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Project No. ASD92-031-00
February 11, 1992

Mr. Bill Mitchell
G.W. Mitchell & Sons, Inc.
P.O. Box 12638
San Antonio, Texas 78212

Re: Retainer Blocks
Load Test Results

Dear Bill:

As requested, Raba-Kistner Consultants, Inc. (R-KCI) has conducted the load testing of the plastic HDPE panels along with concrete panels from four other sources. The concrete blocks are commercially available products or they are typical of what is used for retainer blocks.

The testing of the panels was conducted in our laboratory using a Forney LT-900 Universal testing machine. Since the panels would not fit full scale in our equipment, several sections were sawed from each panel and tested to obtain a breaking stress. This stress was then used to obtain a uniform load which would create this stress based on the actual panel size or actual span. The test results are presented on Plate 1 attached. As you can see from this data, the plastic HDPE panels out performed all of the concrete panels which were tested. This data illustrates that the use of the plastic panels is applicable in situations where the typical retainer block is specified.

We appreciate the opportunity to be of technical service to you on this project. If we may be of additional assistance, please do not hesitate to call.

Very truly yours,

RABA-KISTNER CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read "Dale B. Martin", with a long horizontal flourish extending to the right.

Dale B. Martin, P.E.
Director
Materials & Construction Engineering

/dgp
Copies submitted: Above (1)
Attachment

Load Test Results

<u>Product</u>	<u>Size</u>	<u>Capacity of Panels (lb/ft²) at Time of Failure</u>
HDPE Plastic Panel	20 x 48	1520
HDPE Plastic Panel	20 x 48	1310
Panels from City Water Board	24 x 24 x 2	810
Panels from City Water Board	24 x 24 x 2	1210
Panels from City Water Board	24 x 24 x 2	1180
County Wide	12 x 36 x 1 1/2	500
County Wide	12 x 36 x 1 1/2	470
G.W. Mitchell Site Cast	18 x 18 x 1 1/2	1200
G.W. Mitchell Site Cast	18 x 18 x 1 1/2	1000
Macon Concrete Products	24 x 36 x 1 1/2	900
Macon Concrete Products	24 x 36 x 1 1/2	760

NOTE: Test results based on span of panel, 18 x 18 panels spaned 18 inches, 12 x 36 panels spaned 36 inches, 24 x 36 panel spaned 24 inches, etc.).