



“Celebrating 50 Years of Client Satisfaction”

SIGN MANUFACTURING AND INSTALLATION SPECIFICATIONS

1. Sign Cabinet Framing:

The main structural framework shall consist of an all-welded double angle truss frame designed for a wind load to meet code requirements. The plastic faces and metal retainers of this sign shall be designed for a wind load of thirty pounds per square foot.

All welding shall be done by certified welders in our plant by a San Bernardino County Licensed Fabricator and shall conform to all specifications as set forth in the best known practices of welding designated by the American Welding Society.

All struts, tie rods and frame bracing shall be installed in such a manner as to ensure that no sag in the structural frame exists, with sign fully loaded with sign faces and all other internal components in place.

Steel for sign frame shall conform to specifications for structural steel, as adopted by the American Society for Testing Materials, Serial and Designation No. A36-62T, latest edition. Steel frame members within the sign shall be cleaned of grease and oil after which all metal which is not shop primed, or where prime coat is damaged, shall receive one coat of metal primer.

2. Metal Fabrication and Service Access:

All sheet metal used for the metal fabrication process shall be 22 gauge in thickness. All sheets are of the electrolyte zinc coated type for corrosion resistance, and provide an excellent surface for paint bonding.

All exposed metal work shall be first class in every respect with all joints and breaks true to line. Sign cabinet shall be fabricated with a minimum of visible seams and exposed hardware.

All reinforcing and attachment members necessary to fasten the metal work to the structural frame shall be provided. Reinforcing members shall be spaced as required to assure flat, unyielding edging panels.

Removal panels at ends and top shall be provided for servicing ballasts, neon transformers, lamps and sockets.

3. **Electrical Components:**

All electrical materials, ballasts, neon transformers, lamps, sockets, connectors, and all other equipment shall be new and shall be listed by Underwriter's Laboratories, Inc.

A. Lamps

The translucent plastic faced signs shall be illuminated from within by 800 MA high output fluorescent lamps spaced 12" on center. Lamps shall be General Electric, Sylvania, or approved equal.

B. Ballasts

All lamps shall be powered by lighting component ballasts as manufactured for sign use. There shall be the exact number and arrangement of lamps per ballast as specified by the ballast manufacturer, with no exceptions. Each ballast shall be easily accessible for maintenance.

C. Wiring

All wiring shall be AWM 90 degree centigrade 1000 volt TW/MTW UL file #E18971. Wiring connectors for wire splicing shall be U.L. approved 1000V capacity. They shall be Scotch Lok type Y or R or an approved equal. All splices shall be so placed as to be easily accessible for inspection and/or repair.

D. Sockets

All lamp holders shall be Kulka Brand with silver-coated contacts for use with 800 MA lamps.

E. Disconnect Switch

All cabinet signs shall be equipped with an approved water proof disconnect 20 amp rated switch as manufactured by Bell Electric Co., or approved equal, with enough circuits and capacity to control all primary wiring within the sign..

4. **Plastic:**

A. Plastic background and overlays shall be Acrylic sign grade. Acrylic sign grade is an impact modified acrylic sheet developed for the sign industry. It offers excellent weather ability and additional impact strength.

B. The plastic background shall be constructed of minimum thickness of 3/16".

C. All applied plastic letters and symbols shall be 1/8" in thickness, bonded permanently to the background with solvent of Methylene Chloride.

- D. The manufacturer's procedure for welded butt joints will be used on permanently joined assemblies. Routed areas will be reinforced with clear plastic. Plastic faces shall be engineered to insure surface uniformity. Clear plastic vertical stiffeners approximately 2 1/2" X 3/8" shall be tied back to the sign framing. Faces shall be suspended from continuous hanging bars and be free from light leaks.
- E. Use 3M vinyl films which are durable, dimensional stable 3M films which are designed for use on exterior signs. These films have uniform color in both reflected light and transmitted light, and they have low gloss to eliminate glare from the sun.
- F. Graffiti proof for faces: All graffiti proof material used on sign faces shall be of the 3M type. Which is clear overlay type, so no light transmission is lost? They withstand the harsh cleaning materials in today's world.

5. **Painted Finishes:**

All interior and exterior surfaces of sign faces and cabinet edges shall be primed with Metal Pre-treat Primer and finished with one coat of Akzo Noble 2 Part Polyurethane. The finish will be dust free, with a hard durable satin finish.

6. **Neon Manufacturing and Installation:**

Neon manufacturing and installation to conform to the "Quality Neon Manufacturing Procedure" (see attached guidelines).

7. **Light Emitting Diodes:**

All LED's used in Quiel Bros. Signs shall conform to the quality LED manufacturing procedure. LED's are 80% more energy efficient compound to neon. LED's have a low failure rate they offer long life for reduced maintenance cost.

8. **Shop Drawings and Patterns:**

Fabrication will be from full-sized patterns, showing accurately the size, style and spacing of lettering. Logo style, if provided, will optically be enlarged and followed exactly.

9. **Installation or Erection:**

Signs shall be completely installed or erected, including foundations and steel supports and connected to primary wiring to be supplied by owner within six (6) feet of signs at location specified by sign contractor. All bolts and fasteners shall be zinc or electro galvanized finish.

10. **Certifications:**

In acceptance of the work to be performed, sign contractor certifies and agrees that:

Contractor holds, in good standing, Municipal, State Contractor's C-45, C-10, and all other licenses required by law for the legal codes, ordinances, and State and Federal regulations; and present evidence of final inspections, including labels of the Underwriter's Laboratories, Inc.

That workmen are protected by compensation insurance, and that the company is covered in the amount of \$2,000,000.00 against legal liabilities for damage to property or use thereof.

That contractor is financially able to complete all work undertaken, that it has no labor liens or unsatisfied judgments outstanding.

11. Workmanship:

All work shall be performed in a first-class and workmanlike manner by experienced workmen and in direct employ of sign contractor. All work shall be square, plumb, straight and true, providing all support and anchoring means as required for proper installation.

12. Clean-up:

During the process of the work, the premises shall be kept reasonably free of all debris and waste materials resulting from the work under this section. Upon completion and before final acceptance of the work, all debris, rubbish, leftover materials, tools, and equipment shall be removed from the site.