The following specifications are for the fabrication, painting of signs, graphics& installation of 4 (four) typical sign designs for the Embry-Riddle Aeronautical University.

Signs:

1-3) Building identification / Directional, single faced or double faced signs face. Size and height vary from sign to sign and application for sign placement to be determined by ERAU.

4) Single faced Parking signs / Map display signs.

Fabrication:

Signs 1, 2 & 3 to be all aluminum material with schedule #40 internal steel supports per engineering specifications. Main sign frame to be 3.125" x 6"/ 8" channel minimum wall .125. Corners 45degree all seams welded (A).

Internal face mounting to be to 1" x 1" .125 angel, plug welded to main sign frame. Sign faces to be .125 sheet with 1" x 1 x.125 angel plug welded to back of sign face. Sign face should fit tight to sign frame, 1/8" tolerance total top & bottom of sign face. To have machine screws through (angel) sign face to sign frame sides, top & bottom of sign face (B). Reveals for signs should be maximum of 2" for 1 & 2. Sign face #3 to be .125 sheet painted and applied to sign frame with VHB 3M #4950 x $\frac{3}{4}$ " around entire sign face.

Note: single faced signs back to .090 sheet

Chevron cover(s) & Pylon cover(s) to be extruded 6" / 8" x.125 wall half round. Top(s) & Bottom of all components to be sealed with .125 plate welded. Internal bolt system for all components per specifications. Chevrons to be 1" PVC, spacing to be 2"; to be internally fastened to chevron cover and mounted securely to sign frame.

Steel Support poles, plates & gussets: Steel to be minim specification of schedule #40 3"x 3" square tube. Steel plate to be $\frac{1}{2}$ " x 12" x12" with 4 each $\frac{1}{2}$ " steel gussets welded to pole & plate. Continuous weld all joints. Note: "J" bolts to be $\frac{3}{4}$ " x 30" / 24" all to be minim of 5" below finished grade of sign.

Paint:

Preparation of sign frame, sign faces, pylon cover & chevron covers & chevrons as follows. Sand all surfaces with 150 grit, clean all surfaces after sanding, epoxy prime all components for paint. Sign frame, pylon covers, chevron covers to be Silver Metallic #43523 Nason Ful-Thane 2K Urethane Sign faces to be pantone Dark Blue #2965 to Teal #3145c 1/3 to 2/3 graduation per sign face. Some double face design call for solid panel color top section of sign face, Dark Blue #2965 See color rendering for reference. Chevrons to be Pantone #299c

Graphics:

Font/ Optima Simi Bold.

All sign layouts to be approved by ERAU, prior to production.

Preferred graphics to be 3M Scotchcal[™] Film Series High Performance 220 / 225-10

Color/ White applied 1st surface to sign faces. Minimum manufactures warranty **7 years** for vertical exterior exposure applications.

Footers:

All footer(s) to be to depth, width & height as noted per signs diagrams 1, 2, 3&4. To be to Florida Building Codes 2001 Ed., with 2003 revisions, Chapter16, Structural Loads or current Florida Building Codes at time of sign installation.

All holes to be clean of debris, dry, securely covered and marked during interim of hole excavation and pouring of concrete. It is the sign company's responsibility to have clearance for all underground utilities prior to excavation of footer(s).

Concrete to be 3000 PSI. "J" bolt system to be to NO LESS than diagram specifications per sign. #5 rebar welded cages directly to "J" bolt(s).

Reverse Channel Letters (Building ID):

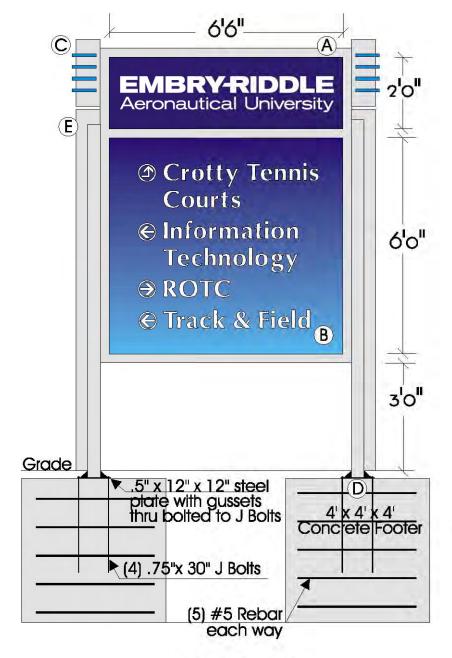
Font/ Arial

Sizing to be in direct per portion to available space; or to specifications supplied by ERAU Construction & Planning Department.

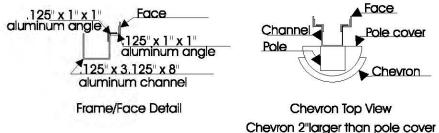
Non-Illuminated & Illuminated letters fabrication specifications:

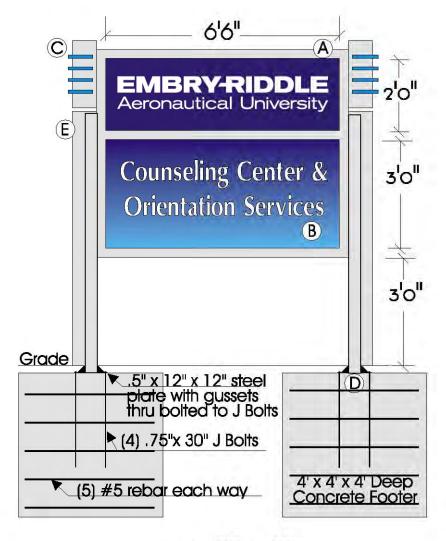
Faces to be .080 aluminum sheet, returns of letter to be .063 aluminum sheet, 3" (three inches) in depth. Non-Illuminated Letters to be mounted securely to structure to be Flush Mounted to structure. With no less that ¼" (quarter inch diameter) stud, minimum penetration to be 2 ½" (two and one half inches) into structure wall. Paint Color to be Duranodic Bronze or specified by ERAU Construction & Planning Department.

<u>Illuminated Reverse Channel Letters</u> to be illuminated with GE / TETRA® MAX low voltage LED(s). Letters to stand off structure wall maximum of 2 $\frac{1}{2}$ " and no less than 1 $\frac{1}{2}$ ". All wiring to UL specifications for reverse channel letters.



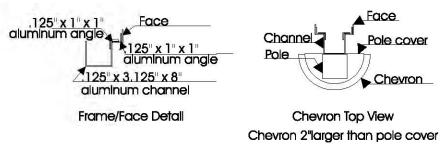
- A) .125" x 3.125" x 8" aluminum channel mitered on all corners. Channel attached to 4" steel pole with (6) .375" x 1.5" bolts drilled and tapped. Structure has no visible fasteners
- B Sign face(s) .125" aluminum gradient painted from dark blue to turquoise (see paint detail) Graphics high performance 3M white first surface
- © Chevrons 1" PVC sheet painted light blue (see paint detail)
- D Structure supported by (2) 4" schedule 40 steel poles with (4).75" x 30" J Bolts and .5" x 12" x 12" steel plate with (4) gussets
- E Poles covered with half round aluminum pole cover painted silver (see paint detail)

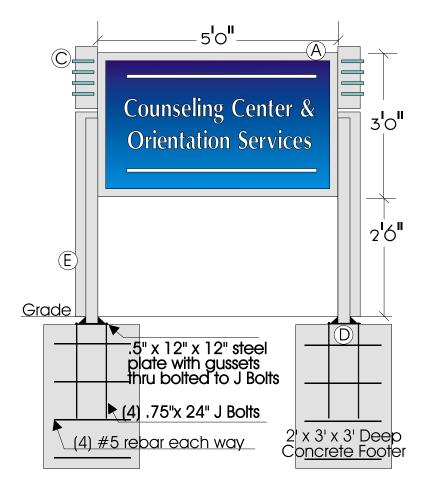




Scale .375" = 1'0"

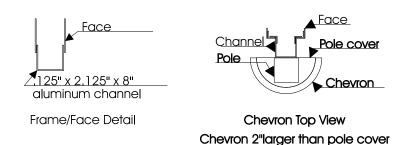
- (A) .125" x 3.125" x 8" aluminum channel mitered on all corners. Channel attached to 4" steel pole with (6) .375" x 1.5" bolts drilled and tapped. Structure has no visible fasteners
- B Sign face(s) .125" aluminum gradient painted from dark blue to turquoise (see paint detail) Graphics high performance 3M white vinyl first surface
- Chevrons 1" PVC sheet painted light blue (see paint detail)
- D Structure supported by (2) 4" schedule 40 steel poles with (4).75" x 30" J Bolts and .5" x 12" x 12" steel plate with (4) .5" x 4" x 4" gussets
- E Poles covered with half round aluminum pole cover painted silver (see paint detail)





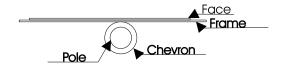
Scale .5" = 1'0"

- (A) .125" x 2.125" x 8" aluminum channel mitered on all corners. Channel attached to 3" steel pole with (6) .375" x 1.5" bolts drilled and tapped. Structure has no visible fasteners
- B Sign face(s) .125" aluminum gradient painted from dark blue to turquoise (see paint detail) Graphics high performance 3M white vinyl first surface Face fastened to channel with .75"#4905 3M joining tape
- © Chevrons 1" PVC sheet painted light blue (see paint detail)
- D Structure supported by (2) 3" schedule 40 steel poles with (4).75" x 24" J Bolts and .5" x 12" x 12" steel plate with (4) .5" x 4" x 4"gussets
- (E) Poles covered with half round aluminum pole cover painted silver (see paint detail)



(B) Visitor Parking 30" 5¹0¹¹ (D)(D)Grade -.5" x 12" x 12" steel plate with gussets thru bolted to J B<u>olts</u> (4) .75"x 24" J Bolts 2' x 2'x 3' (4) #5 rebar each way Concrete Fotter Scale .5" = 1'0"Scale .5" = 1'0"

- (A) 1.25" x 1.25" aluminum box tube mitered on all corners. Frame welded to pole at top and bottom
- B Sign face .125" aluminum gradient painted from dark blue to turquoise (see paint detail) Graphics high performance 3M white vinyl first surface. Face fastened with DF tape
- © Chevrons 1" PVC sheet painted light blue (see paint detail)
- D Structure supported by 3" schedule 40 DOT poles with (4).75" x 24" J Bolts and .5" x 12" x 12" steel plate with (4) .5" x 4" x 4"gussets in 2' x 2' x 4' concrete footer. Pole painted silver (see paint detail)



Chevron Top View
Chevron 2"larger than pole cover