REGIONAL MUNICIPALITY OF OTTAWA-CARLETON REPORT
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON RAPPORT

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DATE 11 February 1997

TO/DEST. Transportation Committee

FROM/EXP. Co-ordinator, Transportation Committee

SUBJECT/OBJET **ROADWAY WEATHER INFORMATION SYSTEM (RWIS)**

## REPORT RECOMMENDATION

**That the Transportation Committee receive this report for information.**

BACKGROUND

The RMOC recently acquired a computerized road weather information system (RWIS) to ensure a more cost-effective and efficient method of maintaining Regional roads during winter weather conditions.

What follows is a brief summary of how the system works:

- RWIS stations have been installed at five sites within Ottawa-Carleton to report on pavement surface conditions. The system allows staff to obtain up to the minute pavement condition reports from each location. Stations located in the north-west and south-west of the Region also act as an early warning system, as most winter storms originate from these directions.

- At each site, road sensors, the size and shape of an oversized hockey puck, are placed within the roadway, flush with the pavement surface. These "pucks" are capable of measuring surface temperature, surface moisture, the presence of de-icing chemicals and a number of other parameters of interest to roads maintenance staff. Two of the sites also have atmospheric weather measurement devices to provide air temperature, wind speed, humidity, and related weather data.

- Additionally, each site includes subsurface temperature sensors located beneath the roads surface to assist in predicting future road surface temperatures.

- The data from these stations is transmitted via telephone lines to a central computer located at Environment Canada (EC) where meteorologists can then analyze the data, to produce specific weather forecasts for the road surfaces covering the next 24 hours.

- The system is a decision support tool, which provides Regional staff with real time, road condition data, allowing staff to make the right decision, at the right time to minimize costs and maximize effectiveness for efficient road maintenance.

With this system and partnership with Environment Canada, the RMOC will be in a better position to benefit from the experience and knowledge of staff by modifying road maintenance practices for any given storm; modifying the material application to meet weather conditions will result in savings. Once fully operational, the RWIS will assist staff to determine the right combination of salt and sand, based on the information received and forecast.

Over the 96/97 winter both Regional and Environment Canada staff will be familiarizing themselves and training with the system to allow full implementation next winter season. The provincial government is monitoring the Region's progress with the RWIS and has plans to expand the network of sensors within Ontario over the coming years.

Staff will demonstrate the RWIS in a brief video presentation.

*Approved by*
*Rosemary Nelson*

SV/rn