permit applications. This is not intended to be a blanket requirement, except in cases where the geotechnical report for the development indicates that the foundation conditions in the development may require a specific foundation design.

In addition to the findings discussed above, we have two other concerns with respect to this issue:

- a) Based on his work approving building permits applications for buildings in this subdivision, the PMA was aware (or ought to have been aware) that there had been sensitive clay problems in the subdivision and its vicinity in previous stages of construction.
- b) The PMA did not require that the geotechnical report be submitted prior to issuing the building permits.

We consider that information about sensitive soils should be shared between all divisions that could be affected by them, including Planning and Infrastructure Approvals, Infrastructure Management, Building Code Services, etc.

Recommendation 11

That the City ensure a copy of the soils or geotechnical report is provided to the Building Code Services Branch at the same time that it is provided to Planning and Infrastructure Approvals.

Management Response

Management agrees with this recommendation.

BCS branch will work with Development Review branches and the industry to establish a protocol for the acquisition of copies of subsurface soils investigation

reports and updates prior to the submission of building permits for a new subdivision. This will be completed by end of Q2 2010.

Regarding Finding 2 (*File No. 2 – Subdivision*), Findings 1 to 9 (*Sensitive Soils*), and section 4.2 (in the detailed audit report, the Auditor has expressed opinions regarding the carriage of specific building permits of building constructed in an area of sensitive soils. Management would like to clarify that the PMA and PMI acted appropriately. Specifically,

- The PMA reviewed the subsurface soils investigation report upon receiving it and immediately alerted the PMI and the Building Code Engineer of the potential for additional actions the permit applicant/holder would be required to satisfy to address the nature of the soils conditions with regard to the new Code seismic requirements as per the branch’s guideline on sensitive soils;
- The builder was advised immediately of the City’s concerns and was directed to provide additional information to address the new permit applications, the permits just issued, and the buildings under construction. The PMA advised the builder of a need on their part to devise a plan to address, in a satisfactory manner, the impact of the subsurface conditions on the existing and future foundations;
- Staff met with the builder and their consultants to clarify the branch’s requirements in terms of documentation in support of a Part 4 review of foundation designs for foundations located in areas of sensitive soils. Any remediation was undertaken and completed shortly thereafter. In addition, the builder integrated any special considerations, accounting for the condition of the sensitive soils, in the foundation design for the other foundations. Permit applications for subsequent lots included the design considerations related to the sensitive soils and the new seismic requirements;
- The CBO is not authorized under the OBC to require the submission of subsurface soils investigation reports undertaken for a subdivision application review as a blanket requirement of a building permit application for a specific building lot. There must be a factual basis for requiring any technical reports from an applicant. As soils conditions vary from building lot to building lot, a blanket requirement is not legal or enforceable; and,
- There was no basis for the PMA to require a subsurface soils investigation report, as the PMA would not have been aware of any specific and special geotechnical subsurface conditions based on the previous phases of the development which had not exhibited any specific and special conditions. In addition, the site review memos provided by the soils consultant indicated the allowable soil bearing pressure was 100kPa. This design soil bearing capacity was within the prescriptive parameters of design of the Code for non-engineered foundations. There were no field conditions, which would have triggered the branch

requirement for additional submission information prior to the issuance of the permits.

With regard to the Auditor's suggestion of relying on the soils engineering reports prepared in accordance with the Geotechnical Investigation and Reporting Guidelines for Development Applications, as adopted February 2008, BCS branch will certainly review these for identification of general and specific soils conditions, if any, and refer to these for purposes of assisting the permit applicant to understand the additional submission requirements related to the soils and seismic conditions per the branch's guidelines on sensitive soils.

It is noted that the primary purpose of the Geotechnical Investigation and Reporting Guidelines for Development Applications is to quantify the impact of the soils on the design and installation of the infrastructure. There is a direct relationship between the positioning of the foundations and that of the infrastructure such as the sewers and water services. For example, the high water table may affect the footing design and the location of the footings within the soil strata and this may affect the design and location of the services. Hence, the reason why these reports include a section on Foundation Design.

4.3 Document Retention Requirements

Section 20 of the Policies, Guidelines and Standards prepared by the Building Code Services Branch requires that the following documents and samples must be retained:

- (i) Copies of *all* orders made under s. 12, s. 13, s. 14, and s. 18.(1) of the BCA.
- (ii) *All* documents, such as drawings, specifications tests and photographs, produced and supplied in accordance with s. 18.(1) of the BCA.
- (iii) All documents, such as soils report(s), plan of survey, and other documents as set out in the policy "Inspection for Fire Protection and Life Safety Systems for Operation and Performance".
- (iv) Written reports prepared by the professional engineers(s) and architect responsible for the general review in accordance with Subsection 2.3.2 of the code.
 - **final acceptance letters** prepared by (i) architect, (ii) structural engineer, (iii) mechanical engineer (iv) electrical engineer, and (v) other professionals engaged to carry out specialty general reviews, such as fire protection, environmental issues, etc;
 - **final review letter** prepared by the geotechnical engineer;

- **a rational sampling of the site visit reports** prepared by the responsible professionals or their representatives, (i) architect, (ii) structural engineer, (iii) mechanical engineer (iv) electrical engineer, and (v) other professionals engaged to carry out specialty general reviews.

Note: It is essential that the sampling of site visit reports retained demonstrate (i) that the general review professionals or their representatives are carrying out site visits on a consistent basis (in accordance with their rational sampling scheme), and (ii) that issues raised by the general review professionals or their representatives are followed-up and resolved.

- (v) All samples, as required by the Building Inspector under s. 18.(1), clause (f), or the BCA, as determined by the Building Inspector in consultation with the Program Manager.
- (vi) All documents must be on the prescribed forms as indicated in the Building Code Act.

The results of the review of the various files for this subdivision found that they do not contain all the documentation that is required based on the Policies, Guidelines and Standards. For example, the inspection files do not always contain a copy of the approved roof truss drawings; in some cases, the structural engineer's letter in the file does not correspond to the approved version of the letter.

In addition, in a number of files, as discussed in Section 4.1, the PMI allowed the owner to not submit the required as-built survey. This practice should be eliminated due to the potential for unforeseen and unnecessary liability to the City. In addition, the requirement by the PMI that one of the inspectors uses visible landmarks to ascertain that the house is located properly within the property is not a proper use of the resources available to the PMI.

In reviewing the files with respect to the contractor who covered the plumbing work in, it was noted that they do not contain information on the companies responsible for the various trades. This information is essential in order for the City to be able to keep a complete database of residential construction within the City.

Recommendation 12

As a number of files reviewed did not contain all the required documentation (i.e., copy of approved truss drawings, structural engineer's letter, as-built survey), that the City ensure that the requirements of the Building Code Act and the City's Policies, Guidelines and Standards be followed when reviewing files for completeness.

Management Response

Management agrees with this recommendation.

The Building Code Act and the branch Policies, Guidelines and Standards assign specific and discretionary responsibilities to staff with respect to the handling of documentation in the files.

A review of the sampling of files subject to the audit confirmed there were few instances where documentation was missing. Management will monitor on an ongoing basis to ensure that documentation within files is complete.

With respect to Findings 1 to 5 (*File No. 8 – House*), and Findings 3 and 4 (*Document Retention Requirements*), management would like to clarify as follows:

- The branch guideline for requiring a soils report indicating the allowable soil bearing pressure was not implemented until September 2003. Prior to the introduction of the guideline, the practices of the former municipalities continued pending reviews and the standardization of standard operating procedures. Another practice of the former municipality was the undertaking of excavation inspections to evaluate the soils conditions. This practice was adopted in lieu of requiring a soils report of the soils of the building lot. As the Building Official determined the soils to be sufficient, there was no basis to require any additional evaluation to further confirm what was already established.
- With respect to the Auditor's suggestion that the branch collect and maintain a complete database of residential construction within the City, management would like to clarify that the Building Code Act and OBC do not require the compilation of this information, nor is the permit applicant or permit holder required to provide this information. In fact, the Province's mandatory application form for a building or demolition permit does not provide for the capturing of this information.

4.4 Structural Field Review

The protocol for sensitive soils prepared by the PMI (Sensitive Soils Inspection Guidelines) indicates that the structural engineer shall provide site review memos for each lot confirming that the footings and foundation walls sizes and reinforcing, concrete strength, etc., are installed as per the design requirements and approved permit drawings.

We found in some instances that the structural engineer's representative responsible for reviewing the foundation and foundation walls during construction found deficiencies in the placing of the reinforcing steel and noted them in the inspection memos; however, the structural engineer did not return for re-inspection. The City's inspector allowed construction of the building to proceed on the basis of the structural engineer's initial memo, instead of requiring that the engineer return to confirm that the footings and foundation walls were reinforced in accordance with the design and his instructions. We consider that this is not dictating to the engineer how to conduct its

business, but rather a demand that the engineer meets the requirements of the review required by the City.

The concern with the procedure as carried out is that it transfers liability to the City, as the responsibility for the corrections or additions to the reinforcement is assumed by the City's inspector. The inspector must be absolutely clear that the responsibility for the sign-off on the foundation is the owner's and the owner's engineering consultants.

Recommendation 13

As in one of the files reviewed the structural engineer for the builder identified some deficiencies in the foundation and foundation walls, but did not re-inspect them to confirm that the deficiencies had been corrected, that the City ensure that inspectors refrain from signing off without the engineers confirmation that the structures are being built in accordance with the design. Failure to do so results in unwarranted transference of liability from the builder to the City.

Management Response

Management does not agree with this recommendation.

It is not the building official's role to give directions on how the consulting engineer is to discharge his/her responsibilities. Providing directions would effectively transfer the assumption of liability for the design of the reinforced concrete foundations from the qualified designer, the consulting engineer, to the City. It is the building official's role to accept the engineering reports provided on site by the permit holder and to review the information for the purpose of confirming the reports reflect the intended Part 4 design. If deficiencies in the engineer's reports are identified, the building official will request further engineering reports. The consulting engineer, in performing field reviews, accepts responsibility for their design as constructed. The consulting engineer is requested by the permit holder to perform any re-inspections where deficiencies have been observed by the building official.

Contrary to the opinion expressed in Finding 4 (*File No. 2 – Subdivision*), and Findings 2 and 3 (*Structural Field Review*), the City must not assume responsibility and liability that rests squarely with the professional by giving direction, as suggested above, as to how the professional engineer is to manage their responsibility. BCS branch's obligation is to ensure Part 4 design under the OBC for Part 9 buildings or parts thereof, that fall outside the prescriptive standards set out in Part 9, by requiring the design to be carried out by a qualified designer, which the branch has deemed to be a professional engineer. The building official does not manage the permit holder's consultants. Branch Policies, Guidelines and Standards require that the consulting engineer provide the building official the final letter of sign-off prior to the issuance of the Final Occupancy Permit.

The final letter of sign-off by the consulting engineer will include statements of the deficiencies noted, the remedial work completed to address the deficiencies and acceptance of the remedial work. The consultant engineer thereby assumes responsibility and liability for the work undertaken. The branch's Policies, Guidelines and Standards reflect this delineation of responsibility and risk assumption.

4.5 Inspection Passed Site Unseen

During the review of subdivision inspection files, we found two instances where the building inspector arrived at the site and found that there was no access to the basement to permit inspection of the plumbing; the inspector instructed in writing that the contractor was not to cover the plumbing until the inspector had inspected it; but upon his return a few days later, the inspector found that the contractor had poured the concrete slab for the basement floor, thus covering the plumbing under the slab and preventing its inspection.

Nonetheless, the inspector provided a Plumbing Inspection Report indicating that the plumbing had passed, without actually inspecting the plumbing. The reasoning for this, as written in the Inspection Reports, was that the contractor had done acceptable and similar work in other sites.

During the interview the inspector confirmed that there had been two other occasions (a total of four times) where he had approved the plumbing site unseen under similar circumstances. The inspector did not recall the addresses of the other two sites, but indicated that both were also located in the subdivision.

When asked if the PMI was aware of these cases, the inspector indicated that he had discussed the matter with the PMI, who had indicated this procedure was acceptable. Discussion of the matter with the PMI during the interview, and subsequent conversations, revealed that the PMI did not agree with this procedure. Further discussion revealed that another inspector remembered that this had been done in two other sites, located in other subdivisions; however, it was not possible during this Audit to confirm which properties were involved.

Recommendation 14

That the City ensure Inspectors exercise their responsibility and right to demand uncovering of work that they have not been able to inspect due to premature cover-up by the builder; and, that they are warned that inspection reports done on a site unseen basis are negligent and that they may be subject to disciplinary action.

Management Response

Management agrees with this recommendation.

The Building Code Act provides for a number of tools and methods for determining compliance with the OBC. In this instance, other means by which the construction

could be inspected without destructive investigation were pursued and the building official determined the underground plumbing to be in compliance. When the incidents were brought to the attention of management, the building official was directed to 'fail' such inspections and to use the tools available to determine compliance where construction has been covered prematurely, as appropriate.

In regards to Findings 1 to 4 (*Inspection Passed Site Unseen*), the building official duly reported he had not viewed the construction but had nevertheless passed it based on above surface observations and knowledge of the work throughout this subdivision of the licensed trade.

4.6 Refundable Inspection Fees

The Building By-law makes provision for reinspection fees as follows:

39. Upon issuance of the final occupancy permit, the refundable inspection fee shall be remitted to the person named on the fee receipt issued by the City upon payment of the fee, unless the person directs in writing that it be refunded to another person, less any additional reinspection fees incurred by the City as set out in Schedule "A" in this by-law where,

(a) the permit holder has provided notice of an inspection and the construction was not ready for inspection or was not substantially complete when the Inspector attended the site in accordance with Article 2.4.5.3 of the Building Code;

(b) the permit holder has provided notice of an inspection and failed to cancel the notice before the Inspector attended the site in accordance with Article 2.4.5.3 of the Building Code; or

(c) more than fifteen inspections were required per dwelling unit to enable the issuance of the final occupancy permit.

During the review of the files for the subdivision, it was noted that the inspectors did not mark the box for charging of inspection fees even though there were several repeat inspections.

Review of the files for other developers and building permit files found that others are being charged the "not ready for inspection fees". The City provided list of fees paid by the particular developer, which showed that the last "not-ready for inspection" fee was paid for March 2007.

We selected 50 files at random within the reviewed subdivision stage and found that all had at least one "not ready for inspection" event and that in none of these events the inspector had marked the box to require payment of the corresponding fee. This sample represents a total of \$5,000 that the City had the right to collect but did not. If this amount is projected to the overall stage (207 lots), the amount not collected is considerable. The City should now charge the developer their fees.

Recommendation 15

That the City ensure that the Inspectors charge all developers for all the inspection visits where the contractor was not ready in order that the City can obtain reimbursement for unnecessary inspections.

Management Response

Management agrees with this recommendation.

The Refundable Inspection Fee was introduced as an incentive for the industry to complete the inspection process in a timelier manner and make more judicious use of limited inspection resources. The Fee is reimbursed once the Final Occupancy Permit is issued. The Fee is reduced where a builder has called for an inspection prematurely, has failed to give proper notice of cancellation, or has occasioned unnecessary repeat inspections and the Building Official's time has been wasted. A review of the audited files has determined the charges were collected at the final occupancy permit per the branch's Policies, Guidelines and Standards.

The branch's Policies, Guidelines and Standards related to Refundable Inspection Fees were revisited with the building officials to ensure clarity and consistency of application.

Recommendation 16

That the City charge the developer the Refundable Inspection Fee applicable under Section 39 of the City By-law, including the uncharged fees noted in this audit report.

Management Response

Management agrees with this recommendation.

The branch has processed and will continue to process any draw downs, as applicable, and in accordance with the Building By-law. As the timing of completion of construction is in the control of the permit holder as is the closure of the permit files, completion of the implementation is not identifiable.

4.7 Inspections by Interns and Summer Students

During some of the interviews it was alleged that the PMI had unqualified interns and summer students conduct inspections that must be completed by qualified inspectors. Further investigation of this matter found correspondence involving the Manager, Inspections, and the various Program Managers, Inspections in which they discussed the potential negative impacts on the City should this practice not be stopped and should it come to light.

Interviews with the Chief Building Official, the Manager, Inspections, and the PMI confirmed that they were all aware that the practice, in essence, is illegal. The Chief Building Official justified the practice on the grounds that the requirements for

timeliness of inspections prescribed by the Building Code plus the dearth of qualified staff had required this action.

The Manager, Building Inspections in Building Code Services provided in February 2009 a listing of the inspections done by students in 2006, 2007, and 2008, extracted from the MAP system. The data was provided in Excel format, and included the Application Number, Permit Number, Date of Issue, Current Status, Address, Inspector Name, Discipline, Inspection, District, and Inspection Date,. The status of the student inspector was provided in correspondence dated February 20, 2009, where the Manager, Building Inspections provided the dates of qualification for five of the students.

Illegal inspections represent all the inspections done by summer students who were not qualified, for areas that require a building inspector duly qualified in accordance with the Ontario Building Code (Building, Mechanical, and Plumbing Inspections).

The branch's **Inspection Policies, Guidelines, and Standards (IPGS)**, prepared by the Building Inspection Division address the requirements for inspections in accordance with the Ontario Building Code and the City's Building By-law. All inspections must be done by inspectors qualified in accordance with the Ontario Building Code.

We transcribed the description of the various inspections from the IPGS and the Building Code Act where IPGS did not have a definition. We also note in the description of the inspection whether it is required by the Ontario Building Code or the City's Building By-law.

Inspections carried out for new housing include a visual inspection of areas of the building construction, mechanical installations and plumbing systems. A minimum of eight inspections is required. This will increase to nine inspections where the home owner requests an inspection to allow for occupancy prior to completion of all the construction.

1. Excavation, readiness to construct footings

Inspection required prior to placement of footings. This inspection is required by the Ontario Building Code.

2. Plumbing - Underground

Inspection of the completed below ground plumbing installations prior to covering-up. This inspection is required by the Ontario Building Code.

3. Backfill

Inspection of the completed footings, foundation and related works prior to covering-up. This inspection is required by the Ontario Building Code.

4. Framing/Superstructure including HVAC-Rough-in

Inspection of the completed structural framing, stairs, fire separation and fire stopping, fireplace, roughed-in HVAC and roughed-in above ground plumbing prior to closing-in. This inspection is required by the Ontario Building Code.

5. Plumbing - Rough-in

Inspection of the completed above ground plumbing installations prior to covering-up. These inspections are required by the Ontario Building Code.

6. Insulation and Vapour Barrier/Air Barrier

Inspection of the completed installation of the insulation, air and vapour barrier prior to closing-in. This inspection is required by the Building By-law.

7. Final - Building including HVAC

Inspection of the completed house construction. This inspection is required by the Ontario Building Code.

8. Final - Plumbing

Inspection of the completed plumbing systems, appliances and fixtures. This inspection is required by the Ontario Building Code.

9. Occupancy of a Partially Completed Building

The inspection is carried out at the request of the homeowner to determine compliance with the provisions that allow for occupancy prior to completion of all construction. This inspection is required by the Ontario Building Code.

The City's Building By-law in such cases provides for a Partial Occupancy permit, followed by a Final Occupancy permit when the entire building is finished. We provide a description of these two permits in Section 4.1.3 - File No. 3.

Inspections for buildings under Part 3 of the Ontario Building Code include the inspections listed for Part 9 - Housing and Small Buildings, plus the following inspections:

1. Fire Separation

This involves a general check of the penetrations of required (i) horizontal and vertical fire separations, (ii) firewalls, and (iii) a check of the termination conditions of these elements to ensure system continuity and integrity. This inspection is required by the Ontario Building Code.

2. Fire Stopping

The inspection comprises the substantial completion of all required fire separations and closures. This inspection is required by the Ontario Building Code.

3. Mechanical

The inspection of the construction/installations of active systems and components related to fire detection, alarm and communication, fire suppression, smoke control and exhaust systems, and heating, ventilation and air conditioning. This inspection is required by the Ontario Building Code.

During the fact verification and management response stages of the audit, Management contended that the only illegal inspections that were carried out at their direction were related to inspections of the exterior of the houses, including final grading, caulking, and other finishes to the houses (called Final Exterior/completion checks by BCSB). Because we found several illegal inspections other than Final Exterior inspections in our review, Management indicated that the reason why there were other inspections noted was, in their explanation, the result of the way in which MAP, the management system, records the inspections; according to Management, the MAP system records the names of the last inspector to handle the file as having done all other inspections.

To verify the extent to which MAP misreports the various inspections, in April and May, 2010 we reviewed a sample of 100 files. When BCSB provided the 100 sample files, the Manager, Inspections notified us that some of the dates he had provided to us in February 2009 were incorrect, and did not include all the summer students. BCSB provided the correct dates of qualification for the various students by the Ministry of Municipal Affairs and Housing.

Due to the erroneous qualification dates provided initially, the sample was not representative in that several of the files examined corresponded to students who were qualified; however, we found 18 files where the inspection was carried out by unqualified summer students. Of the 18 files with illegal inspections we found where inspections were carried out by unqualified summer students, 14 files referred to Final Occupancy and four files were for Framing or Backfill (Foundation) inspections.

Following the review of the initial sample files, we requested 65 additional files for further review. However, four files were not provided because they were not found. The total number of files reviewed (61) showed that in 75% of the cases the inspection in the MAP record corresponds to the inspection form in the file, and that 80% of the inspections were carried out by unqualified summer students.

The data obtained from MAP was corrected to reflect the dates of qualification for the various inspectors, and then adjusted to take into account the findings of the file review. **Table 1** summarizes the number of illegal inspections identified from MAP, after adjustment based on the review of the sample files:

Table 1					
Illegal Inspections Based on MAP Data					
No.	Inspection	Year			TOTAL PER TYPE OF INSPECTION
		2006	2007	2008	
1	Excavation	5	-	2	7
2	Plumbing - Underground	-	1	4	5
3	Backfill (listed as Foundation in MAP)	36	-	-	36
4	Framing/Superstructure (includes Interior Framing, Structural and Structural Framing)	3	-	9	12
5	Plumbing - Rough-in	-	2	55	57
6	Insulation/Vapour and Air Barrier	2	-	-	2
7	Final - Building (includes Final, Exterior, and Final Occupancy)	706	149	43	898
8	Final - Plumbing	-	160	384	544
9	Partial Occupancy (includes Occupancy Inspection)	4	3	-	7
	Mechanical - Rough-in (also labelled HVAC rough-in)	-	10	11	21
	Mechanical - Final (also labelled HVAC-final)	-	212	197	409
TOTAL ILLEGAL INSPECTIONS		756	537	705	1,998

4.8 Inspections done by Unqualified Inspectors Credited to Qualified Inspectors

In addition to the illegal inspections listed in MAP, review of correspondence between Program Managers and the Manager, Inspections found that a number of inspections that MAP showed as having been carried out by a qualified inspector, were in fact completed in the field by an unqualified inspector. BCSB provided a list of those inspections in MAP where the inspector had noted that the inspection had been done by another inspector. In a number of these cases, the other inspector had been an unqualified inspector.

We consider this a serious matter because the system was used deliberately to show a legal inspection in place of an illegal inspection. Furthermore, unless we had found the noted correspondence, it is not possible to determine based on MAP that the inspection was in fact done by another person. The only way we were able to determine this was because the inspector of record made a relevant note in MAP, which permitted that a system analyst searched for all MAP records with a note attached, and then filtered those to show the ones where a student inspector was listed.

We examined a sample of 40 files, and concluded that in 95% of the cases the inspections had been carried out by an unqualified inspector. It was noted as well that in about 40% of the cases the inspection noted was incorrect, and was in fact Final, Final Occupancy or Final Exterior. The data in MAP was adjusted to reflect the findings. **Table 2** summarizes the instances in which inspections appear in MAP as having been performed by an inspector, but were in fact performed by an unqualified student, after adjustments as noted.

Table 2					
Illegal Inspections by Unlicensed Students Credited in MAP to Qualified Inspectors					
No.	Inspection	Year			TOTAL PER TYPE OF INSPECTION
		2006	2007	2008	
1	Excavation	-	-	-	-
2	Plumbing - Underground	-	-	-	-
3	Backfill (listed as Foundation in MAP)	-	-	-	-
4	Framing/Superstructure (includes Interior Framing, Structural and Structural Framing)	-	-	-	-
5	Plumbing - Rough-in	-	-	5	5
6	Insulation/Vapour and Air Barrier	-	-	-	-
7	Final - Building (includes Final, Exterior, and Final Occupancy)	356	150		506
8	Final - Plumbing	-	-	-	-
9	Partial Occupancy (includes Occupancy Inspection)	-	-	-	-
	Mechanical - Rough-in (also labelled HVAC rough-in)	-	1	-	1
	Mechanical - Final (also labelled HVAC-final)	-	-	-	-
TOTAL ILLEGAL INSPECTIONS		356	151	5	512

Table 3 summarizes the total number of illegal inspection carried out during the three years.

Table 3				
Total Illegal Inspections				
	Year			TOTALS
	2006	2007	2008	
Illegal Inspections from MAP (See Table 1)	756	537	705	1,998
Illegal Inspections Credited to Inspector (See Table 2)	356	151	5	512
Total Illegal Inspections	1,112	688	710	2,510

The Manager of Building Inspections stated in interviews and meetings that he made the decision and advised the CMO after the fact that the illegal inspections for Final Occupancy were to be carried out by students. Management stated that the CBO has stated in interviews and meetings that she was aware students were undertaking inspections without the Province’s qualifications.. The Chief Building Official, when shown the results of the review of the files in accordance with Tables 1 and 2 above, indicated that the BCSB policy had been to allow only Final Occupancy inspections to be done by students.

The CBO has stated that the reason for the number of records of illegal inspections is due to “a glitch in the City’s computerized permit tracking application system that credited inspections and the assignment of permit files to the last person who touched the file, which often was a student who merely undertook completion checks, when in fact the person responsible for the file and inspections was the assigned building official.” Our review of the MAP records and the actual inspections recorded indicates that this is a factor in less than 1 out of 5 files reviewed. The data in Tables 1 and 2 takes into account the variation found.

The CBO has stated that the Ontario Building Code allows that “an inspector qualified in one category of qualification may carry out plans review and inspection in another category where to do so does not constitute a substantial part of the plans review or inspection on any project.” In our opinion, the mechanical and plumbing rough-in and final inspections constitute a substantial part of the plans review or inspection and does not fall within the description noted above. The fact that the Ontario Building Code requires separate qualifications for House, HVAC-House, Plumbing-House, Plumbing-

All Buildings, and Building Services shows that being qualified for House is not sufficient qualification to carry out the Mechanical and Plumbing inspections. The City Solicitor was asked by the Auditor General for his opinion regarding the legality and the potential exposure to liability to the City in the event that “summer students” were engaged in building inspections. The City Solicitor provided the following information:

The Building Code Act (the “Act”) requires “inspectors”, and where certain conditions are met, “intern inspectors”, to carry out building inspections. Persons who are neither inspectors nor intern inspectors are not permitted to carry out inspections of buildings. It is therefore important to determine whether “summer students” meet the qualifications of an intern inspector. Given the renewed importance of qualifications required across the building industry, it is presumed that Building Code Services is aware of the requirements of inspectors and intern inspectors and that efforts are taken to comply.

Inspectors: Qualifications

Section 15.11 of the Act provides that a person is not eligible to be appointed as an inspector under the Act unless he or she meets the qualifications set out in the Building Code (the “Code”). Chief Building Officials and inspectors have been required to meet the qualification requirements under the Code since January 1, 2006 (note: the original date of July 1, 2005 was extended by regulation). Article 3.1.4.1 of Part 3 of the Code sets out the qualifications for inspectors.

Intern Inspectors - Qualifications

Article 3.1.4.2 of the Code allows for intern inspectors who have not met all Code qualification requirements to perform restricted duties.

By operation of Article 3.1.4.2, an intern inspector must meet two qualifying criteria. The person shall be: (1) enrolled in an internship program approved by the Minister; and (2) supervised by a duly qualified inspector or Chief Building Official.

Once qualified as an intern inspector, the person is subject to certain limitations. For example, the intern inspector cannot issue certain Orders under the Act such as Stop Work Orders, Orders to Remedy Unsafe Building or Emergency Orders. The intern inspector is allowed to issue Orders such as an Order to Comply under Subsections 12(2) of the Act or an Order prohibiting the covering up of construction under Subsection 13(1) of the Act. These types of Orders typically facilitate follow-up inspections by inspectors. Furthermore, an intern inspector cannot conduct a site inspection of a building relating to substantial completion of footings, foundations, or completion of construction and installation of components required for the issuance of an occupancy permit. Intern inspectors are however able to conduct a variety of other site inspections of a more routine nature during the construction process.

The Use of “Summer Students”

In light of the above analysis, summer students who do not meet Code qualifications should not be conducting Code inspections unless a supervising inspector is also on site. Summer students could carry out other inspections that are not Code related. For example, Building Code Services oversees the administration and enforcement of the City’s Pool Enclosure By-law 2001-259. This By-law is enacted under the authority of the Municipal Act and allows inspections to be conducted by employees, officers, or agents of the municipality. Summer students designated by the Director of Building Code Services as her authorized agent or assistant would be able to conduct pool enclosure inspections as such inspections do not have to be carried out by either an inspector or intern inspector as defined by the Act.

Liability Concerns

While the City is not the insurer of building construction, inspections under the Act are designed to determine compliance with the requirements of the Code at various stages of construction. Negligent building inspection has the potential of being a significant liability for municipalities given the effects of joint and several liability. In many cases, negligent construction cases involve homeowners and/or contractors who can no longer be found and/or are judgment proof (e.g. bankrupt, dissolved, or have limited insurance coverage). Liability is of course determined on a case-by-case basis. The fact that an inspection may have been carried out by an “unqualified” summer student will not always equate to findings of liability. For example, the summer student may have correctly inspected the building or alternatively, notwithstanding the lack of qualifications, the deficiency in question may not relate to the building inspection process. Moreover, liability may be found in cases where the inspection process has demonstrated a cavalier disregard for the inspection process, irrespective of the inspector’s formal qualifications.

Conducting inspections by unqualified inspectors would be considered disregard for the inspection process. Subsection 15.11(7) of the Act provides that no person shall represent, directly or indirectly that he or she has the qualifications if the person does not have or meet the qualifications. There is also a risk that any enforcement proceedings commenced under the Act that rely on inspections by unqualified persons would be compromised. The courts are generally inclined to exclude evidence obtained through unauthorized entry or where there has been other non-compliance with the Act. Therefore, such inspections would be considered illegal. Furthermore, if persons have indeed engaged in inspections outside their scope of qualification, regard may be given to the City’s Employee Code of Conduct as well the Code of Conduct for inspectors. This latter Code is required under Section 7.1 of the Act.

In light of the above, if indeed summer students were unqualified and conducted building inspections without site supervision, Building Code Services should be advised of the concern and steps taken to address potential issues that may flow

from such circumstances. For example, in situations where an unqualified summer student carried out a building inspection but subsequent inspections were carried out by qualified inspectors, the non-qualification issue may have resolved. In cases where there remains a concern as to whether the inspection was properly carried out and there is reasonable corresponding concern that the building is unsafe in the specific circumstances, Building Code Services should re-attend the site under the authority of Section 15.9 of the Act. These will be fact specific issues to address on a per file basis to assess whether a further inspection and/or notice to the building owner is required. If unqualified students conducted inspections, a due diligence process should be engaged to determine the scope of potential concerns. However, at this point in time there does not appear to be a legal obligation for the City to re-attend on inspections or to notify homeowners.

On the basis of the above, it can be concluded that only qualified summer students should be used to carry out inspections not related to pools. Alternatively, summer students should only be allowed to inspect pools in relation to the Pool Enclosure By-law. Given that the qualification process is well established by the Ministry at this time, the most appropriate action should be to make the qualification under the Building Code a condition of employment.

Recommendation 17

That the City make qualification under the Building Code a condition of employment for summer students conducting building inspections.

Management Response

Management agrees with this recommendation.

Following 2008, the branch no longer recruits students to undertake completion checks as the branch's Internship Program has now produced sufficient graduates to undertake this work.

Should BCS branch resume employing construction / engineering / architectural students to undertake site completion checks of exterior conditions that are not related to the minimum building standards for health and safety (for example: verifying that the siding is complete, all openings have been caulked, the light fixtures at the entrances have been installed, the vent covers have been installed, the masonry weep holes are clear of debris and whether the ground is sloping away from the foundation), the applicable job descriptions will be revised to require students to be recognized by the Province as an "Inspector" per the Building Code Act and Code.

Prior to 2006, Building Inspectors and students were not required to be qualified by the Province to undertake any inspections. Notwithstanding this absence of a province-wide minimum standard for Code knowledge, and to mitigate risk associated with undertaking inspections, the City ensured proficiency of its Building

Inspectors through extensive training, field experience and by requiring Building Inspectors to be certified as Building Officials under a program established by the Ontario Building Officials Association.

Prior to 2006, the branch relied on construction / engineering / architectural students to undertake the exterior completion checks as part of the final occupancy inspections, status inspections and inspections of components of the building or systems such as final HVAC and final interior inspections, depending on the students' experience and training. The majority of the students who conducted the exterior completion checks in 2006, 2007 and 2008 were employed prior to 2006 and had undertaken the same exterior completion checks and 'other' inspections competently prior to the new provincial requirements.

The branch also had relied upon consultants, who were retired building inspectors, to assist in dealing with the peak workloads experienced May to November each year. Due to the new legislative requirements for qualifications, the consultants opted to discontinue their services. This drop in available resources, together with a vacancy rate of 25% in 2006, and a continued construction boom, necessitated the decision to continue to use students to undertake exterior completion checks despite their not having fully established their qualifications with the Province.

Management considered its options and believed that the continuation of the program using students was in the best interest of new homeowners, the building industry and the City. Not undertaking the completion checks, or reassigning the completion checks to the qualified Building *Inspectors* that would have drawn more experienced *Inspector* resources away from the more critical inspections, would have caused a considerable reduction in service delivery to new homeowners and the industry. The options were untenable.

The Chief Building Official did confirm awareness of the operational decision to continue the practice and had advised the Auditor that the risk was **low**, and that although these completion checks were not crucial for health and safety, they were nevertheless essential for providing a better level of service by ensuring construction was completed within three years of permit issuance.

The operational decision to continue the program was made with full regard to all factors and risks. To mitigate any risk, the students were provided with extensive training to ensure their competence in undertaking the completion checks, and were supervised by the PMIs as well as coached by the Building *Inspectors* who had carriage of the permit files (referred to as the Building *Inspector* of record).

It is noted that meeting the qualification requirements set out by the Ministry of Municipal Affairs and Housing, does not make one an inspector. A prudent municipality would ensure the newly qualified "*Inspector*" received extensive training, in and out of the field, in addition to being coached by an experienced *Inspector*. Students were also instructed to only perform exterior completion checks.

The students were further encouraged to take the Ministry exams and file their information with the Province such that over the summer(s), they could achieve the required level of qualification required by the Province. By 2008, most of the students were qualified as “*Inspectors*” per the OBC.

The exterior completion checks performed by the students represented a small percentage (0.58%) of the total of 281,614 inspections undertaken by the branch over a three (3) year period. The exterior completion checks undertaken by the students involved elective inspections triggered by the Building By-law and were components of the final occupancy inspections (refer to Appendix 2 for a description of all inspections).

The practice of retaining students to undertake exterior completion checks and closing permit files was essential to maintain excellence in service delivery, was unavoidable due to lack of resources (25% vacancy rate), and was pursued only after ensuring public safety would not be compromised. The practice was discontinued after 2008 in view of the BCS branch’s lower vacancy rate.

Regarding Findings 1 to 11 (*Inspections by Interns and Summer Students*), and Section 4.7 (in the detailed audit report) management would like to clarify as follows:

- There were no misrepresentations. The email correspondence involving Building Inspections management expressed concerns as to the accuracy, or lack thereof, of the MAP data on inspections activities and the glitch in the MAP process that required certain fields to be checked off (√) in order to close the file and trigger MAP to produce a standard letter to the permit holder confirming issuance of the final occupancy permit and the amount of refundable inspection fees to be remitted, as applicable.
- Management was noting that the person who processed the file and updated MAP to trigger the letter, would automatically be credited the inspections and be the signatory on the form letter (hence the expression, the last person to touch the [MAP] file was credited the inspections).
- In the correspondence, management debated whether it was more appropriate to ensure MAP was accurate versus ensuring the letter featured as the signatory, the Building *Inspector* of record, instead of the student who in closing the file and updating MAP, became the signatory of the letter. One PMI found a solution to the glitch by having the student insert in MAP the name of the Building *Inspector* of record in the final inspections fields and inserting in the MAP Note field the actual person’s name, who completed the final inspection, in an attempt to ensure veracity of the MAP information.
- The Auditor’s statement that “the system was used deliberately to show a legal inspection in place of an illegal inspection” is contradicted by the facts. Had that been the intent, no note would have been entered in MAP. The notation in MAP denotes honesty.

- In its present state of development, MAP requires an overhaul in order for the system to function as an information management system. Management is aware of this and relies on the actual official business records, the building permit files, as the source of information whether for management purposes, fact verification, court processes (prosecution and defending claims), etc. The MAP data is only relied upon for purposes of measuring metrics, such as the number of permits issued, inspections undertaken, etc, with a full understanding of its strengths and weaknesses.
- The Auditor has confirmed in Section 4.7 (in the detailed audit report) that the data is not reliable, that it is incorrect 25% of the time in relation to the completion checks (Table 1), 40% in relation to the other inspections (Table 2), and 20% for the entire sample (Table 3) of the entries. This is why management does not rely on the MAP data as a management tool and has made the development of the Inspections Tracking Application in MAP a priority in order to transform the database system into a useful and effective management tool.
- Building Inspections management are conducting regular file audits to monitor performance, ensure compliance with established policies, guidelines and standards and to identify training and development needs.

Recommendation 18

That the City develop an Action Plan to deal with all the illegal inspections completed by Building Code Services Branch, including inspections identified in the audit and any other than may exist. The Action Plan should consider notification of the property owners and steps to ensure that corrective measures are taken.

Management Response

Management agrees with this recommendation.

This section of the audit deals with inspections performed by students. Students undertook exterior completion checks as part of an established program as well as 'other' inspections. The following table sets out management's results of the investigation based on the detailed review of actual official business records, the building permit files and MAP database for the metrics.

Table 4 - Total number of inspections performed by students 2006, 2007 and 2008

	2006	2007	2008	TOTALS
Final exterior completion checks				
• Performed as a qualified <i>Inspector</i>	85	676	833	1,594
• Performed without provincial qualifications	986	307	43	1,336
Other inspections (Building, Mechanical and Plumbing)				
• Performed as a qualified <i>Inspector</i>	625	5362	2819	8,806
• Performed without provincial qualifications	231	10	72	313
Total inspections by students	1,927	6,355	3,767	12,049
Total Building Code inspections by BCS branch	85,335	90,698	105,581	281,614

- Excludes pools (all years)
- Excludes pre-permit inspections (2008)

In summary, of the total inspections undertaken by students during 2006, 2007 and 2008, only 1,649 inspections were performed by students lacking the requisite provincial qualifications. The majority of these inspections were exterior completion checks. This represents 0.58% of all inspections undertaken by the BCS branch during the three years.

The following response reflects the detailed analysis of the two distinct categories of inspections.

Completion checks:

With respect to the exterior completion checks and the information provided in response to Recommendation 17 above, BCS branch has reviewed the work and has determined that there is no need or basis for duplicating the completion checks that were properly undertaken by well-trained construction /engineering /architectural students. The training and development of the students far exceeded the minimum standards set out by the Province for undertaking completion checks. The decision to continue to use students, following a change in the Act, was necessitated by the peak workloads associated with the continuing construction boom and the inability to recruit pre-qualified inspectors.

Trained and experienced students viewed the following building elements and conditions to complete exterior checks necessary for the issuance of the final occupancy permits: visual checks to confirm positive drainage from the foundation walls, completion of the siding and fascia, exterior caulking of openings in the building envelope, the presence of guardrails on any decks, etc. Students were supervised and reported to the Building *Inspector* of record any observations of scope outside their training, which would require an inspection for Code compliance.

In view of the Auditor's concern, BCS branch contacted Tarion Corporation to determine whether any of the above referenced elements were the subject of any registered claims. Tarion has confirmed that there were no claims registered for any of the elements viewed as complete by the students from 2006 to 2008.

'Other' inspections:

With respect to the 'other' inspections that entailed components of inspections triggered by the OBC, such as Building, Mechanical and Plumbing, the following information is provided:

- 'Other' inspections involved the inspection of components of the interior of the building such as a review of the vapour barrier for one room (Building), or verifying the location and discharges of required exhaust fans (mostly bathroom exhaust fans) (Mechanical) and witnessing the air pressure test of the plumbing system (Plumbing).
- The Audit revealed that student *Inspectors* performed a total of 8,806 'other' inspections over the three-year period. Management was not aware student *Inspectors* were performing these 'other' inspections despite the formal training program that clearly outlined the expectations of workloads, and the fact the PMIs and/or the Building *Inspector* of record were reviewing their inspection reports. It is now clear that additional tools were required to ensure compliance with the branch's directives.
- These inspections, while performed without the approbation of management, were legal in accordance with the Building Code as these inspections were limited to components of the inspection process which did "*not constitute a substantial part of the plans review or inspection on a project,*" in accordance with the Building Code. A detailed review of 50 permit files containing 'other' inspections performed by student "*Inspectors*" confirmed that these inspections were limited to only components of the inspection process. The complete listing of all the inspections for low rise residential housing comprising of the inspection process is appended to this response – refer to Appendix 2.
- Management's review of permit files identified 313 of the 9119 (3.4%) 'other' inspections undertaken by a student that was not an "*Inspector*" per the OBC. The remainder of the inspections were completed in compliance with the OBC.

- Management only became aware of these ‘other’ inspections performed by students on May 18, 2010 following the disclosure by the Auditor of the specific building permit files that founded the Auditor’s contentions.
- Up to that point in time, the Auditor’s source for his findings was solely the MAP data. Management had identified concerns as to the accuracy and reliability of the MAP data to the Auditor in September 2009 as part of the fact verification process. Management provided specific examples of the disconnect between MAP entries and the actual official business records, the building permit files. The Auditor first responded to these concerns in April 2010.
- Prior to the disclosure by the Auditor, management had initiated its own review of permit files to locate the inspections, other than the exterior completion checks that had apparently been undertaken by students that were not an “Inspector”. Management reviewed over 300 permit files and was not able to locate any ‘other’ inspections undertaken by a student that was not an “Inspector.” The findings in fact supported the contention that the MAP data was flawed and unreliable.
- At a May 14, 2010 meeting, the Auditor clarified his concerns regarding the ‘other’ inspections (other than the completion checks which management was aware of), and as a result, management retrieved specific files to investigate the ‘other’ inspection (Building, Mechanical and Plumbing).
- On May 19, 2010, management alerted the Auditor that some of the files required further review and that management would report back as to its factual findings on May 21. A legal opinion for the benefit of the Auditor was sought on May 20, 2010. The results of the scrutiny of the official business records were provided to the Auditor at a meeting on May 21, 2010.
- Disclosure by the CBO was timely and in earnest. Management has shared whatever information was available at the time as requested. The CBO needed to rely on factual evidence based on the official business records, the building permit files, before drawing any conclusions.
- It is noted that the review of “Eight Specific Building Service Files” involved over 700 permit files. The branch requested the Auditor identify the permit files that supported the findings in order to enable the fact-finding review and to comment on the Auditor’s interpretations of building regulatory processes and building code standards. Close to 200 files were identified by the Auditor, but none related to the inspections undertaken by students.
- Review of the permit file records did reveal that in some of the cases, the inspections were performed to assist the qualified Building Inspector who had carriage of the permit file. Students were coached by the Building Inspector as to what to observe and were instructed that if a performance standard was satisfied, to proceed to advise the builder that he/she could proceed with construction.

- Management will review the associated permit files and take appropriate action based on the findings. It is noted that if a deficiency was missed as a result of these inspections, these would have been brought to the attention of the builder, who is responsible for building in accordance with the OBC, or to the Tarion Corporation under the New Home Warranty Act. Management will verify with Tarion whether there have been any deficiencies identified as a result of these inspections. Presently, there has been no indication that these inspections have resulted in deficiencies being missed.
- Further, any determination as to whether these 'other' inspections were performed in accordance with the OBC, or not, should be made by an appropriately qualified and Code competent person, informed with the actual documentation of each permit file. At the time of this audit, the Auditor had only reviewed the documentation of approximately 150 permit files, commencing in May 2010, each requiring further review with appropriate staff in order to confirm the facts.

With respect to Section 4.7, management would like to clarify as follows:

The Building Code requires the following for a person to be appointed as an "Inspector":

- To have successfully completed the examination program administered or authorized by the Ministry relating to the knowledge of the Act and the Code in the categories of qualifications set out in Table 3.5.2.1 that correspond to the type of buildings the Inspector will plan review and/or inspect; and,
- To have filed the requisite information with the Ministry.

Thus, an *Inspector* must have successfully completed the examination of the category "House" in order to be able to inspect a detached house or semi-detached house including the building's systems and any ancillary building. To be able to inspect a substantial part or all of a plumbing system of a 'House,' the *Inspector* must also have successfully completed the examination covering Plumbing-House, etc. Table 3.5.2.1 of the Code sets out the matrix to follow to ensure an *Inspector* is qualified to inspect what they are tasked to inspect.

There is, however, an exception. Note (1) to Table 3.5.2.1 of the Code permits an *Inspector* qualified in one category of qualifications to carry out plans review and inspections in another category where to do so does not constitute a substantial part of the plans review or inspection of any project.

Thus, if a student was a qualified *Inspector* for 'House,' and many were in 2007 and 2008, he or she was able to inspect components of the building, including, confirming the location of footing pads prior to the pouring of the basement slab, and inspecting the rough-in of the plumbing or witnessing the air test prior to occupancy. A number of students had attained the requisite qualification for 'House' when they

undertook the 'other' inspections of components of the building (Table 2) and therefore, these 'other' inspections were performed by "Inspectors" in accordance with the OBC.

In Section 4.7 of the detailed audit report, the Auditor refers to four files where a student undertook "Framing or Backfill (Foundation) inspections. Closer scrutiny of these inspections revealed: that two of the four inspections involved confirming the location of footing pads prior to the pouring of the basement slab; one involved the measuring the depth of an excavation for sono tubes for the piers of a sundeck; and the fourth inspection involved the review of the framing of a refab shed. Each of these inspections were performed under the guidance of the Building Inspector of record, where required.

Recommendation 19

That the City review the conduct of the City staff who violated the Ontario Building Code by authorizing the illegal inspections undertaken by unqualified inspectors, and take appropriate disciplinary action.

Management Response

Management agrees with this recommendation.

Management has reviewed the decision to continue a longstanding practice that addressed a significant shortfall in resource allocation from 2006 - 2008, as well as the outcomes of that decision. At the time, the practice was essential to maintain excellence in service delivery, was unavoidable due to lack of resources, and was pursued only after ensuring public safety would not be compromised. A risk assessment indicated the risk was low for the homeowners and the City. The practice was discontinued as soon as the Interns were trained and qualified. No further action is required.

In hindsight, management could have discontinued the final exterior completion checks, which would have necessitated striking out or suspending the By-law section. However, management was concerned with the detrimental effects of not continuing the program, specifically, having open files with unresolved Code issues, incomplete construction three years after a permit has been issued, and an increase in the number of disputes between the builders and the purchasers involving the BCS branch. Further, a decision to strike out the related By-law sections would have only been required for less than 1% of inspections and was part of a transition process that was complete within three years.

Management was also concerned with the impact of a sudden drop of service level. An operational decision was made to ensure excellent service. The CBO regrets not advising the DCM and Council of the situation in 2006.

4.9 Assessment of Email and Internet Utilization, Program Manager, Building Code, Building Inspection Unit

As part of our audit, we originally attempted to review 90 days of email and Internet activity for a program manager within the Buildings Code Service Branch. The test classified the utilization of the corporate email system and Internet for the three-month period, for non-business usage versus business needs.

Emails were reviewed to assess the degree to which the employee is in compliance with the City's "Responsible Computing Policy". Relevant sections of the Policy state:

IT services, including Internet, email, telephone, wireless voice/data and messaging services may be used for non-business purposes subject to the following conditions:

- *usage does not incur additional cost to the City; or, where authorization has been given for usage of IT services and assets for personal reasons and such usage does incur additional cost to the City, individuals must reimburse the City for any personal use costs. For example, personal long distance calling services, including telephone, cellular, fax, or modem must be charged to a personal calling card or to a non-City telephone number/account.*
- *usage is incidental and does not interfere with the individual's work duties and responsibilities; and*
- *usage does not tend to bring the image of the City into disrepute or give rise to embarrassment or liability on the part of the City.*

IT services and assets shall not be used for non-business purposes, such as:

- *selling merchandise, providing non-City services, running a personal business or any activity that could result in personal gain, with the exception of authorized electronic forums (i.e., classified ads, etc.) provided by the City for employee use;*
- *sending or forwarding chain letters, large quantities of email or SPAM;*
- *managing a personal website; or*
- *performing work for profit with City resources in a manner not explicitly authorized by the City.*

In addition, Appendix B of the Responsible Computing Policy titled Electronic Message Guidelines states that:

Employees are prohibited from sending jokes, rumours or gossip via email. These communications, which often contain objectionable material, are easily misconstrued when communicated electronically.

4.9.1 Corporate Email System Usage Assessment

For the employee reviewed, we obtained 27,422 emails of which we analysed 19,250 (representing 70% of emails provided to our office). The extensiveness of emails relates to items that had been saved by the employee since 2002. These emails were from both the 90-day period reviewed and emails saved by the employee in personal folders.

We determined that personal email usage is high averaging 30% for this employee. This corresponds to 24% of the memory utilized being for non-business use. The employee was found to have communications for personal reasons such as travel, golf, insurance quotes, social clubs, etc.

The table below summarizes the 19,250 emails we reviewed as well as the memory resource utilization for the safekeeping of these.

TABLE 2: UTILIZATION - CORPORATE EMAIL SYSTEM

OAG Classification	OAG Sub-Classification	Size	Number of Emails	Size Conversion	% of Resources Used	% of Category Vs. TTL Emails
City Business		1,082,184	12,528	1 GB	76%	65%
Not Applicable (N/A)		4,210	1,035	4.1 MB	0%	5%
Non-Business	Advertisement	8,858	449		1%	2%
	Business	7,189	113		1%	1%
	Golf	161	4		0%	0%
	Joke	119,835	980		8%	5%
	Photo	29,084	39		2%	0%
	Politics	758	28		0%	0%
	Social	171,782	3,696		12%	19%
	Travel	8,613	378		1%	2%
Total Non-Business		346,280	5,687	338.2 MB	24%	30%
Grand Total		1,432,674	19,250	1.337 GB	100%	100%

Emails were classified and summarized as:

- **City Business:** Normal work related communications, United Way, OBOA (including golf), Golden triangle (including golf), CIPP golf tournament, ministries correspondence, etc.
- **Non-business:** Friends, jokes, political /social groups, non-business travel related, travel planning for friends, insurance quotes, Clublink, golf and/or ski related, etc.

- **Not applicable:** Automatic system generated replies: read receipts, non-read receipt, etc.

Some of the internal and external emails we reviewed and classified as “jokes” contained offensive material.

Emails saved on the employee’s personal folder, which ultimately means the information residing on the employee’s corporate drive (H:\ drive) included text and images of female nudity.

During the course of the audit, this issue was brought to the attention of both the Branch Director as well as Legal Services Branch for appropriate action.

We also found that the employee had numerous email exchanges with two other City employees. Some of these were jokes emails, which some in our opinion are inappropriate in nature and are against the City’s Responsible Computing Policy. Specifically, these could “bring the image of the City into disrepute or give rise to embarrassment or liability on the part of the City”. Most of the communications with these two employees were for non-business use.

In addition, we noted that the employee saved non-business photographs on his City account. Photos related to social groups, friends; parties hosted as well as attended; personal trips/vacation, etc.

We observed many instances where Building Code Services Branch managerial employees were communicating with each other in a non-professional manner. Many examples of “joke emails” between the manager and program managers and sometimes with subordinates were noted. This puts subordinates in an awkward position.

We further observed emails suggesting that Building Code Services Branch managerial staff were holding meetings at restaurants and off lunch hours. Management advised that they were aware of and sanction this practice.

We concluded that the City’s firewall was unsuccessful in preventing some inappropriate emails from entered the City. Furthermore, we found that some City employees use the corporate email system for personal use, frequently; and have content that violates the Responsible Computing Policy. Specifically to the employee reviewed, usage was in violation of the Responsible Computing Policy and referred to management for appropriate remedial action. Lastly, we noted liberal communications and jokes exchanges between managerial staff of the Building Code Services Branch.

4.9.2 Internet Usage Assessment

We determined that personal Internet usage is generally high averaging 32% for permitted sites.

Permitted Sites/Hits:

Over the period three-month period, August 1, 2008 to October 31, 2008 the employee had 2,738 hits of permitted sites and his usage was classified as follows.

TABLE 3: UTILIZATION - INTERNET PERMITTED SITES/HITS

Classification (OAG)	Total	%	Examples of Classification by OAG
City Business	149	5%	E.g., Maps google; Ministry of Housing; OBOA; Claridge, Richcraft, Minto, Ashcroft, Monarch homes, etc.
Mixed	404	15%	E.g., Search engines such as Google, Yahoo, Mapquest, Canada411, Weather Network, etc.
N/A	1,319	48%	E.g., Productivity: advertisement or site which cannot be viewed via Internet Explorer, etc.
Non-business	866	32%	E.g., Travel, entertainment, Grapevine, Evite, employment site, food, education, shopping, etc.
Grand Total	2,738	100%	

Non-business related hits amounted to 32% of the employees Internet traffic.

The following table provides of the daily number of hits the employee had per workable day where the employee was at work. The employee had on average 45 hits per day, based on actual days of attendance.

TABLE 5: UTILIZATION - INTERNET PERMITTED AVERAGE HITS PER DAY

Months (2008)	Workable Days	Days Off	Days Employee at work	TOTAL Hits per Month (Permitted)	Average Hits per Day (rounded)
Aug	20	0	20	840	42
Sept	21	2	19	1,119	59
Oct	22	0	22	779	35
Total for period	63	2	61	2,738	45

Recommendation 20

That the City take appropriate disciplinary action regarding the PMI and others involved with inappropriate use of the City’s Internet and email services.

Management Response

Management agrees with this recommendation.

Appropriate disciplinary action has been implemented, a communiqué has been delivered to all branch staff re-affirming the expectations of proper computer use under the City's Responsible Computing Policy and all BCS branch employees received an in-depth briefing of the responsible computing policy from IT Services, in Q4 2009.

Regarding Findings 1 to 4 (*Internet and Email Use*) and section 4.9.1 (in the detailed audit report), management would like to clarify that a detailed examination of the information provided by the Auditor revealed that other than one case where the use and storage of emails by one employee was of concern, the use of the Internet and

emails by the branch management was in keeping with the City's Responsible Computing Policy. See management's response to Recommendation 22.

Recommendation 21

That the City ensure all employees abide by the Corporate Responsible Computing Policy through active and documented monitoring practices.

Management Response

Management agrees with this recommendation.

Currently, the ITS department and Labour Relations conduct two Internet usage audits per year that examine the Internet use of 50 employees for each audit cycle. Awareness reminders regarding the City's Responsible Computing Policy are provided twice weekly to all staff with network accounts. City managers are responsible for monitoring their staff and can, where warranted, request technology usage reports and can work with Labour Relations when interpreting certain data sets.

All BCS branch employees received an in-depth briefing of the Responsible Computing Policy from ITS in Q4 2009, in addition to a memo from the Director of Building Code Services and Chief Building Official in Q1 2010, reminding all staff to comply with the Responsible Computing Policy.

4.10 Assessment of Email and Internet Utilization of Six Additional Building Inspection Unit Employees

Based on the findings of our above review, we examined the emails and Internet usage of the remaining managerial staff and one Building Official III of the Building Inspection Unit, Building Code Services Branch.

The scope of the review spanned the 90-day period, December 1, 2008 to February 28, 2009 and included an additional six employees of the Building Inspections Unit. One of the objectives was to determine the amount of non-business related use of the City email account. One of the six employee's email was completely reviewed and for the remaining five, we reviewed every tenth email or approximately 10% of the emails provided.

The second objective included a review of each of the six employees Internet log. For the Internet usage, we classified all permitted Internet hits to determine the amount of non-business use.

The following table summarizes the results of the review:

TABLE 6: UTILIZATION CORPORATE EMAIL SYSTEM AND PERMITTED INTERNET HITS

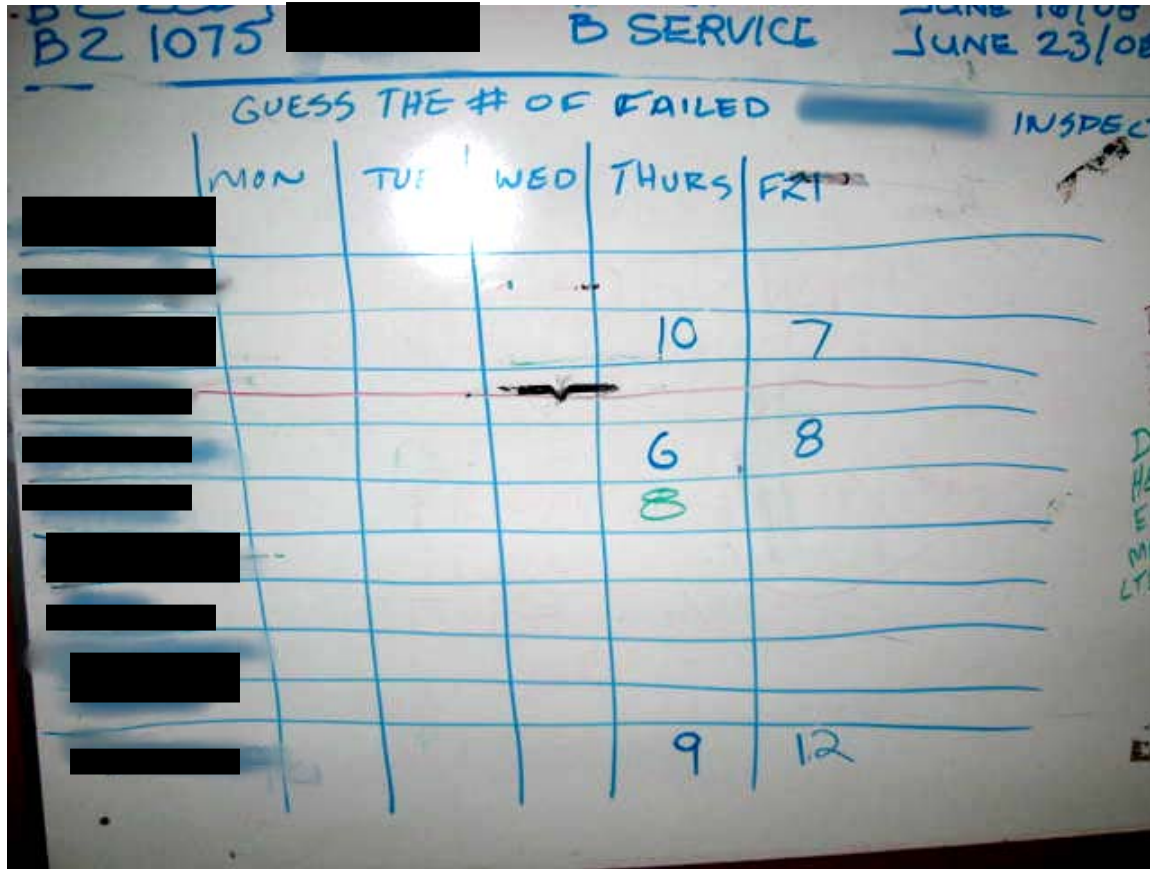
Position Held During the Period Under Review	Total Number of Emails Received	Total Number of Emails Reviewed (1)	Percentage of Emails Classified as Non Business Use	Total Number of Internet Hits Reviewed	Percentage of Permitted Internet Classified as Non Business Use
Manager	846	846	25%	1,424	22%
Program Manager #1	1,120	142	17%	3,651	16%
Program Manager #2	228	68	2%	785	14%
Program Manager #3	942	96	7%	1,067	35%
Program Manager #4	585	59	9%	1,678	22%
Building Official III	486	49	29%	7,843	54%

NOTE: (1) The number of emails reviewed was based on a random sample of every 10th email, except for one employee where all emails were reviewed.

4.10.1 Corporate Email System Usage Assessment – Additional Employees

Our sample review of emails indicates that some employees had higher non-business use than others and one employee demonstrated unethical conduct. Specifically, we found:

- Based on another employee’s saved emails, we noted that one employee was regularly purging emails. Therefore, our review and classification is not representative of actual email usage, as we did not have access to the deleted emails.
- A staff member had communications with family members and a volunteer group, which included planning trips. The employee has personal items saved in the H drive (which is an employee’s personal network drive), two of which were found to contain female nudity. Emails with nudity contravene the Responsible Computing Policy.
- One management employee was found to frequently communicate with friends through the City’s corporate email account. The employee was found to have jokes containing female nudity content, which could be viewed as objectionable material and is in violation of the City’s Responsible Computing Policy.
- We observed that a management employee had saved on his H drive (personal network drive) on June 6, 2008 a photograph of an office pool under filename: “(name of builder) Lottery.jpg”. Per the photograph, it appears that 11 of this program manager’s subordinates may have been speculating on the number of inspections a specific developer would fail from June 16 to 23, 2008. Below is the photograph of the office pool.



Saved as: [REDACTED] H Drive Contents \ Operational \ Misc [REDACTED] Lottery.jpg

FIGURE 1: PHOTOGRAPH OF OFFICE POOL, “GUESS THE NUMBER OF FAILED INSPECTIONS”

According to the branch overview in the 2008 Budget Document, “The Building Code Services Branch is the municipal authority in building code knowledge, regulation and enforcement. It assists property owners, builders, architects and engineers by providing direction in the application and interpretation of the Building Code Act, the Building Code and the applicable laws (e.g., zoning by-laws, Heritage Act, Nutrient Management Act, etc.) to ensure construction meets these safety and performance standards. Specifically, the key services and activities include review construction plans for all new/renovated buildings within legislated timeframes to ensure compliance with Ontario Building Code and all applicable laws, issue building and demolition permits, and assign municipal addresses and conduct field inspections of building construction and renovations within legislative timeframes to ensure compliance with permit plans, Ontario Building Code and applicable laws.”²

² 2008 City of Ottawa Budget Document, Building Code Services. Page 266.

In our opinion, given the role of the Building Code Service Branch, as noted above, this office pool activity raises a number of concerns.

Saving this type of material on the City network contravenes the City's Responsible Computing Policy, is inappropriate and suggests a lack of professionalism.

Recommendation 22

Given the level of personal use of Internet and email, that the City perform a review of the staffing requirements in Building Code Services Branch to determine if all existing staff are required.

Management Response

Management does not agree with this recommendation.

Overall there were no substantiated performance issues or evidence of wasted productivity that would warrant such a recommendation.

It is noted that this recommendation contradicts the 2006 Audit of Building Services which stated "Insufficient resources exist within BSB to continue to effectively manage workload".

Internet Usage

Many sites result in IP address tags. Visiting certain businesses' websites can generate up to 40 "non-business hits" using the criteria defined by this audit. It is conjecture to conclude that BCS branch program managers were using the Internet inappropriately from the kind of analysis conducted. Reliance on the raw data is not sufficient to clearly and accurately discern intent of use. One would have to sit with an employee at his or her computer to correctly ascertain and categorize the usage. For example, in one case a program manager had been listening to a news piece on a particular building site in preparation for responding to media enquiries and accidentally left his computer running all through the weekend with the browser still open to cbc.ca. This generated a very large number of "hits" which were included in the count as personal use.

The City's Responsible Computing Policy does not disallow Internet streaming for local media. In a recent presentation to all BCS branch employees an IT Services manager specifically told staff that listening or visiting local media sites is permitted as long as network bandwidth capacity is not impacted.

Emails

The photograph found of an "office pool" was taken by an employee. The program manager will download to his personal drive photographs from City-owned cameras whenever a building official is reassigned with the intent to review these, cull the inventory, and properly store the pictures in the branch's electronic library at a later time. The program manager had not yet scrutinized the photos to determine their

relevancy for work. Since the time of this audit the photograph was removed from the program manager's drive. There was no lottery as is implied in the audit. The incident was related to several building officials' unprecedented frustration over a builder's abuse of the inspection process. Eventually the situation was resolved as meetings were held with the builder's representatives to discuss the performance issues. The board was never visible to the general public and was up two to three days at most. Once the program manager noticed the board it was removed. The employees have since been made aware of the inappropriateness of the incident and have been reminded of the Code of Conduct to which they are held.

Since this audit, all BCS branch staff and management have received training on the City's Responsible Computing Policy. In addition, a memo regarding appropriate use of email and Internet use that included a reminder of the Code of Conduct was sent to all staff from the Director/Chief Building Official. In addition, the Director/Chief Building Official has also requested that IT Services conduct periodic reviews of Internet use within the branch.

Please see the briefing note (Appendix 1) dated 25 January 2010 submitted from IT Services to the City Manager regarding the ability to use the City's Internet filtering service for interpreting Internet usage.

5 CONCLUSION

The audit revealed that the Program Manager, Inspections is not following the Building Code requirements and the Policies, Guidelines and Standards of the City in some cases. In particular, we found that the Program Manager, Inspections did not follow these requirements with respect to the following aspects:

1. Allowing a property owner to proceed with construction without a building permit.
2. Approving inspections for plumbing without an actual inspection having taken place.
3. Overriding decisions by inspectors to issue Order to Comply even though appropriate permits or inspections had not been completed.
4. Incomplete documentation in the files, such as as-built surveys, soils reports, etc.

The audit found that the BCSB allowed 2,500 illegal inspections to be completed over the past three years (2006 to 2008) by unqualified summer students.

This audit started on January 12, 2009 as an audit of two specific building services files. Based on our work the scope was expanded to eight specific files. Our audit was again subsequently expanded to address the use of unqualified inspectors by the BCS Branch and the resulting risk management issues.

Management made the decision to use unqualified students, being fully aware that this contravened the requirements of the Ontario Building Code Act. Management indicates that this action was taken to deal with peak workloads associated with a construction boom. Management undertook this action without informing Council, appropriate management tools, legal advice or risk assessment.

Our Office was informed on May 21, 2010 that the CBO was seeking a legal opinion as the applicability of some section of Building Code regarding these illegal inspections. That the CBO, 16 months after the start of the audit, would seek a legal opinion indicates she lacks a full understanding of risk management.

The audit also revealed that the Program Manager, Permit Approvals did not properly assessed the potential of sensitive clays in a subdivision, and that the documentation provided for subdivisions is not distributed to all the persons who have a direct interest in that information.

It is our opinion that BCSB should ensure that there is compliance to the Ontario Building Code Act at all times.

We reviewed the email and Internet use of the PMI. We found that he used both the corporate email system and Internet excessively for non-business use and disregarded the City's Responsible Computing Policy and the City's Code of Conduct. As a mid-management level employee the computer misconduct (e.g., jokes, and inappropriate materials) is particularly serious. Based on our review, we conclude that this user's extensive personal use ultimately resulted in his spending less time performing duties for which the position is responsible for. Based on these findings, we expanded the scope of our review to include the emails and Internet usage of the Building Inspection Unit's remaining managerial staff as well as one Building Official III.

Following review of the Internet and email use by the Units managerial employees as well as Building Official III, it is our opinion that staff at the Building Code Services Branch are not properly managing time and actions of some of their staff. Disciplinary action should be taken as required in those cases.

As stated in various other audits, IT Services need to enforce the Responsible Computing Policy at all levels of the organization. In addition, stronger measures are needed to address the level of jokes and inappropriate materials received and sent by City employees using the corporate email system.

APPENDIX 1 - January 25, 2010 BRIEFING NOTE

Understanding Internet Access Logs

Version 0.3
25 January 2010

- *At the request of the City Manager, the Manager, IM/IT Architecture and Security, provides this information note regarding the City's current Internet filtering service. The note describes the purpose of this filtering service and describes the Internet access logs that are created by the service. The note then articulates a concern about the interpretation of the Internet access logs that is presently occurring which is inconsistent with the nature and purpose of these logs, and which may present an incorrect public perception of employee usage of the Internet in support of the business purposes of the City of Ottawa.*

Summary
<ul style="list-style-type: none"> • The City's Internet filtering service, Websense, is a tool designed first and foremost for security purposes to safeguard the City's network from dangerous (malicious and compromised) Internet sites. It is also used to restrict access to web sites with inappropriate content, consistent with City policy and Management direction. • The Internet access logs generated by this tool can be easily misinterpreted and used in a manner that does not reflect their true content, given the purpose and design of the Internet filtering tool and the nature of today's Internet web site technology & Internet browsers. • These Internet access logs are currently being used and interpreted in a way and for purposes inconsistent with their actual content, and statements are being made based on this interpretation which are inaccurate or unsupportable. • These Internet access logs should not be used for time-and-attendance measurement nor to measure the FTE requirements of specific work units. These Internet access logs should only be used with great caution as supporting evidence in employee behaviour investigations.
<p>Decision Points:</p> <p>For Information</p>
<p>Final Recommendation with justification:</p> <ul style="list-style-type: none"> • Internet access logs should not be used for time-and-attendance measurement • Internet access logs should not be used to measure the FTE requirements of specific work units • Internet access logs should only be used with great caution as supporting evidence in employee behaviour investigations

Background/History
<p>Why do we have an Internet filter?</p> <ol style="list-style-type: none"> 1. To block unintended access to malicious and compromised web sites that could endanger City information and technology assets, including sensitive citizen data. (Example: In late December 2009 / early January 2010, the personal web sites of two City Councillors were both compromised by an external attacker. The City's Internet filtering service correctly and successfully blocked access to both sites during the period when they were compromised and redirecting visitors to a malicious web site.) 2. To block intentional and unintentional access to web sites hosting inappropriate content (offensive, illegal, etc.) that could harm the reputation of the City. 3. To restrict access to web sites that could negatively impact the availability of the City's public and internal systems, through excessive consumption of network capacity. Examples include streaming video sites associated with major world and sporting events.
Key Issues and Risk Analysis:
<p>The Purpose of the Internet Filter is not to Manage Employee Productivity / Effectiveness</p> <ul style="list-style-type: none"> • The Internet filter blocks access to dangerous web sites • The Internet filter blocks access to inappropriate web sites • The Internet filter blocks access to web sites deemed inappropriate by City Management, consistent with the Responsible Computing Policy <p>Internet Access Logs Cannot be Used to Measure Time-and-Attendance or Employee Activity</p> <ul style="list-style-type: none"> • Today's web sites include a large amount of dynamic content, including audio and video "pop-ups" that are launched automatically outside of the user's control (advertising, etc.) • Simply having the Ozone (Intranet) home page open generates Internet traffic to the Weather Network • Accessing internal job postings generates Internet traffic to Workopolis • Accessing online Council webcasts generates Internet traffic • The number of "hits" does not correspond to the number of mouse clicks, "visits", or user actions • Browsers left open on many web pages will "auto refresh", generating new "hits" without user intervention (www.cbc.ca/news/?refresh) • Streaming media, such as online training webinars, will generate 100's of "hits" over a short period • Automated news feeds ("RSS" feeds) continually update as long as a browser is open (even if there is no Internet site being actively visited by the user) • Many email messages, including unsolicited email and online business subscriptions, generate Internet traffic without user intervention when previewed or read • Analysis has shown that a significant percentage of Internet usage recorded is generated by advertisements and automated web statistic tracking, over which the user has no control • Many Internet browsers have helpful and productivity-enhancing features to monitor web pages of interest (such as www.cfra.com), and these features generate a continuous stream of Internet traffic without user intervention (features such as those that automatically advise the user of updated web page content or store the web page content locally for later offline viewing) • There is no way to take the Internet access logs and accurately transform that data into a picture of how long a particular employee was surfing the Internet or reading a web page or listening actively to a local news radio broadcast. •
Internet Access Logs can only Support Employee Behaviour Investigations, but are not Definitive

<ul style="list-style-type: none"> • Internet access logs record all of the Internet traffic generated from an employee’s workstation and under an employee’s network account. • Internet access logs make no distinction between activity initiated by an employee (through clicking the mouse) and activity generated automatically by the Internet browser and/or the web site visited. • The appropriateness of certain Internet activity cannot be established across the board for all employees in all departments, but must be reviewed in the context of a specific employee’s job duties: <ul style="list-style-type: none"> ○ “Sports” is a business-related category for Parks & Recreation; ○ “Sex Education” is a business-related category for Public Health; ○ “Entertainment” is a business-related category for Centrepointe Theatre staff; and, ○ “Weapons” is a business-related category for a Purchasing Officer supporting Ottawa Police Services.
<p>Policy Implications</p>
<p>Unknown at this time.</p>
<p>General Implications / Dependencies</p>
<p>N/A</p>
<p>Consultation / Others Advised or Impacted</p>
<p>The City Clerk & Solicitor’s office as well as the Litigation & Labour Relations Branch have been involved in these discussions.</p>
<p>Key Messages</p>
<p>N/A</p>
<p>Next Steps/Future Objectives/Milestones:</p>
<p>Briefing to the Office of the Auditor General by the Manager, IM/IT Architecture and Security on Tuesday, 26 Jan 2010.</p>

APPENDIX 2

The following is excerpted from BCS branch’s Inspection Guidelines and Standards “New detached and semi-detached single dwelling unit”. These guidelines supplement the training and standards set out in the OBC. For students, a specific training module was developed that details the completion checks to be carried out by the students. The text in ***CAPITAL LETTERS and in bold and italics*** represents the components of the Final Occupancy Inspection that are the exterior completion checks performed by the students.

Required Inspection 17

The completion of construction and installation of components required to permit occupancy by Sentence 2.4.3.2. (1) and 2.4.3.2.(1), Ontario Regulation 403/97, as amended

Purpose of Inspection

- To visually inspect the construction and installation of interior and ***EXTERIOR FINISHES***.
- To ***CONFIRM THE COMPLETION*** of the construction and installation of all required finishing components.
- To confirm the completion of required party wall.
- To confirm completion and operation of the HVAC system(s).
- To confirm completion of fireplace and chimney construction and the installation of factory-built fireplaces and chimneys, stoves, ranges, space heaters and add-on furnaces complies with the manufacturer’s specifications.
- To confirm the completion of fire access routes, i.e. private roadway(s).
- To confirm the ***COMPLETION OF SITE GRADING***, i.e. in relation to Building Code only.
- To confirm the building is ready for occupancy (reference Inspection 5.1: Final – Plumbing).
Coordination required with the Plumbing Inspector.
- To confirm the provisions of OBC Sentence 2.4.3.2. (1) are met to allow for occupancy where the building construction is incomplete.

Key Inspection Issues

Interior

Stairs, handrails and guards:

- ✓ Provision, construction, dimensions and clearances.

Wall, ceiling and floor finishes:

- ✓ Provision, flame spread rating, waterproof at tub and showers.

Doors and windows:

✓ Provision of doors – washrooms, insulated at exterior, weather-stripped, resistance to forced entry.

✓ Provision of windows – bedrooms, ventilation, and resistance to forced entry.

Fire places:

✓ Non-combustible hearth.

Electrical:

✓ Provision - 3 way switch at stairways/exterior lighting at entrances.

Basement:

✓ Provision of foundation wall insulation.

Fire protection:

✓ Protection of foam plastic insulation.

✓ Provision of smoke alarms/CO detectors.

✓ Completion of party wall – both sides.

✓ Completion of fireplaces.

✓ Garage door - self-closing device.

✓ Garage – gas seal.

HVAC

Supply and return air system:

✓ Complete and operational – furnace, clearances, duct runs and connection to branch ducts, dampers, supply outlets, return inlets, combustion air.

Mechanical ventilation:

✓ Review HRAI Mechanical Ventilation Design Summary.

✓ Confirm house type I, II, III, IV and installed equipment is in accordance with the approved building permit documents.

✓ Installation complete and operational – exhaust fans - CSA approval, capacity, discharge, controls, air-intake – opening size, location and separation, connection to forced air system/HRV.

Exterior

Stairs, landings, handrails and guards: (N/A as this is confirmed at Partial Occupancy

Inspection stage):

✓ Provision, construction, dimensions and clearances.

CLADDING, CAULKING AND FLASHING:

- ✓ **PROVISION AND INSTALLATION.**

GRADING:

- ✓ **GRADE AND SLOPE AT BUILDING.**
- ✓ **GRADE AND SLOPE AT PROPERTY LINES/ADJACENT BUILDINGS.**

Fire Department Access:

- ✓ Completion of roadways and location of fire hydrants in serviced areas of the City.

Reference: Building Services Policy, Water Supply for Fire Fighting, (N/A as this is confirmed at Partial Occupancy Inspection stage)

Deficiencies

- ✓ Confirmation of completion of all required corrective action.
- ✓ Co-ordination with the Plumbing Inspector to ensure completion of plumbing.

Consultants Reports

It is Building Services Branch policy to require the submission of a HRAI – Residential Mechanical Ventilation Record - signed and sealed by a Certified Installer for the installation.

Required Tests

As determined by the Building Inspector in accordance with **s.18.1** of the BCA.

Enforcement Issues / Areas of Concern

- Guardrails – climbability/openings.
- Air ducts - excessive lengths, elbows, damaged, blocked.
- Building envelopment.
- **SLOPE OF WINDOW SILLS – SPLIT SILLS – DRIP.**
- **INCORRECT SIDING INSTALLATION.**
- Masonry support.
- Patio doors – ensure inoperable or 4” opening restriction where a landing/step has not been installed – allowance for occupancy.

Inspection Report

Occupancy Permit - complete the Building Services Occupancy Permit form.