



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS DIVISION
SUITE 1800, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 253-1122

HOWARD H. ELEY
COMMISSIONER

BILL LEE
GOVERNOR

TO: Ben Price, Assistant Chief Engineer of Operations

FROM: Lee Smith, Interim Director of Traffic Operations


SUBJECT: **Proprietary Item Request and Justification**
City of Memphis & Shelby County

The City of Memphis & Shelby County is requesting the following items be used in all signalization projects within their jurisdiction over the next three years where Federal and/or State funding are used.

- 1) **Traffic Signal Controllers:** Siemens EPAC Controllers.
- 2) **Traffic Signal Detection:** Iteris Vantage Vector Hybrid Video/Radar Detection.
- 3) **Accessible Pedestrian Signals (APS):** Polara Engineering APS including the EN2 – EZ Communicator Navigator, 2-Wire Push Button System.
- 4) **Emergency Pre-Emption System:** 3M/GTT Opticom.

The above items are essential for synchronization with existing facilities. The City of Memphis & Shelby County staff has been extensively trained to install, operate, maintain, program, troubleshoot, and repair these items. This allows technicians to quickly diagnose issues which reduces the time required to maintain the system overall and helps keep the system operational during heavy traffic times to ensure maximum capacity of the synchronized system. By utilizing these items as the standard for the City of Memphis & Shelby County, there will be a cost savings in stocking replacement equipment and will result in faster and less costly repair. See attached letter for additional justification details of this request.

I, Lee Smith, Interim Director of the Traffic Operations Division of the Tennessee Department of Transportation, do hereby certify that in accordance with the requirements of 23 CFR 635.411(a) (2) that the patented or proprietary items listed above are essential for the synchronization of existing facilities.


Lee Smith (Mar 17, 2023 09:56 CDT)

Interim Director of Traffic Operations



Assistant Chief Engineer of Operations

Mar 17, 2023

Date

January 19, 2023

Mr. Steve Bryan, P.E., PTOE
Section Manager – Signal Design
Traffic Operations Division
Tennessee Department of Transportation
505 Deaderick Street
Nashville, TN 37243

**SUBJECT: Request for Proprietary Traffic Signal Products Certification
(Traffic Signal Controllers)**

Dear Mr. Bryan:

The City of Memphis would like to request the use of Siemens EPAC controllers on all Traffic Signal projects within the City of Memphis and Shelby County. The City of Memphis maintains the traffic signals for all of Shelby County, including the suburban municipalities of Arlington, Bartlett, Collierville, Germantown, Lakeland, and Millington. There are currently 788 traffic signals located in the City of Memphis and approximately 225 traffic signals in Shelby County outside of the City of Memphis. Our inventory of existing equipment is comprised primarily of Siemens EPAC controllers. It is estimated that EPAC controllers are currently installed at 975 of the 1013 signalized intersections in Shelby County. The City of Memphis maintains an inventory of parts for the Siemens series of controllers and our Traffic Signal Technicians have undergone extensive training on the maintenance, programming, and troubleshooting of the Siemens EPAC controllers. The use of Siemens EPAC controllers is requested for full synchronization with existing equipment. Thank you for your consideration of this request to better serve the citizens of Memphis and Shelby County with increased safety and efficiency through normal operations and maintenance activities. If you have any questions, please feel free to contact me at 901-636-6710.

Sincerely,



Randall Tatum, P.E., PTOE
Administrator, City Traffic Engineer
City of Memphis
Division of Engineering



January 19, 2023

Mr. Steve Bryan, P.E., PTOE
Section Manager – Signal Design
Traffic Operations Division
Tennessee Department of Transportation
505 Deaderick Street
Nashville, TN 37243

**SUBJECT: Request for Proprietary Traffic Signal Products Certification
(Iteris Vantage Vector Hybrid Video/Radar Detection System)**

Dear Mr. Bryan:

The City of Memphis is moving away from using traditional in-pavement loops for vehicle detection because of the increased maintenance associated with keeping loop detectors functioning properly. For this reason, The City of Memphis would like to request the use of the Vantage Vector Hybrid Video/Radar Detection system from Iteris on all Traffic Signal projects within the City of Memphis and Shelby County. The City of Memphis maintains the traffic signals for all of Shelby County, including the suburban municipalities of Arlington, Bartlett, Collierville, Germantown, Lakeland, and Millington. There are currently 788 traffic signals located in the City of Memphis and approximately 225 traffic signals in Shelby County outside of the City of Memphis. The Vantage Vector detection system provides the benefits of both video and radar technology. The video detection component is ideal for stop bar detection. Radar detection provides an extended detection zone compared to what is available with video and works very well for advance detection. The Vantage Vector system provides enhanced dilemma zone precision which can improve safety at the intersection. This detection system also works very well for volume-density signal timing applications. Our inventory of video detection equipment is comprised primarily of Iteris products. It is estimated that the Iteris Vantage Video Detection system is currently installed at 400 of the 1013 signalized intersections in Shelby County. This represents approximately 100% of the locations where Video Detection is installed. The City of Memphis maintains an inventory of parts for Iteris detection systems and our Traffic Signal Technicians have undergone extensive training on the maintenance and troubleshooting of these systems. The use of the Vantage Vector Hybrid Video/Radar Detection System is being requested because of its unique capabilities that incorporate the benefits of two forms of vehicle detection technology. The City of Memphis is not currently aware of any suitable alternative forms of vehicle detection that provide the same functionality. Thank you for your consideration of this request to better serve the citizens of Memphis and Shelby County with increased safety and efficiency through new vehicle detection technology. If you have any questions please feel free to contact me at 901-636-6710.

Sincerely,

A handwritten signature in black ink that reads "Randall Tatum".

Randall Tatum, P.E., PTOE
Administrator, City Traffic Engineer
City of Memphis
Division of Engineering



January 19, 2023

Mr. Steve Bryan, P.E., PTOE
Section Manager – Signal Design
Traffic Operations Division
Tennessee Department of Transportation
505 Deaderick Street
Nashville, TN 37243

**SUBJECT: Request for Proprietary Traffic Signal Products Certification
(Polara Engineering, Inc. EN2 – EZ Communicator Navigator, 2-Wire Push Button)**

Dear Mr. Bryan:

The City of Memphis would like to request the use of the Polara Engineering, Inc. EN2 – EZ Communicator Navigator, 2-Wire Push Button System on all Traffic Signal projects within the City of Memphis and Shelby County where Accessible Pedestrian Signals are specified. The City of Memphis maintains the traffic signals for all of Shelby County, including the suburban municipalities of Arlington, Bartlett, Collierville, Germantown, Lakeland, and Millington. There are currently 788 traffic signals located in the City of Memphis and approximately 225 traffic signals in Shelby County outside of the City of Memphis. It is estimated that the Polara Engineering, Inc. EN2 – EZ Communicator Navigator, 2-Wire Push Button System is currently installed at 55 of the 1013 signalized intersections in Shelby County. This represents 100% of the locations where Accessible Pedestrian Signals are installed. Our inventory of existing accessible pedestrian equipment is comprised primarily of the Polara Engineering, Inc. EN2 – EZ Communicator Navigator, 2-Wire Push Button System. The City of Memphis maintains an inventory of parts for this product and our Traffic Signal Technicians have undergone extensive training on the maintenance and trouble shooting of this system. The use of the Polara Engineering, Inc. EN2 – EZ Communicator Navigator, 2-Wire Push Button System is requested for full synchronization with existing equipment. Thank you for your consideration of this request to better serve the citizens of Memphis and Shelby County with increased safety and efficiency through normal operations and maintenance activities. If you have any questions, please feel free to contact me at 901-636-6710.

Sincerely,

A handwritten signature in black ink that reads "Randall Tatum".

Randall Tatum, P.E., PTOE
Administrator, City Traffic Engineer
City of Memphis
Division of Engineering



January 19, 2023

Mr. Steve Bryan, P.E., PTOE
Section Manager – Signal Design
Traffic Operations Division
Tennessee Department of Transportation
505 Deaderick Street
Nashville, TN 37243

**SUBJECT: Request for Proprietary Traffic Signal Products Certification
(3M/GTT Opticom EVP System)**

Dear Mr. Bryan:

The City of Memphis would like to request the use of the 3M/GTT Opticom Emergency Vehicle Preemption System on all Traffic Signal projects within the City of Memphis and Shelby County. The City of Memphis maintains the traffic signals for all of Shelby County, including the suburban municipalities of Arlington, Bartlett, Collierville, Germantown, Lakeland, and Millington. There are currently 788 traffic signals located in the City of Memphis and approximately 225 traffic signals in Shelby County outside of the City of Memphis. The Opticom EVP System is used to give emergency vehicles priority when assigning the ROW at traffic signals, which helps to reduce response delay. Our inventory of existing equipment is comprised primarily of the Opticom EVP System. It is estimated that the 3M/GTT Opticom Emergency Vehicle Preemption System is currently installed at 455 of the 1013 signalized intersections in Shelby County. This represents 100% of the locations where Emergency Vehicle Preemption is installed. The City of Memphis maintains an inventory of parts for the Opticom EVP system and our Traffic Signal Technicians have undergone extensive training on the maintenance and trouble shooting of this system. In addition, the existing emergency response vehicles and the Memphis Area Transit Authority (MATA) vehicles are currently outfitted with 3M/GTT preemption equipment. The use of the 3M/GTT Opticom EVP System is requested for full synchronization with existing equipment. Thank you for your consideration of this request to better serve the citizens of Memphis and Shelby County with increased safety and efficiency through normal operations and maintenance activities. If you have any questions, please feel free to contact me at 901-636-6710.

Sincerely,

A handwritten signature in black ink that reads "Randall Tatum".

Randall Tatum, P.E., PTOE
Administrator, City Traffic Engineer
City of Memphis
Division of Engineering