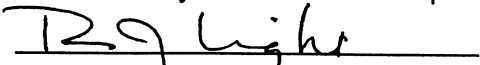


**BC BUILDING CODE INTERPRETATION COMMITTEE**  
**AIBC, APEGBC, BOABC, POABC**

<b>File No: 98-0060</b>	<b>INTERPRETATION</b>	<b>Page 1 of 1</b>
Interpretation Date:	January 15, 2003	
Building Code Edition:	BC Building Code 1998	
Subject:	Thermal Expansion	
Keywords:	Expansion , Pressures	
Building Code Reference(s):	7.6.1.11.(1) 7.6.1.5. 7.6.2.6. 7.6.3.3 (1)	
<b>Question:</b>		
<p>Sentence 7.6.1.11.(1) states that protection against thermal expansion may be required when a check valve, backflow preventer , or pressure reducing valve is required to be installed.</p> <p>Question #1 Is this an "optional" requirement because of the wording "may be required " or is this a mandatory requirement wherever system pressures could exceed 550Kpa ( 80 psi )?</p> <p>Question #2 If this is a mandatory requirement as stated in Question #1 , what are the alternative methods of dealing with this issue ?</p>		
<b>Interpretation:</b>		
<p>Thermal Expansion in a piping system is the result of the cold water from the street main entering the Water Distribution System located within the heated building causing excessive expansion of the water in the system due to the dramatic temperature changes .</p> <p>Question #1 It is mandatory to provide protection when any of the noted devices are installed, and the resulting closed system is subject to the temperature changes that cause Thermal Expansion. Where system pressures could exceed 550Kpa (80 psi ), Sentence 7.6.3.3. (1) requires the installation of a Pressure Reducing Valve.</p> <p>Question #2 The most effective method is the installation of a pressure type expansion tank. A strategically located pressure relief device, designed to provide an outlet for the excessive pressure to escape would also be considered acceptable.</p> <p>Also , consideration must be given to preventing the Hot Water System from entering the Cold Water Distribution System in more complex installations.</p>		
<p> R. J. Light, Committee Chair</p>		
<small>The views expressed are the consensus of the joint committee of AIBC, APEGBC, BOABC, and POABC, which form the BC Building Code Interpretation Committee. The purpose of the committee is to encourage uniform province wide interpretation of the BC Building Code. These views should not be considered as the official interpretation of legislated requirements based on the BC Building Code, as final responsibility for an interpretation rests with the local Authority Having Jurisdiction. The views of the joint committee should not be construed as legal advice.</small>		