



CONSULTANTS SE, INC.

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July 10, 1992

Bartran Homes  
1136 East Stuart  
Fort Collins, CO 80525

ATTN: Mr. Bill Bartran

RE: Proposed Pavement Sections  
(Stabilized Subgrades)  
English Ranch P.U.D.  
Fort Collins, Colorado  
Job No. 12921007

Mr. Bartran:

Because of observed instability in the natural soil subgrades, the pavement subgrades in the English Ranch subdivision were stabilized using Class "C" fly ash. After stabilization, the finished grades in some of the treated areas appeared to be as much as 1-inch higher than design top-of-subgrade. At this time, we have been asked to evaluate that situation with regard to the design pavement sections for the new roadways. The results of our evaluation are presented in this letter.

Design pavement sections for the English Ranch subdivision include 3 or 4 inches of asphaltic concrete overlying a 6-inch aggregate base. That pavement structure was designed to be supported on a compacted soil subgrade comprised of site soils. At this time, 9 to 12 inches of the subgrade has been stabilized with Class "C" fly ash to develop a more stable subgrade for placement of the pavement structure.

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Job No. 12921007  
July 10, 1992  
Page 2

In our opinion, stabilization of the subgrades has significantly increased the load carrying capacity of the in-place materials. If stabilization of the subgrade had been included in the original pavement design, we would have suggested that a properly stabilized subgrade could approach being equivalent to an aggregate base course as a replacement. However, since laboratory evaluation was not completed to verify the anticipated strength of the blended materials, we suggest that an equivalency factor of 2 inches of stabilized subgrade per 1-inch of aggregate base would be an appropriate substitution. It is our opinion that the resultant section involving 9 to 12 inches of stabilized subgrade with 5 inches of aggregate base and 3 inches of asphalt surfacing would be more than equivalent to the originally designed section.

We appreciate the opportunity to work with you on this project. If you have any questions concerning this report, or if we can be of further service to you in any other way, please do not hesitate to contact us.

Very truly yours,

TERRACON CONSULTANTS SE, INC.



Lester L. Litton, P.E.  
Colorado No. 23957

LLL/dmf

cc: Mr. Craig Farver  
City of Fort Collins Engineering Department  
281 North College Avenue  
P.O. Box 580  
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