

Approved:



for José Abreu, P.E.  
Secretary

Effective: December 15, 2004  
Office: State Traffic Engineering  
and Operations  
Topic No.: 750-030-002-f

## **SIGNALIZATION PRE-EMPTION DESIGN STANDARDS**

### **PURPOSE:**

To provide standards and strategy for the installation of traffic signal pre-emption features so that conflicts between a priority vehicle and the opposing traffic are eliminated.

### **AUTHORITY:**

Sections 316.0745, 316.0747, Florida Statutes (F.S.), Sections 4B-22, 4E-18, 4E-19, 4E-20, 4E-21, 8C-6, Rule 14-15.010, Florida Administrative Code (F.A.C.)

### **SCOPE:**

Offices affected by this procedure are Central State Traffic Engineering and Operations, District Traffic Operations, State Public Transportation and Modal Administration, and District Public Transportation and Modal offices.

### **REFERENCES:**

Manual on Uniform Traffic Control Devices (MUTCD), Topic No. 750-020-007.

### **DEFINITIONS:**

Signalization pre-emption is the priority control of traffic signals. With priority control capability, normal signal timing is altered to provide an appropriate indication for priority intersection control. The more common applications of priority control are to provide pre-emption for emergency vehicles, and for traffic across at railroad-highway grade crossings, and moveable span bridges. A priority vehicle may be a train, boat, emergency vehicle, or mass transit vehicle.

## **GENERAL**

Operational concerns to enhance safety on the existing State Highway System have generated increased requests for pre-emption of traffic signals. Pre-emption of signals can occur at a single intersection such as for passage of a train on an adjacent railroad track, or along a corridor due to the operation of priority vehicles. Numerous questions and problems have arisen concerning the strategy of pre-emption, the extent of the Department's participation in such features, and pre-emption techniques.

### **1. DESIGN STANDARD**

- 1.1** Designers of Department signal projects shall require signal pre-emption features where signalized intersections are located within 200' of moveable span bridges and railroad-highway grade crossings. For signalized intersections between 200' and 500' from a railroad-highway grade crossing with active control, traffic signals should have pre-emption when a study shows it is warranted. All measurements are from the stop bar at the signalized intersections to the stop bar at the railroad-highway grade crossing.
- 1.2** Pre-emption features for signalized intersections adjacent to fire stations are a special case and require an individual study of the interaction between the intersection operation and fire station vehicles. Department signal projects shall include pre-emption features in this case if a thorough study justifies their inclusion.
- 1.3** Department signalization projects also may include pre-emption systems for mass transit vehicles. Such projects should be referred to the District Traffic Operations Engineer for review and approval prior to the finalization of plans and must receive the endorsement of the Department's Public Transportation and Modal Administration, and from the traffic signal maintaining agency.
- 1.4** Pre-emption systems to serve emergency vehicles are generally unique in design and function in their operation. These systems provide for the emergency vehicle to pre-empt traffic signals along corridors of signalized intersections when the emergency vehicle is en-route to an emergency response. These routes often affect multiple jurisdictions, thus would require system compatibility. Selection of a system would require:
  - (a) Formal area-wide plan to select system
  - (b) Agreement with local jurisdictions
  - (c) Agreement with local traffic maintaining agencies
- 1.5** Current provisions in the Federal ISTEA Program allow for funding of Pre-

emption Systems for emergency vehicles. Funding provisions and availability should be assessed through the District Traffic Operations Engineers office prior to initiating any system implementation.

**2. TRAINING**

None required.

**3. FORMS**

None required.