

G.I.-30 SEPT. 1976

GEOCRES No. 4076-11DIST. 1 REGION W.P. No. 258-66-04CONT. No. 80-04W. O. No. STR. SITE No. 6-305HWY. No. E.C.R.LOCATION Marx Ave. Pedestrian
OverpassNo. of PAGES - OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. REMARKS:

DIST. 1
CONT No
WP No 258-66-04

MARK AVENUE
PEDESTRIAN BRASS
GENERAL LAYOUT

SHEET

NOTES

CLASS OF CONCRETE

PRETENSIONED BOX GIRDERS 5,000 P.S.I.
DECK SLAB, PIERS & END POSTS 4,000 P.S.I.
REMAINDER 3,000 P.S.I.

CLEAR COVER ON REINFORCING STEEL

FOOTINGS & ABUTMENTS 3"
DECK SLAB 1 1/2" TOP, 1" BOTTOM
END POSTS 1 1/2"
PIER COLUMNS 3", PIER CAPS 1 1/2"
AND/OR AS NOTED ON THE DRAWINGS.

CONSTRUCTION NOTES

THE CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BEARING SEATS DEAD LEVEL TO THE SPECIFIED ELEVATIONS WITH A TOLERANCE OF 1/8".
NO CONCRETE SHALL BE PLACED ABOVE THE ABUTMENT BEARING SEATS UNTIL THE CONCRETE IN THE DECK HAS BEEN PLACED.
PIER CAPS ABOVE BEARING SEATS TO BE PLACED AFTER BOX GIRDERS ARE ERECTED.

CONCRETE QUANTITIES

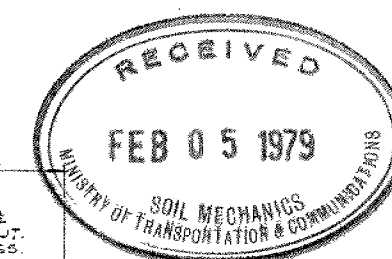
CONCRETE QUANTITIES ARE LISTED BELOW FOR THE APPROPRIATE CONCRETE LUMP SUM TENDER ITEMS:
CONCRETE IN PIERS, ABUTMENTS AND WINGWALLS 4,000 P.S.I. 82 CU. YD.
CONCRETE IN DECK SLABS 4,000 P.S.I. 38 CU. YD.
CONCRETE IN APPROACH SLABS 3,000 P.S.I. 31 CU. YD.

REINFORCING STEEL GRADE - 400

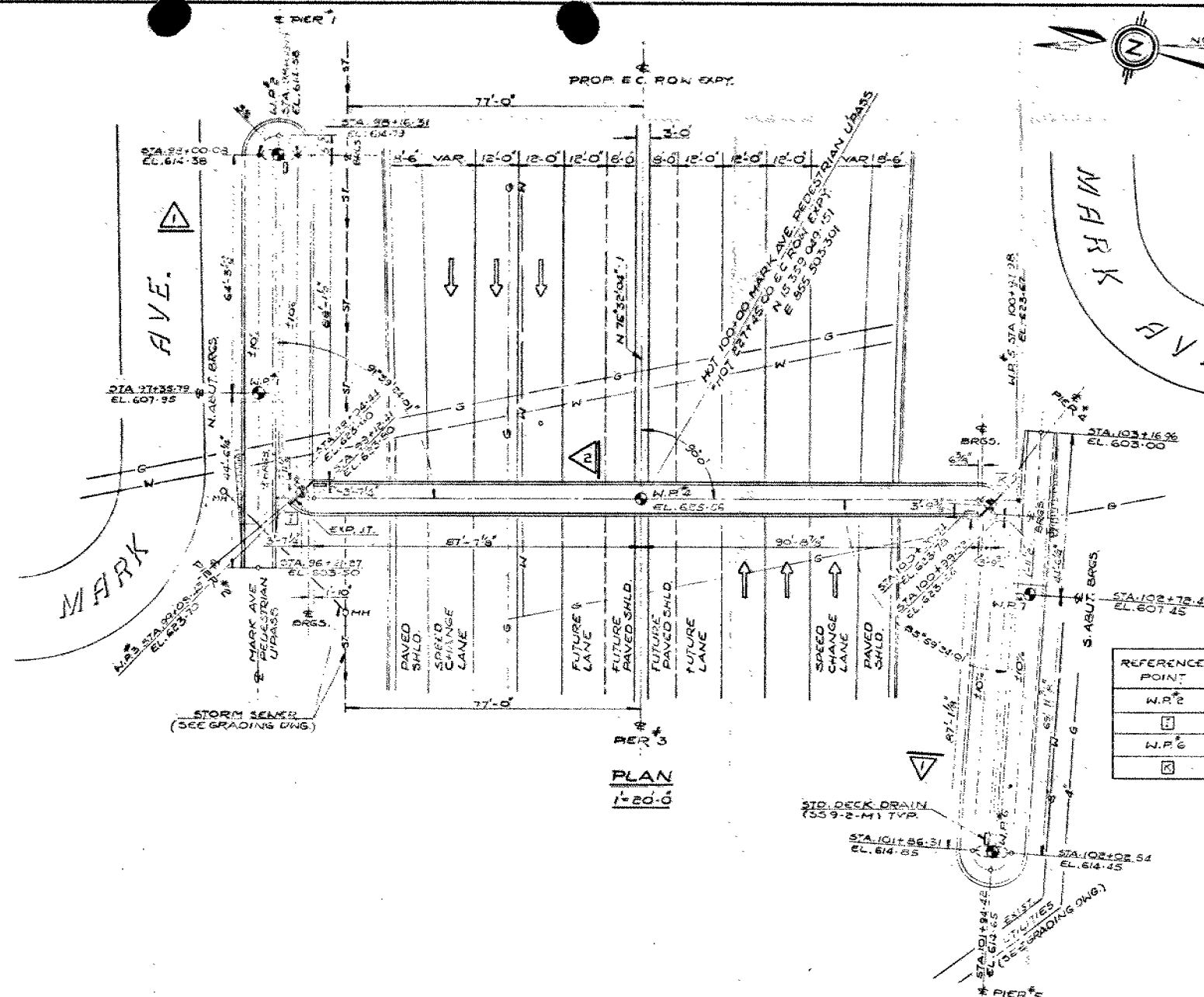
REINFORCING BARS WITH THE DESIGNATION 'C' AT THE END OF BAR MARK SHALL BE COATED BARS.

LIST OF DRAWINGS

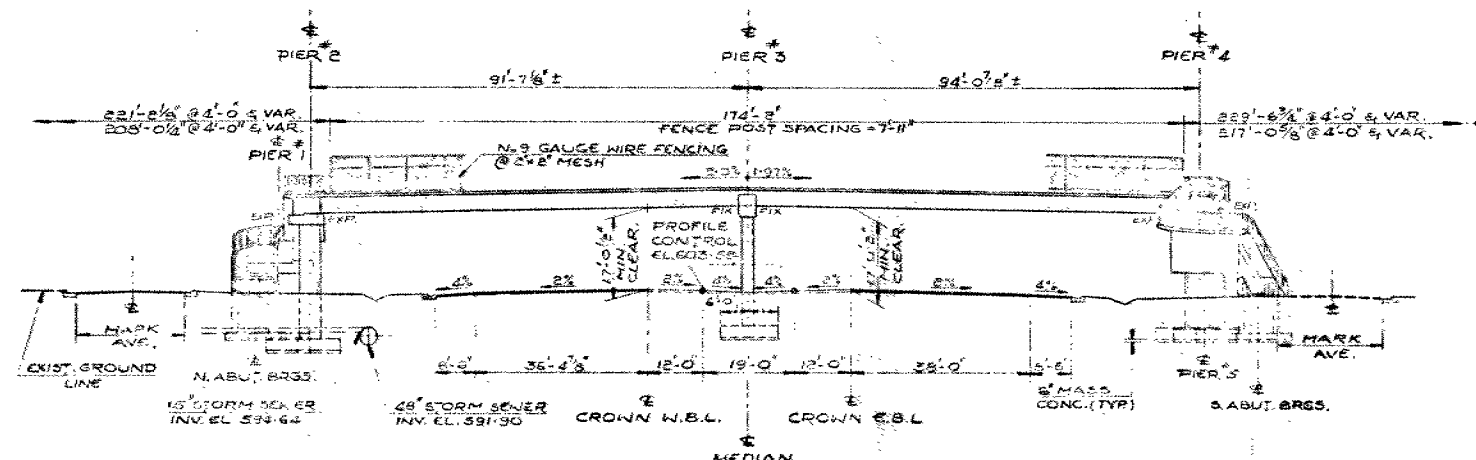
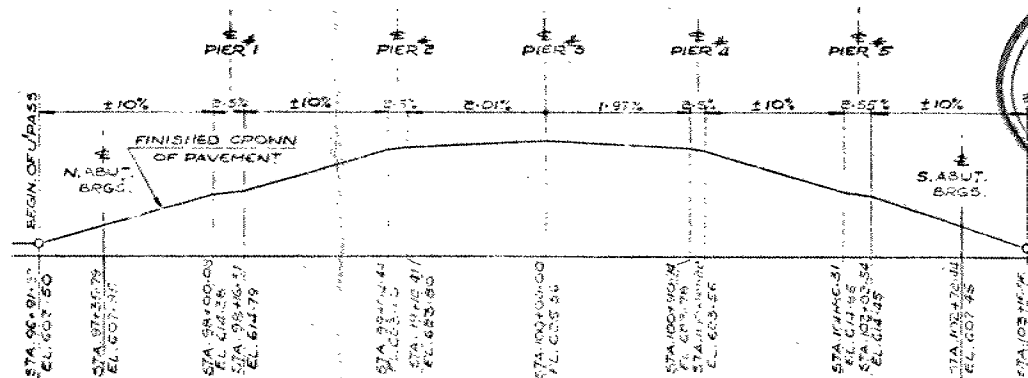
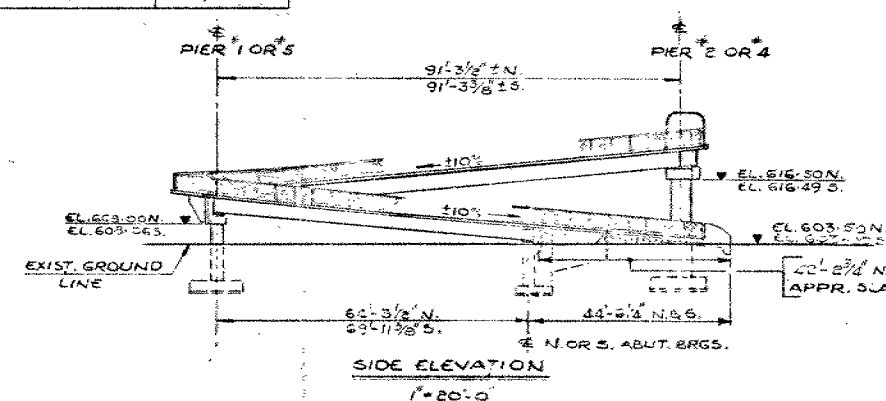
- 6-305-1 GENERAL LAYOUT
- 2 BORE HOLE LOCATION & SOIL STRATA
- 3 SITE & FOOTING LAYOUT
- 4 ABUTMENTS & ABUTMENT FOOTINGS
- 5 PIER 1 & 2 & PIER FOOTINGS
- 6 PIER 3 & PIER FOOTING
- 7 PIER 4 & PIER FOOTING & BEARINGS
- 8 PIER 5 & PIER FOOTING
- 9 PRETENSIONED BOX GIRDERS (TYP.)
- 10 PRETENSIONED BOX GIRDERS (TYP.)
- 11 DECK LAYOUT & SCAFFOLD ELEVATIONS
- 12 DECK DETAILS I
- 13 DECK DETAILS II
- 14 APPROACH SLABS
- 15 FENCING DETAILS I
- 16 FENCING DETAILS II
- 17 STANDARD DETAILS I
- 18 AS CONSTRUCTED ELEV. & DIM.



REVISIONS	DATE	BY	DESCRIPTION	DATE



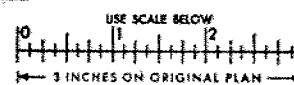
REFERENCE POINT	NORTH	EAST
W.P. 2	15,359,163.474	855,570.319
W.P. 3	15,359,144.213	855,480.539
W.P. 4	15,358,935.203	855,435.190
W.P. 5	15,358,950.481	855,526.927



TOP OF FOOTINGS EL'S:
N. & S. ABUT. FOOTINGS 595.25
PIERS 1 & 5 595.75
PIER 2 595.40
PIERS 3 & 4 596.00

ELEVATION
1"=20'-0"

FOR REDUCED PLAN



Mr. A.P. Watt
Regional Structural Planning Engineer
Southwestern Region, London

Soil Mechanics Section
Engineering Materials Office
West Building, Downsview

77 10 18

Re: Preliminary Recommendations
Mark Avenue Pedestrian Underpass
E.C. ROW Expressway, W.P. 258-66-04, Site 6-305
District 1, Chatham

In reply to your request of June 6, 1977 for a foundation investigation at the above site, we are submitting the following comments and recommendations. Subsurface explorations were carried out in 1968, some 3/4 miles west (at Hwy. 3) and some 1/2 miles east (at Dominion Blvd.) of the proposed pedestrian crossing site along the future E.C. ROW expressway alignment.

The subsoil conditions at both locations, with the exception of the extreme upper 4-5 feet, were found to be similar. It consists of an about 110 foot deep deposit of firm to hard clayey silt, some sand, trace of gravel, followed by a 10 foot thick sandy silt, some gravel stratum. Limestone type bedrock was encountered at elevation 490±.

The groundwater level was observed to be 2 to 3 feet below ground level at the time of field investigation. Assuming that the subsurface conditions are similar at Mark Avenue to those encountered at the adjacent sites, (Dominion Blvd. and Hwy. 3) the following recommendations are given regarding the proposed pedestrian crossing structure foundation.

The upper (desiccated) portion of the clayey silt subsoil appears to be suitable for spread footing type of foundations between elevation 593 and elevation 587. A safe net pressure of 3.0 t.s.f. may be assumed for design purposes. The desiccated zone is susceptible to softening on contact with water. Therefore, it is recommended that the base of the footing excavations be protected by concrete working slabs immediately on exposure. Differential settlements are expected to be in the order of about 1 inch. As an alternative, the entire structure may be supported on end bearing piles driven to bedrock. The maximum allowable load for the particular steel section may be assumed for design purposes. No major dewatering problems are anticipated.

The frost protection requirement in this area is minimum 4 feet.

cont'd.....

These recommendations will be confirmed at a later date after the completion of the planned field investigation programme.

P. Payer
Senior Engineer

For: K.G. Selby
Supervising Engineer

PP/gs

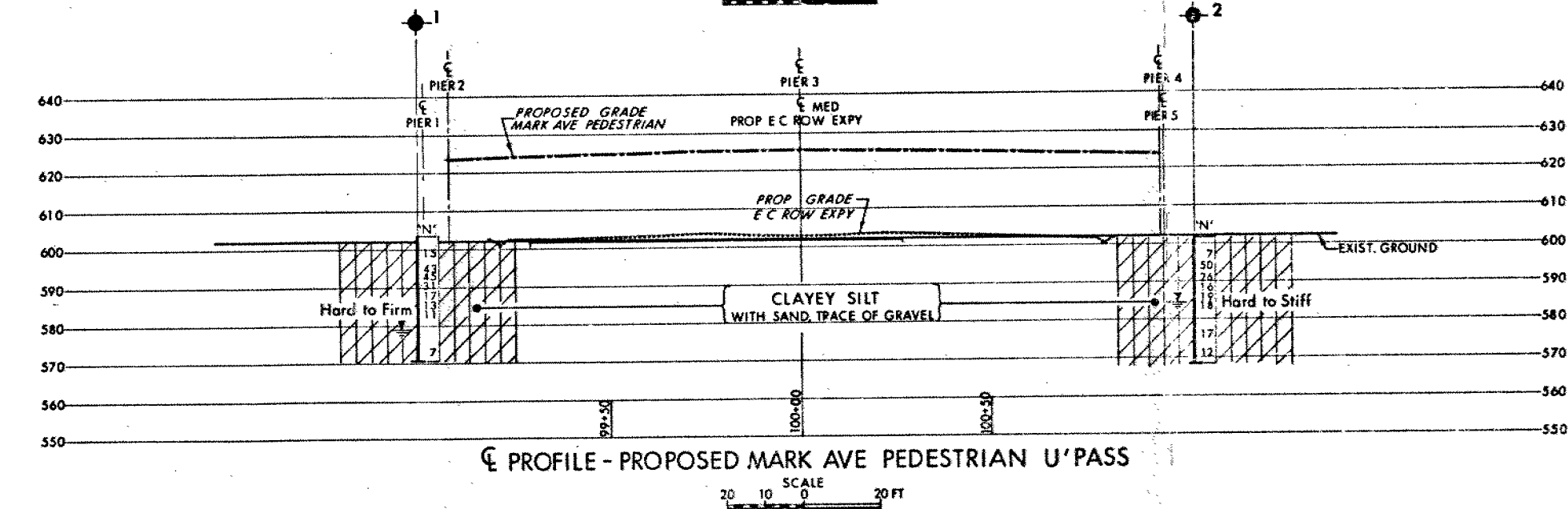
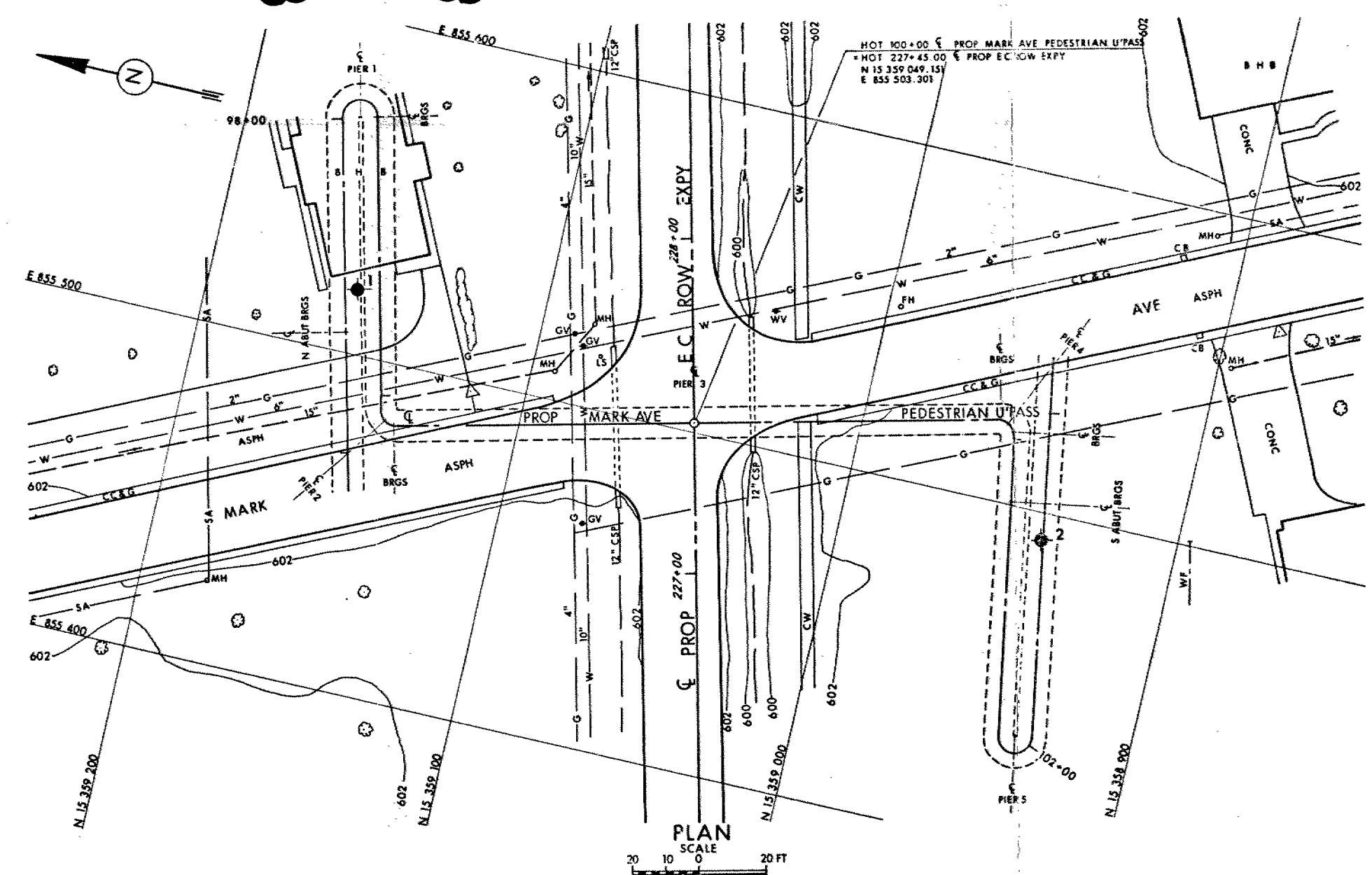
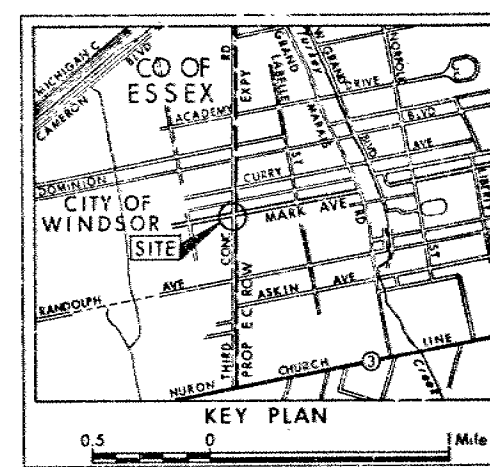
cc: J.R. Roy
A. Wittenberg
J.H. Blevins

J.L. Keen
G.A. Wrong
B.J. Giroux
R.S. Pillar

R. Hore

A. Crowley
J. Anderson
G. Sloan

Files J



LEGEND

- Bore Hole
- ⊕ Dynamic Cone Penetration Test (Cone)
- ⊙ Bore Hole & Cone
- N' Blows/ft (3rd Pen Test 350 ft lbs energy)
- CONE Blows/ft (60° Cone, 350 ft lbs energy)
- ↓ WL at time of investigation May 1979

No	ELEVATION	CO-ORDINATES	
		NORTH	EAST
1	603.4	15 359 156	855 520
2	601.3	15 358 940	855 492

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

REVISIONS		DESCRIPTION	
DATE	BY		

GEOCRE No 4016-11

HWY No EC ROW EXPY DIST 1

SUBMIT PP CHECKED DATE Aug 14-1979 SITE 6-305

DRAWN RS CHECKED APPROVED DWG 6-305-2