



COUNCIL ORDER No. 0015453

BEFORE THE BUILDING TECHNICAL COUNCIL

On October 7, 2015

IN THE MATTER OF the Safety Codes Act, Revised Statutes of Alberta 2000, Chapter S-1.

AND IN THE MATTER OF the Order dated June 16, 2015 issued by Alberta Municipal Affairs (the Respondent) against business/property owner (the Appellant).

UPON REVIEWING the Order issued by Alberta Municipal Affairs; **AND UPON REVIEWING** the written submissions made on behalf of the Appellant, and Alberta Municipal Affairs, the Respondent; **AND UPON HEARING** submissions on behalf of the Appellant and the Respondent; **AND UPON REVIEWING** further submissions presented during the hearing by the Respondent; **THIS COUNCIL ORDERS THAT** the Order is **REVOKED**.

Issue:

1. The Appeal concerns the provision of a water supply for firefighting purposes including documentation indicating how the water will be delivered at a rate to meet with the intent of the 2006 Alberta Building Code (ABC).

Appearances, and Preliminary, Evidentiary or Procedural Matters:

2. The Appeal Panel heard from the Appellant, the owner having powers and authority over the property.
3. The Appeal Panel heard from the Respondent, Alberta Municipal Affairs, the jurisdictional authority for the administration of the Safety Codes Act in the area within which the subject property is located. Alberta Municipal Affairs was represented by the issuing Building Safety Codes Officer.
4. At the commencement of the hearing the Appellant and Respondent confirmed that there were no objections to any members of the hearing panel, and that the Safety Codes Council (Council) in general and the Appeal Panel in particular had jurisdiction to hear and decide the appeal.

5. The Chair of the Appeal Panel explained the process to be followed in hearing this appeal, and read out a list of the documents before the panel, consisting of the items listed below in The Record, paragraph 6 as items a) to i) in the Record. The Respondent and Appellant confirmed that they had a copy of the material, that they had reviewed the material, and that they had no objections to any of the documents submitted to the Appeal Panel prior to the hearing.

The Record:

6. The Appeal Panel considered, or had available for reference, the following documentation:
 - a) Copy of Order dated June 16, 2015 (pages 1 to 2)
 - b) Notice of Appeal and Request received June 12, 2015 (pages 3 to 12)
 - c) Acknowledgement Letter dated July 8, 2015 (page 13)
 - d) Request for Stay of Order Pending Appeal dated June 30, 2015 (pages 14)
 - e) Stay of Order Letter dated July 15, 2015 (page 15)
 - f) Appeal Hearing Brief Preparation Guide (page 16)
 - g) Written Notification of Appeal Hearing (pages 17 & 18)
 - h) Appeal Brief of the Respondent (pages 19 to 122)
 - i) Appeal Brief of the Appellant (pages 123 to 158)

Position of the Parties:

Appellant

From the Appellants' submission and testimony, the Appellants' position may be summarized as follows:

7. The Appellant supports the need for sufficient firefighting water availability.
8. The Appellant feels undue hardship due to physical limitations of the property and a strained relationship between the municipalities surrounding the property, therein denying the Appellant permission to acquire sufficient water capacity from existing municipal water lines.
9. The Appellant wishes to have an amenable solution to all parties that addresses the needs of this property and other nearby properties respecting firefighting water.

Respondent

From the Respondents' submissions and testimony, the Respondent's position may be summarized as follows:

10. The ABC is the building code in effect during the construction of this component of the building. The ABC requires in part, that adequate firefighting water be provided and further, provides the standard which is to be met.

11. The ABC firefighting water requirement has been an outstanding code compliance item for approximately 5 years.
12. The Respondent believes that all reasonable attempts to achieve compliance have been exhausted by the Respondent, thereby due to no progress towards achieving compliance; an Order to comply was issued as the next step towards compliance.

Appellants' Argument:

13. There are obstacles to providing the firefighting water supply and a number of options have been considered including the installation of water holding tanks whether above ground or below ground, each of which has its own considerations such as freezing if above ground and physical shortage of space if below ground due to existing service/utility lines.
14. Communication has been ongoing with the municipality to assist in either allowing connection to municipal water lines adjacent to the property or installation of municipal infrastructure to service the entire subdivision. Access to municipal water lines are further compromised by an inter-municipal agreement between the municipalities surrounding the property, and that the lines service municipal reservoirs and another municipality. Technical difficulties related to existing high pressure incurred due to moving water through the pipeline over a distance of approximately 2 miles and pressure differentials if a loop interconnection of pipelines were to occur between lines would need to be addressed. If connection to any line were to occur, the municipality has indicated a need to install a water meter sufficient in size to allow the volume and pressure to pass through to meet firefighting requirements. If connected to the high pressure line, a pressure reducing valve would be required, however the piping arrangement would only provide pressure protection to one hydrant.

The municipality's conditions respecting the water meter are unreasonable.

The municipality has been asked to install a separate line to service the businesses, but the request has been refused.

Discussions with various municipal officials have been ongoing over the past 5 years, and more recently has escalated to municipal elected officials but to no conclusion yet. The response so far is that it's not the municipality's problem however it is believed that the matter has gone to the municipality's legal counsel for advice respecting municipal responsibility.

Communication between the municipalities involved with the water lines needs to be stepped up.

15. Firefighting water and water supply in general affects everyone in the business subdivision around this property.

16. The preferred solution would be one that corrects the issue rather than implementing a provisional solution that would need to be readdressed later.
17. The phase 3 building area is a clear span and low in hazard as it has no gas line or heating source inside, it is used only for equipment storage and has a wash bay. It is used primarily to store equipment in the winter to keep warm. The heating system is in-floor provided by a heat plant in another area. This part of the building has no forced air system and has no water inside that could freeze. Access is via vehicle doors or man doors.
18. There are two fire hydrants in the area, one of which is approximately 293m from center of building and the other is approximately 160m away from the building.
19. The Appellants' family paid for the existing hydrants to be installed and prefers to not spend any more money on water supply if the effort is not acceptable.
20. There is no opposition to putting in a water line but only wants to put it in once.
21. A 15,000gal tank and a vault to house metering and pressure control valve has been acquired but will not be installed until an acceptable solution agreeable to all authorities has been reached. Further to the installation, there is difficulty in finding a reasonable and functional location. The property has an easement along one side making this area unusable and to move the tank into the property will take truck space away. Using a tank or dugout system will also require the installation of a pressure system and freeze protection system.
22. The best solution to date is the installation of a fire hydrant connected to the high pressure municipal water service line however this solution would also require the installation of a vault to house the municipal required water meter and surge protection valve. The obstacle to this solution is that the municipality will not allow this system to be located on private property and there is no room within the easement due to utility lines.

Respondent Exhibit:

23. The Respondent presented exhibit 1 and exhibit 2 as additional information.
24. The Appellant reviewed the exhibit 1 and exhibit 2 submissions, agreeing to the addition, noting that the identification of owner is in error, stating that the reference to two businesses are different entities however the content is acceptable.

Respondents' Argument:

25. The administrative structure to provide safety codes services is described as that of Alberta Municipal Affairs being responsible due to the municipality not holding accreditation to administer the safety codes system. Alberta Municipal Affairs provides services through

contract with authorized accredited agencies for the issuance of permits and related safety codes inspections. This property is subject to such a contracted safety codes administrative arrangement however, the contracted agency which started the safety codes administrative process went out of business leaving Alberta Municipal Affairs responsible to finish the services. Subsequently there have been other contracted agencies engaged in providing services on this property. This history has resulted in Alberta Municipal Affairs becoming directly engaged with the site over the past 4 to 5 years in attempt to complete compliance, engaging building and fire disciplines, and the municipalities in effort to expedite a solution to firefighting water.

26. This order only takes into consideration phase 3 of the building and that no other work preceding or following phase 3 was taken into consideration. The phase 3 consists of two truck bays being approximately 725m² in area and that this area alone requires need for a fire hydrant. The entire building including all phases is approximately 6,946m².
27. The Respondent provided that the Respondent had just become aware of more information within the last two days. The additional information is that a building permit had been taken out for an addition on June 18, 2012 and that the construction had been completed and safety codes inspections finished including safety codes sign-off on July 10, 2015 giving this permit a status of completed as complying with safety codes requirements. The permit and work for this addition is in respect to phase 4 of the same building that this appeal is focused to, making the building larger than what the order for firefighting water had taken into consideration.
28. Confirmation was provided that all phases of the building are connected making the entire structure a singular building.
29. A wall made of cinder block filled with concrete exists between the original structure and phase 3. This wall as determined by the Respondent, is a firewall having a 4hr fire resistance rating and is further described as continuing above the building by at least 3' and having openings in the form of man doors having a 1½ hr fire resistance rating. The intent of the firewall is to separate the building into two buildings for ABC application.

The Appeal Panel did not accept this wall as a firewall because to be determined as a firewall it must meet all code requirements specific to a firewall. Given the information presented being the use/occupancy of a low-medium hazard industrial building the wall would need to have a 4hr fire resistant rating with all openings having not less than a 3hr fire resistant rating. The descriptive information provided in the Appellant and Respondents arguments and the documentation provided indicate less than the required rating for openings and less than a 900mm parapet above the roof line.

30. There are municipal water lines adjacent to the property. There are 3 water lines in parallel; an 8" line from a municipality to the reservoir and two 6" lines, one of which services a fire hydrant and one which provides water to properties within the business subdivision.

31. There are two fire hydrants in the region, however neither of them are in usable proximity to this building, nor do they have capacity that would benefit firefighting to structures of this size. This would mean that firefighting efforts would need to truck water in. To meet with ABC requirements, water would need to be provided at a rate of 60 litres per second; and to provide water at this rate by truck would require a rotating truck shuttle utilizing 6 trucks plus a holding tank on scene.
32. Currently, the only firefighting water available would be the water on the responding fire trucks.
33. The building has firefighting access from all sides of the building.

The Appeal Panel did not accept access from all sides as the documents provided clearly indicate that at best access may be available from 3 sides.
34. The municipality has indicated a fire hydrant on private property is not allowable.
35. To meet with the ABC, a fire hydrant meeting code requirements must be within 90m of the principle entrance of the building. An acceptable alternative to the fire hydrant is the provision of firefighting water by another means. A potential solution would be to have an all season available water volume of 30,000 gal or more. As the order was issued only upon phase 3, it is unknown what volume of water would be needed for the entire building structure.
36. An addition to the building was initiated in 2012, described as phase 4 consisting of another two truck bays having an area of 732m² and an occupancy classification of Group F2, medium hazard industrial. The building permit #376SSC-12-B0023 identified the occupancy classification as Group D, office which is an error.

Findings of Fact:

37. The phase 3 portion of the building is single storey.
38. The building occupancy is classified in part, as F2 industrial. The classification is based only on the phase 3 construction.
39. The phase 3 construction is of non-combustible construction.
40. The phase 3 construction is approximately 725m² in area. This phase consists of two truck bays identified as bays 12 and 13; and is approximately 130' long and 60' wide.
41. The Order which is the subject of this appeal is in reference only to phase 3 of the construction.
42. The building currently consists of 4 phases which have all been completed and occupied.

43. The building requires firefighting water that meets the capacity calculations provision of the ABC.
44. There are two existing fire hydrants in the vicinity, both of which are in excess of the 90m from building entrance requirement of the ABC.
45. The building has firefighting access on two sides.
46. The building wall identified as a “firewall” does not meet the defined code criteria of a 4hr firewall therefore this wall cannot be used to divide the structure classified as Group F2 into two separate buildings for code application.

Reasons for Decision:

47. The ABC provides an integrated building safety system which incorporates a number of co-dependent safety systems which must work together to achieve the level of safety intended. These systems cannot be viewed or considered on an individual basis as an effect on any one system has the potential to affect any of the related systems. Paramount to the application of the ABC is the need for the owner and safety codes authority to have a clear understanding of the entire construction size, use/occupancy, construction materials used, and other risk factors in order to determine which code required systems apply. The documents and statements provided by both the Appellant and the Respondent clearly indicated that the entire building was not taken into consideration. This was evident in the fact that the Order under appeal was issued solely in respect to phase 3 of the construction without consideration to the preceding phases, or the following phase 4 which added to the building size/occupancy even though all phases existed and were occupied when the order was issued. By considering the entire building in the application of the ABC, a determination may be made to which code required building safety systems need to be incorporated, which systems need to be interconnected or affect others, and the standard to which each system must meet.

Failing to consider the entire building may leave the owner in a false sense of security that the building is safe and the system(s) are providing protection; and similarly, firefighters would reasonably be expecting certain building components to be available or performing when they may not exist or be to a lesser standard thereby putting the firefighters at unnecessary risk.

48. Errors in safety codes administration were identified which affect the administration, roles, and responsibilities associated with this site. Through the course of the hearing, the Appeal Panel noted inconsistencies in documentation and process giving the Panel doubt to the diligence and completeness of the safety codes administration related to this site.

These errors have the potential to affect the determination of the owner responsible for code compliance. Documentation identifying who the owner is, was challenged by the Appellant

in the presentation of the Respondents' additional exhibits. While the Appellant acknowledged and accepted the content of the documents, correction was provided to the party listed as being the owner.

The documentation and statements provided in respect to the wall described as a "firewall" bring into question the applicability of it being a firewall and whether the wall as constructed could within reason, be considered as a firewall under the ABC requirements. As a firewall is an integral component to the safety performance of the building and within context of the ABC would create an ABC application wherein the structure on either side of the wall would be considered as separate buildings for the purpose of code application. A non-conforming firewall could reasonably require other building systems such as sprinklering and fire detection/alarm to be incorporated to mitigate risk.

Phase 4 documentation identified a 732m² addition to the building in 2012 without any evidence of consideration to the pre-existing structure or completeness of outstanding items, nor did it indicate consideration to incorporating mandatory safety codes items associated with larger buildings. This was further emphasized through the issuance of a Permit Services Report in July of 2015 for phase 4 stating work complies.

The noted inconsistencies in safety codes administration affirms the need for the jurisdictional authority to review the entire building structure in order to determine what safety codes systems would be needed to reasonably meet with the ABC requirements.

- 49.** A number of inconsistencies in safety codes administration, process, and code application beyond and including the subject matter of this appeal where noted. An overarching review of the property should be done to determine the extent of code application and compliances that may be outstanding.
- 50.** The revoking of the Respondents' order is a matter of fairness to the Appellant; not a determination to whether a firefighting water supply is required, rather that the jurisdictional authority has a duty to assess and administer the fullness of the ABC requirements including the integration of all building safety codes systems to provide reasonable safety to persons and property. Only with an assessment of the entire site for safety codes compliance can the Appellant be assured that all applicable ABC requirements have been considered.

Dated at Edmonton, Alberta this 22nd day of October 2015

Chair, Building Sub-Council Appeal Panel