



The Delta Advantage

Design Topics for Precasters

Volume 5, Issue 2

May 2002

Getting the Most From Your Design Consultant

By Ronald E. Thornton, PE (Delta Engineers)

Engineers and architects are holding precast producers increasingly more responsible for the structural design of their products. And, many producers do not have a licensed professional engineer on staff to prepare and seal design computations as required. Moreover, scheduling demands usually require that the stamped calculations and shop drawings be submitted immediately after the order is placed, if not sooner.

Precasters are frequently turning to consulting engineers for the preparation of structural designs and shop drawings for a number of reasons. Among them:

- No licensed engineer on staff
- Staff engineer may not be licensed in a neighboring state where the product is being supplied.
- Staff engineers and drafters are overbooked
- Staff engineer desires a peer review or guidance with more difficult design situations.
- Transfer of liability; Only engineering firms can obtain professional liability insurance. Therefore, precast companies who are doing their own designs are essentially "self-insured" for errors and omissions.

Whatever the reason for engaging the services of a consulting engineer, there are several things one can do to assure timely and effective service:

- Meet with the consultant before you get into a rush job situation so that he or she can become familiar with your products, design standards, etc. Find out who your contact is within the engineering firm and establish up front how projects will be billed.
- Involve the consultant as early in the project as possible. Get plans, specifications and any pertinent information together and send it to the consultant so that they can review the materials, request any further information they may need, and schedule their work accordingly.
- Provide as much information as possible including the job name, plans, specifications, soil borings, schedules, assumptions (thicknesses, etc.) and constraints (weights, etc.). Also, how many copies of computations and drawings are needed.

- Take time to carefully review shop drawings and design summaries prepared by your consultant, prior to submission.

Some products can be designed as standard if used repeatedly on different projects. This can save considerable time and expense. However, such standards must be reviewed carefully when used to assure that the assumptions used in the standard design meet the requirements for each specific project on which it is used. Changes in fill depth, live load, soil conditions, etc. can render your standard design invalid when such changes occur. Your consultant should assist you in determining the applicability of your standards against the specifications for any particular project.

Having an established working relationship with a consulting engineer should be like having an extension of your staff such that he or she is there when and only when needed.

Avoiding Burnout

Ron Thornton was quoted in the Spring 2002 issue of MC Magazine in an article entitled "Beware of Burnout – How to keep your career on fire". Ron pointed out in his interview some of the anti-burnout activities here are Delta such as birthday recognitions, attitude adjustment parties, picnics, sporting events and holiday celebrations. In keeping with our tradition, we recently organized a wine tasting tour of the Finger Lakes region. Our bus tour included 22 employees, spouses and significant others with stops at about 8 wineries. Not only was the trip relaxing, but we also found the souvenirs we brought home to be a good form of relaxation after a hard day at the office – Cheers!

Prepared by: Ronald E. Thornton, PE
Delta Engineers, PC
164 Court Street
Binghamton, NY 13901

? **Phone:** (607) 231-6612 ? **Fax:** (607) 231-6650

• **E-mail:** rthornton@deltaengineers.com

? **Web:** www.deltaengineers.com

ADDRESS CORRECTION REQUESTED

Delta Engineers, PC
164 Court Street
Binghamton, New York 13901



DELTA ENGINEERS, PC
164 Court Street
Binghamton, NY 13901

PHONE: (607) 231-6612
FAX: (607) 231-6650
E-MAIL: rthornton@deltaengineers.com
WEB: www.deltaengineers.com

Delta Engineers, PC provides specialized services to the precast/prestressed concrete industry including:

- *Structural design and analysis*
- *Erection plans*
- *Detailed shop drawings*
- *Plant automation consulting*

Proud Members of



PCANY



Featured Project

Project: Northside Public Works Bldg, Vienna, Va.
Produced by: Rotondo Precast, Fredericksburg
Structural Design by: Delta Engineers, PC

This project included a detention structure consisting of 180' of 18' x 8' precast Omega 3-sided frame elements. A small precast outfall control box was placed inside the structure and the ends were capped with precast end walls. The cast-in-place bottom slab was also designed by Delta Engineers.



Please send us your project photos to be featured here