

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION 962  
CONFLICT MONITORS FOR USE WITH MODEL 170E AND 2070  
CONTROLLERS/CABINETS

October 21, 1998

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**962.01 Description.** This Supplemental Specification sets forth the specifications and prequalification procedure for traffic signal conflict monitors, including software when necessary, for use in controller cabinets using model 170E or 2070 controllers.

**962.02 Definitions and References.** Wherever the following abbreviations are used in these specifications, they shall be construed to have the following meaning:

- CalTrans California Department of Transportation
- CMS Construction and Material Specifications, ODOT
- EIA Electronic Industries Association
- NEMA National Electrical Manufacturers Association
- ODOT Ohio Department of Transportation
- QPL "Qualified Products List" as published by CalTrans
- TEES "Transportation Electrical Equipment Specification" as published by CalTrans
- ATSI Athens Technical Specialists, Inc.

**962.03 Prequalified Product Procedure.** The Office of Traffic Engineering shall maintain a listing of conflict monitors that have been tested and approved as meeting this supplemental specification. Only conflict monitors on this listing shall be accepted in model 170E or 2070 controller cabinets.

The manufacturer of the conflict monitor shall have at least a base 210 model conflict monitor listed on the California QPL.

A manufacturer or vendor may submit a conflict monitor for testing at any time. The equipment shall be delivered to the ODOT Signal Shop, 1606 West Broad Street, Columbus, Ohio 43223.

All submitted conflict monitors will be tested by ODOT on a portable conflict monitor tester (ATSI, PCMT - 2000, PC Based Monitor Tester). All conflict monitors that successfully meet specification requirements will be placed on the ODOT conflict monitor prequalified list. The conflict monitor must pass the ATSI tester while operating in the standard mode of operation used on the street during normal stop and go operation. No special testing modes will be acceptable.

The product submission shall include the conflict monitor unit, full documentation of the unit, and PC software used to program or access the unit's features. ODOT will return these items to the vendor after testing. ODOT will complete all testing and evaluations within 45 days of receipt of the product. ODOT will have sole discretion in determining if monitors meet specification requirements. Monitors that fail to meet the specification will be returned along with a written report identifying any deficiencies.

ODOT may remove a conflict monitor from the prequalified list if, in ODOT's sole discretion, the monitor has failed to perform satisfactorily in the field.

**962.04 Materials and Warranties.** Equipment and materials furnished shall be new, of first quality, of current design and free of defects. Electrical parts, switches and other elements of the installation shall be of ample capacity to carry the required current without excessive heating or drop of potential.

Standard industrial quality components (integrated circuit chips, transistors, diodes, resistors, capacitors, etc.) shall be used wherever possible. These components shall be clearly identified with the original identification. Other vital information such as voltage polarity, emitter or collector terminals, pin locations, etc., shall be designated by an approved industrial procedure. All components shall be available and in production by a reputable manufacturer.

Major items or assemblies of equipment shall bear a nameplate, indelible marking or brand that shall identify it as to type, model, catalog number and manufacturer.

Manufacturers' guarantees or warranties shall be transferred to ODOT upon delivery and acceptance of the equipment. All conflict monitors shall be warranted for a period of 24 months or for the manufacturer's standard warranty period, whichever is greater, for parts and labor from date of shipment to the project or the ODOT Signal Shop. Each unit shall have a permanent label or stamp indicating the date of shipment.

**962.05 General Requirements.**

A. Minimum Standards. This specification establishes minimum standards for Conflict Monitoring Devices designed for use in Model 332 and 336 Traffic Signal Controller Cabinets