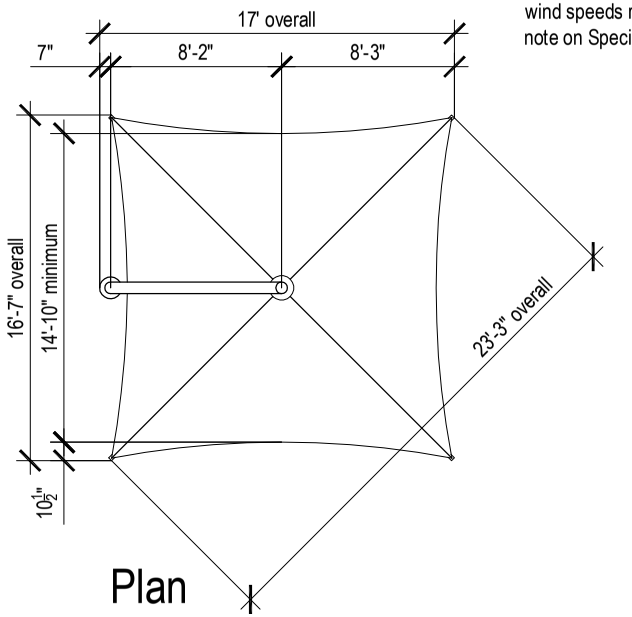
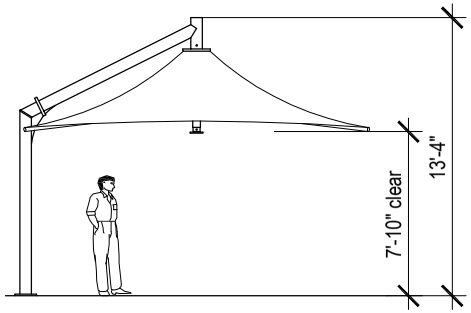
**LEVA SQUARE 16'-7" - LS50**
Designed to 90mph, Exp B
Rated when umbrella is fully erected.
Umbrella weight: 320 lb.
Boom weight: 463 lb.

Overall dimensions represent clearance dimensions for the complete umbrella. Membrane dimensions differ, depending on variations in tensioning and fabrication. All dimensions are nominal and have a tolerance of +/- 2".

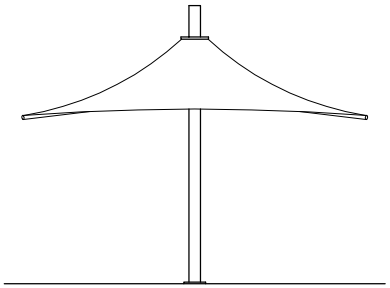
Note : The umbrellas must be closed and tied before wind speeds reach gusts of 60mph (100km/h) Refer note on Specification - Umbrella Design.



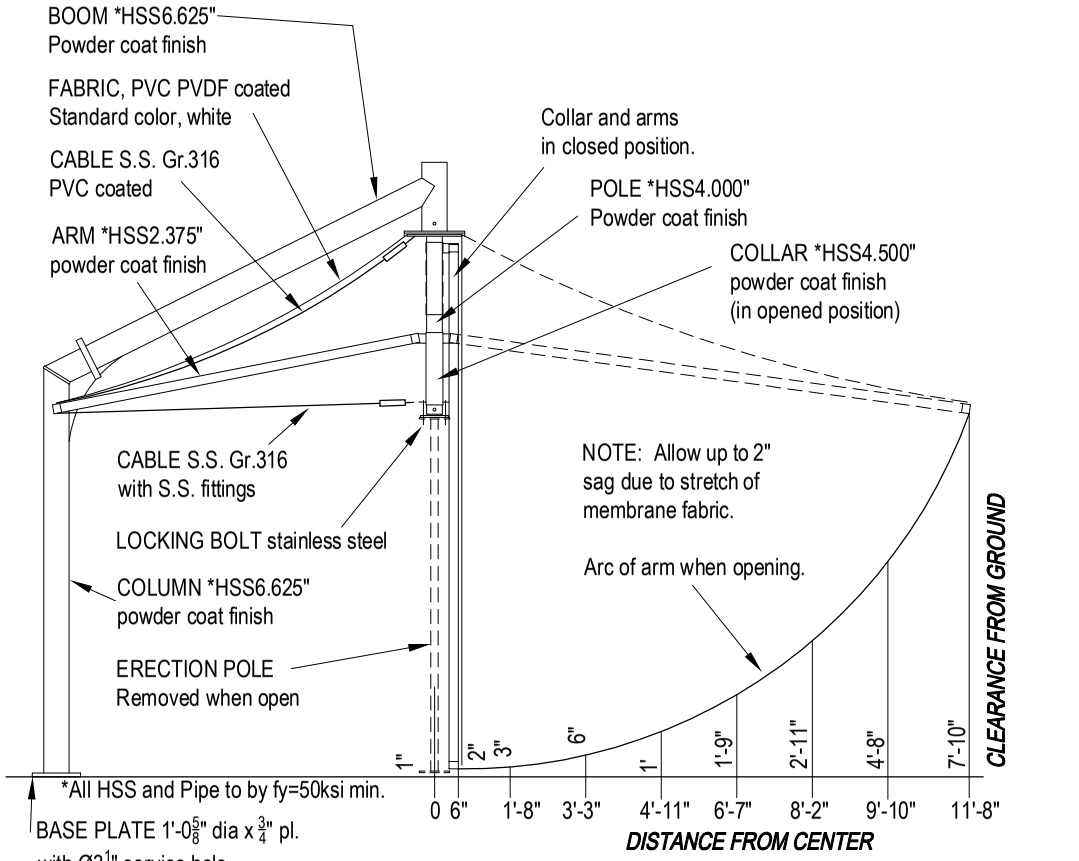

Plan




Side Elevation



Elevation



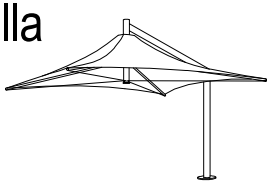

*All HSS and Pipe to by fy=50ksi min.

BASE PLATE 1'-0 5/8" dia x 3/4" pl.
with Ø3 1/2" service hole.
8- 3/4" hold down bolts on 9 7/8" B.C.
F1554 Gr. 36 galvanized or stainless steel Gr.316.
With dome nuts and leveling nuts.

OPENED POSITION
View square to boom

CLOSED POSITION
View square to arm

# 16'-7" Side Support Square Umbrella
# Leva - Model LS50



Leva Model LS50
Architectural Umbrellas

BIRDAIR

Figured dimensions take precedence. Do not scale.



Birdair Inc. | Engineering Framing | EF-LS50-07.10

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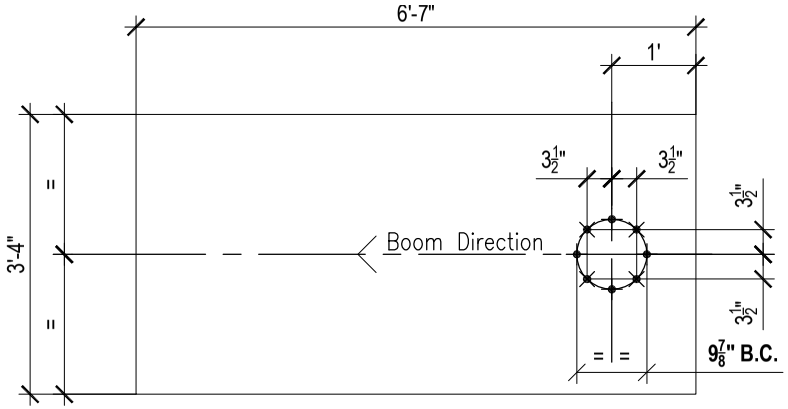
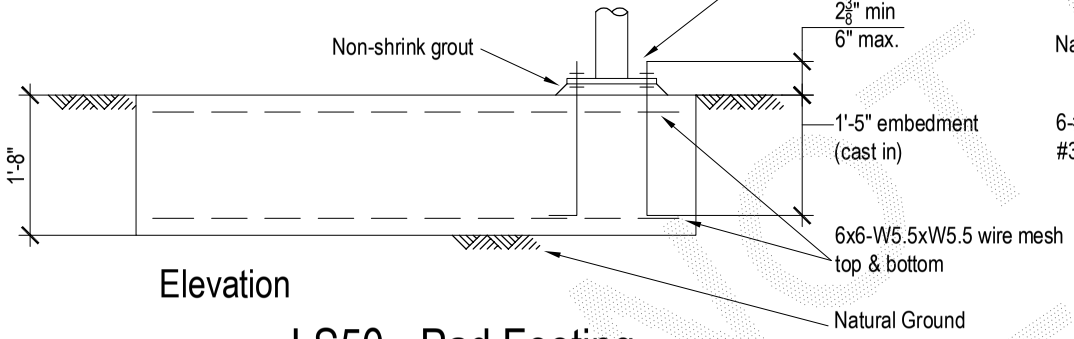
sales@birdairumbrellas.com

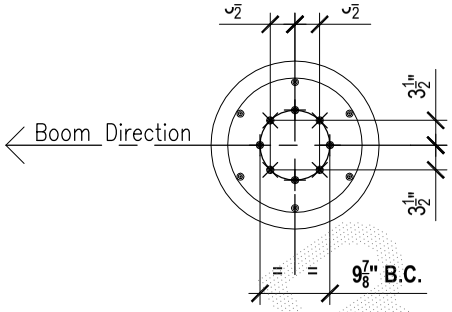


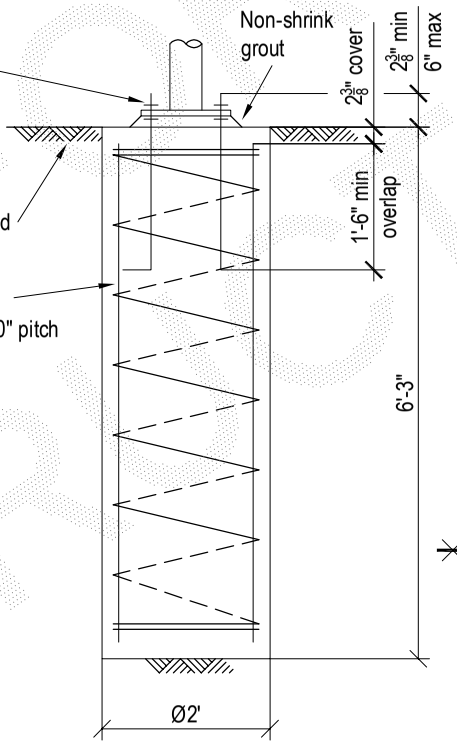

Plan




Elevation

## LS50 - Pad Footing




Elevation

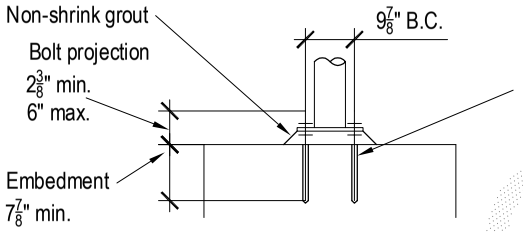
## LS50 - Pier Footing

**Notes:**
Designed to 90mph, Exp B

Assumed soil conditions:
Pad - bearing capacity 14.5 psf
Pier - cu=7.25 psf (stiff clay)

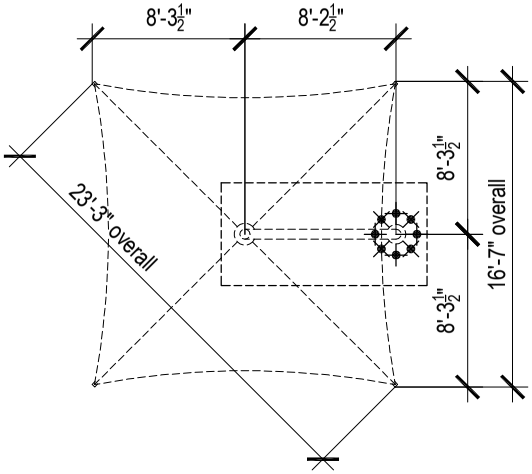
Minimum $2\frac{3}{8}$" cover to all reinforcement
Concrete strength - f'c 3600 psi
$\frac{3}{4}$" aggregate size
Slump $2\frac{1}{2}$"

**Anchor bolt location tolerances** per Australian Standard AS 4800-1998
- 3mm for anchor bolt centers within an anchor bolt group.
- 6mm for adjacent anchor bolt group centers.
- Maximum accumulation of 6mm per 30m not to exceed a total of 25mm.
- 6mm from anchor bolt group center to column line center.




8- $\frac{3}{4}$" H.D. bolts to be threaded rod F1554 Gr. 36 hot dipped galvanized, or stainless steel Gr.316. Supplied with nuts, washers and leveling nuts.
Chemical anchors, on $9\frac{7}{8}$" B.C., to be **Ramset Reo 502 (or 'Hilti HIT-RE 500')**, or engineer approved equivalent, and to be installed in accordance with the manufacturer's instructions.

## Chemical Anchor Detail




## H.D. Bolt Layout Plan

Not to scale

| | | |
|---|---|---|
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Figured dimensions take precedence. Do not scale.