



Southwest
New Brunswick
Service Commission

All about spatial separation

The National Building Code sometimes requires the exterior walls of some buildings built near a property line to be constructed differently, and the closer to a property line a building is, the more restrictive the requirement. In Code, this is called "spatial separation." The intent of spatial separation Code is to prevent fire in one building from damaging other structures on an adjacent property, or from damaging a different building on the same property.

Since the primary means of a fire escaping a building (or, in some cases, entering it) is through windows, the closer to a property line or adjacent building a wall is, the fewer windows will be allowed. Generally speaking – except with single-family houses – once there are restrictions on windows, a requirement to use non-combustible cladding will also be put in place.



This house is a perfect example of why building Code places restrictions on

construction near a property line: an apartment next door was engulfed in flames, and the heat melted the vinyl siding and shattered several windows.

The next requirement will be to construct the wall with a fire-resistance rating. This generally means installing a fire-rated drywall (see “fire rated drywall”) on the interior of the wall.

After this, the next restriction is on the nature of the construction itself. In some cases, Code will require a wall to be built out of non-combustible materials: usually this means a steel-stud wall, but sometimes a builder may look at brick, concrete and the like.

But there's nothing on the other side!

Our office hears that claim frequently when dealing with spatial separation requirements. On the surface, it sort of makes sense: if the neighbouring lot is empty, why go to all the hassle and expense of having non-combustible cladding and a fire separation? After all, what's there to damage?

There's a reason that spatial separation only factors in the property line – not the buildings on the neighbouring property. The best way to explain the concept is to flip things in reverse: the average property owner won't take kindly to being told that they can't build something on their property, because it would come too close to a building on their neighbour's land. One person's exercise of property rights shouldn't affect another, in other words. For this reason, building inspectors look at the property line as a big grey wall: there could be something there now, or in the future. (And, rest assured, your neighbour has to follow the same rules you do.)

Fire-rated assemblies

For the most part, creating a fire-rated wall isn't remarkably complex. Usually, it's just a matter of adding one or more layers of a special fire-rated drywall on the inside of the wall as required. If something like this is required, the owner, applicant or designer (as the case may be) will be required to show how the wall will achieve the required fire-resistance rating. In general, changing out the standard ½” drywall with a ½” Type X drywall will provide a 45-minute rating to the average 2x6 insulated stud wall. What's critical to note is that unlike interior fire separations (see [“fire separations”](#)), it's only the inside of the wall that requires the fire-rated treatment.

Applies to buildings on the same property

Spatial separation restrictions also apply when there are multiple buildings on the same property (except with garages serving homes). The logic here is much the same: minimize the risk of a fire in one building spreading to other buildings nearby.

Rare with houses, garages

Code is generally less restrictive when it comes to spatial separation for houses, and most construction in our region involves single-family dwellings. In other words, it's rare for our office to encounter a situation where spatial separation restricts design on a house. Further, since the first restriction is reduced windows, and most folks don't want a house with a lot of windows looking at their next-door neighbour, most designs naturally limit window openings beyond the limits spatial separation restrictions impose. The Code also exempts garages that serve a home on the same property.

A note to designers

A vast portion of our region is rural in nature, and served by volunteer firefighters. In some cases, simply due to resources and distance, a fire crew may not be able to arrive on site within the ten-minute period established as a threshold by Code. In these cases, we have to treat the building as if it were closer to the property line by halving the limiting distance (as Code requires) to compensate. We strongly suggest designers contact our office for input on which areas may be so affected before finalizing plans.