

Empire Laboratories, Inc.

P.O. Box 429 • 214 North Howes
Fort Collins, Colorado 80522 • Telephone (303) 484-0359

July 15, 1975

Glendon R. Anderson
430 Link Lane
Fort Collins, Colorado 80521

Dear Mr. Anderson:

Re: Pavement Design - Brew Subdivision
Fort Collins, Colorado
Project No. 2063-75

We are pleased to submit our Report of a pavement design for the Brew Subdivision in north Fort Collins, Colorado, as requested by James H. Stewart and Associates. The objective of the investigation was to determine the criteria for pavement design for the proposed Hibdon Court and the widening of North College Avenue within the subdivision.

The field investigation, carried out on July 9, 1975, consisted of sampling the subgrade at a depth of one (1) foot below the surface in the center of the cul-de-sac of Hibdon Court. It is our understanding that the western portion of Hibdon Court will be in a cut section and that fill will be placed below the remainder of Hibdon Court and the widening of North College Avenue. It is recommended that the upper six (6) inches of the street subgrade in the fill sections of the proposed streets be underlain by a granular pit-run material.

The Atterberg Limits and soil classification of the subgrade sample were determined in the laboratory and are included on page 3. These properties were determined for the purpose of developing criteria for pavement design. It is our understanding that Hibdon Court is classified as a residential street and that North College Avenue is classified as an arterial street. Using the group index of the upper soil at the site as a criteria for pavement design and following the above recommendations for the subgrade fill, it is recommended that pavement thicknesses for the proposed streets be as follows:

Hibdon Court (Cut Section)

Select Gravel Base Course	5"
Asphaltic Concrete	<u>2"</u>
Total Pavement Thickness	7"



Glendon R. Anderson
July 15, 1975
Page 2

Hibdon Court (Fill Section)

Select Gravel Base Course	4"
Asphaltic Concrete	<u>2"</u>
Total Pavement Thickness	6"*

North College Avenue

Select Gravel Base Course	6"
Asphaltic Concrete	<u>2"</u>
Total Pavement Thickness	8"*

*Note: Based on the use of a minimum six (6) inch layer of granular pit run material in the upper portion of the street subgrade.

All topsoil, organic matter and other unsuitable materials should be stripped and removed from the street subgrade prior to placing any fill material, sub-base or base course. The finished subgrade should be a minimum of three (3) feet above existing groundwater elevations. All subbase, base course and asphaltic concrete shall meet City Specifications and should be placed in accordance with these specifications.

Very truly yours,

EMPIRE LABORATORIES, INC.



Neil R. Sherrod
Engineering Geologist



nmp

cc: James H. Stewart & Associates

Reviewed by:


Chester C. Smith, P.E.
Vice President



SUMMARY OF TEST RESULTS

Atterberg Limits

<u>Location & Depth</u>	<u>Center of cul-de-sac 1.0'-1.5'</u>
Liquid Limit	30.5
Plastic Limit	17.0
Plasticity Index	13.5
% Passing 200	79.5
Group Index	9.6

CLASSIFICATION

Unified	CL
A.A.S.H.O.	A-6(10)