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TO: NEW YORK STATE THRUWAY AUTHORITY
P.O. BOX 189
ALBANY, N.Y. 12201

ATTENTION: JIM SHEA

LETTER OF TRANSMITTAL

DATE: DECEMBER 13, 1991PROJECT NO: 2643.1900PROJECT NAME: NYSTA-McDONALD'S

RE:

MALDEN SOILS REPORT

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<u>2</u>	<u>NOV/1991</u>	<u>-</u>	<u>MALDEN GEOTECHNICAL EVALUATION</u>

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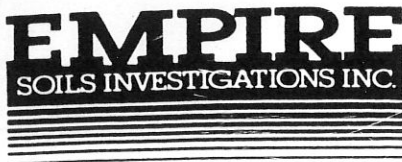
REMARKS: JIM, DON BELL MAY BE INTERESTED
IN READING THIS.

COPIES TO

D. BARLOW, CHA (1 copy)
L. KETCHAM, CHA (1 copy)

BY: 

NOTE: IF ENCLOSURES ARE NOT AS NOTED, PLEASE NOTIFY US AT ONCE.



GEOTECHNICAL EVALUATION
PROPOSED MCDONALD'S RESTAURANT
MALDEN SERVICE AREA
NEW YORK STATE THRUWAY

Prepared For:

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE
LATHAM, N.Y. 12110



Prepared By:

EMPIRE SOILS INVESTIGATIONS, INC.
BALLSTON SPA, NEW YORK 12020

GEOTECHNICAL EVALUATION
PROPOSED MCDONALDS RESTAURANT
MALDEN SERVICE AREA
NEW YORK STATE THRUWAY

I. INTRODUCTION

An investigation and evaluation of the proposed McDonald's Restaurant site at the New York State Thruway Malden Service Area was conducted as authorized by C.T. Male Associates, P.C.. The purpose of our work was to evaluate the existing subsurface conditions and provide recommendations for the design and construction of building and sign foundations, and surrounding pavements. Topographic site survey and general layout information was provided by C.T. Male Associates, P.C. The final location of the new restaurant building has not been established at the time of the report. However, the general layout provided shows the new building to be in close proximity to the existing restaurant.

II. PROJECT AND SITE DESCRIPTION

We understand that the existing restaurant building and adjacent pavements located at this site will be demolished and replaced with a new **two-story** McDonald's Restaurant building, with surrounding parking areas, in the same approximate location. We also understand that the existing restaurant building contains a partial basement area. It is assumed that the proposed new McDonald's building will not

these excavations should be removed through common sump and pump techniques along with any mud or soils surficially softened.

The structural design, sliding and overturning stability, of any retaining walls, road signs and utility poles should be analyzed. Assuming adequate drainage provisions and level backfill are included in the design, the following parameters should be used for these analyses together with a factor of safety of at least 1.50.

- o Maximum Allowable Foundation Edge Pressure = 4,000 psf
- o Equivalent Fluid Weight of Level Backfill

Active Pressure = 30 pcf
Passive Pressure = 250 pcf

- o Coefficient of Sliding Friction

Along Base of Foundation = 0.40

Depth of embedment for pole foundations should be analyzed utilizing the following parameters:

- o Maximum allowable Lateral Soil Bearing Capacity = 200 psf/ft. of depth
- o Allowable Horizontal subgrade reaction constant (n_h) = 15 tons/ft³ units

All bearing grades should be excavated to their final elevation and compacted to their undisturbed state. The final grades should be firm and stable, and free of any loose soil, mud, water or frost. Foundation wall backfill should consist of select granular material. Settlements are not expected to exceed one (1) of an inch. They should occur

one-half (1/2) ~~inch~~?

<u>Type</u>	<u>Application</u>	<u>Compaction Req.</u>
Select Granular Fill NYSDOT Spec. Section 203-2.02C	Under Foundations, and adjacent to structures	95% ASTM D-1557 6 inch lifts (Max) with plate compac- tor of similar equipment
Select Granular Fill NYSDOT Spec. Section 202-2.02C	Under grassed areas	90% ASTM D-1557 12 inch lifts (Max)
Select Granular Fill NYSDOT Spec. Section 203-2.02C	Under pavements and slabs	95% ASTM D-1557 8 inch lift (Max) with vibratory roller

Existing on-site excavated soils may be used for fill and backfill if they are tested and meet the above specified gradation requirements.

VII. CLOSURE

This report has been prepared to assist in the design and construction of a McDonald's Restaurant to be located in the Town of ~~MALEDEN~~ **SAUGERTIES**, New York. The recommendations are presented on the basis of our understanding of the project as described herein and through the application of generally accepted soil and foundation engineering practices. No other warranties, expressed or implied, are made. Should there be any modifications in the building location as presented on the Subsurface Investigation Plan, we should be notified so that we may review the changes and modify our recommendations as required.