



Baseline Document Change Announcement

Electrical Material Specifications BDC97S-028

December 1, 1998

MEMORANDUM Baseline Document Change

Subject: Additions and Revisions to the Electrical Material Specifications

This BDC consists of three parts. The first part is the addition of three new Electrical Material Specifications to upgrade traffic signal design to the new LED(light emitting diode) technology. The new specifications are as follows:

1. Metric Specifications for a Green LED Traffic Signal Module titled EBM-GRNLED-TSM.
2. Metric Specification for Green, Amber and Red LED Turn Arrow Module titled EBM-LED-GARTAM
3. Metric Specification for a LED Bi-modal Turn Arrow Module titled EBM-LED-BTAM.

The 1998 *Supplemental Specifications* to the 1996 *Standard Specifications for Road and Bridge Construction*, issued via BDC97S-029, added the three materials to the specifications as follows:

702.02 Materials and Equipment.

THE FOLLOWING ARE ADDED TO THE LIST OF MATERIALS IN THE 2ND PARAGRAPH:

Green LED Traffic Signal Module	EBM-GRNLED-TSM
Green, Amber, and Red LED Turn Arrow Module	EBM-LED-GARTAM
LED Bi-modal Turn Arrow Module	EBM-LED-BTAM

8. Traffic Signal Assemblies.

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

The red, green, bi-module turn arrow, and green, amber, and red turn-arrow LED modules shall be used for all related indications.

THE FOLLOWING IS ADDED:

Traffic signal assemblies shall also consist of removing the lamp, lens, and reflector and furnishing and completely installing an LED module in all traffic signal heads, except the amber bulbs, and optically programmed signals.

The second part of this BDC concerns Metric Specifications for CCTV Assembly (Remote Color Control) titled EBM-CCTV-COLOR which is used in Traffic Surveillance Systems(CCTV) projects. Revisions to this Electrical Material Specification were made in order to enhance the reproductive picture quality, and also increase the reliability of the CCTV assembly remote color control which are:

1. COLOR CCTV CAMERA - II, 2-2, Resolution and Sensitivity: 450 horizontal TVL lines changed to 460, 768 horizontal and 492 vertical active pixels changed to 786 and 494, and scene illumination of 1.5 lux changed to 0.1 lux.
2. COLOR CCTV CAMERA - II, 2-4, Camera Control Cables: Added this new section 2-4.
3. COLOR CCTV CAMERA - II, 2-5, Video Cable: Added this new section 2-5.
4. COLOR CCTV CAMERA - II, 2-6, Camera and Housing Power Cable: Added this new section 2-6 including Figure No. 1 and Figure No. 2.
5. ZOOM LENS - III, 3-1, Basic Configuration: The zoom lens shall be capable of supplying magnification in the range of 1 to 12X changed to 10X.
6. ZOOM LENS - III, 3-4, Position Feedback: Removed this section.

The 1998 Supplemental Specifications to the 1996 Standard Specifications for Road and Bridge Construction, issued via BDC97S-029, added this material to the Section entitled 706 - Intelligent Transportation Services Facilities.

The third part of the BDC concerns Metric Specifications for Adjustable Face Vehicle Traffic Control Aluminum Signal Head titled EBM-TS-1A. It is a metricated version of an existing, but no longer used, approved specification for aluminum signal heads. The English version of the aluminum signal head specification (EB-TS-1) was approved April 1, 1990. As of, April 1, 1991, the Department changed to a polycarbonate signal head. It is now desired to utilize aluminum signal heads only when a single free swinging indication is to be installed at the end of a mast arm. Single polycarbonate free swinging signal heads installed at end of mast arms, have had failures due to the light weight of the polycarbonate heads in windy conditions.

The revision to the 1996 Standard Specifications for Road and Bridge Construction which adds the new aluminum signal head specification is as follows:

702.02 Materials and Equipment.

THE FOLLOWING IS ADDED TO THE LIST OF MATERIALS IN THE SECOND PARAGRAPH AFTER THE ITEM "TRAFFIC SIGNAL HEAD":

Traffic Signal HeadEBM-TS-1A

Instructions to Designers

Electrical Material Specifications EBM-GRNLED-TSM, EBM-LED-GARTAM, and EBM-LED-BTAM shall be used on traffic signal projects that require the use of the 1998 Supplemental Specifications, see BDC97S-029. For traffic signal projects under design that do not require the use of the 1998 Supplemental Specifications, the decision on whether to use the new technology on these projects will be made on a case by case basis by the Traffic Signal & Safety Engineering Unit during the Design Submissions.

The revision to Electrical Material Specifications EBM-CCTV-COLOR and the new EBM-TS-1A are issued for immediate use in projects currently under Design and Construction.

Distribution to In-House Staff and Various Public Agencies

This BDC Announcement file and the electronic files of the additions and revisions to the *Electrical Material Specifications* can be viewed and/or downloaded from the NJDOT Web Page at <http://www.state.nj.us/transportation/>. Click on "Capital Program Management" (Listed on the left side of the screen). The files are listed in the CPM Table of Contents (Click on "CPM T.O.C."). Click whatever document you wish to view or download. The download file is in a zip format. If you need an unzipping program, download and install the winzip or pkzip program located at the bottom of the page.

This memorandum along with the additions and revisions to the *Electrical Material Specifications* will be distributed to In-House staff and various Public Agencies in accordance with the *Electrical Material Specifications* distribution list by the Document Control Unit. The hard copy distribution may be at least one

month after date of this memorandum because of printing delays, so rely on the web for faster service. Please make additional copies as needed.

Distribution to other Outside Agencies (Consultants, Contractors, etc.)

This memorandum will be posted on the NJDOT's Electronic Bulletin Board System (BBS) under conference number 10 - "Highway Design", File Area 56 - "Baseline Document Change memorandums"

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