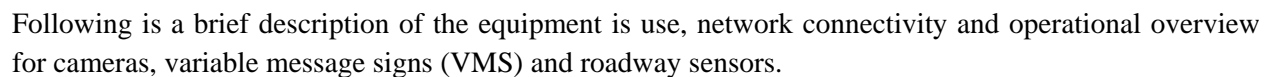


## Physical Demark and Logical Hand Off

The Region 3 TMC is located in the NY State Office Building in downtown Syracuse, NY. The center uses a variety of equipment deployed in the field to manage traffic. The detailed inventory of current equipment is included in Attachment 15. The diagram below provides an overview of the Region field equipment and connectivity.



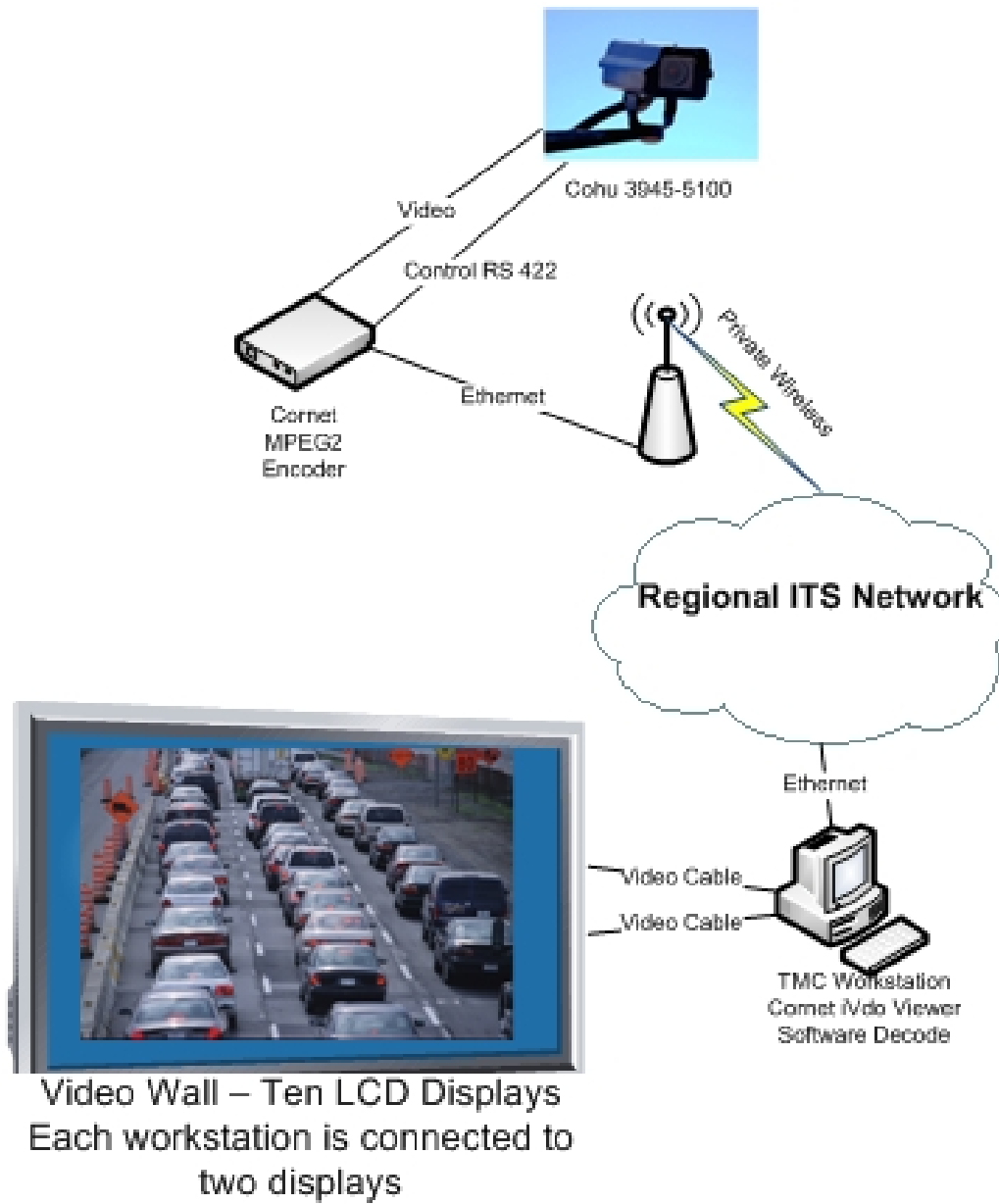
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Page 1

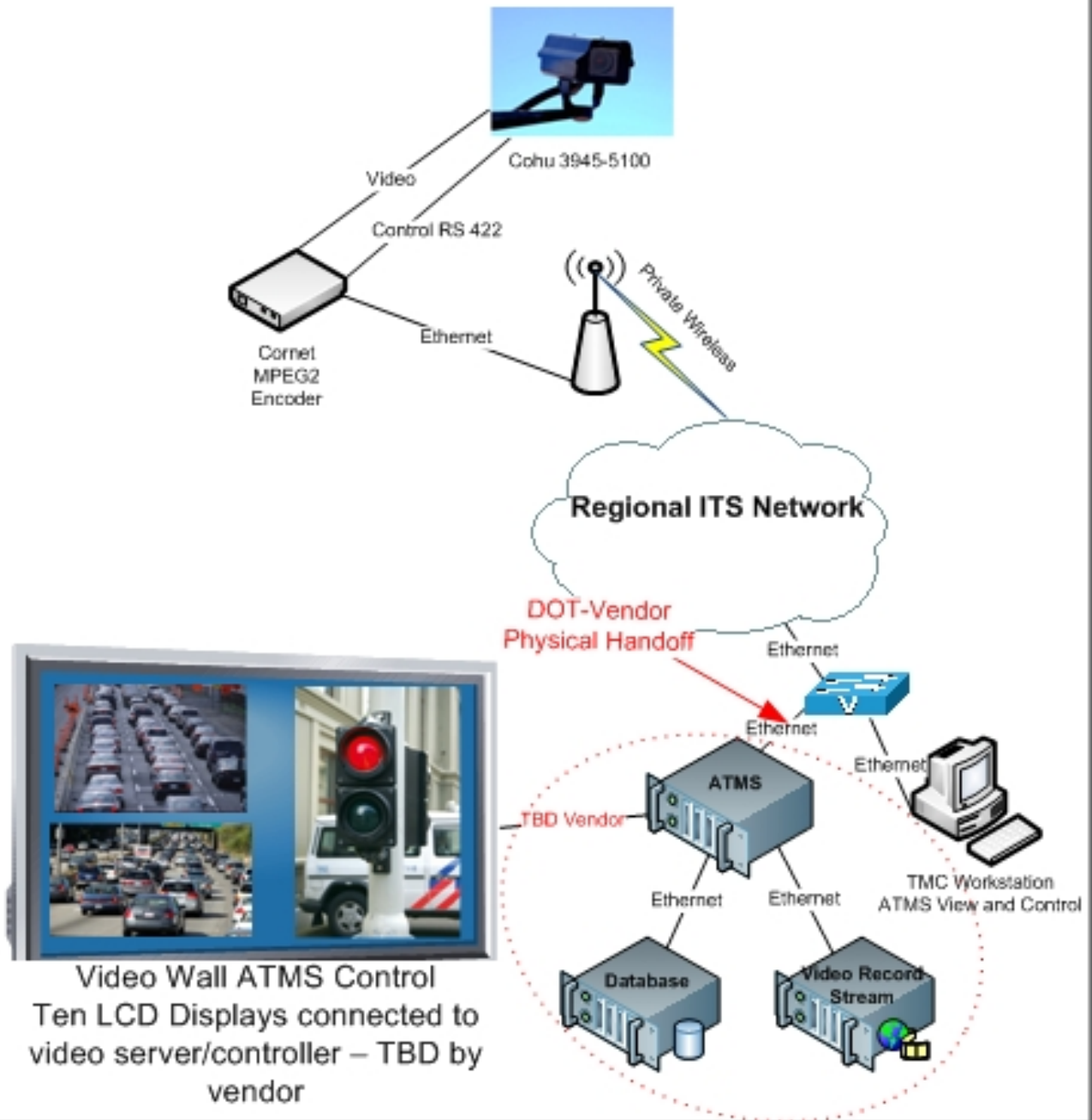
Region 3 currently has twenty six Cohu 3945 analog cameras installed. Each camera is connected to a Cornet encoder that converts the video to an MPEG2 stream and provides an Ethernet handoff to the local private radio access device. The encoder also provides a serial port for camera control. Video is decoded workstations and cameras are controlled using the Cohu NetCams client on the TMC workstations. The ATMS must provide integrated control of cameras as defined in the Requirements Matrix, using the existing encoding hardware.

The TMC video wall is made up of 10 LCD displays with each TMC workstation connected using video cards to two of the screens. The ATMS must provide a system for video wall control to replace the current view selection method while using the existing LCD displays (e.g. a video switch with software integrated into the ATMS).

## Before

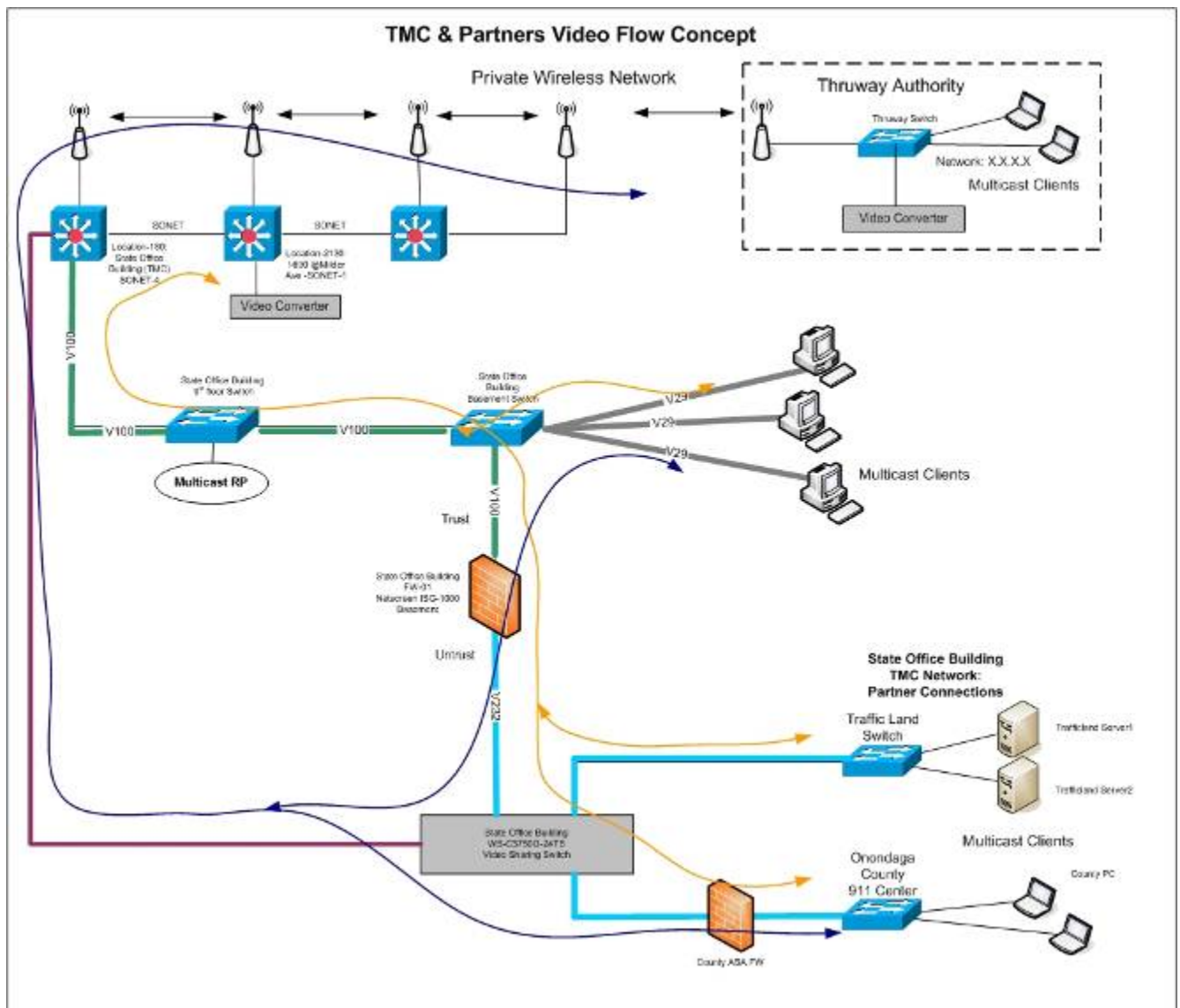


## After



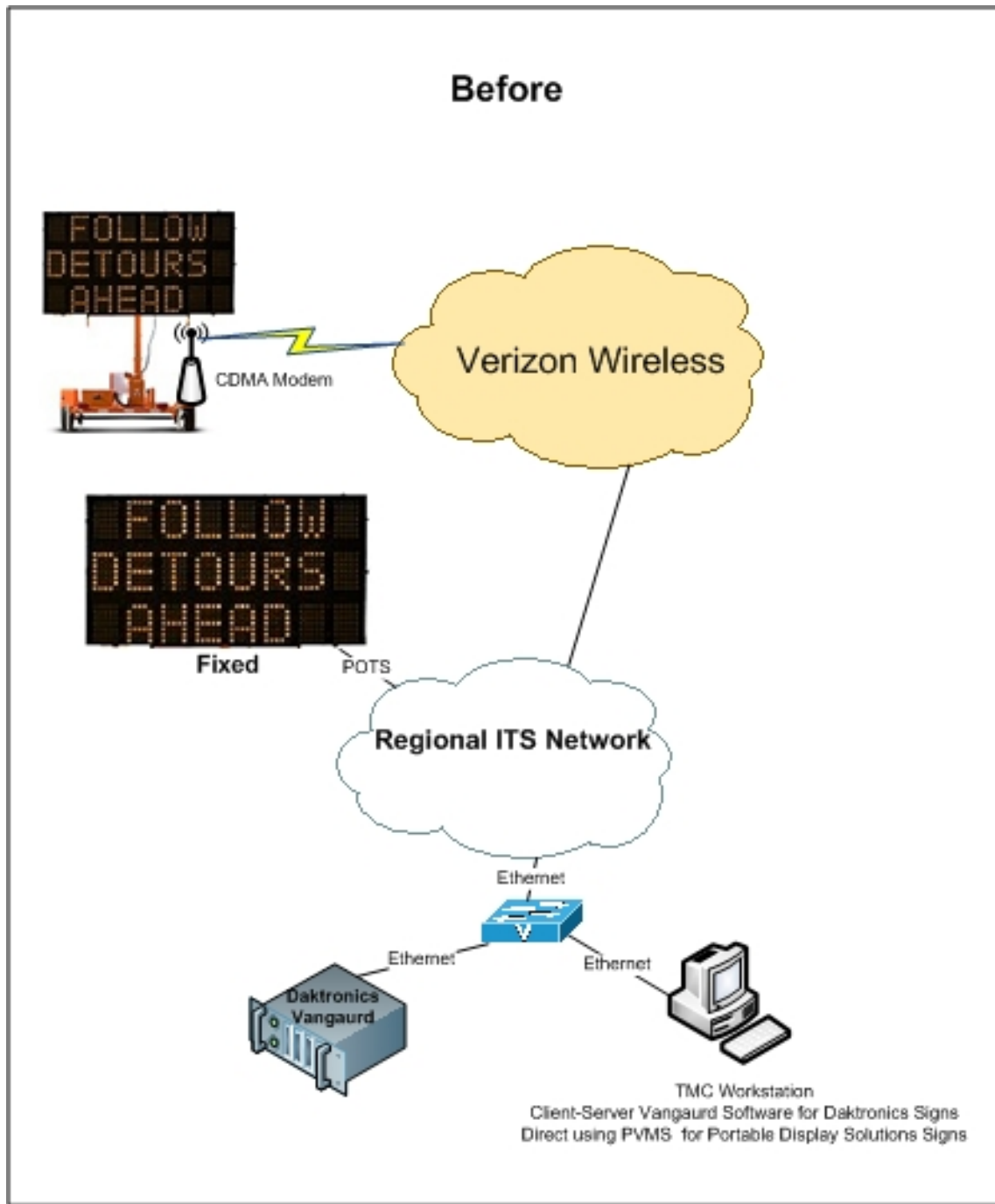
## Video Sharing

Video is shared on the network locally and with partners using IP Multicast. The ATMS must support sharing of video with Region 3's partners. The diagram below illustrates the current video sharing environment:



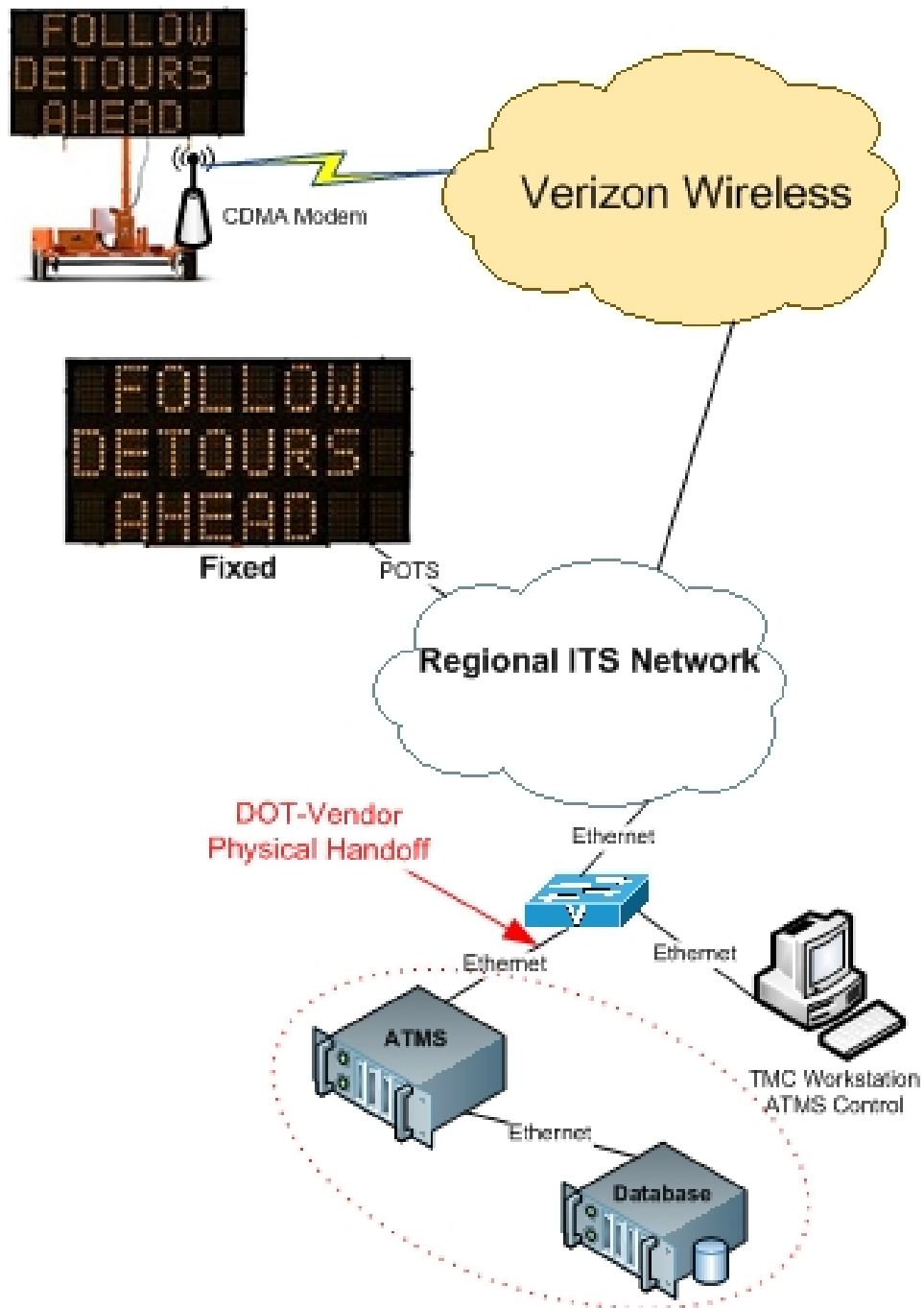
## VMS

Region 3 uses fixed signs primarily from Daktronics and portable signs from Display Solutions. Both fixed and portable signs are connected to the TMC via cellular modems using the Verizon network. The Daktronics signs are controlled individually or in groups through Vangaurd Control Software clients on the TMC workstations connected to a Vangaurd server in the TMC. Portable signs are controlled directly from TMC workstations using the Sunray software client.



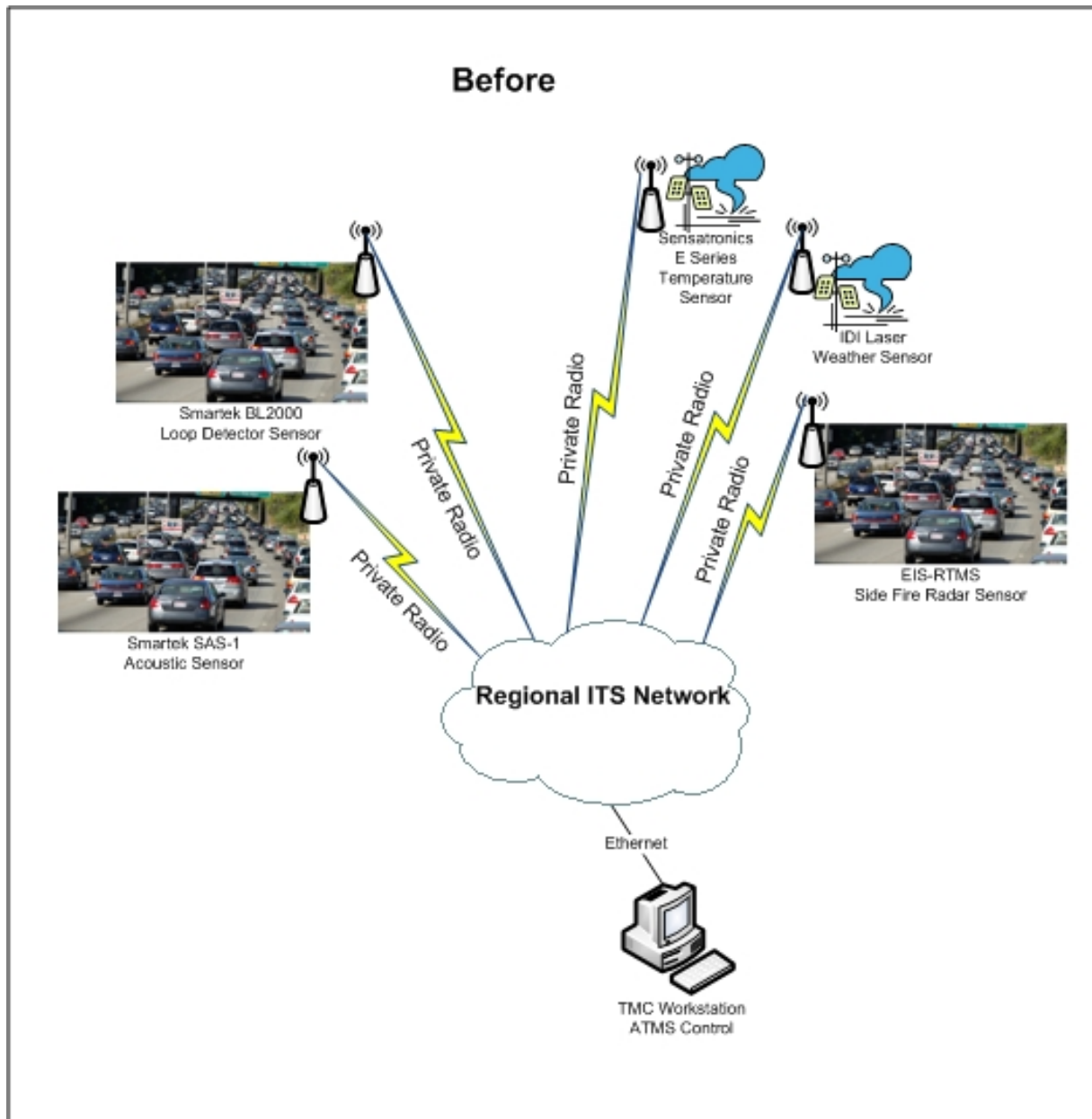
The ATMS must provide direct control of portable and fixed signs as defined in the Requirements Matrix

## After



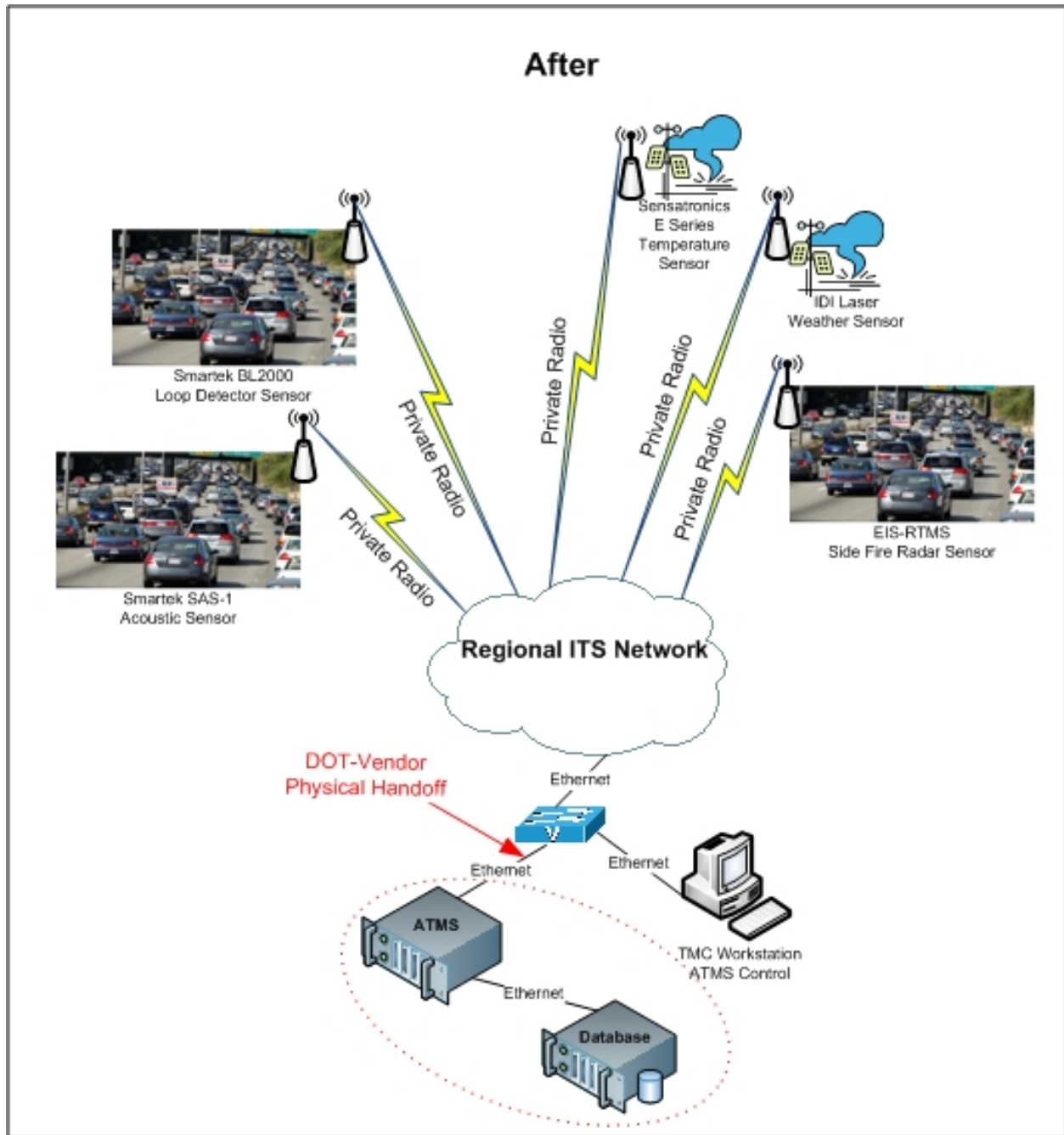
## Roadway Sensors – Traffic, Weather, Ramp Meters

Region 3 utilizes a number of different types and models of roadway sensors, including acoustic, radar and loop detector traffic sensors and weather sensors. Region 3 does not currently deploy ramp meters. The drawing below illustrates the concept of roadway sensor use in the Region.



Sensors are managed and data gathered using a number of device specific, proprietary software tools. The ATMS must provide integrated sensor management and data gathering and storage as well as real time continuous, on demand, and scheduled (polled) data updates using the existing hardware, in accordance with the Requirements Matrix.



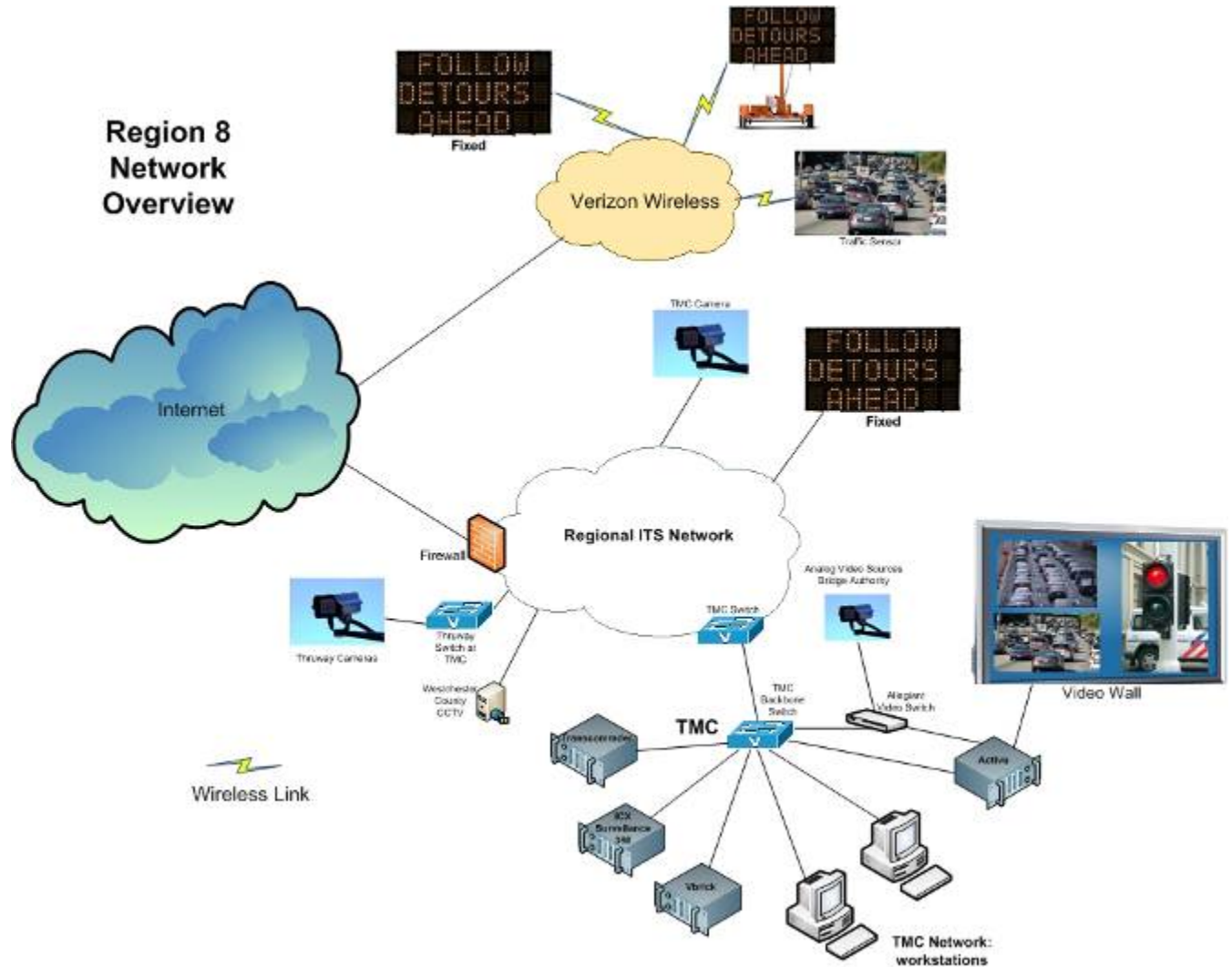


## Backup Center

Region 3 intends to establish a backup TMC in the NYS DOT Equipment Management Workshop. The ATMS must provide the same features and functionality as deployed in the main State Office Building TMC in the backup TMC, excluding video wall support. See the High Availability section in the Requirements matrix for more details.

## Region 8 Transportation Management Center

The Region 8 TMC is located in Hawthorne, Westchester County, NY. The center uses a variety of equipment deployed in the field to manage traffic. The detailed inventory of current equipment is included in Attachment 15. The diagram below provides an overview of the Region field equipment and connectivity.



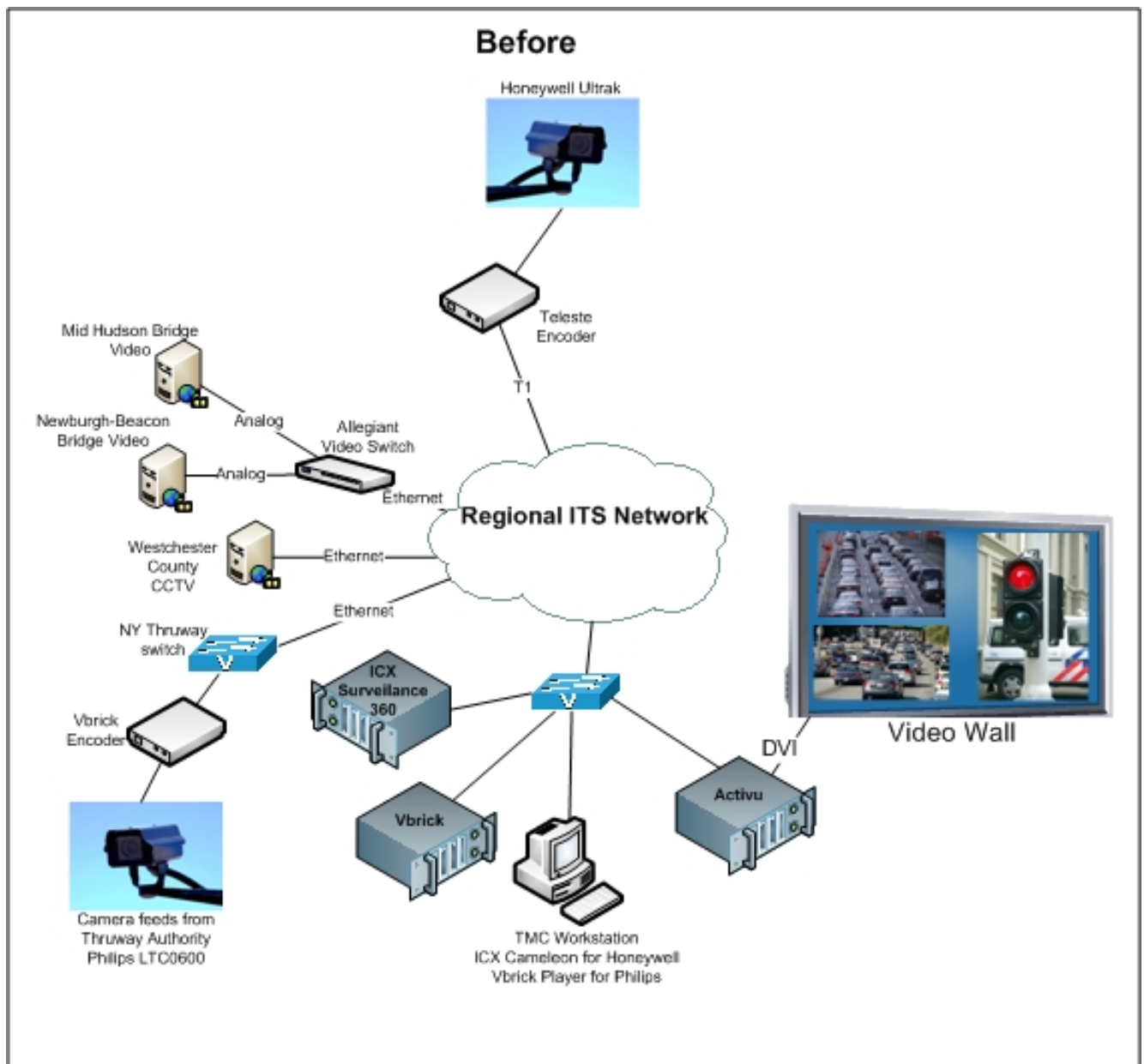
Following is a brief description of the equipment is use, network connectivity and operational overview for cameras, variable message signs (VMS) and roadway sensors.

## Cameras

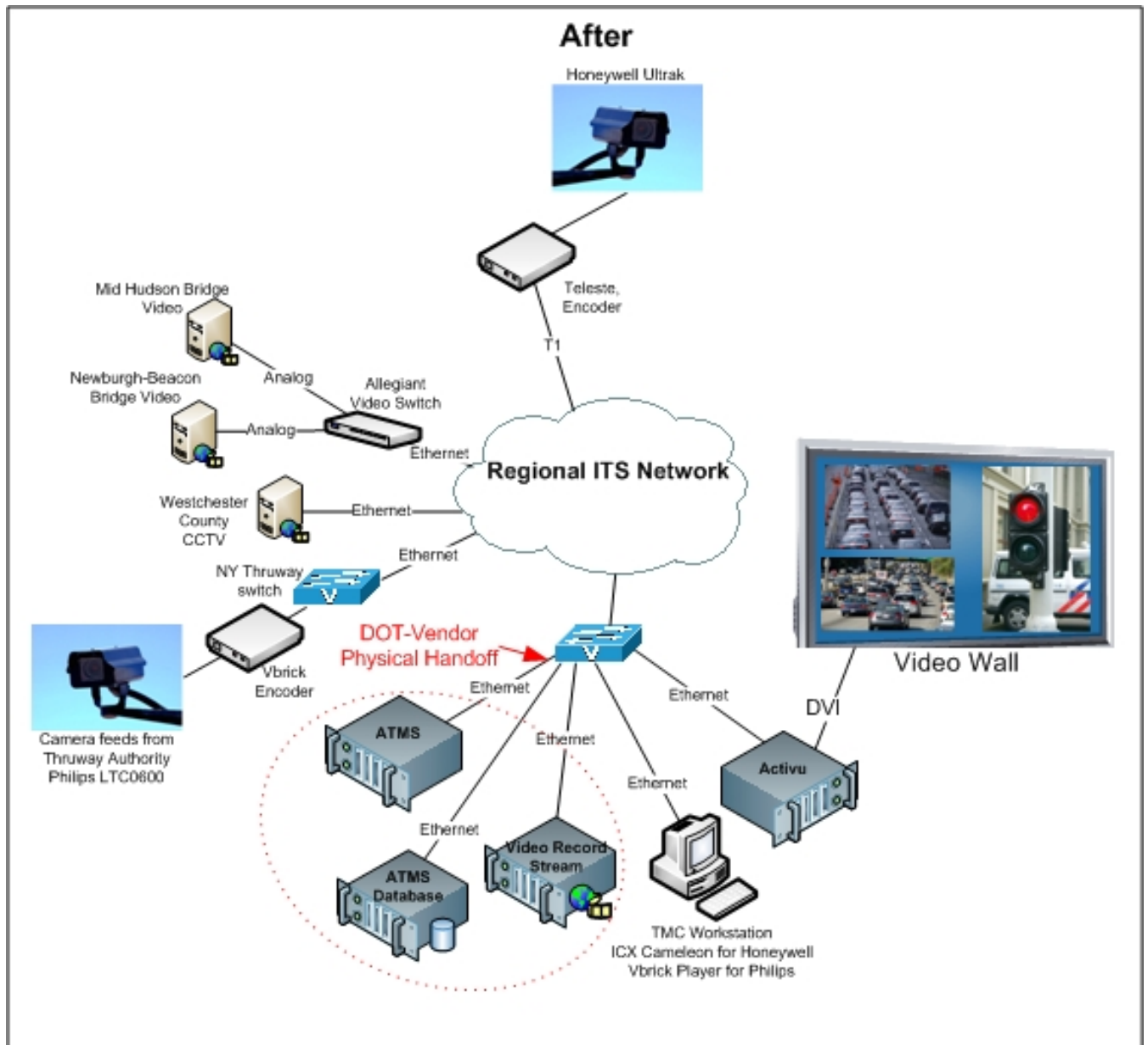
Region 8 currently has approximately 30 (85 total in the next few years) roadway cameras installed, a mix of analog and digital. Approximately twenty-five of these Honeywell Ultrak cameras are viewed and controlled using server based Cameleon software. Philips cameras are currently controlled by the NYS Thruway and viewed only by the TMC using workstation Vbrick Player client. TMC workstations access video feeds with the VBrick and Cameleon clients using IP Multicast .

The TMC video wall is made up of 36 DLP displays connected by DVI cable to an Activu server. An Allegiant video switch is used to convert analog video feeds. The Region plans to convert to all digital/IP cameras as funds become available for new purchases and upgrades.

The following drawings provides an overview of camera control and viewing as it works currently.



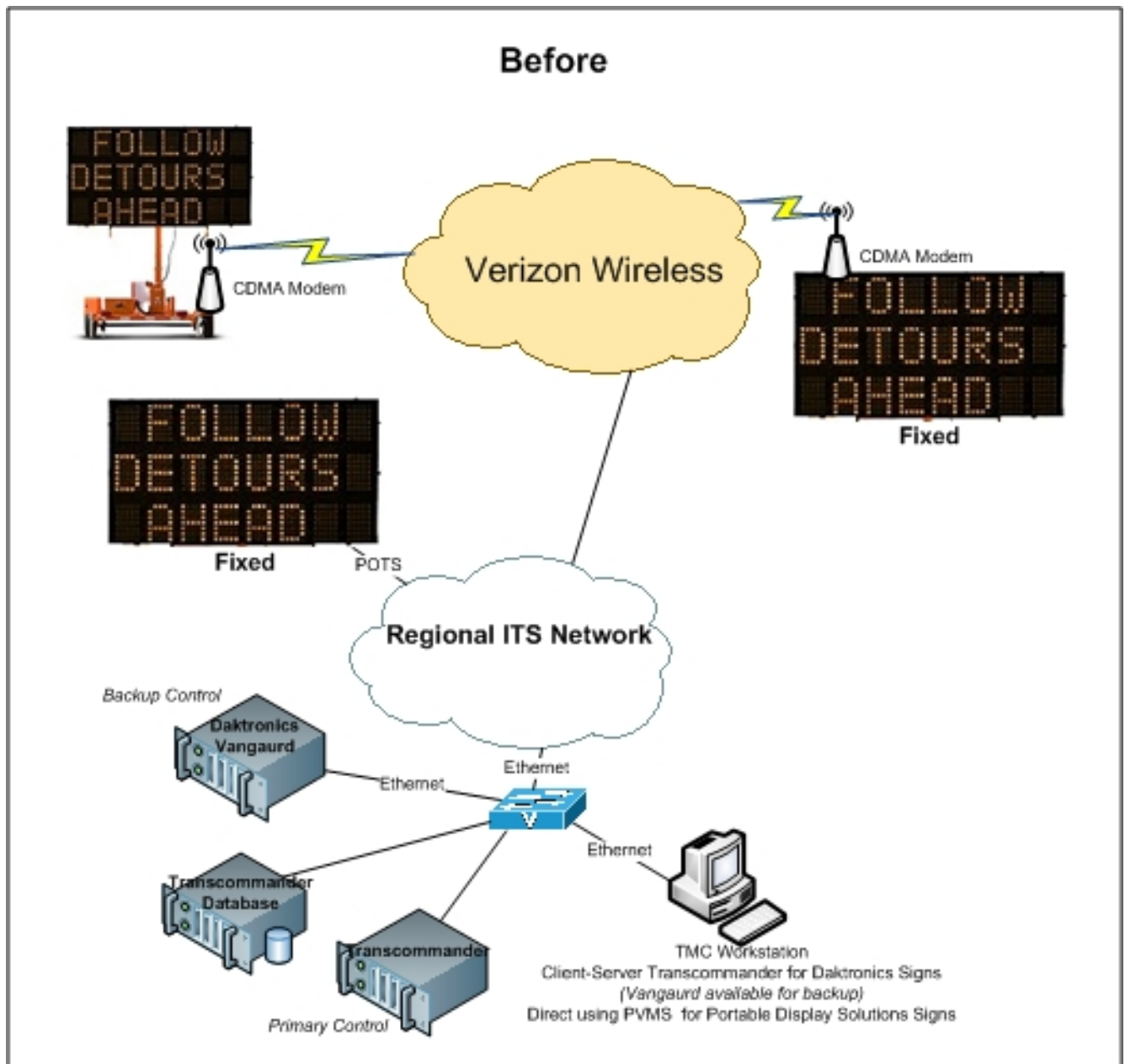
The following drawings provides an overview of camera control and viewing supported by the new ATMS.



## VMS

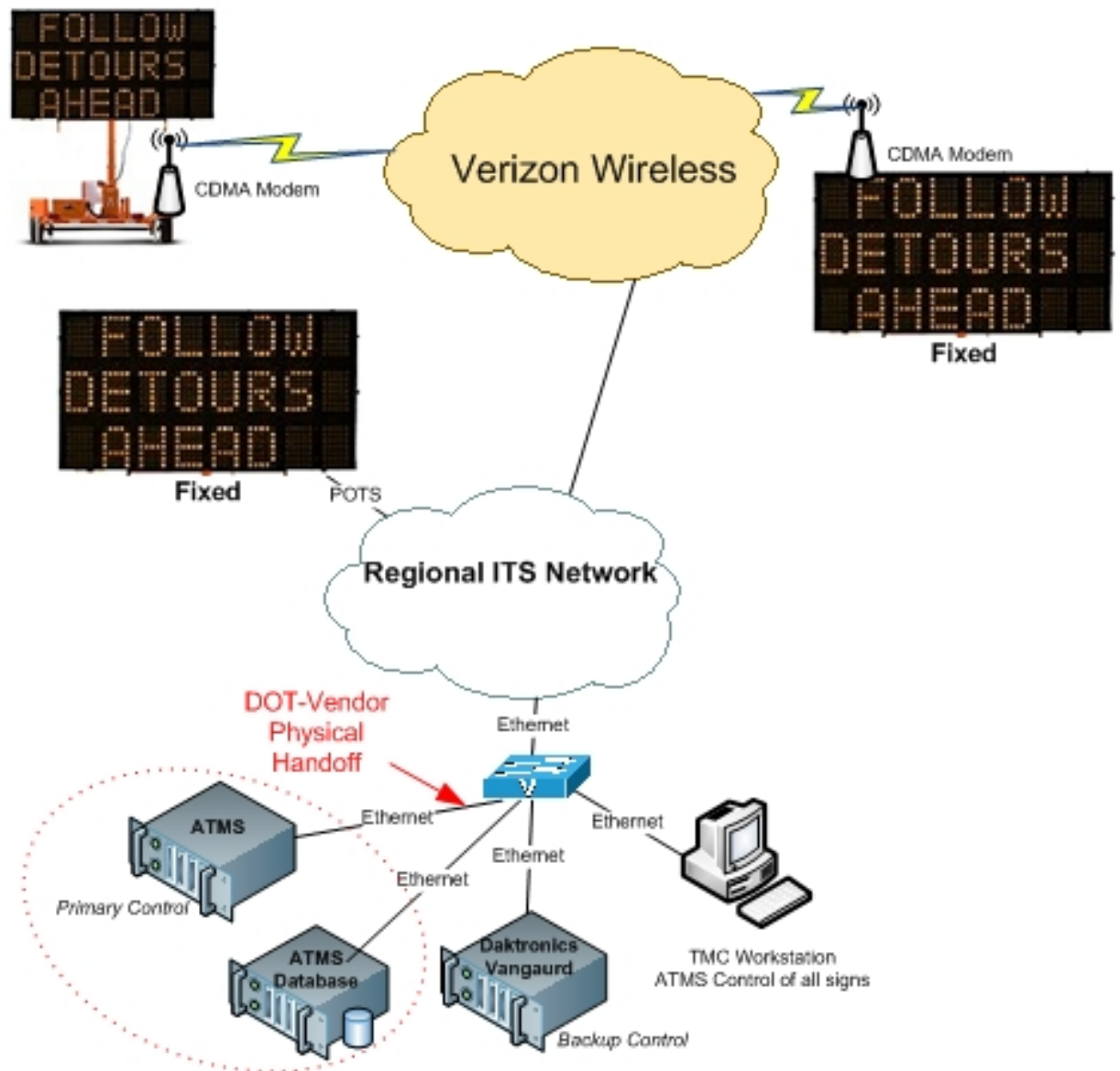
Region 8 uses fixed signs primarily from Daktronics and portable signs from Display Solutions. Most fixed and all portable signs are connected to the TMC via cellular modems using the Verizon network. All signs are connected full time and have a unique IP address assigned. The Daktronics signs are controlled individually or in groups through Transcommander server based software. A Vanguard server is maintained for backup and for occasional control of sign features not available with Transcommander.

Approximately 40 older portable signs are deployed, 4 American Signal, and 36 Display Solutions. Portable signs are controlled directly from TMC workstations using either PCMS or EasyHost software clients. It is expected that these signs will be replaced in the near future.



The ATMS must provide direct control of portable and fixed signs as defined in the Requirements Matrix

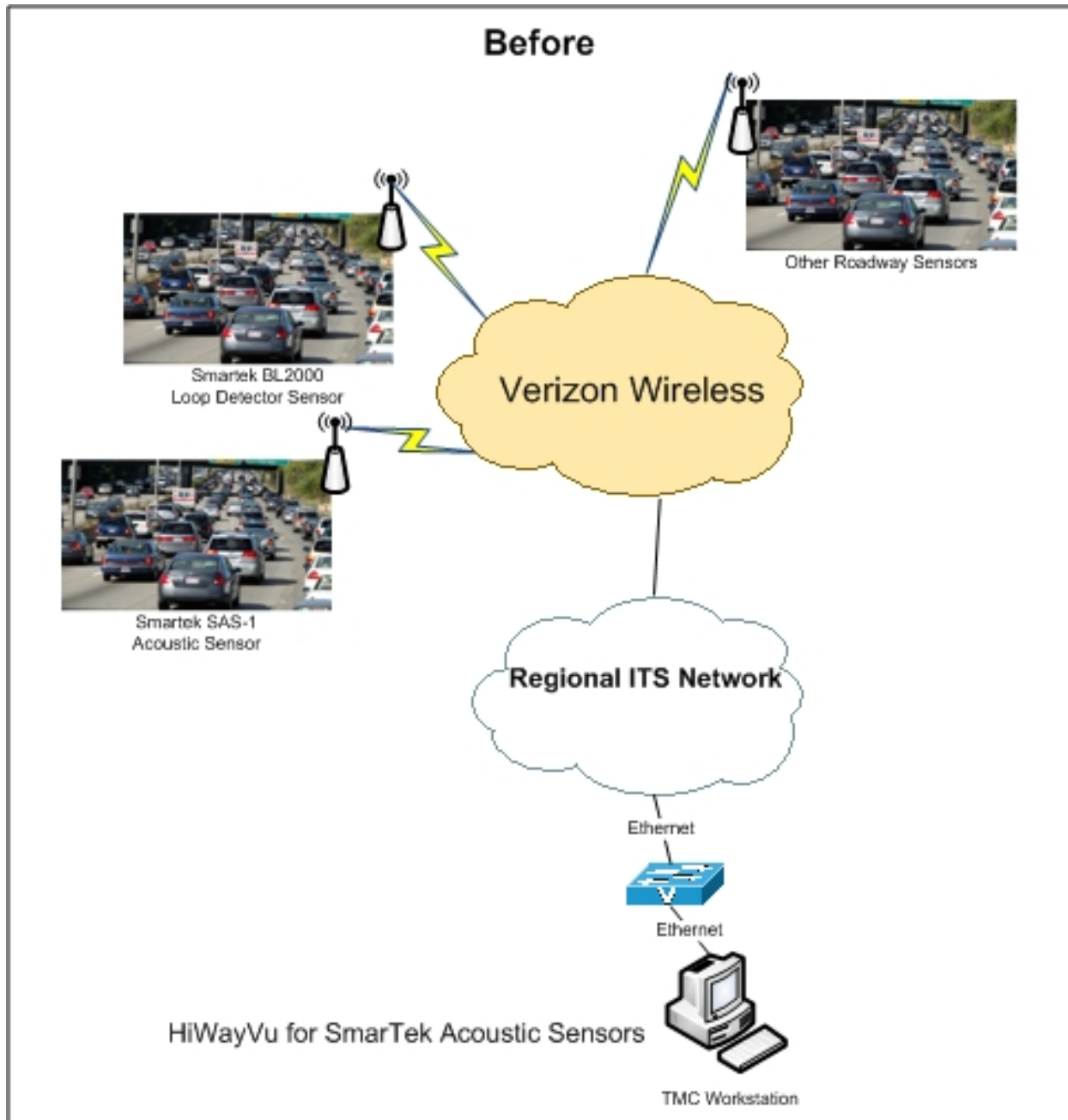
## After



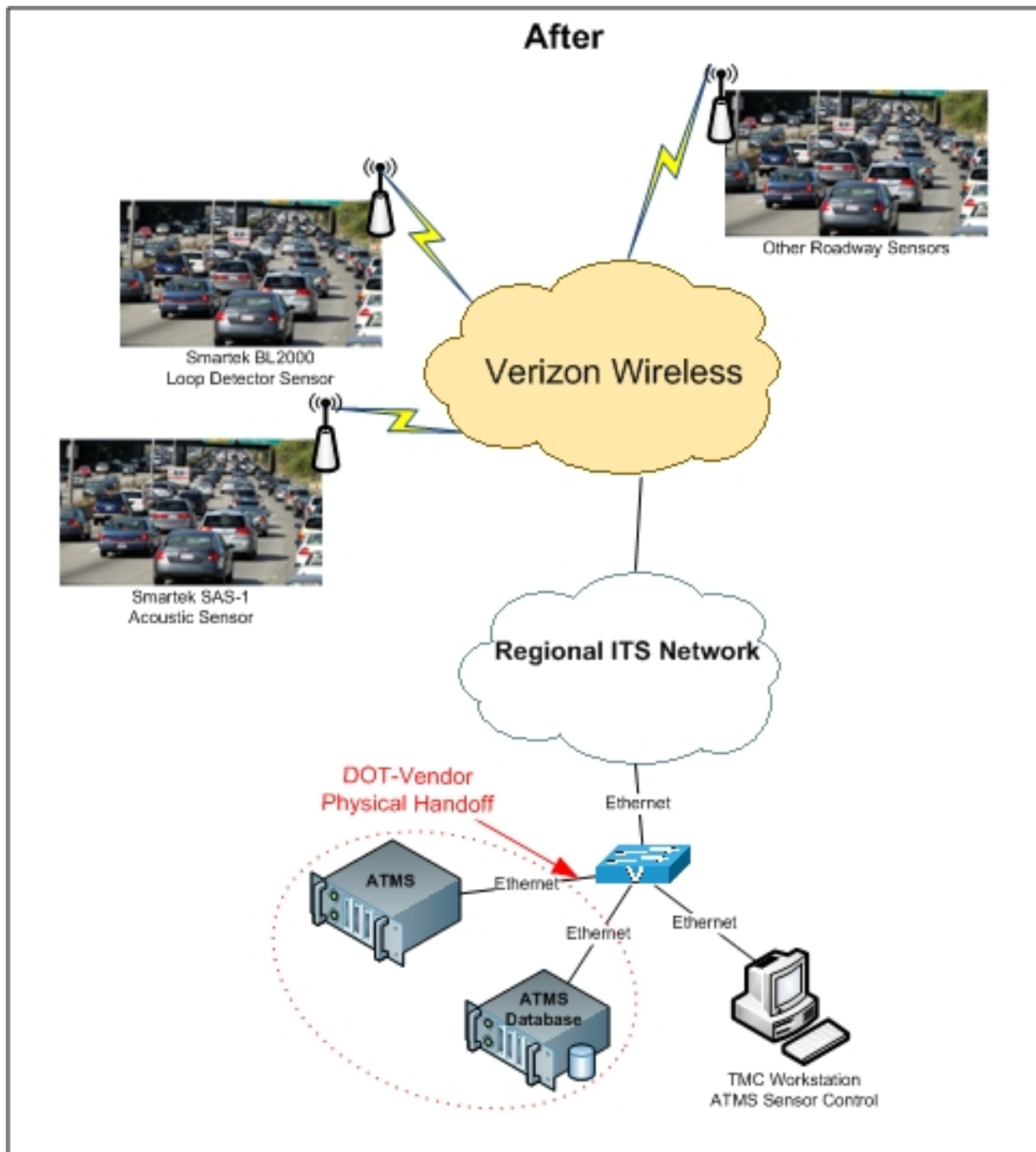


## Roadway Sensors – Traffic

Region 8 utilizes a number of different types and models of roadway sensors, including acoustic and loop detector traffic sensors. The drawing below illustrates the concept of roadway sensor use in the Region.



Sensors are managed and data gathered using device specific, proprietary software tools. The ATMS must provide integrated sensor management and data gathering and storage as well as real time continuous, on demand, and scheduled (polled) data updates using the existing hardware, in accordance with the Requirements Matrix.



Region 8 is in the process of deploying BlueTOAD sensors to collect speed data (origination/destination) by detecting Bluetooth devices in passing vehicles. Sensors data will be captured and sent to the service provider TrafficCast using cellular modems. Trafficcast will compile the data and send it to Region 8 over an Internet connection in XML format. These sensors are expected to be functioning in test mode by the end of 2011.