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# Specifications for Illuminated Street Name Signs

**Revision History:**

**8/29/13: Corrected some verbiage. Changed to require galvanized brackets.**

**9/10/18: Corrected some verbiage. Update correct hyperlinks.**

## GENERAL SPECIFICATIONS

### Details/Drawings referred to in this document:

[Mesa Standard Details & Specifications](#)

Including: M-21.06, M-21.07, M-21.08, M-94.04, M-94.05, M-94.06, M-95.07, M-95.08, M-95.09

Questions about these specifications should be directed to the ITS Operations Supervisor: 480-644-3129

### **Fabrication and installation of new L.E.D. Illuminated Street Name Signs:**

The signs shall be mounted to City of Mesa type, J, K, L, Q, R, S poles at a height of at least 18'-6" from the bottom of the pole base plate to the bottom of the sign. The sign shall be rigidly attached to the front of the pole per the details. The vendor shall:

- Fabricate a new sign cabinet complete with **galvanized** mounting brackets (**to prevent rust and corrosion**), LED light source and power supply. The cabinet shall be constructed per the details, and come in 6', 8', 10' or 12' in lengths to accommodate the lettering.
- Provide Modular LED Light Strips (vendor to provide submittals on type of LED system proposed). LED lighting equipment shall be approved and certified for use in Commercial Signs, shall be temperature rated for the Phoenix, AZ climate. LED Strips shall be placed at least across the top and bottom of the cabinet. Proper heat sinking of the LED modules shall be required. LED Drivers and any wiring shall be included to complete the installation. The sign shall be evenly lit with no dark or "hot" spots and legible from a minimum of 400' away at night. LED Drivers shall be manufactured by Phillips/Advance (100W 24VDC preferred). Any LED light sources, LED drivers, diffusion panels if used, must be readily available.
- Submit a sign face design layout per City of Mesa Standard M-21.07 & M-21.08 for approval: [Mesa Standard Details & Specifications](#)
- Fabricate the sign faces per the approved sign face layout using the approved materials as listed in the "Approved Materials List" table.
- Install the sign, related 1/2" weatherproof flexible conduit, #12 awg conductors from the sign to the traffic signal pull box at the base of the pole. The contractor shall test the sign by energizing the conductors at the pull box with a generator. City crews will install the fuse holder, fuse (size as recommended by sign vendor), energize the sign circuit and test the installation.

### **Shop drawings & Structural Calculations:**

The contractor will be required to submit shop drawings & structural calculations of their sign assembly if not already on file with the City of Mesa Transportation Department.

The following shall be included:

- The sign and the supporting structure attached to City of Mesa type J, K, L, Q, R, S, poles. Engineer shall certify that the pole can support the proposed signs. Pole specifications may be found here: (M-94.04-M-94.06): [Mesa Standard Details & Specifications](#)
- Weight of sign assembly including mounting hardware
- Brand and type of LED lighting
- Phillips/Advance LED Driver model (100W 24VDC preferred)
- Brand and type of sign face substrate material
- Brand and type of sheeting material
- Mounting brackets

All drawings and structural calculations shall be wet sealed & signed by an Arizona licensed structural engineer if signed drawings are not already on file with the City. Once approved, the vendor will be added to the City's Approved Vendor list.

**Sign Faces:**

- **Sign Face Sheeting:**
  - Sheeting shall consist of the following currently approved materials (all faces shall include UV treated Anti-Graffiti Film):

<b>Approved Materials List - Description</b>	<b>Manufacturer</b>	<b>Part Number</b>
Crystal Grade Translucent Reflective Sheeting (White)	Nikkalite	92802
ESM Film (Green)	Nikkalite	108
F-Cal UV Treated Anti-Graffiti Film	Nikkalite	EF-40801
DG Cubed Translucent Reflective Sheeting (White)	3M	4090T
EC Film (Warboys Green)	3M	1176
Anti-Graffiti Film	3M	1160

- **Substrate, sheeting compatibility and performance:**
  - It shall be the responsibility of the vendor to ensure that the sign face substrate material and reflective sheeting are compatible with each other and shall warrant against bubbling, cracking, buckling, delamination and substantial fading.

**WARRANTY & MANUFACTURER IDENTIFICATION PLATES:**

1. All signs & faces shall be guaranteed for **10 years**. Those faces found to have failed shall be fabricated and replaced at no charge to the City. Labor to replace defective sign faces shall be provided for the first 5 years. LED Drivers/Power Supplies shall be warranted for 5 years minimum.
2. The sign cabinet & supporting structure shall have a 10 year warranty.
3. The sign frame shall have the manufacturer's company name, serial number and date of manufacturer engraved on the frame or engraved on a metal plate permanently affixed to the bottom right corner of the sign frame. The sign cabinet shall have the manufacturer's company name, serial number and date of manufacture engraved on a metal plate permanently affixed to the bottom right corner/**side** of the sign. No decals will be allowed.