CT TECHNOLOGY

TRAFFIC CONTROL SYSTEMS AND SOLUTIONS

CASE STUDY:
TMB-134 RADAR DETECTORS FOR GLASGOW CITY COUNCIL

SUMMARY

Sub-ground induction loops have been used for decades as a standard approach for detecting vehicles at road traffic intersections. However, as alternative traffic management systems, and in particular radar technologies, continue to advance, the limitations of SCOOT loops are such that above-ground radar systems are becoming preferable as a detection solution. When Glasgow City Council were challenged with ineffective induction loops and competing for road space with utilities, they elected to trial a number of alternative technologies, including the Icoms TMB-134 Radar Detector.

THE CHALLENGE

With a population of around 1.8 million, Glasgow experiences one of the highest volumes of road traffic of any urban centre in Scotland. Combined with often severe weather conditions, this has led to repeated failing of sub-ground induction loops, partly due to the hostile environment, but also due to road occupations for infrastructure repairs. This was not only costly but also causing significant congestion problems in and around the city, leading the city council's traffic management team to evaluate alternative detection solutions.

THE SOLUTION

The engineering team at the City Council's Neighbourhoods Regeneration and Sustainability department assessed the requirements at a number of the city's traffic intersections. A particular issue was identified with detecting vehicle presence fully across intersections with more than one lane. Working in collaboration with C&T Technology, a junction with this scenario, the busy intersection of London Road and A728 Clyde Gateway, was chosen to trial the Icoms TMB-134 multi-lane radar detector.

The council's contractor mounted a TMB-134 detector at the top of an existing traffic signal pole at the intersection. The engineers were then able to set up the device using the existing cabling, defining up to 9 virtual zones to detect vehicles approaching the intersection. These zones could be set to detect on individual lanes, including right or turn left lanes.

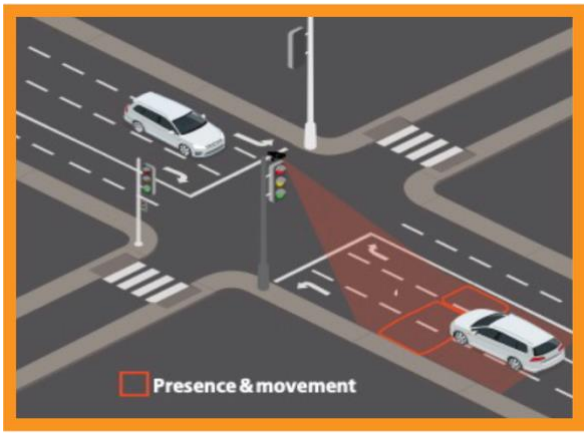


By configuring their position, size and function, each area activates a relay, triggered on movement of any vehicles or bicycles. The detection areas are also configured as presence detection zones, activating the relays until the point that the object leaves the zone. After several weeks in use, the council were satisfied that the radar detectors were operating successfully, day and night and in a range of weather conditions.

THE BENEFITS

TIME SAVING:
Repair or replacement of the failed sub-ground loop would typically have involved several weeks of planning and implementation of roadworks, which would undoubtedly have caused further traffic congestion.
The TMB-134 radar detector was installed, configured, and functioning in a matter of hours.

COST-SAVING:
The manpower, vehicle use, and materials typically required for the usual induction loop repairs would have cost the council several thousands of pounds. As the detector could be mounted on the existing traffic signal, there was also no requirement for any additional mounting pole equipment.
Installation and set-up of the radar detector was quick, efficient, and estimated to cost significantly less than the usual induction loop repair costs.



SUSTAINABILITY:
Implementing the radar detector has eliminated the use of wasteful materials as well as any potential pollution from repair vehicles and congestion caused by roadworks.
The TMB-134 radar is a clean and sustainable detection solution that minimises waste.

FLEXIBILITY:
Once installed in the ground, induction loops are difficult and costly to access, repair and adjust for changing traffic management requirements.
The TMB-134 is capable of reliably detecting up to 50 metres across three lanes. It is easily adjustable, flexible, and versatile enough to be suitable for most multi-lane approaches across the city.

TMB-134 MULTI-LANE RADAR VEHICLE DETECTOR SUMMARY:

- Replaces up to 9 inductive loops
- Separate detection areas for each lane,
- including turn-right and turn-left lane
- Easy, quick above ground installation
- Can be mounted onto existing traffic pole
- Accessible for interventions or maintenance
- Detection of moving and stationary vehicles
- Range: up to 70m from installation point
- Detection of vehicles and bicycles
- Configuration with dedicated software
- Works in all weather conditions

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