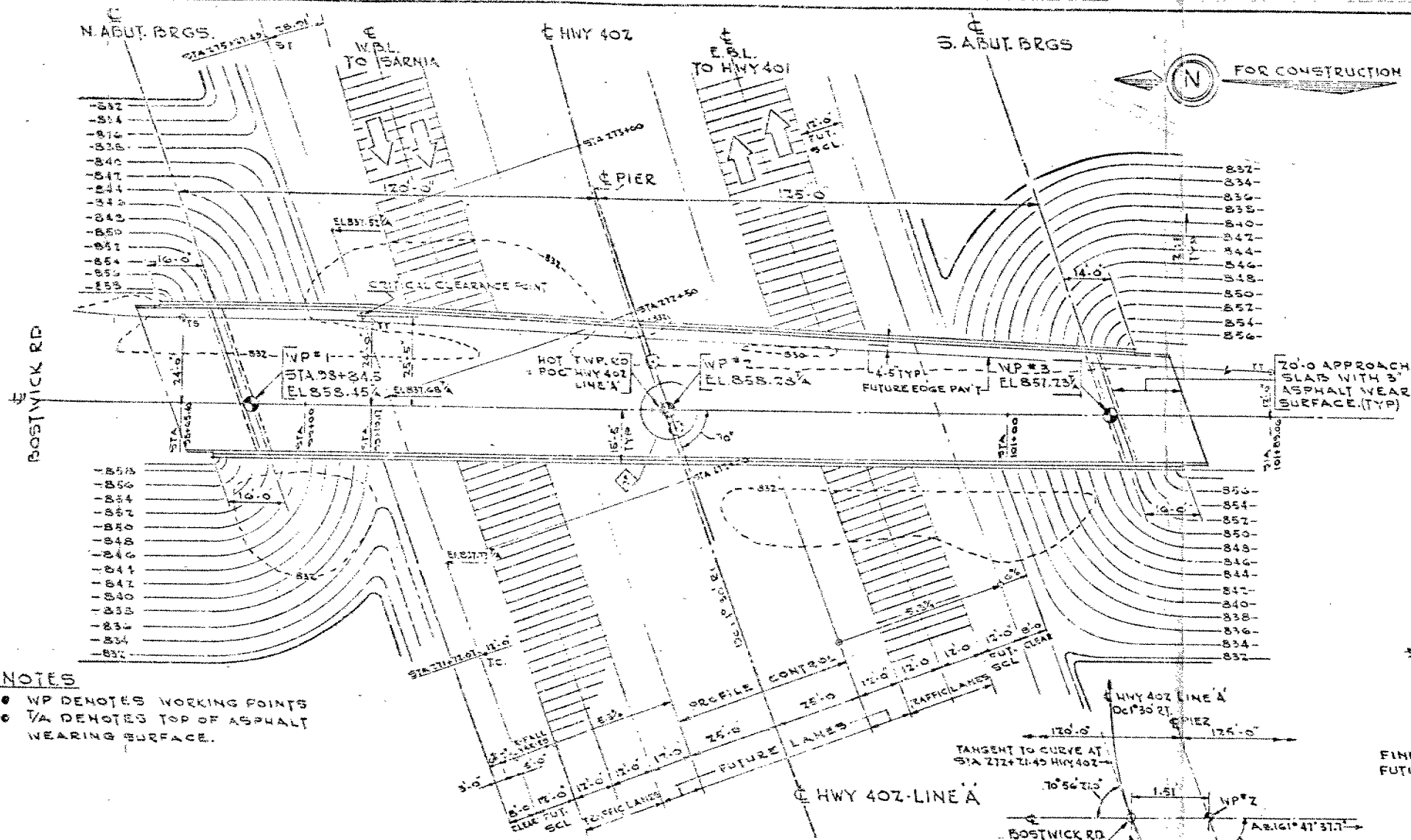
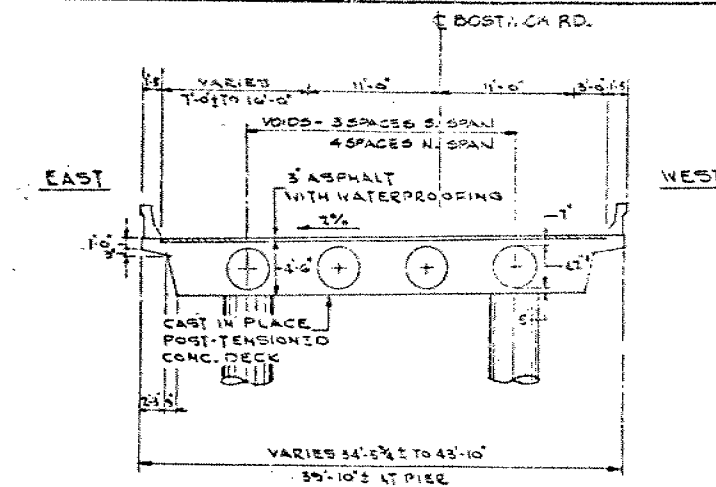


G.I.-30 SEPT. 1976

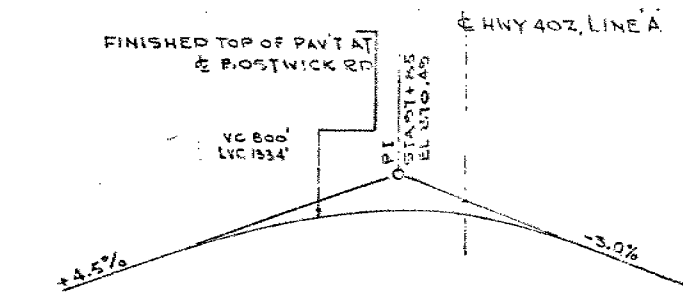
GEOCRES No. 40I14-96DIST. 2 REGION W.P. No. 41-66-07CONT. No. 77-61W. O. No. STR. SITE No. 19-545HWY. No. 402LOCATION Boothwick Rd. UnderpassNo. of PAGES -=====OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. REMARKS:



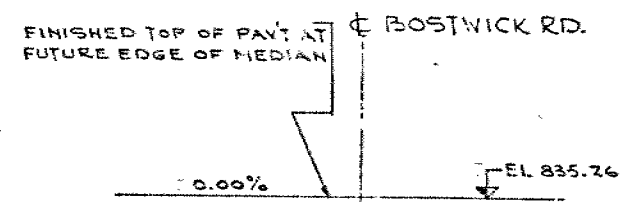
NOTES
 ● WP DENOTES WORKING POINTS
 ● T/A DENOTES TOP OF ASPHALT WEARING SURFACE.



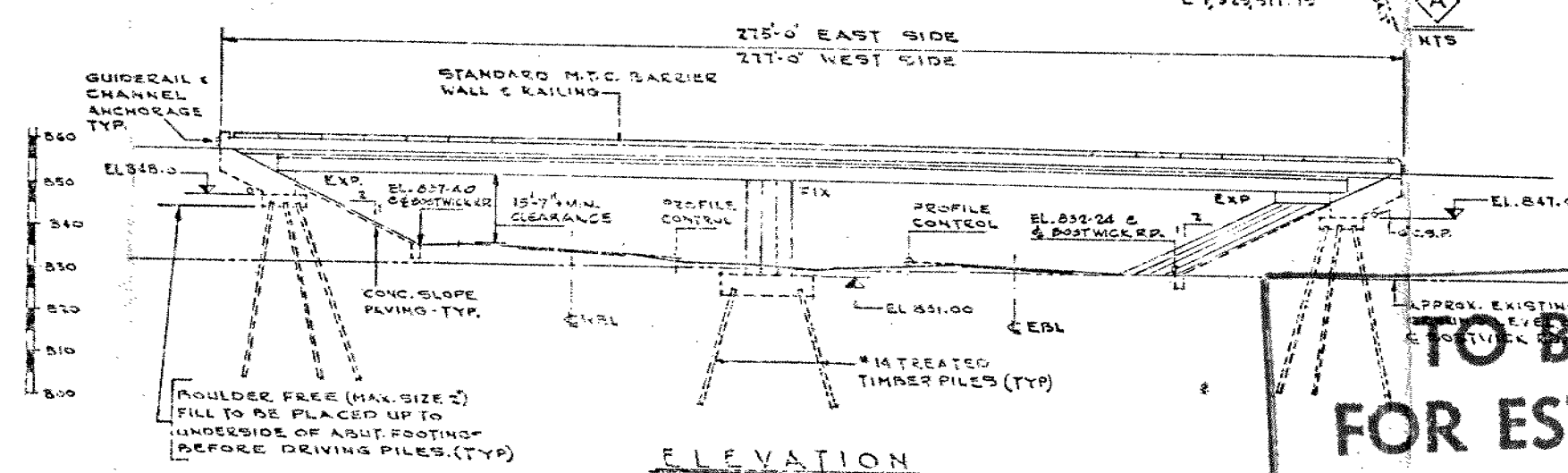
TYPICAL CROSS SECTION
 SCALE 1/8" = 1'-0"



PROFILE BOSTWICK RD
 NTS



PROFILE HWY 402
 NTS



ELEVATION
 SCALE 1" = 20'-0"

LIST OF DRAWINGS :

1. GENERAL PLAN
2. BOREHOLE LOCATIONS & SOIL STRATA
3. FOUNDATION LAYOUT, REINFC. & PIER
4. NORTH ABUTMENT & BEARINGS
5. SOUTH ABUTMENT & BEARINGS
6. DECK LAYOUT DETAILS
7. LONGITUDINAL POST-TENSIONING
8. TRANSVERSE POST-TENSIONING
9. DECK REINFORCING
10. DECK REINFORCING DETAILS
11. CONCRETE BARRIER WALL (2'-6" HIGH)
12. PARAPET RAILING (SINGLE TUBE)
13. 20 FT. APPROACH SLAB (BARRIER WALL)
14. DETAILS OF CONCRETE SLOPE PAVING
15. PROPOSED ELEVATIONS
16. STANDARD DETAILS I
17. STANDARD DETAILS II
18. STANDARD DETAILS III

TO BE USED FOR ESTIMATING PURPOSES ONLY
 DATE 08/5 1976

DIST. 2		SHEET
CONT No WP No 41-66-07		
BOSTWICK ROAD UNDERPASS 2 Miles west of Hwy 401 GENERAL PLAN		
Giffels Giffels, Darius & Jorgensen Limited Consulting Engineers		

REFERENCE BENCH MARK
 BM 833.01
 GEODETIC DATUM
 N & W IN S ROOT 2.0 MAPLE
 334' LT 273+05 LINE 'A'

NOTES

CLASS OF CONCRETE
 DECK 5000 PSI
 BARRIER WALLS, PIER COLUMNS 1000 PSI
 REMAINDER 3000 PSI

REINF. STEEL GRADE
 LONGIT. IN PIER COL GRADE 60
 REMAINDER GRADE 50

CLEAR COVER TO REINF. STEEL
 FOOTINGS, ABUTMENTS & WING WALLS ... 2'
 PIER COLUMNS 2'
 DECK TOP ... 2" BOT ... 12"
 CURBS ... 2" BARRIER WALLS ... 12"
 UNLESS OTHERWISE NOTED ON DWGS.

CONSTRUCTION NOTES.

THE CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BEARING SEATS TO THE SPECIFIED ELEVATIONS WITH A TOLERANCE OF ± 1/2".

NO CONCRETE SHALL BE PLACED ABOVE THE ABUTMENT BEARING SEATS, UNTIL THE DECK CONCRETE HAS BEEN PLACED, STRESSED AND GROUTED.

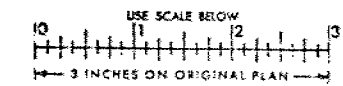
CONCRETE QUANTITIES

CONCRETE QUANTITIES ARE LISTED BELOW FOR THE APPROPRIATE CONCRETE LUMP SUM TENDER ITEMS:

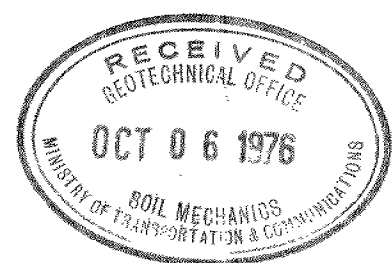
CONCRETE IN PIER, ABUTMENTS, AND WING WALLS ... 3000 PSI 102 CUYD
 4000 PSI 25 CUYD
 PRESTRESSED CONCRETE
 BRIDGE DECK 1184 CUYD
 CONCRETE IN BARRIER WALLS 48 CUYD
 CONCRETE IN APPROACH SLABS 54 CUYD
 CONCRETE IN SLOPE PAVING 53 CUYD

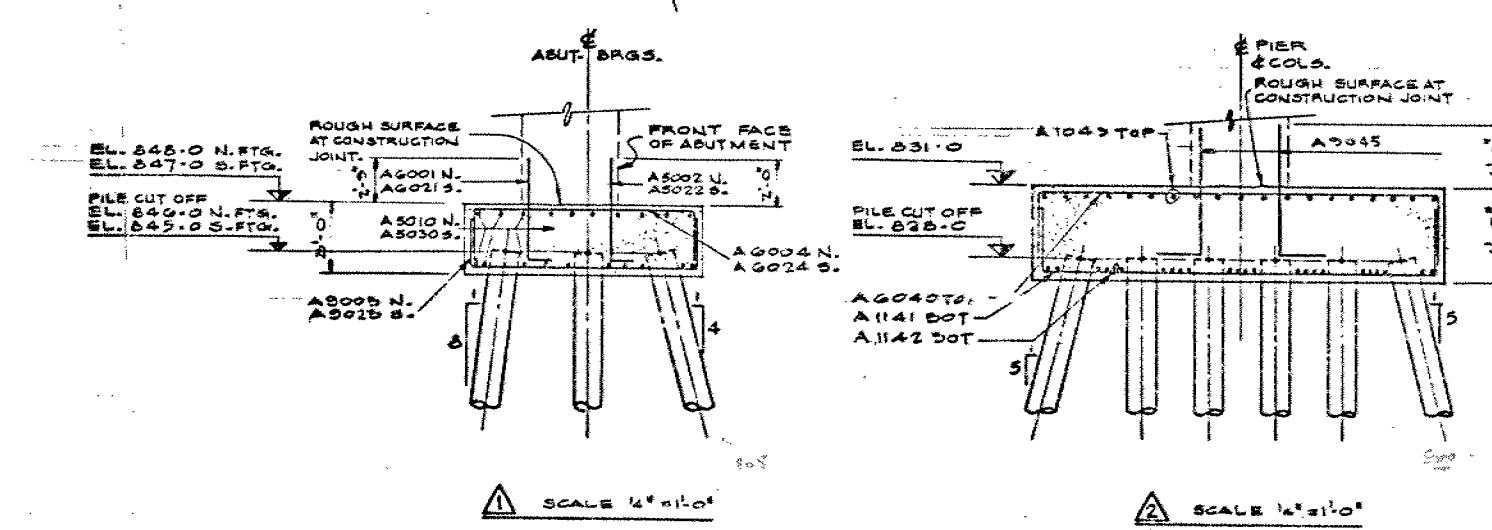
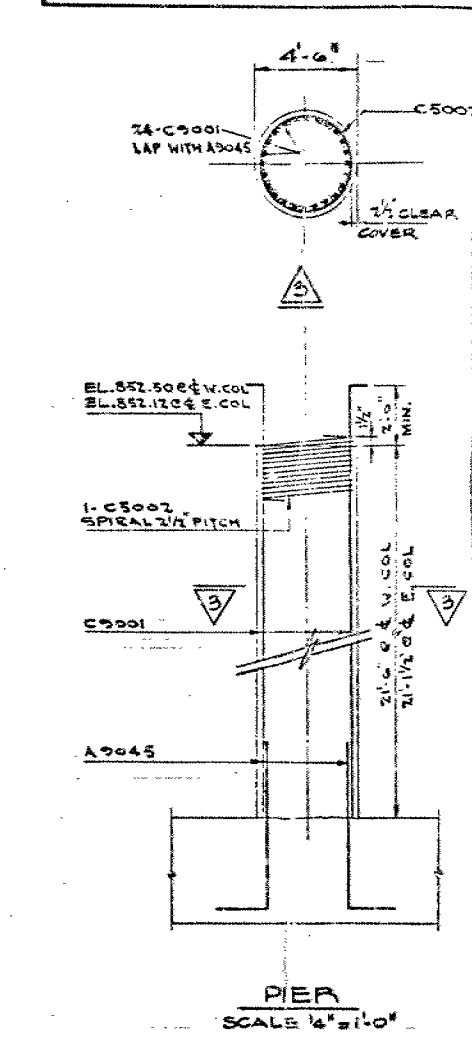
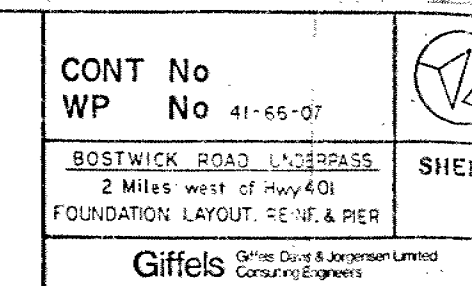
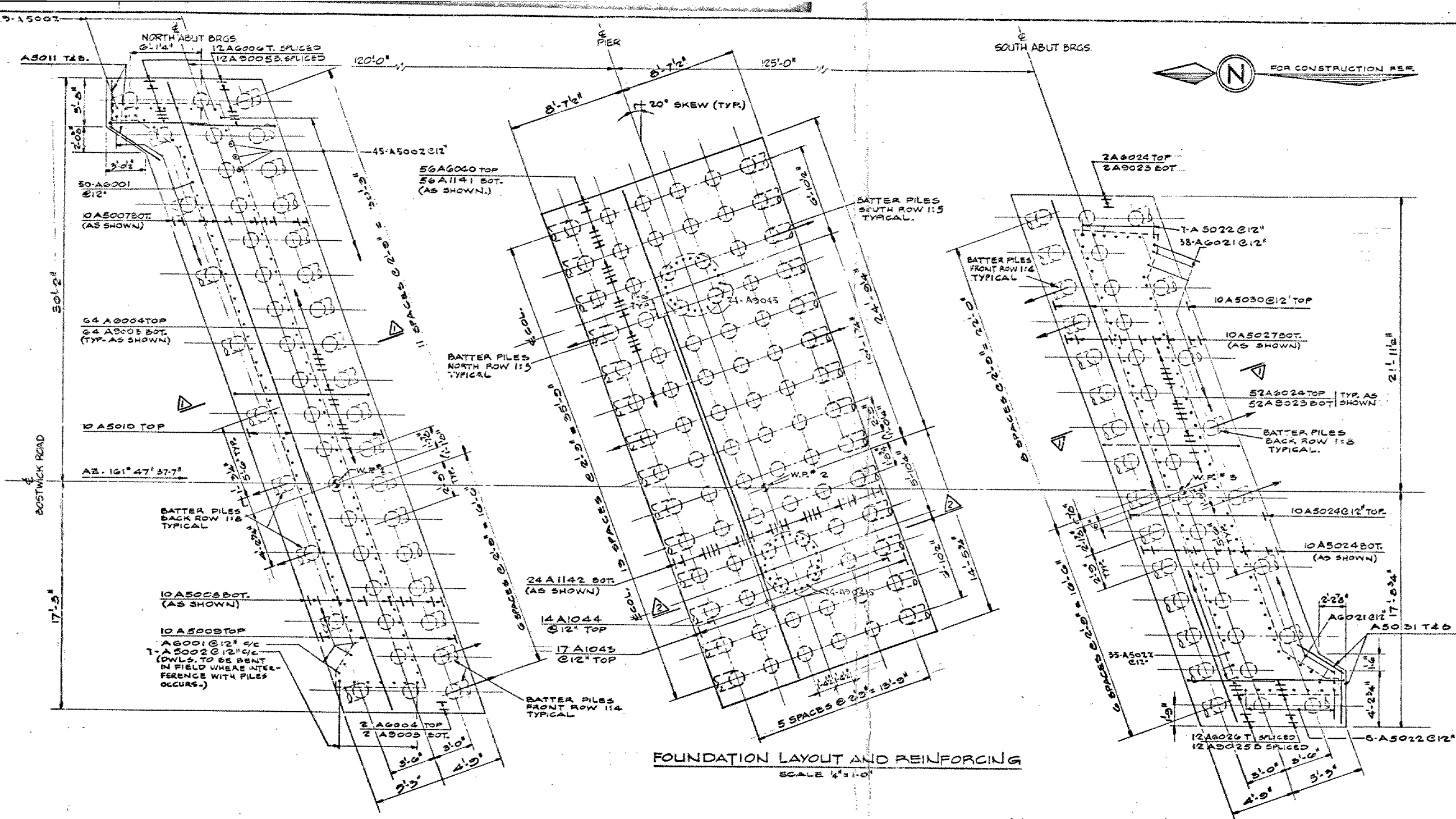


FOR REDUCED PLAN



REVISION	DATE	BY	DESCRIPTION

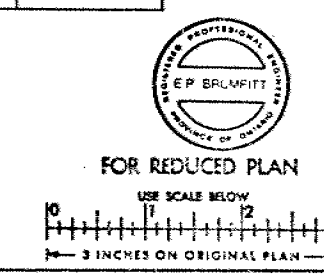




<u>PILES</u>				
LOCATION	QTY.	TYPE	BATTER	LENGTH
NORTH ABUTMENT	10	TREATED TIMBER PILES	1: 8	50'-0"
	18		VERT	
	18		1: 4	
PIER	50	TREATED TIMBER PILES	VERT	35'-0"
	23		1: 4	
SOUTH ABUTMENT	15		1: 4	50'-0"
	15		VERT	
	6		1: 8	

W.P. #	STATION	CO-ORDINATES
1	98 + 84.5 BOSTWICK RD.	N. 15,550.147-37 E. 1,329.480-77
2	100 + 4.5 BOSTWICK RD.	N. 15,530.033-58 E. 1,329.518-26
3	101 + 29.3 BOSTWICK RD.	N. 15,567.014-83 E. 1,329.573-22

- ## NOTES
- PILE SPACING TO BE MEASURED A UNDERSIDE OF FOOTING.
 - PILES TO BE DRIVEN IN ACCORDANCE WITH STANDARD SS3-11 USING DESIGN LOAD OF 20T/PILE.
 - FOR DETAILS OF PILE HEAD PROTECTION SEE SS3-3 DWS.
 - TIMBER PILES SHALL BE TREATED WITH CREOSOTE TO GIVE A RETENTION OF 8 LBS./CU. FT.
 - BAR MARKS A0045 EC0001 SHALL BE GRADE 60.



REVISEMENTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Memorandum

40I14-96
GEOCRES No.

To: Mr. A.P. Watt (2)
Reg. Structural Planning Engineer
Southwestern Region, London

From: Soil Mechanics Section
Geotechnical Office
West Building, Downsview

Attention:

Date: July 15, 1975

Our File Ref.

In Reply to

DDL 17 1975

Subject:

FOUNDATION INVESTIGATION REPORT

For

Bostwick Road Bridge, Hwy. 402
Twp. of Westminster
Dist. 2, London
W.P. 41-66-07, Site 19-545

Attached we are forwarding to you our detailed Foundation Investigation Report on the subsoil conditions existing at the above mentioned site.

We believe that the factual data and recommendations contained therein will prove adequate for your design requirements. Should additional information be required, please do not hesitate to contact our Office.

K. G. Selby

K.G. SELBY
Supervising Engineer

c.c. E.J. Orr
B.R. Davis
B.J. Giroux
G.A. Wrong
A. Wittenberg
J.R. Roy
L.E. Walker
R. Hore
J. Anderson)
A. Crowley) memo only
G. Sloan)
Files ✓
Record Services

TABLE OF CONTENTS

1. INTRODUCTION
2. DESCRIPTION OF THE SITE
3. FIELD AND LABORATORY INVESTIGATION PROCEDURES
4. SUBSOIL CONDITIONS
 - 4.1 General
 - 4.2 Sand and Silt
 - 4.3 Clayey Silt
 - 4.4 Groundwater
5. DISCUSSION AND RECOMMENDATIONS
 - 5.1 General
 - 5.2 Piled Footings
 - 5.3 Dewatering
 - 5.4 Approach Embankments
 - 5.5 Frost Protection
6. MISCELLANEOUS

FOUNDATION INVESTIGATION REPORT

For

Bostwick Road Bridge, Hwy. 402
Twp. of Westminster, Dist. 2, London
W.P. 41-66-07, Site 19-545

1. INTRODUCTION

A request for a foundation investigation at the above site was received from Mr. A.P. Watt, Regional Structural Planning Engineer, Southwestern Region, London.

A field investigation was subsequently carried out by the Soil Mechanics Section to determine the subsoil conditions existing at the site. This report contains the results of our field and laboratory investigations, together with our recommendations relating to the design of the proposed structure foundations.

2. DESCRIPTION OF THE SITE

The proposed bridge is located 2 miles west of the junction of Hwys. 401 and 402 where Hwy. 402 crosses Bostwick Road. The surrounding area is flat farmland engaged in mixed farming.

3. FIELD AND LABORATORY INVESTIGATION PROCEDURES

Field work consisted of three sampled boreholes advanced employing hollow stem augers, as well as three dynamic cone penetration tests.

Disturbed samples were obtained using a 2-inch O.D. split spoon sampler driven according to the specifications for the Standard Penetration Test.

All boreholes were surveyed in the field by personnel from London Region Engineering Surveys Section. The locations and elevations of the boreholes are shown on Drawing No. 416607-A which accompanies this report.

2

All samples were visually examined and classified at the site as well as in the laboratory. Following this inspection, laboratory tests were carried out on selected representative samples to determine the following physical properties:

Atterberg Limits
Natural Moisture Content
Grain-size Distribution

The test results are summarized on the Record of Borehole Sheets contained in the appendix of this report.

4. SUBSOIL CONDITIONS

4.1 General

Subsoil at this site consists of a deposit of approximately 20 feet of sand and silt overlying a deep deposit of over 100 feet of clayey silt.

4.2 Sand and Silt

This stratum consists of sand and silt in widely varying proportions. It has a compact to dense consistency with Standard Penetration 'N' values varying from 10 to 44.

4.3 Clayey Silt

This stratum extends from a depth of approximately 20 feet to in excess of 135 feet. Its consistency ranges from firm to hard with Standard Penetration 'N' values ranging from 7 to in excess of 100 blows per foot. These high 'N' values are found in local deposits which do not form a continuous or reliable layer.

4.4 Groundwater

Groundwater was encountered in the sand and silt deposit approximately 3 to 5 feet below the surface.

5. DISCUSSION AND RECOMMENDATIONS

5.1 General

An underpass is proposed to carry Bostwick Road over Hwy. 402. This will involve the construction of embankments approximately 30 feet in height and a bridge of two spans each of which will be 104 feet in length.

5.2 Piled Footings

Center Pier

It is recommended that the center pier be supported on piles driven to elevation 800. Either steel tube piles (12-3/4" X 1/4") or #14 treated timber piles may be used with a design load of 30 tons per pile. Total settlement of less than one inch is anticipated at this location.

Perched Abutments

It is recommended that the abutments be supported on steel tube piles (12-3/4" X 1/4") driven to elevation 805. A design loading of 30 tons per pile may be assumed for design purposes. Total settlements of less than 2 inches is anticipated at the abutments.

It is expected that these values will be confirmed or increased following pile loading tests to be carried out in the fall of 1975.

5.3 Dewatering

No dewatering problems are anticipated as all footings may be constructed above the groundwater level.

5.4 Approach Embankments

No stability problems are anticipated with embankment fills (30 ft.) if 2:1 slopes are employed. Cobbles exceeding 3" diameter should be removed from fill placed at locations through which piles have to be driven.

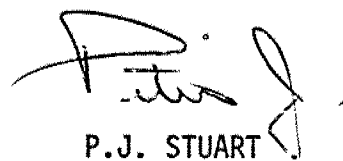
5.5 Frost Protection

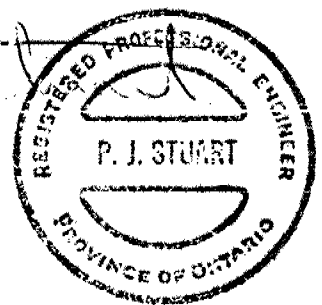
All pile caps or spread footings should be protected against frost action by a minimum 4 feet of cover.

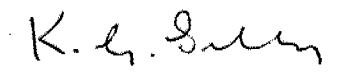
6. MISCELLANEOUS

The field work on this project was carried out May 29 to June 4, 1975 under the supervision of Mr. R. Donnelly, Student Technician. This report was written by Mr. P.J. Stuart, Project Engineer and reviewed by Mr. K.G. Selby, Supervising Engineer.

The equipment used was owned and operated by Master Soils Investigation Limited.


P.J. STUART
Project Engineer




K.G. SELBY
Supervising Engineer

July 1975

APPENDIX

RECORD OF BOREHOLE NO 1

W.P. 41-66-07

LOCATION Co-ords. 15,590,143 N; 1,329,465 E.

ORIGINATED BY RD

DIST. 2 HWY. 402

BORING DATE May 29, 1975

COMPILED BY PJS

DATUM Geodetic

BOREHOLE TYPE Hollow Stem Auger

CHECKED BY

SOIL PROFILE			SAMPLES			GROUND WATER ELEV.	DYNAMIC CONE PENETRATION RESISTANCE PLOT					LIQUID LIMIT W_L PLASTIC LIMIT W_P WATER CONTENT W			UNIT WEIGHT γ	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	'N' VALUES		20	40	60	80	100	W_P	W	W_L		
831.5	Ground Level															
0.0	Sandy silt, trace of clay.		1	SS	15	830										0 35 62 3
	Compact to Dense		2	SS	24											0 39 60 1
			3	SS	20											
			4	SS	44	820										
			5	SS	13											
			6	SS	23											
810.5			7	SS	8	810										
21.0	Clayey silt, some sand, trace of gravel		8	SS	45											3 17 52 25
	Stiff to Hard		9	SS	36	800										
			10	SS	30	790										2 10 51 37
			11	SS	51	780										
			12	SS	50											
	Clayey silt		13	SS	43	770										0 0 71 29
	Hard		14	SS	36											
			15	SS	70	760										
			16	SS	37											
			17	SS	43	750										
						740										
735.0			18	SS	67											0 0 67 33
96.5	End of Borehole															

RECORD OF BOREHOLE NO 2

W.P. 41-66-07 LOCATION Co-ords. 15,590,048 N; 1,329,499 E. ORIGINATED BY RD
 DIST. 2 HWY. 402 BORING DATE June 2, 1975 COMPILED BY PJS
 DATUM Geodetic BOREHOLE TYPE Hollow Stem Auger CHECKED BY GP.

SOIL PROFILE			SAMPLES			GROUND WATER ELEV.	DYNAMIC CONE PENETRATION RESISTANCE PLOT					LIQUID LIMIT w_L PLASTIC LIMIT w_p WATER CONTENT w			UNIT WEIGHT γ	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	'N' VALUES		20	40	60	80	100	w_p	w	w_L		
830.3	Ground Level															
0.0	Sandy silt, trace of clay.		1	SS	10											0 18 71 11
	Compact		2	SS	15											0 38 60 2
			3	SS	15											
			4	SS	14											
813.3			5	SS	13											1 41 56 2
17.0	Clayey silt, some sand, trace of gravel.		6	SS	8											6 24 41 29
	Stiff to Hard		7	SS	11											
			8	SS	104											
			9	SS	42											
			10	SS	47											2 4 60 34
			11	SS	53											
768.8			12	SS	109											0 1 78 21
61.5	End of Borehole															

MINISTRY OF TRANSPORTATION AND COMMUNICATIONS-ONTARIO

ENGINEERING SERVICES BRANCH-GEOTECHNICAL OFFICE-SOIL MECHANICS SECTION

RECORD OF BOREHOLE NO 3

W.P. 41-66-07

LOCATION Co-ords, 15,589,937 N; 1,329,534 E.

ORIGINATED BY RD

DIST. 2 HWY. 402

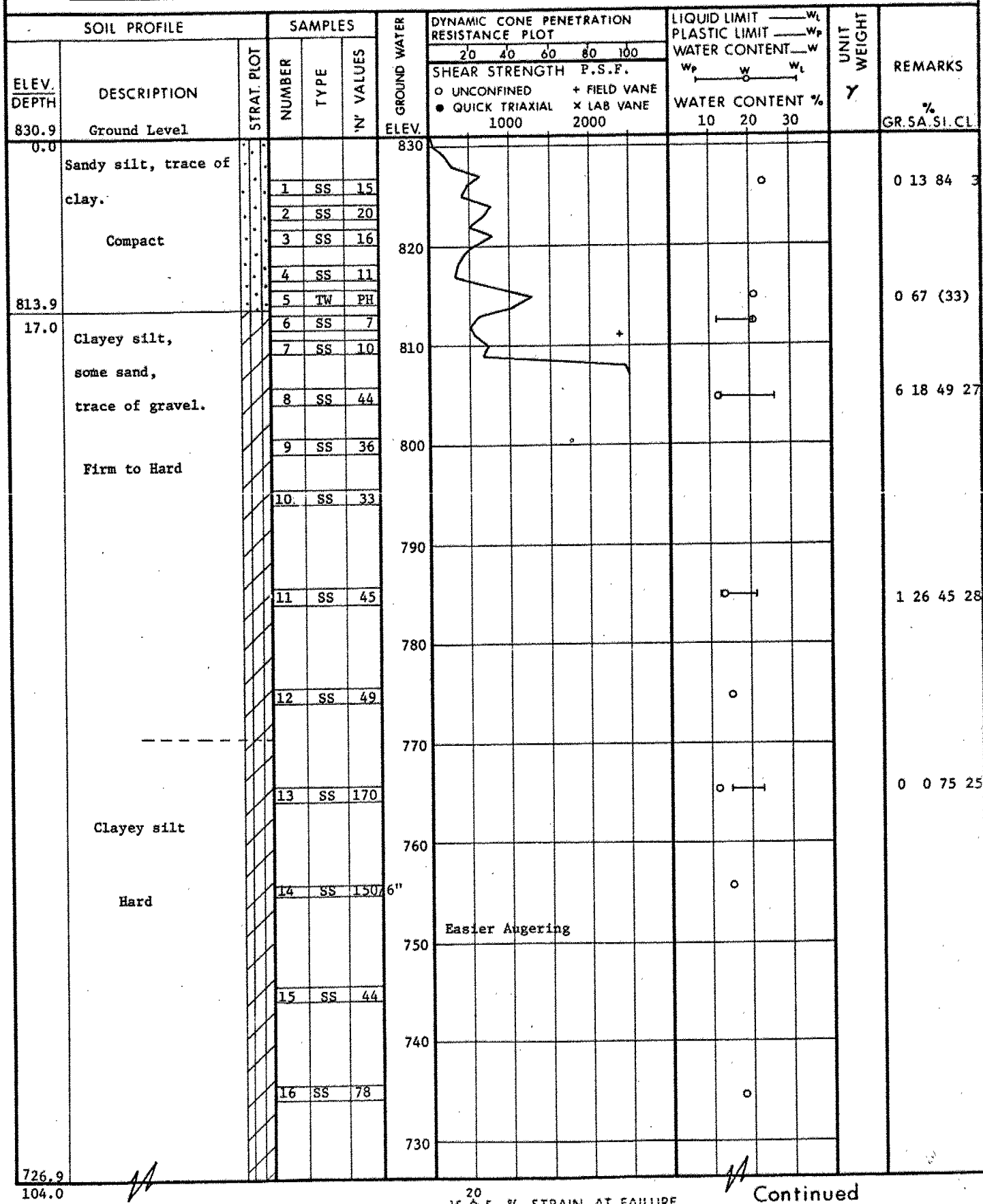
BORING DATE June 3 & 4, 1975

COMPILED BY PJS

DATUM Geodetic

BOREHOLE TYPE Hollow Stem Auger

CHECKED BY CP



OFFICE REPORT ON SOIL EXPLORATION

RECORD OF BOREHOLE No 3 Continued

W.P. 41-66-07 LOCATION Co-ords. 15,589,937 N; 1,329,534 E. ORIGINATED BY RD
 DIST. 2 HWY. 402 BORING DATE June 3 & 4, 1975 COMPILED BY BIS
 DATUM Geodetic BOREHOLE TYPE Hollow Stem Auger CHECKED BY [Signature]

SOIL PROFILE			SAMPLES			GROUND WATER ELEV.	DYNAMIC CONE PENETRATION RESISTANCE PLOT					LIQUID LIMIT w_L PLASTIC LIMIT w_p WATER CONTENT w			UNIT WEIGHT γ	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	'N' VALUES		20	40	60	80	100	w_p	w	w_L		
726.9	continued															
104.0	Clayey Silt Hard		17	SS	129	720										
						710										
						700										
694.4			18	SS	43											
136.5	End of Borehole Note: Water Level not established.															

ABBREVIATIONS & SYMBOLS USED IN THIS REPORT

PENETRATION RESISTANCE

'N' STANDARD PENETRATION RESISTANCE : - THE NUMBER OF BLOWS REQUIRED TO ADVANCE A STANDARD SPLIT SPOON SAMPLER 12 INCHES INTO THE SUBSOIL, DRIVEN BY MEANS OF A 140 POUND HAMMER FALLING FREELY A DISTANCE OF 30 INCHES.

DYNAMIC PENETRATION RESISTANCE : - THE NUMBER OF BLOWS REQUIRED TO ADVANCE A 2 INCH, 60 DEGREE CONE, FITTED TO THE END OF DRILL RODS, 12 INCHES INTO THE SUBSOIL, THE DRIVING ENERGY BEING 350 FOOT POUNDS PER BLOW.

DESCRIPTION OF SOIL

THE CONSISTENCY OF COHESIVE SOILS AND THE RELATIVE DENSITY OR DENSENESS OF COHESIONLESS SOILS ARE DESCRIBED IN THE FOLLOWING TERMS :-

<u>CONSISTENCY</u>	<u>c LB/SQ. FT.</u>	<u>DENSENESS</u>	<u>'N' BLOWS / FT.</u>
VERY SOFT	0 - 250	VERY LOOSE	0 - 4
SOFT	250 - 500	LOOSE	4 - 10
FIRM	500 - 1000	COMPACT	10 - 30
STIFF	1000 - 2000	DENSE	30 - 50
VERY STIFF	2000 - 4000	VERY DENSE	> 50
HARD	> 4000		

TERMS TO BE USED IN DESCRIBING SOILS:-

TRACE < 10% , SOME 10-25% , WITH 25-40% , > 40% SILTY, SANDY, GRAVELLY, CLAYEY ETC.

TYPE OF SAMPLE

S.S.	SPLIT SPOON	T.W.	THINWALL OPEN
W.S.	WASHED SAMPLE	T.P.	THINWALL PISTON
S.T.	SLOTTED TUBE SAMPLE	O.S.	OESTERBERG SAMPLE
A.S.	AUGER SAMPLE	F.S.	FOIL SAMPLE
C.S.	CHUNK SAMPLE	R.C.	ROCK CORE

P.H. SAMPLE ADVANCED HYDRAULICALLY

P.M. SAMPLE ADVANCED MANUALLY

SOIL TESTS

U	UNCONFINED COMPRESSION	L.V.	LABORATORY VANE
UU	UNCONSOLIDATED UNDRAINED TRIAXIAL	F.V.	FIELD VANE
CU	CONSOLIDATED ISOTROPIC UNDRAINED TRIAXIAL	C	CONSOLIDATION
CID	" " DRAINED "	S	SENSITIVITY
CAU	" ANISOTROPIC UNDRAINED "		
CAD	" " DRAINED "		

ABBREVIATIONS & SYMBOLS USED IN THIS REPORTSOIL PROPERTIES

γ	UNIT WEIGHT OF SOIL (BULK DENSITY)
γ_s	UNIT WEIGHT OF SOLID PARTICLES
γ_w	UNIT WEIGHT OF WATER
γ_d	UNIT DRY WEIGHT OF SOIL (DRY DENSITY)
γ'	UNIT WEIGHT OF SUBMERGED SOIL
G	SPECIFIC GRAVITY OF SOLID PARTICLES $G = \frac{\gamma_s}{\gamma_w}$
e	VOID RATIO
n	POROSITY
w	WATER CONTENT
S_r	DEGREE OF SATURATION
w_L	LIQUID LIMIT
w_p	PLASTIC LIMIT
I_p	PLASTICITY INDEX
w_s	SHRINKAGE LIMIT
I_L	LIQUIDITY INDEX = $\frac{w - w_p}{I_p}$
I_c	CONSISTENCY INDEX = $\frac{w_L - w}{I_p}$
e_{max}	VOID RATIO IN LOOSEST STATE
e_{min}	VOID RATIO IN DENSEST STATE
I_D	DENSITY INDEX = $\frac{e_{max} - e}{e_{max} - e_{min}}$
	RELATIVE DENSITY D_r IS ALSO USED
h	HYDRAULIC HEAD OR POTENTIAL
q	RATE OF DISCHARGE
v	VELOCITY OF FLOW
i	HYDRAULIC GRADIENT
k	COEFFICIENT OF PERMEABILITY
j	SEEPAGE FORCE PER UNIT VOLUME
m_v	COEFFICIENT OF VOLUME CHANGE = $\frac{-\Delta e}{(1+e)\Delta\sigma}$
c_v	COEFFICIENT OF CONSOLIDATION
C_c	COMPRESSION INDEX = $\frac{\Delta e}{\Delta \log_{10} \sigma}$
T_v	TIME FACTOR = $\frac{c_v t}{d^2}$ (d , DRAINAGE PATH)
U	DEGREE OF CONSOLIDATION
τ_f	SHEAR STRENGTH
c'	EFFECTIVE COHESION INTERCEPT
ϕ'	EFFECTIVE ANGLE OF SHEARING RESISTANCE, OR FRICTION
c_u	APPARENT COHESION
ϕ_u	APPARENT ANGLE OF SHEARING RESISTANCE, OR FRICTION
μ	COEFFICIENT OF FRICTION
S_f	SENSITIVITY

GENERAL

π	= 3.1416
e	BASE OF NATURAL LOGARITHMS 2.7183
$\log_e \sigma$ OR $\ln \sigma$	NATURAL LOGARITHM OF σ
$\log_{10} \sigma$ OR $\log \sigma$	LOGARITHM OF σ TO BASE 10
t	TIME
g	ACCELERATION DUE TO GRAVITY
V	VOLUME
W	WEIGHT
M	MOMENT
F	FACTOR OF SAFETY

STRESS AND STRAIN

u	PORE PRESSURE
σ	NORMAL STRESS
σ'	NORMAL EFFECTIVE STRESS ($\bar{\sigma}$ IS ALSO USED)
τ	SHEAR STRESS
ϵ	LINEAR STRAIN
γ	SHEAR STRAIN
ν	POISSON'S RATIO (μ IS ALSO USED)
E	MODULUS OF LINEAR DEFORMATION (YOUNG'S MODULUS)
G	MODULUS OF SHEAR DEFORMATION
K	MODULUS OF COMPRESSIBILITY
η	COEFFICIENT OF VISCOSITY

EARTH PRESSURE

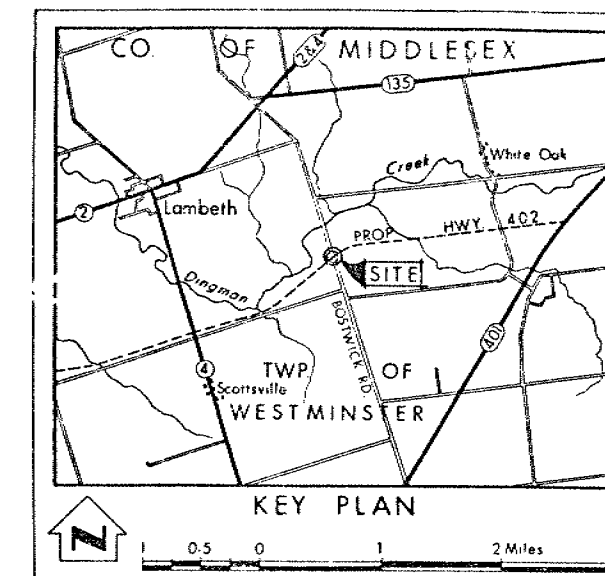
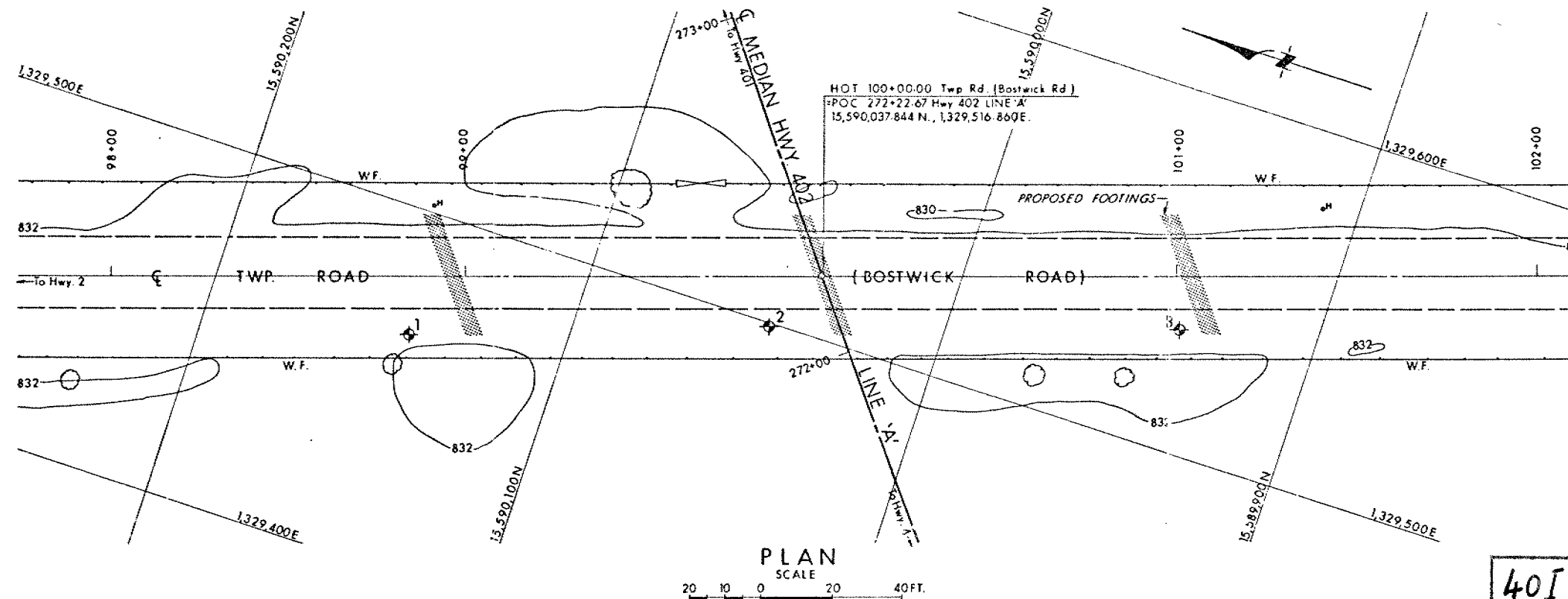
d	DISTANCE FROM TOP OF WALL TO POINT OF APPLICATION OF PRESSURE
δ	ANGLE OF WALL FRICTION
K	DIMENSIONLESS COEFFICIENT TO BE USED WITH VARIOUS SUFFIXES IN EXPRESSIONS REFERRING TO NORMAL STRESS ON WALLS
K_0	COEFFICIENT OF EARTH PRESSURE AT REST

FOUNDATIONS

B	BREADTH OF FOUNDATION
L	LENGTH OF FOUNDATION
D	DEPTH OF FOUNDATION BENEATH GROUND
N	DIMENSIONLESS COEFFICIENT USED WITH A SUFFIX APPLYING TO SPECIFIC GRAVITY, DEPTH AND COHESION ETC. IN THE FORMULA FOR BEARING CAPACITY
k_s	MODULUS OF SUBGRADE REACTION

SLOPES

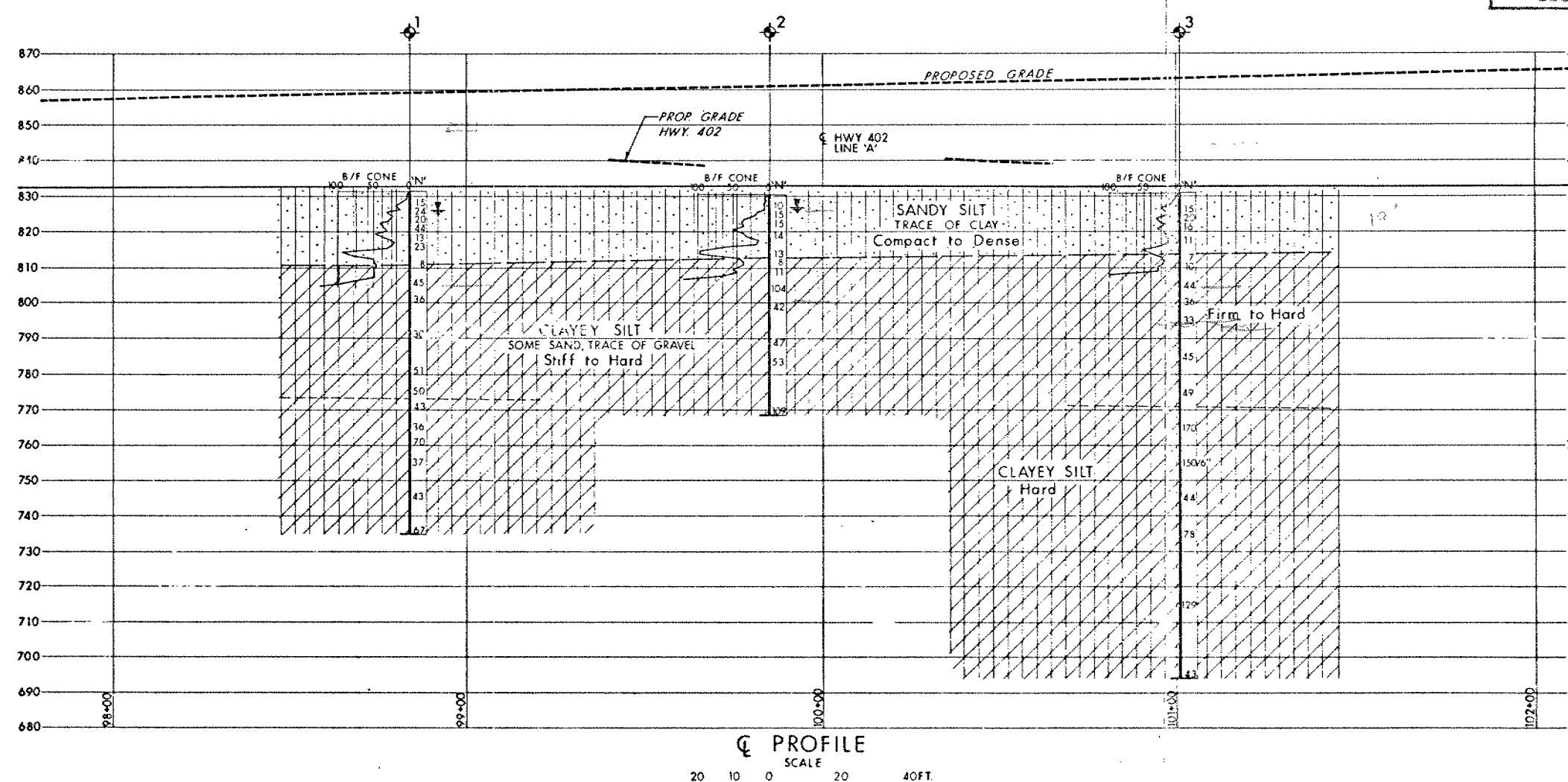
H	VERTICAL HEIGHT OF SLOPE
D	DEPTH BELOW TOE OF SLOPE TO HARD STRATUM
β	ANGLE OF SLOPE TO HORIZONTAL



LEGEND			
	Bore Hole		
	Dynamic Cone Penetration Test		
	B/F CONE - Blows/Ft. Cone Test (350 lbs. energy/blow)		
	Bore Hole & Cone Test		
	Water Levels established at time of field investigation, May & June 1975		
	W.L. in Borehole 3 not established		
NO.	ELEVATION	CO-ORDINATES NORTH	EAST
1	831.5	15,590,143	1,329,465
2	830.3	15,590,048	1,329,499
3	830.9	15,589,937	1,329,534

NOTE: FOR CONTRACT DOCUMENT
The complete foundation investigation report for this structure may be examined at the Structural Office and Foundations Office, Downsview, and at the LONDON District Office.

— NOTE —
The boundaries between soil strata have been established only at Bore Hole locations. Between Bore Holes the boundaries are assumed from geological evidence.



MINISTRY OF TRANSPORTATION AND COMMUNICATIONS—ONTARIO ENGINEERING SERVICES BRANCH—GEOTECHNICAL OFFICE—SOIL MECHANICS SECTION			
BOSTWICK ROAD			
HIGHWAY NO. Prop. 402 LINE 'A' DIST NO. 2			
CO. MIDDLESEX			
TWP. WESTMINSTER			
LOTS 24 & 62 CON 4 & ENBTR			
BORE HOLE LOCATIONS & SOIL STRATA			
SUBMITTALS	CHECKED	WP NO 41-66-07	DRAWING NO
DRAWN	CHECKED	WP NO	416607-A
DATE July 9, 1975	SITE NO 19-545	BRIDGE DRAWING NO	
APPROVED	CONE NO		