

UNDERWRITERS LABORATORIES

ELECTRIC SIGN

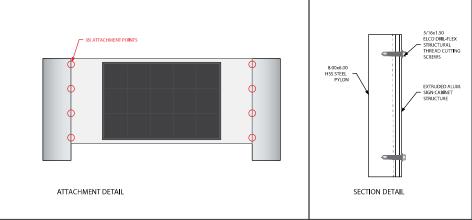




CURRENT SIGN

## ADD EMC TO EXISTING STRUCTURE

- 1. Fabricate new 45"x96.50"x24" sign cabinet to attach to existing poles.
- 2. Re-purpose existing 41"x63" EMC from Shell #303.







Inland #341 4047 SW SR 47 Lake City, FL.

JOB NUMBER:	SHEET NUMBER
31710	۸ 1
DATE:	A.I
01/26/2022	

Inland #341 Job name Job# 0322APG Sign company: Apogee Signs

Installation location: 4047 SW SR 47, Lake City, FL 32055

Section 3107 and 1609 of Florida Building Code 2020 and Chapter 30 ASCE 7-16 applies. Application of wind pressures using the alternative all heights method for components and cladding

Type of structure: new EMC sign cabinet fastened to existing sign poles

Occupancy Category:

Wind velocity (3 sec gust), FBC 2020, section 1609.3: 120 mph

Wind pressure (qz) 36.9 psf

Net Pressure Coeficient (Cnet) from Figure 30.7-2

Components and cladding not in areas of discontinuity - walls and parapets -1.09

Wind Pressure -40.2 psf

Wind load applied between wall and structure, pulling structure away from wall Load carried by tension in fasteners connecting structure to wall

<ul> <li>maximum height of structure to be attached</li> <li>maximum width of structure to be attached</li> <li>fill factor</li> </ul>	3.75 8.04 1.00	ft
- projected area of each component to be attached - wind load	30.2 -1213	
- design limit tension load per fastener to	200	
<ul> <li>even number of fasteners minimum of 2 =</li> <li>number of fasteners practically required due to structure shape</li> </ul>	-8 8	
- weight of structure is approximately	181	lbs
- design limit shear load per fastener to	100	lbs
- average shear load per fastener =	22.6	lbs

Mounting surface construction is:

8.00 x 6.00 HSS steel pylon

## Method - 5/16" Dril-Flex screws

http://anchors.dewalt.com/anchors/ documents/uploads/elco drilflex a manual.pdf?1589229775

References:

**ASCE 7-16** 

The 7th Edition (2020) of the Florida Building Code

John J. Orlando PE LLC 0044089 165 Old Ridge Road Macon, GA 31211 (478) 731-5394 jjorlando@cox.net

sheet: 2 of 2