



DEPARTMENT OF THE ARMY
WASHINGTON, D. C. 20315

61-F-62

Memo to Mr. E.M. Cavell, D-10 December 8, 1961
 Superintendent Special Services Section
 Subject: J.M.O. Patrol Garage at Jct.
 From: Morris & Reg. North Star #178 and Tol-Town By-Pass

Attention: Mr. E. Robby

On reviewing the proposed grading at said Jct. it was noted that the area will generally require a 2-3 foot cut to provide for the 18 inch depth of granular base recommended in the drives and parking areas. The Foundation Report W.L. 51-F-62 dated, July 19, 1961 indicates that the water table is at the existing ground elevation, and the main soil type is a silty clay.

Due to the above conditions and the experience with similar materials in this area one of the following is recommended for the drive and parking areas.

1. The grades on all areas be raised, to provide a fill section for the 18 inches of granular indicated in the Foundation Report.
2. If the grade can not be raised, provide for a minimum depth of 24 inches of granular material. This depth to consist of 18 inches of sand cushion and 6 inches of M.C. Class "A".

cc: Mr. E.M. Cavell (4)
 Mr. Robby
 Mr. Treghashes
 Mr. McMillan
 Mr. Tackeberry
 Mr. Stroman
 Mr. Wroge
 Mr. Kovich
 Mr. Roy
 Mr. Crispier
 Mr. Norman
 Foundations Office
 General File

W.L. 51-F-62
 for Mr. Wroge
 Principal Soils Engineer

Mr. F.E. Cavell
Superintendent Special
Services Section
Mat'ls & Res. North Bay

August 18, 1961
D.H.O. Patrol Garage at
Sec. Hwy. No. 558 and the
Tri-Town By-Pass

Attention: K. Hobby

In the Foundation Report W.J. 61-P-62 it is recommended that the surfacing material consist of a 2 inch binder course of H.L. 6 or 8, and a 1½ inch wearing course of H.L. 1 or 3. This should be changed to read H.L. 4 base 4 top with the depths as indicated.

E.R. Saint

ERS/jh
c.c. F.E. Cavell (2)
K. Hobby
H.A. Tregaskes
H.D. McMillan
H.A. Tackaberry
R.S. Chapman
T.J. Kovich
J. Roy
J.S. Gruspier
P. Norman
Foundations Office
Gen. Files

E.R. Saint
Regional Soils Engineer

Mr. F. E. Cavell,
Superintendent,
Special Services Section.

Materials & Research Section,
(Foundations Office).

Attention: Mr. E. E. Ebbert.

July 19, 1961.

D.H.O. FOUNDATION INVESTIGATION
REPORT.

M.J. 61-7-62 -- M.P. (Mil.)

Re: Proposed Site of D.H.O. Patrol Garage
at Secondary Hwy. No. 558 and Tri-Town By-Pass,
(approx. 3.5 Miles West of the Town of Hailleybury),
Twp. of Bucks, County of Winnebago, Dist. No. 14.

It is proposed to erect a D.H.O. Patrol Garage near the intersection of Secondary Hwy. No. 558 and Tri-Town By-Pass, approx. 3.5 miles West of the Town of Hailleybury.

In order to determine the soil properties and decide on the type of foundations, an investigation was carried out by this Section. The field investigations were confined to five augered boreholes supplemented by the same number of dynamic cone penetration tests. Boreholes No. 1 and No. 5 were taken down to 21'-6" below existing ground elevation; Boreholes No. 2, 3 and 4 were stopped at the surface of the bedrock.

The elevations, as well as the locations of the boreholes are shown on Drawing No. 61-7-62A, attached to this report.

The stratigraphy of the soil throughout the site was found to be quite uniform. The top 2'-0" to 3'-0" feet consist of topsoil, underlain by sandy, clayey silt, followed by limestone bedrock.

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The density of the clayey silt layer varies at different locations of the site and also with depth. Dynamic penetration tests carried out in the first ten feet gave an average 'N' value of 19 blows/foot. At the depth between 10'-0" and bedrock, the average 'N' value decreases to 9 blows/foot.

The safe bearing pressure for spread footings 2 feet wide, at a depth of 4 feet below ground elevation, is estimated to be at 3000 lbs./sq.ft. At the time of the investigation, the water table was found to be at ground level. This will, no doubt, vary seasonally but it is probable that excavations will have to be protected against water seepage by sheeting or other means.

The most suitable location for the sand pile is the North-East corner of the site. At this location the sand pile may be built to any height without danger of base failure; if another location is selected, the sand pile should not exceed 25'-0" feet in height.

The water table, at the site, was found to be at the surface. Consideration should be given to draining the whole yard area. The surplus water could be diverted northwards, where the ground elevation is considerably lower, than at the yard area.

Access roads may be built on the layer of the sandy, clayey silt, after removal of the topsoil. For roadways and parking areas, a total minimum thickness of 18" of granular material is recommended. The upper 6" of this should consist of Class 'A' C.B.C. material.

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Surfacing material should consist of a 2" binder course of H.L.-6 or H.L.-3, and a 1" - 1-1/2" wearing course of H.L.-1, or H.L.-3. The H.L.-1 or H.L.-3 should be modified to allow the use of a sandier mix.

If we can be of further assistance to you in connection with this project, please do not hesitate to contact our Office.

RE/MSF
Attn:.

L. G. Freeman,
PRINCIPAL FOUNDATION ENG.

Per:

REPORT PREPARED BY:

W. Kulantickas
(*. Kulantickas,
PROJECT FOUNDATION ENG.)

REPORT APPROVED BY:

A. G. (terrac)
(A. G. (terrac),
SUPERVISING FOUNDATION ENG.)

cc: Messrs. F. E. Cavell (2)
A. Hobby
H. A. Irigastres
H. D. McMillan
H. A. Tackaberry
H. S. Chapman
H. L. Saint
H. J. Kovich
H. J. Coy
H. S. Crispier
H. Moran
Foundations Office ✓
Gen. Files.

APPENDIX 1.

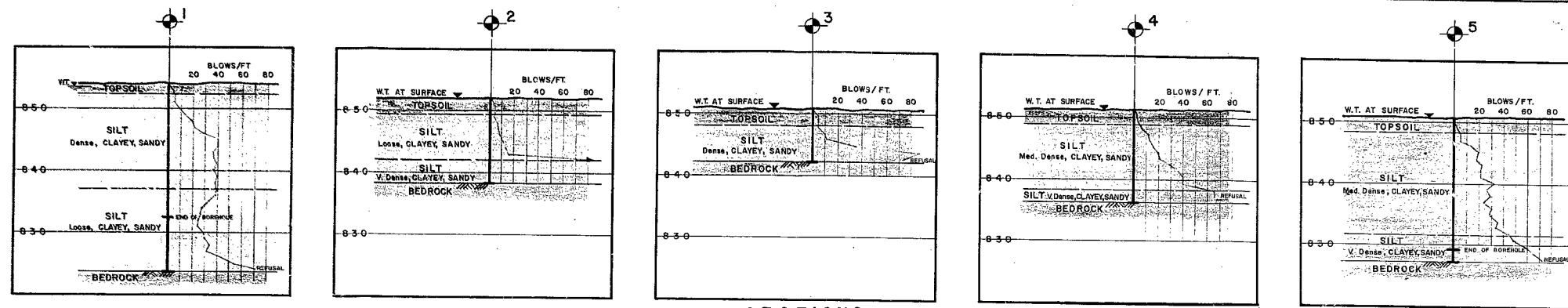
61-F-62

SEC. HWY #558

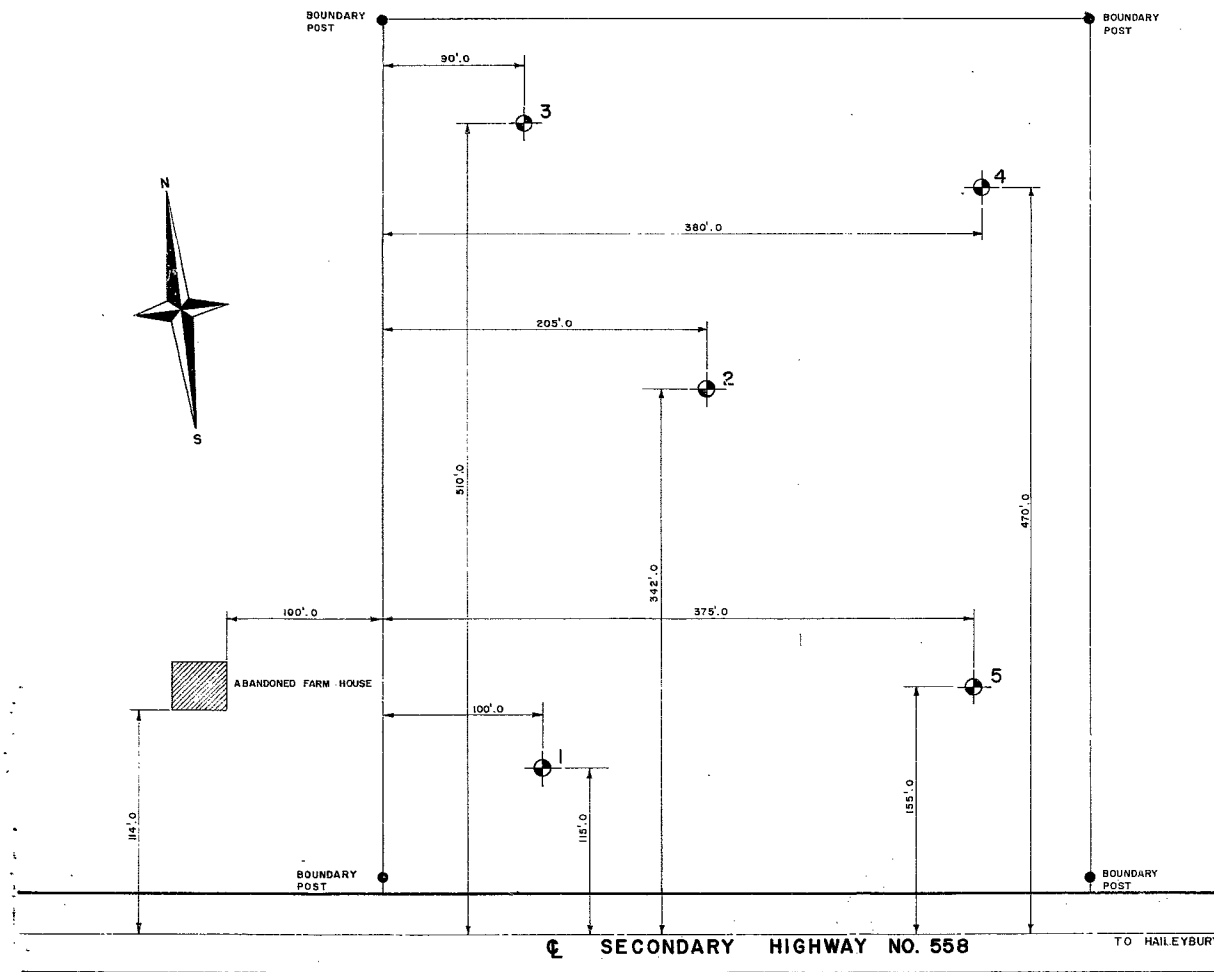
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PASS

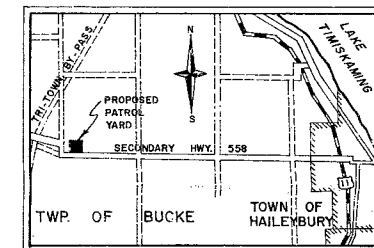
PATROL YARD



SECTIONS
SCALE: 1 inch = 10 feet



PLAN
SCALE: 1 inch = 50 feet



KEY PLAN
SCALE: 1 inch = 1 mile

100' 0"
115' 0"
514' 0"

LEGEND

BORE & PENETRATION HOLE

DEPARTMENT OF HIGHWAYS - ONTARIO			
MATERIALS & RESEARCH SECTION			
TRI-TOWN BY-PASS PATROL YARD			
ORIGINATED W. KULMATICAS	DISTRICT	DATE	JULY 1961
DRAWN D. MUMFORD	W.P. NO.	JOB	F-62
CHECKED	SCALE	DRAWING NO.	
APPROVED			
			61-F-62A