Any equipment that has been type-tested and approved according to section 815.21 of the Standard Specifications prior to the date of award of this contract will be considered as meeting these specifications.

All Red, Yellow and Green LED signal housings with the exception of optically-programmed and fiberoptic housings shall conform to the following:

All Red and Green LED signal modules shall conform to "Interim LED Purchase Specification of the Institute of Transportation Engineers, Vehicle Traffic Control Signal Heads - Part 2: Light Emitting Diode (LED) Vehicle Traffic Signal Modules", July, 1998, or most current version, Institute of Transportation Engineers (ITE), 525 School St., SW, Suite 410, Washington, DC 20024-2797.

Yellow LED signal modules shall conform to the above specifications with the exception that yellow modules shall meet maintained Minimum Luminous Intensity values of Table 1, Section 4 of the above referenced ITE specification of compliant green signal modules at 25°C at 120 volts AC, throughout the useful life based on normal use in traffic signal operation over the operating temperature range.

All signal modules shall conform to the following: (In the case of a conflict, the following special provision shall overrule.)

An independent laboratory shall certify that the LED signal module complies with Section 6 Quality Assurance of the above stated ITE LED Purchase Specification.

LED signal modules must be type-tested and approved by the Department according to the requirements of Subsection 815.21 of the Standard Specifications for Highways and Bridges.

On the backside of the LED signal module there shall be a permanently marked "up" arrow to aid in the proper orientation of the module during installation.

The manufacturer's name, trademark, serial number and other necessary identification shall be permanently marked on the backside of the LED signal module.

Physical and Mechanical Requirement

LED signal modules shall fit without modifications into existing traffic signal housings conforming to "Vehicle Traffic Control Signal Heads" (VTCSH) published in the Equipment and Materials Standards of the Institute of Transportation Engineers. The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation. The LED signal assembly construction shall conform to the applicable ASTM specifications for the materials used to fabricate the module.

Each red LED signal module shall be comprised of a smooth surfaced Red, UV stabilized polycarbonate outer shell, multiple LED light sources, a power supply and a polycarbonate back cover assembled in a gasketed or silicon sealed unit.

Each yellow LED signal module shall be comprised of a smooth surfaced Yellow, or transparent, UV stabilized polycarbonate outer shell, multiple LED light sources, a power supply and a polycarbonate back cover assembled in a gasketed or silicon sealed unit.

Each green LED signal module shall be comprised of a smooth surfaced Green, or transparent, UV stabilized polycarbonate outer shell, multiple LED light sources, a power supply and a polycarbonate