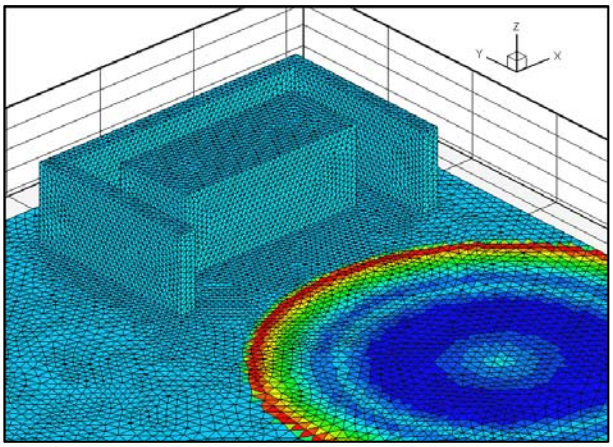

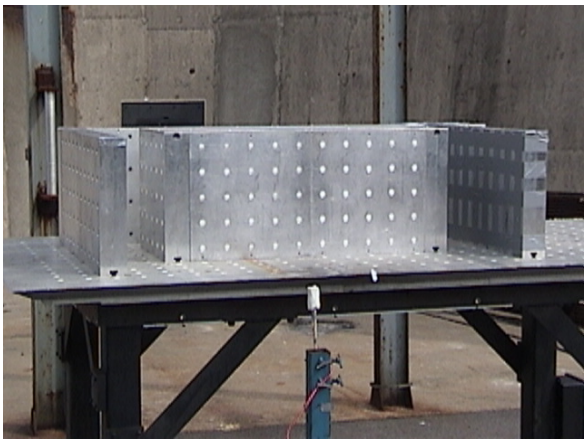

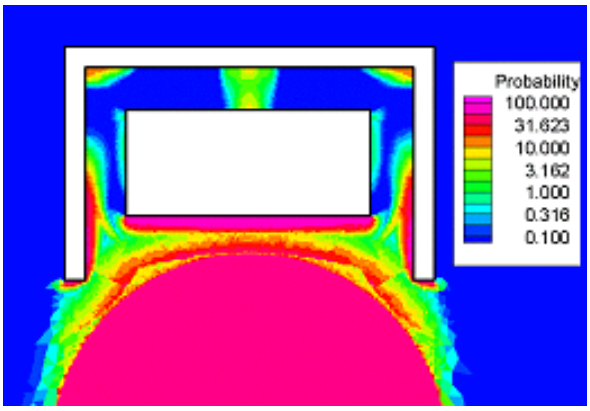

DESCRIPTION:

Martec Limited has extensive experience in analyzing the interactions between blasts and structures, and also the channeling of blast energy in semi-constrained environments. Assessing the type or extent of structural damage or harm to people that can be expected in these scenarios is essential in structural design and in the handling of situations to minimize potential negative consequences.

Through involved analyses using Martec's custom fluid dynamics codes, and industry standard finite element analysis packages, a quick estimate of the type and scope of damage can be determined in minimal time with very little overhead cost. Attempting to duplicate the wide-range of urban situations which can be simulated would require prohibitively expensive experiments. Through use of sophisticated numerical modelling, the appropriate cases for experimental testing can be selected quickly and with a high degree of confidence.

References:

1. R.C. Ripley, T.E. Dunbar, L. Donahue, B. von Rosen, "Personnel Vulnerability Predictions Using Small-Scale Air Blast Modeling", 18th International Symposium on the Military Aspects of Blast and Shock, September 2004, Bad Reichenhall, Germany.
2. L. Donahue, D.R. Whitehouse, T. Josey, D.V. Ritzel, P. Winter, "Non-Ideal Blast Effects for Vulnerability/Lethality Analyses", 21st International Symposium on Ballistics, April 2004, Adelaide, Australia.
3. R. C. Ripley, B. von Rosen, D. V. Ritzel, and D. R. Whitehouse, "Small-Scale Modeling of Explosive Blasts in Urban Scenarios", ISB 2004, 21st International Symposium on Ballistics, April 2004, Adelaide, Australia.