

case study: Forest Lawn Dry Pond

Pisa²[®]



project details	wall system	owner	design	manufacturer	installer
	Pisa2	City of Calgary	Landscape Architect: Lim Associates Inc. Retaining Wall Engineer/Site Engineer: Westhoff Engineering Resources, Inc.	Expocrete Concrete Products Ltd. Calgary, AB	General Contractor: Caliber Systems Inc. Retaining Wall Subcontractor: Custom Park & Leisure Ltd.

>> Municipal Project



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This dry pond project was constructed between July and September 2003 in Calgary, Alberta. The dry pond was built for overflow of water during storm water runoff. The Pisa2 terraced retaining walls were built to provide seating at this location for audiences of sporting events.

Installation specifications were very detailed, leaving no room for error. Surveyors and builders had to be extremely accurate since each tier was 100m long; the slightest error could easily accumulate over such a long distance. With a three-tiered wall system strict construction methods had to be maintained in order to avoid any inconsistencies in the finished product. "The opportunity for error was very high", remarked Patrick from the retaining wall subcontractor, Custom Park & Leisure Ltd. Every effort had to be made to ensure that careful placement was maintained throughout construction.

Each terrace was slightly sloped to encourage drainage, with each wall only 1m apart from the next. Within that 1m area there was road crush compacted to 98% SPD, drainage rock wrapped in filter fabric, and multi-flow pipe to allow for drainage. Since proper drainage was the name of the game for this entire project, special attention was paid to using the correct materials and technique.

All blocks were hand-laid by a 4-man crew. They used a Screed wizard system for the base levelling, which tripled production for the base. The total height of the three walls reached 1.5m, for a total area of 360m².

The whole project is surrounded by reinforced concrete stairs, edging, seating areas, and walkways, which again allowed for minimal errors. When pouring the reinforced concrete, workers had to cover all of the Pisa2 with a medium poly plastic to protect the blocks from splatter.

The Pisa2 walls performed well under intense scrutiny by city engineers, the general contractor, sub-contractor, design engineers, and manufacturer – each doing their part to ensure the long-term stability and durability of the structures. Undoubtedly Calgarians will be cooling their heels on these terraced walls for years to come.



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