



## WEB CAMERAS - A COST EFFECTIVE SOLUTION

### Introduction

Web cameras are a cost effective way to provide road users, managers and operators with up-to-date traffic and road condition information. They are relatively cheap (installed cost should be under \$10K), are quick and easy to install and should require minimal maintenance. Once installed, still images from the camera can be transmitted via the Internet to a web site where motorists, police and City staff can obtain road information. Images can be updated every couple of minutes or as desired.

### Benefits

Just imagine the benefit to the motoring public who can easily view road conditions and adjust travel schedules or use alternate routes. Cameras may be used for roads under construction to both monitor the progress of construction as well review and monitor the contractor's traffic management. Web cameras can also be used to monitor facilities such as athletic ball fields where vandalism of synthetic turf fields may be of a concern.



### Technology

Data is typically transmitted via a cellular 1X modem which is installed in the camera enclosure. Data can also be transmitted via high speed (ADSL) phone lines. Cameras are typically mounted on streetlight or traffic poles to reduce the cost of installing a separate pole for the camera. Cameras should be located near established electrical service panels to reduce installation costs. The camera requires a 120V circuit fed from a 15A breaker. The ideal and lowest cost installation is a web camera mounted directly onto an existing service pole with some modification to extend the height of the pole.

DMD are committed to development and research of new technologies

and design practices aimed at giving our clients the best value. For any further information on topics in this Advisor please contact Don McLean at

### Design

It is preferred, but not mandatory, that a camera be located in an area where roadway lighting is present so that the lighting enhances the image in hours of darkness.

Key considerations when considering web camera include:

- Mount on light pole structures at a minimum height of 8.0 meters above the road grade to reduce the potential for vandalism;
- Locate for easy access;
- Mount on a pole structure that is unlikely to be damaged from vehicle impacts. Cameras should not be located on structures with frangible or breakaway bases;
- Preferably oriented north, northeast or northwest. A camera facing south or east will be adversely affected by sun glare, resulting in the camera becoming ineffective for several hours of the day;
- New camera technologies offer improved images during hours of darkness.

Information from the camera can be displayed on a City or Municipal web site and refreshed automatically. Those interested in roadway conditions can simply access the site via the Internet. An example web site may be found at:

<http://www.th.gov.bc.ca/bchighwaycam/index.aspx>

The main operating cost is for data transmission. Data transmission costs are approximately \$90.00 a month for cellular and may be slightly less for transmission via phone lines depending on provider. No specific maintenance is required.

### Conclusion

DMD have been involved in the design and deployment of many roadway web cameras. We are familiar with new and emerging camera technologies and as such can offer the best value. DMD can prepare installation drawings and specify camera equipment. If required DMD can purchase and assemble camera components as they have done on numerous projects.

