



## Pan Wave (Oil Canning) Acknowledgement

Pan wave, or oil canning, is defined as a visual waviness in the flat area of metal panels. Before McElroy Metal standing seam or Marquee-Lok products are manufactured, all individuals and companies involved with a project need to be familiar with the phenomenon of pan wave and recognize that natural pan wave, commonly known as oil canning caused by thermal expansion is not cause for panel rejection.

However, deformation of the panel caused by improper installation or substrate should be addressed by the appropriate contractor. While many factors can contribute to the degree of natural and unnatural pan wave, some major contributors include deflection due to thermal movement, misaligned substrates or framing, and improperly aligned fasteners. Therefore, the type of surface specified is an important design consideration. There are three primary panel surfaces used for metal roofing products: flat pan, ribbed and striated.

Striating a panel surface consists of roll forming gentle “waves” in the panel surface. These waves break up the flat area of the panel surface and help reduce the appearance of pan wave. For this reason, striated surfaces have become the preferred style of metal roofing for architects, developers, and roofing contractors. Choosing heavier gauge steel will typically improve the results of the appearance of pan wave as well. An example of a striated panel is shown below.



**By signing this document, all parties acknowledge that pan wave or oil-canning is an inherent property of metal panels and is not cause for panel rejection. In addition, all parties acknowledge that striated panels are the preferred pan condition to lessen the appearance of pan wave and that flat pan and ribbed pan may result in a greater appearance of pan wave. Signing this document does NOT waive any rights or responsibilities of the architect, contractor or the manufacturer. Panels that do not meet product quality specifications as published by McElroy Metal will be addressed per our standard policies and procedures and this document does not waive any obligation by McElroy to meet that requirement.**

**This document is an effort to address this issue head on. McElroy is aware that the Metal Roofing Industry has addressed this issue in many ways both subtle and direct. Our goal is that all parties work together to minimize the consequences of not addressing this issue up front.**

_____	_____	_____
Customer Name & Account #	Installer Signature	Pan Condition
_____	_____	_____
Owner Signature	Architect Signature	
_____	_____	_____
Customer P.O.	McElroy Sales Order	

**Please sign & return to:** \_\_\_\_\_ **Please fax to:** \_\_\_\_\_