Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

October 15, 2020

SUBJECT: FAP 332 (IL 1)
Project NHPP-AP3U(280)
Section (C-1,3,L,20)RS-2
Iroquois County
Contract No. 66K54
Item No. 82, November 6, 2020 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised pages 19 & 20 of the Special Provisions

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Very truly yours,

Jack A. Elston, P.E.
Bureau Chief, Design and Environment

MTS

VIDEO VEHICLE DETECTION SYSTEM

This specification sets forth the minimum requirements for a video detection system that shall detect an advance vehicle on a roadway by processing video images, and that provides vehicle presence, traffic flow data, event alarms, and full-motion video for real-time traffic control and management systems.

The Video Vehicle Detection System shall be used at the traffic signal at the intersection of US Route 24 and IL Route 1. The Video Vehicle Detection System shall be the latest version and shall take the place of the existing detector loops.

The Video Vehicle Detection System shall have a 10-year paid cellular service plan which would be used for cellular data. The Illinois Department of Transportation (IDOT) shall not have to pay for any cellular service plans or data until after the end of the 10-year plan. The plan should have unlimited data, roaming charges, and minutes for all incoming and outgoing connections. This cellular service data plan shall also include unlimited hotspot service for the area covering the State of Illinois. This cellular service plan can be the same plan as the Remote-Controlled Video System cellular plan.

The start date of the paid cellular service plan shall not begin until the Video Vehicle Detection System is approved by the Resident Engineer.

The Video Vehicle Detection System shall include three (3) new tablets with three (3) keyboards to be used in a remote location. The three (3) tablets shall include the latest software necessary to remotely access all video cameras at the intersection of US Route **24** and **IL Route 1 (West Junction)** and any future intersections with cameras.

The three (3) tablets shall include documentation, and a battery charger, for each of the three (3) tablets. The three (3) tablets shall have a ten (10) year warranty with three (3) Video Vehicle Detection System licenses. The three (3) tablet warranties and licenses shall start the day of training.

The contractor shall provide two (2) days of training by a factory representative on the software for up to ten (10) people. Ten (10) year software maintenance and updates shall be provided for all three (3) Video Vehicle Detection System licenses on the three (3) tablets, three (3) laptops, and three (3) desktops.

The Video Vehicle Detection System shall provide remote access to three (3) tablets, three (3) laptops, and three (3) desktops at the IDOT District 3 office in Ottawa, Illinois. The remote three (3) tablets, three (3) laptops, and three (3) desktops shall have access to all video cameras to be able to watch or change detector loops placement, type, and size at all four (4) intersecting legs.

The Video Vehicle Detection System shall be capable of communicating with the Centrac's Advance Traffic Management System and the Tactic's Advance Traffic Management System. The Video Detection System shall work wirelessly to the new controller placed inside the new traffic signal cabinet.

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The video camera shall provide real life pictures of the roadway and vehicles.

The manufacturer shall recommend the height and location of the video camera so the proper detection zones will detect and monitor all three (3) legs from ten (10) feet in front of the stop bar until 500 feet in advance of the stop bar. The Video Vehicle Detection System shall use as many cameras as needed to provide and monitor the proper detection for all three (3) legs. The video camera or cameras shall either be mounted on the luminaire arm, the mast arm, or a six (6) foot extension on the mast arm.

The Video Detection System shall include a monitor (minimum size of 12" by 12") with mouse inside the cabinet so the maintainer can monitor the detector loops in each direction. Make sure the traffic signal cabinet is big enough to provide comfortable room for the monitor.

The complete system shall also include an I8 AWG 3 conductor unshielded 600V cable. The video detection system shall also include a 6-foot video detection pipe extension mounted on all mast arms to withstand 80mph wind. See plan drawings on traffic signal plan sheets at **US Route 24 and IL Route 1 (West Junction)**.

System Hardware. The video detection system shall be comprised of two major hardware components: a video sensor and a communications interface panel. An optional wired input/output card shall be available for certain cabinet types.

Video Sensor. The video detection system shall include a video sensor that integrates a high-definition (HD) camera with an embedded processor for analyzing the video and performing detection.

Camera and Processor.

- The camera shall be a color CMOS imaging array.
- The camera shall have HD resolution of at least 720p (1280x720 pixels).
- The camera shall include a minimum 10X optical zoom.
  - It shall be possible to zoom the lens as required to satisfy across-the-intersection detection objectives, including stop line and advance detection.
  - It shall be possible to zoom the lens remotely from the TMC for temporary traffic surveillance operations or to inspect the cleanliness of the faceplate.
- The camera shall have direct, real-time iris and shutter speed control by the integrated processor.
- The processor shall support H.264 video compression for streaming output.