

# Concrete Pipe **Insights**

A Message from the American **Concrete Pipe** Association

## Compaction Equipment and Construction Loads

Construction loads are an important but often overlooked factor in pipe design and installation. Even when construction live loads are considered, the loads that result from the compactive effort are often ignored.

Most standard specifications for pipe include minimum cover requirements for construction equipment live loads. To a lesser extent, these specifications also include a note of caution with regards to the use of vibratory or hydrohammer compaction equipment. These type compactors are capable of producing pipe damaging stresses.

Therefore, one should consider a safe distance from the pipe before the use of vibratory or hydrohammer compaction equipment. Some specifications recommend 4 to 4.5 feet from the pipe as a safe distance. In most cases, the minimum cover requirements for construction equipment live loads should also suffice as a safe distance for the use of these types of compaction equipment.

Two publications, which are available from the American Concrete Pipe Association, on this matter are listed below as references:

- ▶ *Effective Vibratory Compactors on Buried Concrete Pipe*, by Poucher, Novak, and Hindy, The University of Western Ontario, 1976
- ▶ *Concern: Aggressive Compaction Methods*, Technical Bulletin, Pacific Northwest Concrete Pipe Association, 1993



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