



**IT'S ALL ABOUT ME.**

**OKAY. IT'S REALLY ABOUT THE GROUNDWATER.**

**BUT I'M PROTECTING IT.**

Concrete pipe is instrumental in conveying sanitary wastewater and stormwater while preserving the surrounding groundwater quality. Concrete pipe is available in a huge variety of shapes and sizes, and its modularity means it can meet the needs of any sanitary wastewater or stormwater project. With its long history of proven performance, precast concrete is the material of choice for piping projects.

Get more details and see more  
precast concrete solutions at  
[www.precastsolutions.org](http://www.precastsolutions.org).

**precast  
solutions**



## WHY PRECAST CONCRETE? ROUGH AND TOUGH

The strength of concrete increases with time. Other materials can deteriorate, experience creep and stress relaxation, lose strength and/or deflect over time. The load-carrying capacity of concrete is derived from its own structural qualities and does not rely on the strength or quality of the surrounding backfill material.

## HERE FOR THE LONG HAUL

Studies have shown that manufactured concrete products, such as concrete pipe, can provide a service life in excess of 100 years. For severe service conditions, additional design options are available that can extend the life of the concrete product. This is important when calculating life-cycle costs for a project.

## SETTING THE STANDARDS

Concrete pipe is produced in a plant-controlled environment using repeatable processes. The design and manufacture of concrete pipe is covered by many ASTM International Standards to help ensure quality:

- ASTM International C 14, "Standard Specification for Concrete Sewer, Storm Drain, and Culvert Pipe."
- ASTM International C76, "Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe."
- ASTM International C443, "Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets."
- ASTM International C497, "Standard Test Method for Concrete Pipe, Manholes Sections, or Tile."
- ASTM International C506, "Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe."
- ASTM International C507, "Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe."
- ASTM International C655, "Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe."
- ASTM International C990, "Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants."

## WATERTIGHT? DARN RIGHT

Concrete products manufactured in a quality-controlled environment are watertight. Standard watertight gaskets and sealants are formulated to adhere to concrete, making multiple-seam waterproof structures possible.

## INSTALLATION IS EASY

Because concrete pipe can be manufactured well in advance, it is ready for transportation to the job site at a moment's notice. Concrete pipe is quickly installed using a crane and a small crew.

## HEAVYWEIGHT CHAMPION

With a specific gravity of 2.40 and superior frictional resistance, concrete pipe resists the buoyant forces associated with underground construction better than all other pipe materials. Alternative materials such as HDPE have lower specific gravities, causing potential buoyancy problems.

## CAN TAKE THE HEAT

Concrete pipe is noncombustible. Materials other than concrete and steel are flammable and/or do not perform well at elevated temperatures. Fiberglass begins losing structural integrity at 200 F; HDPE begins to melt at 266 F.

## MODULARITY

Because of the modular nature of concrete pipe, piping systems of nearly any size can be accommodated. Concrete pipe is designed and manufactured for simple connection to reduce installation time.

## RESISTS CHEMICAL ATTACK

Concrete is resistant to most substances. Concrete pipe can be designed to withstand anticipated corrosive agents.

## READY WHEN YOU ARE

With hundreds of manufacturers throughout North America, concrete pipe can be ordered from most cities and regions. Concrete pipe is produced in advance and readily available when needed at the job site. This ensures a competitive market and a ready supply.

## LOOKS GOOD IN "GREEN"

Besides water, concrete is the most frequently used material on earth. It is nontoxic, environmentally safe and composed of natural materials, so ground-water quality is not affected after installation.

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