



**STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION**

CERTIFICATION OF ELECTRONIC COMPONENTS

Traffic Operations Division

May 22, 2017

TO: Paul Frost, P.E., Chief Roadway Design Engineer
FROM: Kevin A. Maxwell, P.E., Principal Signals, Lighting and ITS Engineer
SUBJECT: Recommendation for Certification of Electronic Components

Based on review of the following described electronic traffic related item, the Traffic Operations Division recommends that it be certified for the procurement as a patented or proprietary item in Nevada as documented here in.

Manufacturer: Global Traffic Technologies, LLC

Name and Model: Opticom Emergency Vehicle Preemption: Model 764 Phase Selector, Model 721 and Model 722 Detectors, Model 138 Detector Cable, Model 768 Auxiliary Input Panel

Description of Device: Allows emergency vehicles to preempt the normal traffic signal sequence to allow quicker emergency response for police, fire and paramedics, and decrease accidents by turning the signal red for conflicting vehicles and green for the emergency vehicle. Uses encoding to assign priorities depending on the type of emergency vehicle or jurisdiction, and to prevent unauthorized users from preempting signals and disrupting traffic. Also allows bus priority service to improve bus route scheduling and reliability. The devices tie into the regional Central Management System software operated by the RTC of Southern Nevada to allow remote monitoring and programming of preemption devices.

**Description of Need:**

Encoding of the preemption equipment is needed to provide a hierarchy among different types of emergency vehicles and among emergency vehicles from different jurisdictions. It is also needed to lock unauthorized vehicles out of preemption to prevent unnecessary disruptions to traffic signals, using non-coded preemption devices purchased on the internet. It's needed to conform to the regional standards for encoding developed jointly by RTC and other local agencies to allow emergency response across jurisdictional boundaries during large emergencies requiring interagency responses. Encoding preemption equipment requires using one type of equipment. Tying all preemption devices into a Central Management System software is needed to allow remote monitoring and troubleshooting of the devices, and programming them remotely, such as updating continually changing lists of the emergency vehicle codes used by each agency remotely instead of continually needing to visit each intersection to manually update the active codes.

Economic/Cost Analysis:

Longer emergency response times incur costs to public health and safety. Encoding allows interagency responses across boundaries which improves public health and safety. Encoding locks out non authorized users that would disrupt traffic and increase vehicle delay costs accrued by the public. Tying preemption into the regional Central Management System greatly reduces the time spent by technicians to continually update emergency vehicle codes for numerous agencies in the region as their fleets change. The various fire departments and police agencies have spent millions to purchase and install emitters that work with the existing Opticom equipment. Large cost outlay for existing intersection equipment by local agencies.

Jurisdiction/Extent:

City of Las Vegas. All other agencies in the region also use Opticom and have developed an interagency encoding system through the RTC of Southern Nevada.



Certification of Electronic Components

Limitations/Conditions:

This is the only type of preemption equipment that will work on the regional Central Management System maintained by the RTC, who keeps vehicle lists on the system up to date for all agency emergency vehicle fleets.

Request for Certification other than the standard 2 years:

5 years

Justification for Certification other than standard 2 years:

The expected life of the system is expected to be more than 5 years.

Justification for Certification:

Necessary for regional, cross jurisdictional management of emergency vehicle preemption and bus priority, and coordinating emergency vehicle responses across jurisdictional boundaries.

Synchronization

Function

Aesthetics

Logistics

The Nevada Department of Transportation Chief Roadway Design does hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), that this patented or proprietary item is essential for synchronization with existing facilities

DocuSigned by:

Paul Frost

5/23/2017

Chief Roadway Design Engineer

Date

NDOT USE ONLY



Certification of Electronic Components

Date of Certification: May 24, 2017

Certification Expiration: May 24, 2022