PIPPING CONCRETE

Owner and Fabricator:

Pipping Concrete, Inc.
N5888 Center Road
Brandon, WI 53919

Designer:

James W. Todd, P.E.
Excel Engineering, Inc.
Fond du Lac, WI

Drawings:

Excel Engineering will provide a design and drawings for a storage tank that is specific to the client's need for storage volume. These structural details must be included in a site plan prepared by others.

Excel Engineering will be assuming responsibility for the compliance of the tank with the structural and foundation requirements of NRCS Standard 313. An engineer from Excel Engineering licensed in Wisconsin will stamp and sign the cover sheet of each submittal package along with the following statement:

> "The design in this submittal package complies with the Wisconsin NRCS Waste Storage Facility Standard (Code 313) criteria for fabricated structures, including foundation, liquid tightness, structural loadings, structural design, and slabs on grade."

Material and Design:

The storage structures are reinforced concrete tanks. Circular tanks are available in various diameters and in heights of 12 or 16 feet. Rectangular tanks are available in heights of 12 feet.

Access ramps into the storage tanks are an available option.

Concrete strength required is 4000 psi at 28 days for the walls and floor slab. Grade 60 steel is utilized.

The structure design will be based on soils at the site, surcharge requirements, and backfill conditions dictated by the site or needs of the operator.

The circular tanks are designed utilizing a hoop design concept. Control joints are not applicable to this design method. The horizontal reinforcement continues through the vertical construction joints in the tank walls.

Construction Certification: The Excel Engineering, Inc., licensed engineer who certified the design will also need to certify that the completed tank installation meets the design and construction plans, based on the data provided by the Pipping superintendent of the site construction crew who performed the installation. The following statement will be sufficient to document the certification of the Pipping tank installation, along with the stamp of the licensed engineer:

> "To the best of my professional knowledge, judgment and belief, the storage tank has been installed in accordance with the construction drawings and specifications and meets the Wisconsin NRCS Waste Storage Facility Standard (Code 313) criteria for fabricated structures and Wisconsin NRCS Specification 4, Concrete."

NRCS Review and Approval: The NRCS National Design, Construction, and Soil Mechanics Center reviewed sample designs for circular and rectangular storage tanks. Their review concluded that the design meets the requirements of Standard 313.

The State Conservation Engineer in Wisconsin accepted the "one-at-a-time" design business model employed by Pipping Concrete in a letter dated July 3, 2008. This method remains applicable and was confirmed by letter dated February 25, 2014.