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Introduction

The composite foam panels manufactured by Metl-Span I, Ltd and used for wind load design have been approved by ICBO ES. The purpose of this report is to establish the maximum allowable panel span for the interior partition panel application.

Structural Conditions

The interior partition panels included in this report are limited to the following structural conditions.

1. The panels are simply supported on both ends.
2. Both the facia and the liner steel skins are captured within the flanges of the continuous panel end supporting members, typically, a channel profile at the base and a double angle profile at the top (see attached figure 1).

Design Parameter and Design Theory

The interior partition panels are to be designed for a lateral uniform live load of 5 psf and the design limiting factors include the following listed items.

1. Allowable Deflection = L/120 where L = panel span.
2. Safety Factors Against Bending Failure = 2.5.
3. Safety Factor Against Shear Failure = 3.0
4. Except self supporting the dead weight, the partition wall is a non-bearing wall.

Due to the fact that the panel ends are captured within the panel supporting members, the panel side joint connection failure is eliminated from the design consideration. Since the design does not consider the side joint connection, the widest (45" coverwidth) can be used. This allowable span table included in this report listed the 45" wide panels and the application of any narrower panels would be on the conservative side.

Table 1: Allowable Spans For Nonbearing Partition Wall
Lateral Load = 5.0 psf Deflection = L/120
Simple Span Condition Only

Panel Notation	Allowable Span
2.0 CFA45MM-26/26	21'-1"
2.5 CFA45MM-26/26	24'-9"
3.0 CFA45MM-26/26	28'-2"
4.0 CFA45MM-26/26	34'-3"
5.0 CFA45MM-26/26	40'-0"
6.0 CFA45MM-26/26	45'-3"

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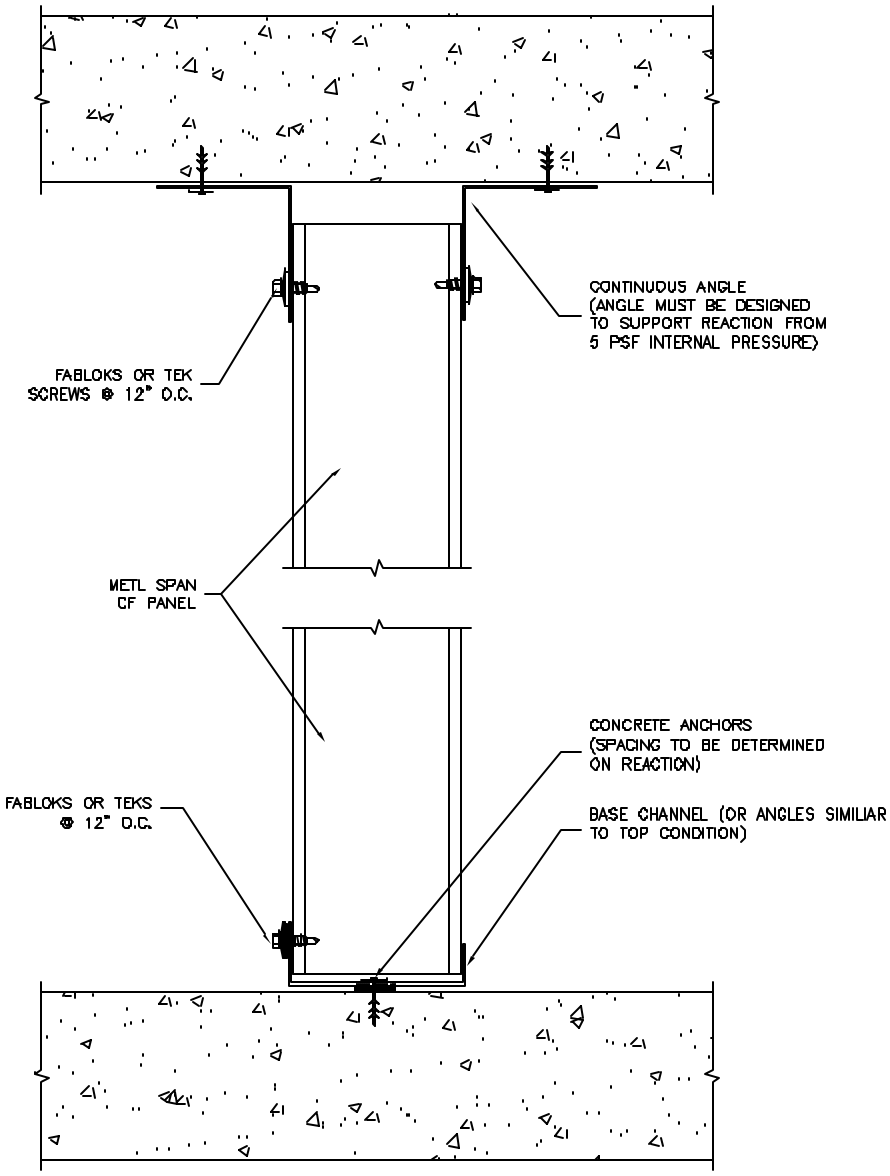

FIGURE 1: TYPICAL PANEL END CONNECTION DETAILS