

## PROJECT

West Block Renovation Project  
Canadian Parliament Buildings  
Ottawa, Canada

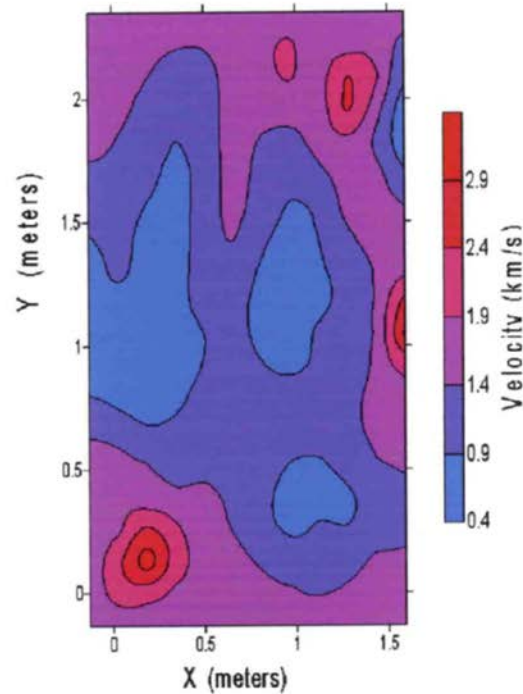
## CLIENT

UMA Engineering, Ltd.  
Mississauga, Ontario



*Upper Right:* Engineers are gathering a large number of mechanical pulse velocity readings on this pier to perform a tomographic analysis.

*Lower Right:* Tomogram or velocity map of the interior of the pier generated from the velocity data showing void spaces at interior.



## PROJECT DESCRIPTION

Testing was conducted on the masonry walls of the West Block and Centre Block in Ottawa to help characterize the material properties and the as-built wall configuration.

## SERVICES PROVIDED BY ATKINSON-NOLAND

- Training of UMA Engineering personnel to conduct flatjack testing in accordance with ASTM C 1196 and ASTM C 1197. In addition, shear test procedures were demonstrated.
- Through-wall mechanical pulse velocity measurements to characterized wall construction and solidity and to locate tie courses.
- Tomography of one masonry pier and a flying buttress to identify anomalies in the cross sections.



Atkinson-Noland & Associates  
Consulting Engineers  
[www.ana-usa.com](http://www.ana-usa.com)

2619 Spruce Street  
Boulder, CO 80302  
303.444.3620

32 Old Slip, 10th Floor  
New York, NY 10005  
917.647.9530