Why Your Next Lens Should be a Wide-Angle
by John Strung

Introduction

When most beginners choose a first lens to buy after the kit lens that came with their camera, they automatically look for a telephoto without giving any thought to a wide-angle. This is partly because many people have misconceptions about what wide angle lenses are and what you can do with them. As we will explain below, the wide-angle lens is an extremely useful, versatile and fun lens and deserves consideration for your next lens if you don't already own one.

The lens of choice of professionals

My attention was first drawn to wide-angle lenses when four consecutive guest speakers at our club said that they use wide-angle lenses for almost all of their photography. Wide-angle lenses are the lens of choice of most professional photographers (other than wildlife and sports photographers).

In fact, of the 95 photos in the Reuters list of Best Photographs of 2012 over half were shot with wide-angle lenses. https://petapixel.com/2012/12/02/the-most-popular-cameras-and-settings-for-reuters-best-photos-of-the-year-2012/

What is a wide-angle lens?

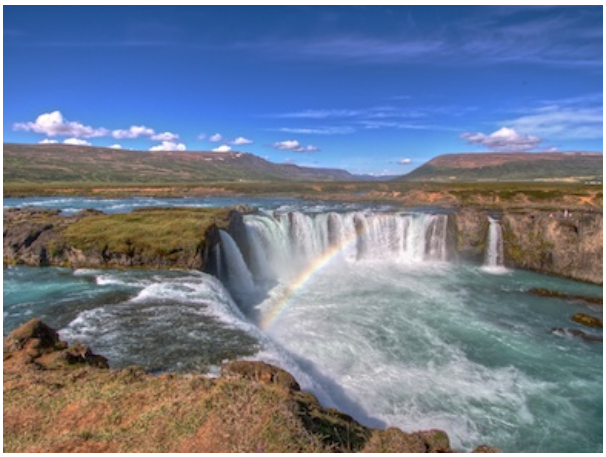
For the purposes of this article, I am going to assume that most readers are using crop-frame DSLR's. Again for the purpose of this article, I am going define a wide-angle lens as a zoom lens in the range 10-22 mm., or a prime lens toward the low end of that range. (The equivalent lens for a full frame camera would be a 16-35 mm.)

Common misconceptions

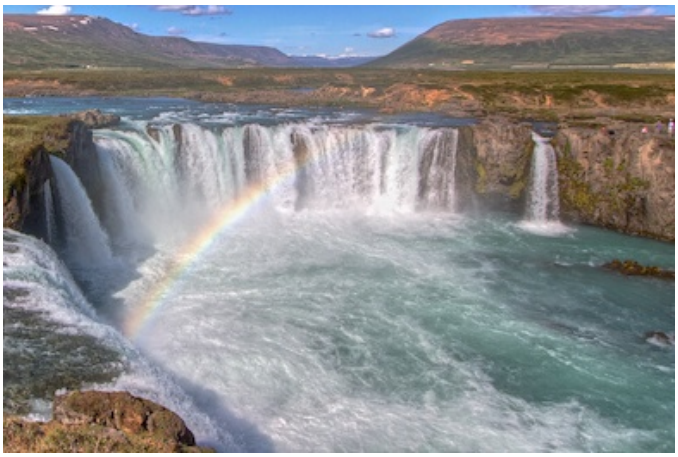
Most people have the common misconception that the only advantage to a wide-angle lens is that it gives you a broader range of view for landscapes, sort of like doing a panorama. Wide-angle lenses do that, but as explained below, they do so much more.

The second common misconception is that there is not enough of a difference between the wide end of the typical kit lens (which is usually 18mm on a crop-frame DSLR) and a dedicated wide-angle lens to be worth having a separate wide-angle lens. After all, the difference between 10mm and 18mm is only 8 mm, right?

Not quite. The difference between 10 mm and 18 mm is 80%. An image shot with a 10 mm lens will have almost TWICE the scope of an 18 mm lens. Look at the two images below of the Godafoss waterfall in Iceland to see the difference. (Just in passing, the 18 mm image is a nice enough picture of the waterfall, but loses all the context that the 10 mm shot has.)



10mm



18mm

So what *is* a wide-angle lens good for?

If the point of a wide-angle lens is not just to get panoramic scenery, what is it good for? What are its special virtues? The short answer is that a wide-angle lens is an incredibly versatile lens. Not only will it allow you to take pictures from a different and more interesting perspective than a regular lens, its characteristics allow you to take photos that you could not take at all with a regular lens. Let's look at some of these characteristics

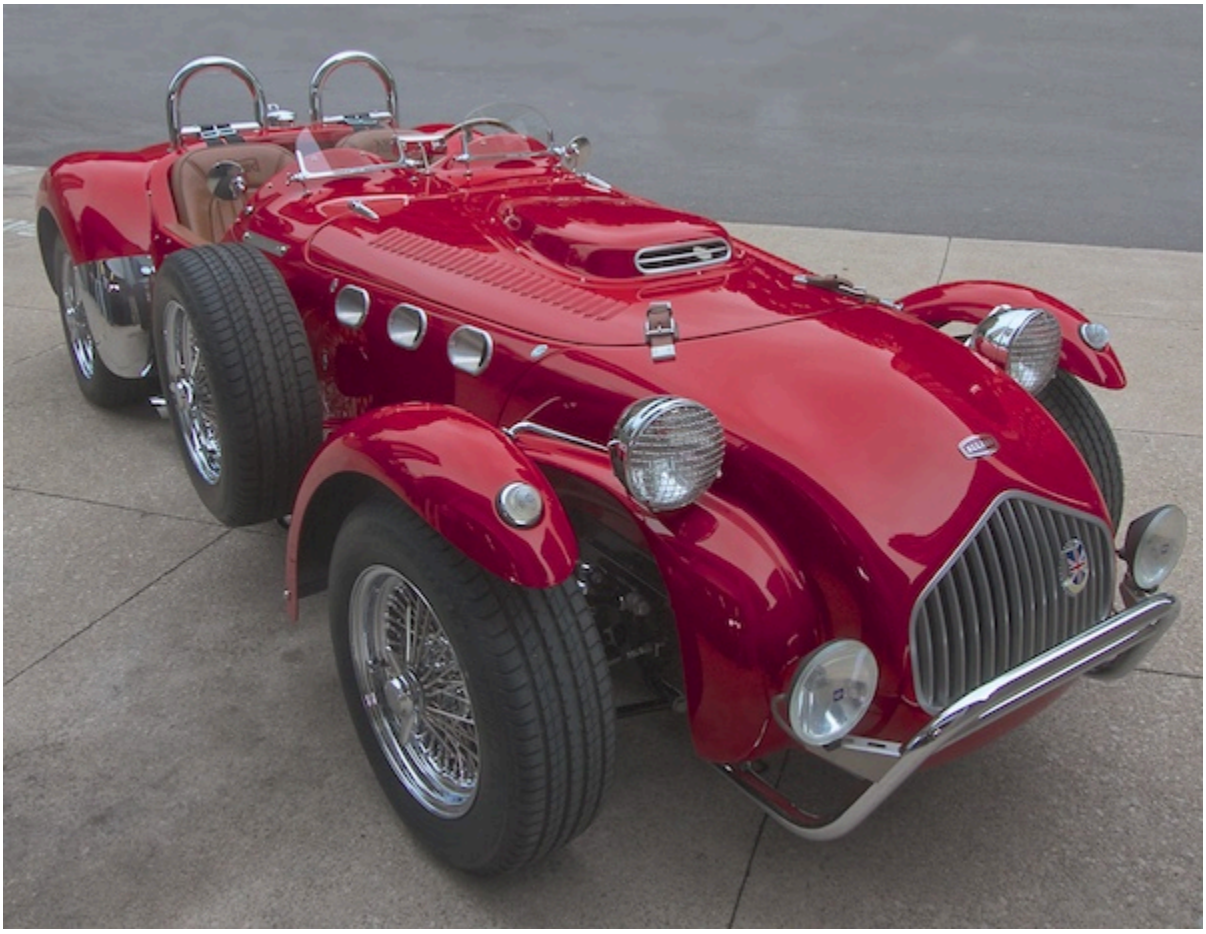
Incredible Depth of Field

Wide-angle lenses have an incredible depth of field. A 10 mm lens at f3.5 focussed at 4 feet has a depth of field from 1'9" to infinity. By comparison, an 18mm lens at the same settings has a depth of field only from 3' to 6'6". This means that if you put your 10 mm lens in manual focus and focused 4', you could shoot all day without refocusing and never have an out-of-focus shot.

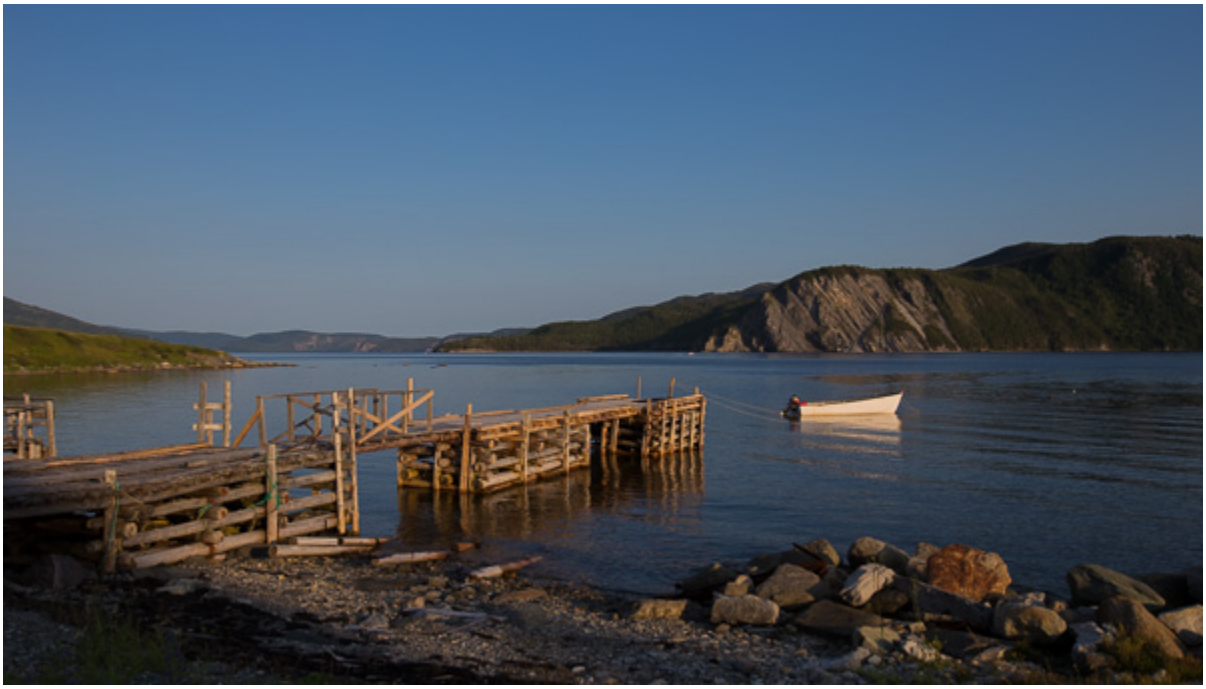
Not that you would want to do that, but the margin for error that gives you means it is really hard to get an out-of-focus shot with a wide-angle lens.

The real beauty of the huge depth of field, though, is it gives you the ability to have both the foreground and background of images in focus without having to go to large f stops (which would diminish the image's sharpness).

This is illustrated by two images below. The vintage Allard sports car was shot from a distance of about 3 feet, but every detail from the front bumper to the rear of the car is in sharp focus. The lower photo of Neddies Harbour in Newfoundland is sharp right from the rocks in the foreground, only a few feet away, to the distant mountains, despite the fact that the photograph was shot at f4.5.



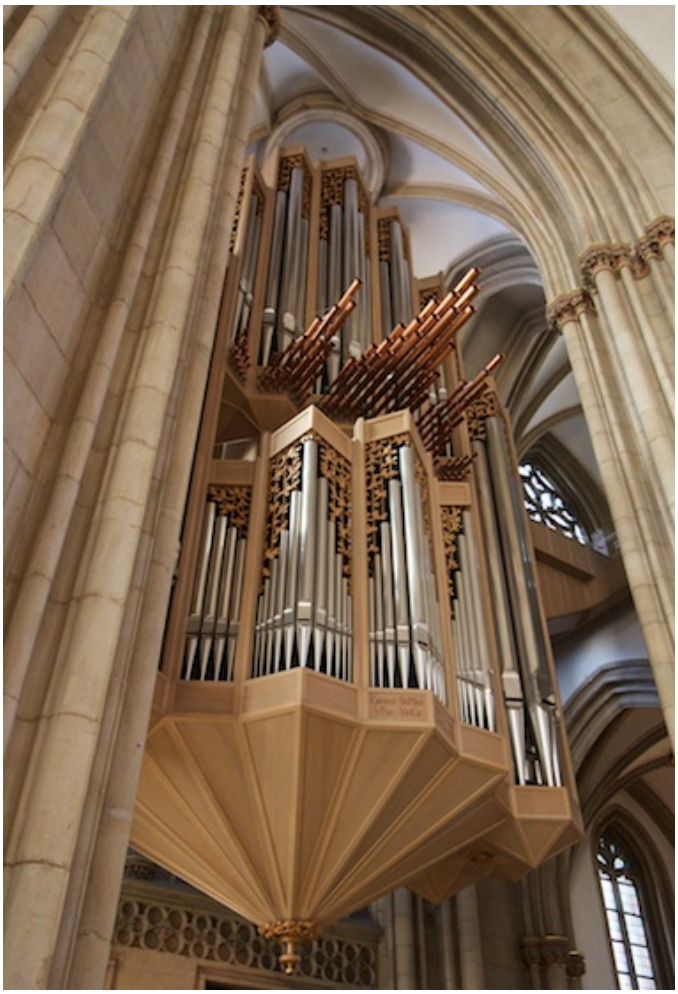
Allard J2X



Neddies Harbour

Low light photography

As a rule of thumb, you can take a hand-held shot at a shutter speed equal to the reciprocal of the focal length of the lens, on a full frame camera. Shooting a 10 mm lens on a crop-frame camera is the equivalent of a 15 or 16 mm lens on a full frame, so you should be able to hand-hold a 10 mm crop-frame camera at a shutter speed of 1/15th of a second. This is great for low-light photography when it is not practical use flash or a tripod. For instance, the photo of the St. Lambertskirche organ below was taken inside the very dark cathedral, handheld at 1/15th of a second. Again, note the wide-angle lens' depth of field renders the entire image sharp. The photo of Bourbon Street in New Orleans was taken at 1/20th of a second.



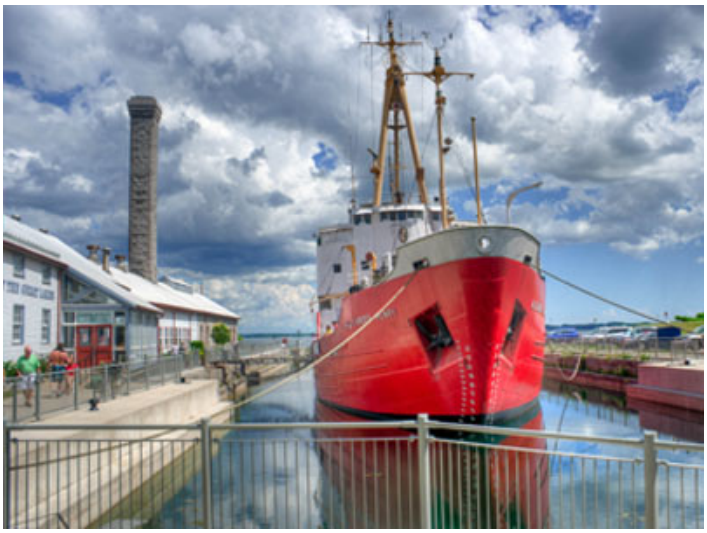
Lets you get closer to your subject

Another advantage of wide-angle lenses are that they let you get much closer to your subject so that you can shoot around foreground distractions. For instance, the left-hand shot below of the Alexander Henry in Kingston was taken with an 18 mm kit lens. With that lens there was no way to avoid the distracting fence in the foreground and still get the boat in the frame. With the wide-angle lens at right, I could move in and shoot from over top of the fence and not only get the boat in the frame, but its reflection as well. The

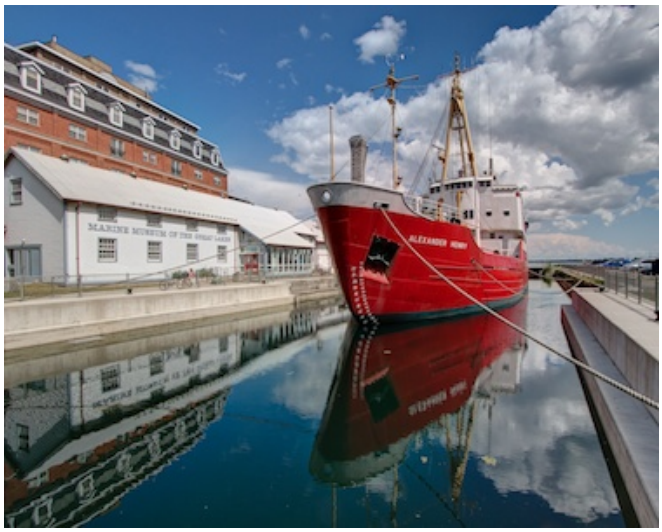
right-hand shot made it into Flickr's "Explore" as one of the most interesting images of the day.

For architectural shots in cities, the wide-angle lens often will let position yourself to avoid telephone poles, wires, traffic, parked cars and other distractions.

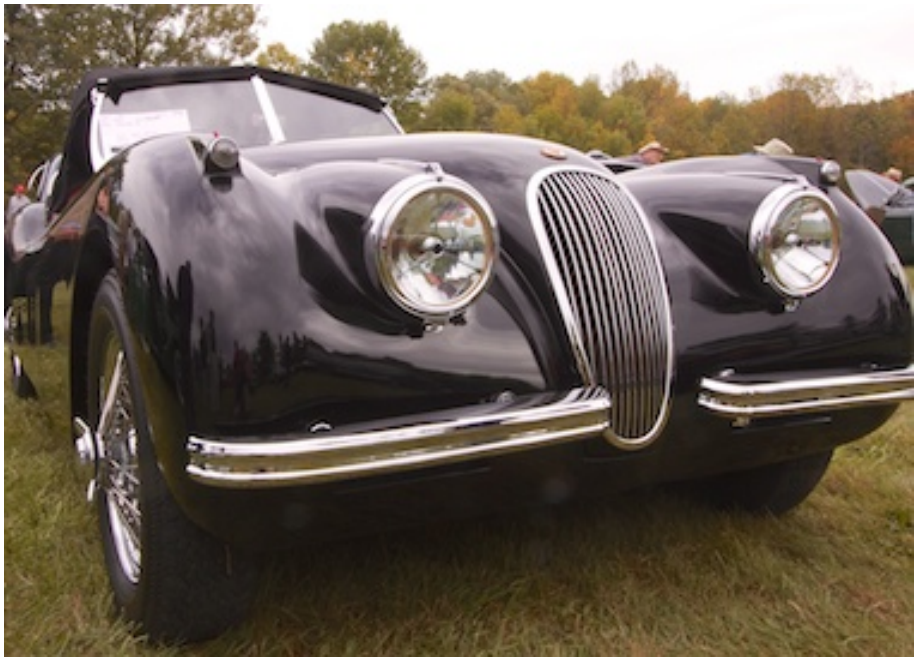
A wide-angle lens can be incredibly useful at events like car shows. You can shoot the cars from close enough not to have other spectators in the frame.



18mm



10 mm



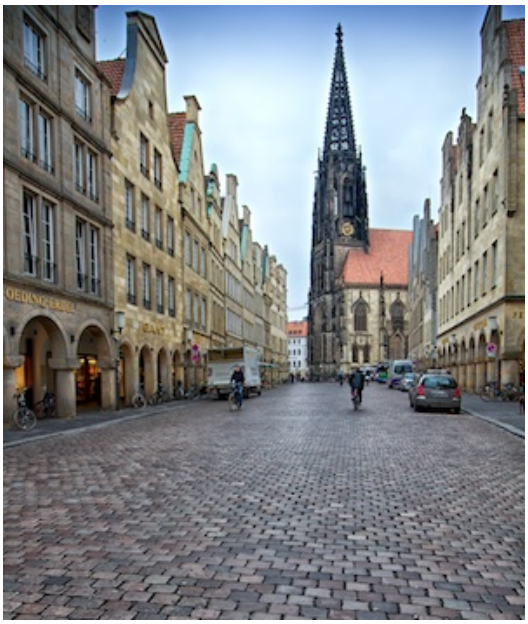
Jaguar XK120

Architectural Photography

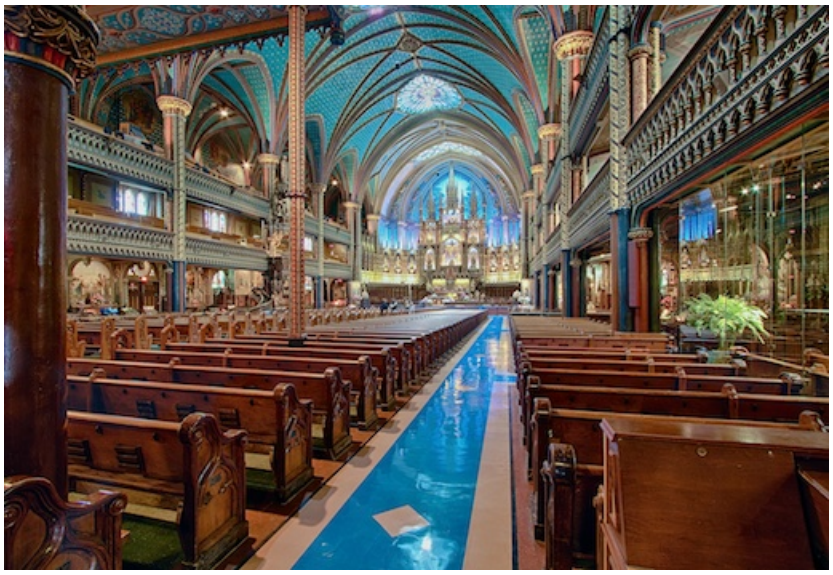
Unless you have a specialized tilt-shift lens a major problem with architectural photography is that you do not usually have a wide enough field of view to get an entire building in the frame without tilting the camera up. Tilting the camera results in the

verticals converging so that it looks as if the building is falling over. While you can correct this in post processing (see our PDF on Perspective Tutorial, that process results in a loss of part of the picture. With a wide angle lens you are more likely to be able to capture the whole building or scene without tilting the camera. The scene below on the left was taken at 10 mm with the camera level and required no post processing perspective adjustment.

The wide angle is also very helpful with interior architectural shots where you have very little room to move back. The photo on the right of Notre-Dame-de-Grace in Montreal is an example. Again, the camera was level and no perspective adjustment was necessary.



St. Lmbertskirche
Münster, Germany



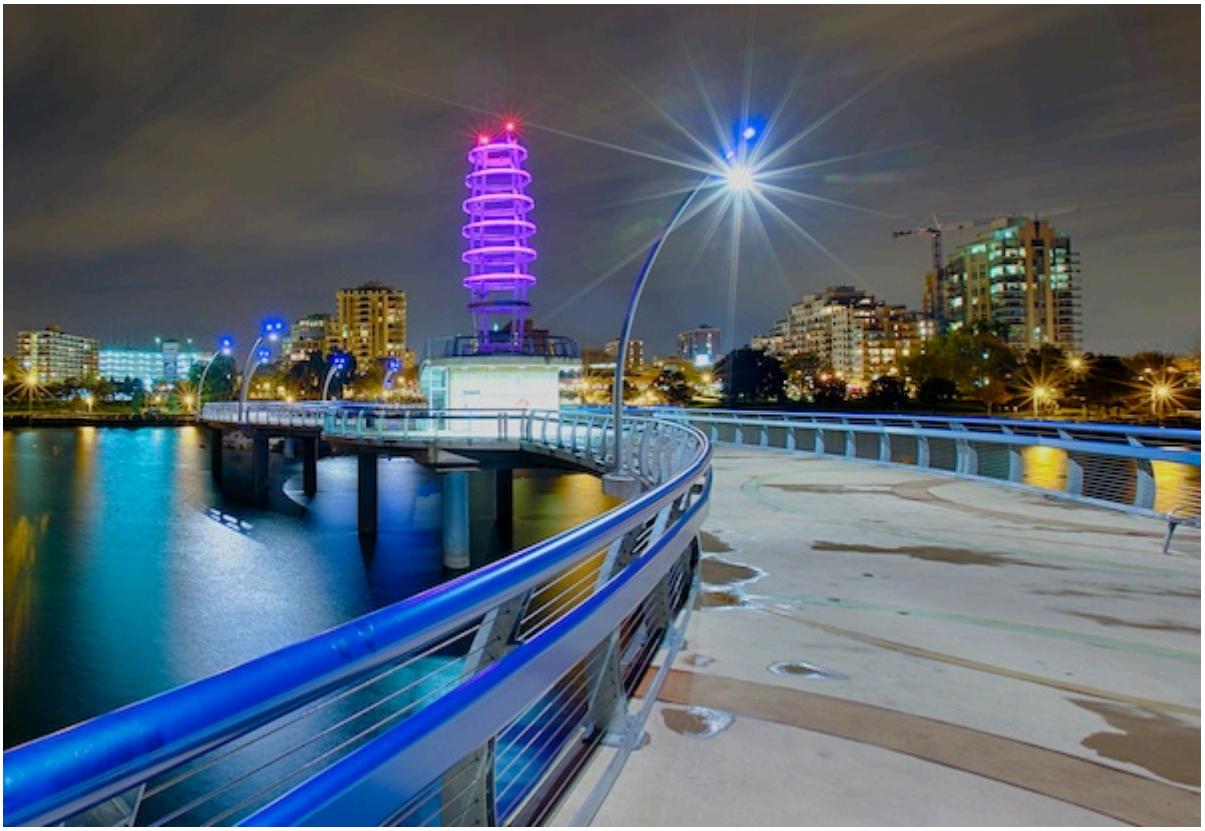
Notre-Dame-de-Grace, Montreal

Depth and Perspective

Wide-angle lenses can be used to add depth and perspective to photos. They do this in two ways. In the first place, the incredible depth of field allows you to have foreground objects in focus. See for instance, "Neddes Harbour", above. Secondly, wide-angle lenses increase the angle of converging lines. Note how the converging lines in the photo below and the two immediately above add to the depth and perspective of the image.

To take advantage of this, you have to change your way of taking photos. You have to move closer to your subject and pay more attention to the foreground. You have to think consciously of using foreground objects and leading and converging lines to help add depth to the photo. You also have to take more time composing your shots and ensure the camera is level as wide-angle lenses are much more sensitive to off-level effects. You must keep the camera absolutely level to avoid having your verticals converge.

New Orleans Street



Burlington Waterfront

Conclusion

I find that the wide-angle lens has become my go-to lens. It is my new "normal lens" and I probably use it for 80% of my photography, other than bird photography. I find using the wide-angle lens interesting, challenging and a lot of fun. I think using it has improved my photography.

Resources

How to use a wide-angle lens effectively is a whole other topic. Fortunately, Ken Rockwell has a a very useful and informative article entitled

He also has recommendations, comparisons and reviews of wide-angle lenses. His recommendation for Canon crop-frame cameras is the NEW Canon EF-S 10-18 IS STM, - http://www.kenrockwell.com/canon/lenses/10-18mm.htm which is available for about $400. (Most of the images in this article were taken with the older and more expensive Canon EF-S 10-22.) His recommendation for crop-frame Nikons and other brands is the Tokina 11-16mm f/2.8 II.

Finally, if you have an iPhone, the Simple Depth of Field Calculator - https://itunes.apple.com/ca/app/simple-dof-calculator/id301222730 is a very useful app to have so you can check your depth of field before taking your shot