

\_\_\_\_\_ 33-73-01 HWY. 401 + FIRST AVE E. 30M12-105  
W.O. W.P. LOCATION GEOCRE NO.

• DATA ON FILE IN SOIL MECHANICS SECTION

REFER TO: W.P. FILE

REMARKS

**GEOCRE** INDEXING CARD FOR REPORTS NOT MICROFILMED

GI-20 AUG. 74

# M. M. DILLON LIMITED

consulting engineers and planners

BOX 219, TORONTO, ONTARIO M4P 2G5 (416) 481-6886 CABLE: DILLEN, TORONTO, CANADA

OUR FILE: 7231-01

YOUR FILE:

9 August 1974

Ministry of Transportation  
and Communications  
Regional Materials & Testing Office  
3501 Dufferin Street  
Downsview, Ontario  
M3K 1N6

Attn: Mr. A. Shopoff

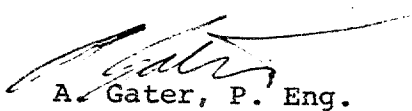
W.P. 33-73-01  
Hwy. 401 Widening

Dear Sir:

The present soils data for the proposed 60" sewer to be tunnelled under the 1st Line East does not provide adequate information for Contractors tendering the work, as the boreholes were terminated at the hard shale level, which is well above the sewer inverts. We request that the shale be cored to the proposed sewer invert at boreholes No. 2 and No. 3, as shown on the attached sketch.

Yours truly

M.M. DILLON LIMITED

  
A. Gater, P. Eng.  
Project Manager

AG:bjh  
Encl.

cc: N. Sen

27.



CROSS SECTION 10 x 10  
CHARGES BRUNING COMPANY

BOREHOLE 1  
STA 2240+00

172' Lt.

0	10"	dk br. cl. lo. tps
10"	42"	br. ft. cl. stony
42"	5'	dk br. cl. lo. tps
5'	5 1/2'	br. sil. cl. - lt. cl. wet
5 1/2'	10'	red weath. shale moist
10'		n.f.p. hard shale

BOREHOLE

630

620

610

INVEL 618.00

2240+00

BOREHOLE

93

93

INVEL 612.33

2

FIRST LINE EAST

VERTICAL 1" = 10'  
HORIZONTAL 1" = 100'

# BOREHOLE 3

STA. 2236+73

178' Lt

170' Lt  
dk. br. cl. to. tps  
br. ft. cl.  
dk. br. cl. to. tps  
br. si. cl. - ft. cl.  
red weath. shale  
n.f.p. shale

0 - 5"  
5 - 12 1/2"

dk. br. cl. tps.  
red si. lo. - si. cl. to  
(occ. layers with shale  
fragments)  
(11 1/2' - 12 1/2' bouldery)  
red weath. shale  
n.f.p. dr.

12 1/2' - 13 1/2'  
13 1/2' - 14'

# MANHOLE VI

STA. 2235+50

dk. br. cl. to tps  
br. si. cl. - ft. cl. till moist  
red weath. shale dry 8' moist 9' - 12'  
n.f.p. hard shale

0 - 3"  
3" - 4'  
4' - 14'  
14' - 15'

GROUND LINE

SHALE

# SCALES

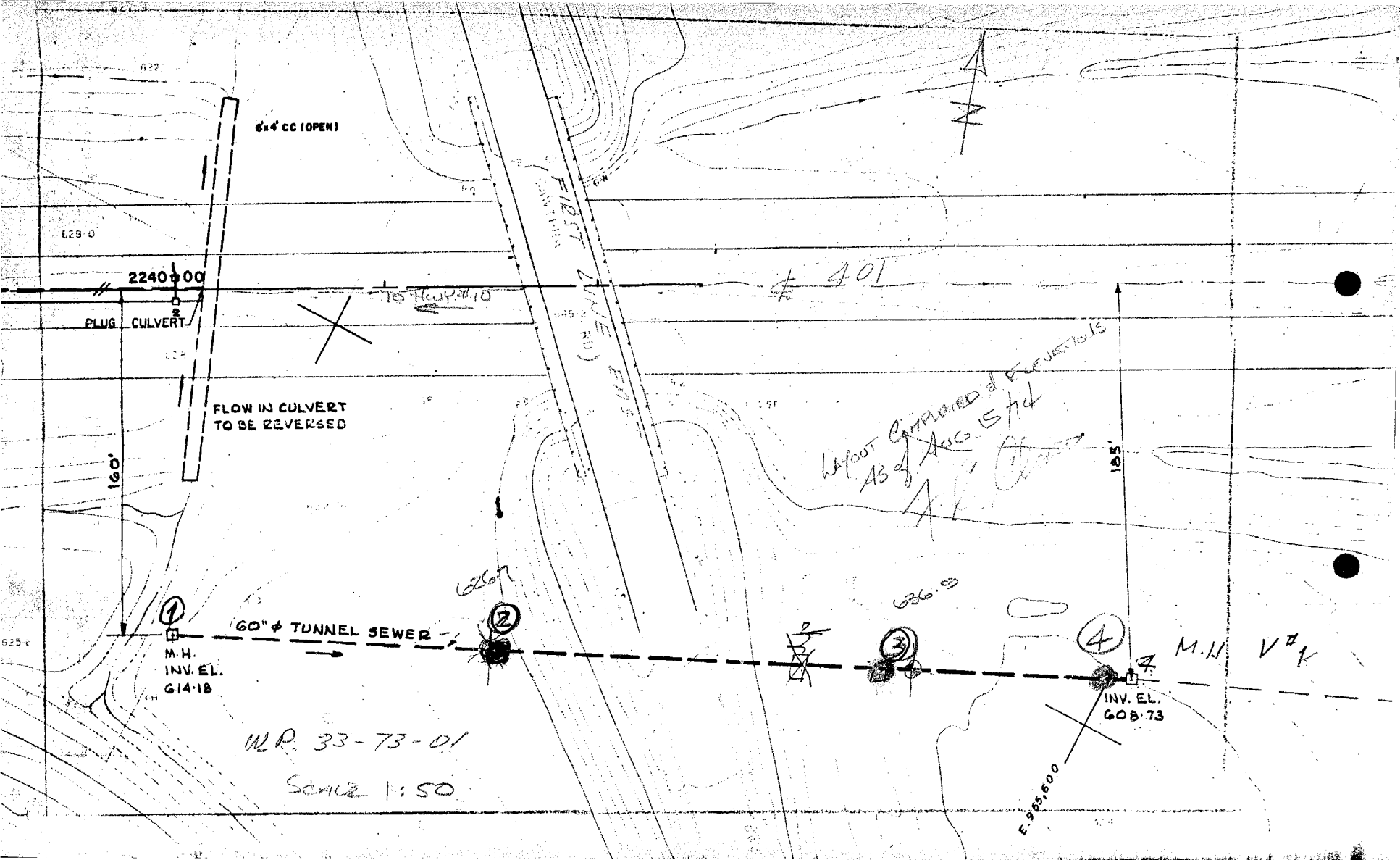
VERTICAL

1" = 10'

HORIZONTAL

1" = 100'

2235+00



MINISTRY OF TRANSPORTATION AND COMMUNICATIONS, ONTARIO

MEMORANDUM

TO: Mr. R.D. Gunter,  
Regional Materials & Testing  
Office,  
Central Region, Toronto.

FROM: Soil Mechanics Section,  
Geotechnical Office,  
West Building, Downsview.

ATTENTION: Mr. P.F. Weber.

DATE: September 6th, 1974.

OUR FILE REF. IN REPLY TO SEP 17 1974

SUBJECT: RE: Soil Investigation at Hwy. 401 and  
First Line East at Mississauga,  
W.P. 33-73-01, District 6, Toronto.

30M12-105  
GEOCRES No.

CONT. 75-28

At the request of your Office (letter dated August 13th, 1974) two boreholes were carried out at the abovementioned site.

The investigation revealed that the subsoil at this site is mainly cohesive type glacial till made of a clayey silt-sand and gravel underlain by shale bedrock. The overburden is 11 ft. and 12 ft. deep respectively from the existing ground surface. In Borehole No. 2 the upper 8.5 ft. of the material is reworked or filled material having the same texture of cohesive glacial till and a trace of organics. No water was encountered in the Boreholes during the period of investigation. However, after the drilling operation, the perched water level was measured at 620.2 and 626.9' in Boreholes No. 2 and 3 respectively.

It is estimated that the shale bedrock starts at about elev. 615.5' in B.H.#2 and elev. 624.9' in B.H.#3. However, the upper 4 ft. in B.H.#2 and about 7.5 ft. in B.H.#3 of the shale is quite weathered and probing was carried out by augering and split-spoon sampling.

Below elev. 615' in B.H.#2 and 617.4' in B.H.#3 the shale bedrock was drilled and BXL size core samples extracted. The coring yielded 100% recovery and is made up of mostly sound shale interbedded with limestone and ½" to 2" thick seams of weathered shale.

The subsoil findings are presented in the attached drawing. In addition, included are two borelogs and the Geologist's analysis of the cored shale bedrock sections.

*V. Korlu*  
V. Korlu,

Project Engineer,

For: M. Devata,  
Supervising Engineer.

VK/mj  
ATTACH\*

DESIGN SERVICES BRANCH

FOUNDATIONS OFFICE

## RECORD OF BOREHOLE NO 2

JOB \_\_\_\_\_ LOCATION Co-ords. 15,855,100 N; 955,334 E. ORIGINATED BY VK  
 W.P. 33-73-01 BORING DATE August 15, 1974 COMPILED BY VK  
 DATUM Geodetic BOREHOLE TYPE Auger and sample with CME 45 CHECKED BY \_\_\_\_\_

SOIL PROFILE			SAMPLES			ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT			LIQUID LIMIT <u>      </u> $w_L$ PLASTIC LIMIT <u>      </u> $w_p$ WATER CONTENT <u>      </u> $w$ $w_p$ — $w$ — $w_L$			BULK DENSITY $\gamma$ P.C.F.	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS/FOOT		SHEAR STRENGTH P.S.F. O UNCONFINED + FIELD VANE ● QUICK TRIAXIAL x LAB VANE			WATER CONTENT % 10 20 30				
626.7	Ground Level													
0.0	Clayey silt & some sand, traces of gravel and organics (Fill)		1	SS	0	620							org. 2.1	▼ 620.2 4 19 60 17
618.2	Stiff		2	SS	75									
615.7	Het. mix. of clayey silt, ss. & grav. Glac. Hard													
11.0	Weathered		3	SS	158									
611.7			4	SS	100%									
15.0	Sound		5	BXL	90% Rec	610								
	Shale Bedrock		6	BXL	80% Rec									
601.2														
25.5	End of Borehole					600								



DESIGN SERVICES BRANCH

FOUNDATIONS OFFICE

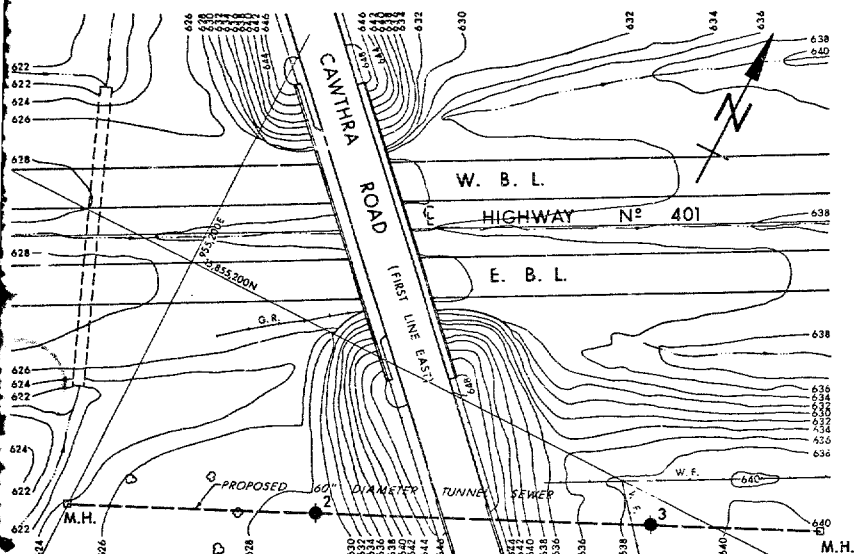
# RECORD OF BOREHOLE NO 3

JOB \_\_\_\_\_ LOCATION Co-ords. 15,855,184 N; 955,514 E. ORIGINATED BY VK  
W.P. 33-73-01 BORING DATE August 16, 1974 COMPILED BY VK  
DATUM Geodetic BOREHOLE TYPE Auger & Sample with CME 45 CHECKED BY \_\_\_\_\_

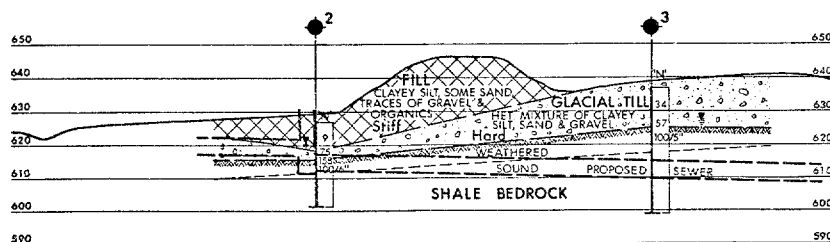
SOIL PROFILE		STRAT. PLT	SAMPLES			ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE				LIQUID LIMIT $w_L$			BULK DENSITY	REMARKS
ELEV. DEPTH	DESCRIPTION		NUMBER	TYPE	BLOWS/FOOT		BLOWS / FOOT				PLASTIC LIMIT $w_p$				
636.9	Ground Level						SHEAR STRENGTH P.S.F.				WATER CONTENT $w$				
							O UNCONFINED + FIELD VANE				WATER CONTENT %				
							● QUICK TRIAXIAL x LAB VANE				10 20 30				
0.0	Het. mix. of clayey silt, sand & gravel		1	SS	34	630									
	Glacial Till														
	Hard		2	SS	57										
624.9															
12.0	Weathered		3	SS	100.5"	620									
617.4															
19.5	Sound		4	BXL	90% Rec										
	Shale Bedrock		5	BXL	100% Rec	610									
			6	BXL	100% Rec										
			7	BXL	100% Rec	600									
598.9															
38.0	End of Borehole														
						590									

OFFICE REPORT OF OIL EXPLORATION





PLAN  
40 20 0 SCALE 40 80 FT.

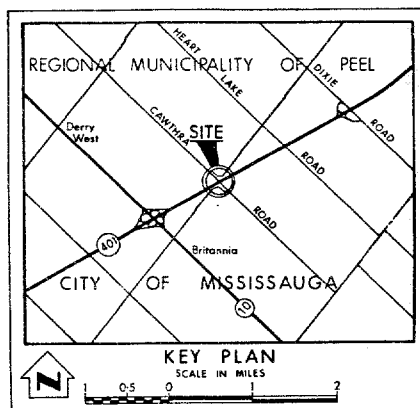


PROFILE ALONG PROPOSED SEWER

HORIZ. 40 20 0 SCALE 40 80 FT.  
VERT. 20 10 0 20 40

#### NOTE FOR CONTRACT DRAWING

The complete foundation investigation report for this structure may be examined at the Structural Office and Foundations Office, Downsview, and at the \_\_\_\_\_ District Office.



#### LEGEND

- Bore Hole
- ⊕ Cone Penetration Test
- ⊕ Bore Hole & Cone Test
- ⊕ Water Levels established at time of field investigation, AUG. 15-16, 1974.

NO.	ELEVATION	CO-ORDINATES	
		NORTH	EAST
2	626.7	15,855,100	955,334
3	636.9	15,855,184	955,514

#### 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	DATE	BY	DESCRIPTION

MINISTRY OF TRANSPORTATION AND COMMUNICATIONS—ONTARIO  
ENGINEERING SERVICES BRANCH—GEOTECHNICAL OFFICE

### PROPOSED 60" DIAMETER SEWER (CAWTHRA ROAD)

HIGHWAY NO. 401 DIST. NO. 6  
REGIONAL MUNICIPALITY OF PEEL  
CITY OF MISSISSAUGA

#### BORE HOLE LOCATIONS & SOIL STRATA

SUBNO V.K.	CHECKED <input checked="" type="checkbox"/>	WP NO 33-73-01	DRAWING NO
DRAWN N.T.	CHECKED <input checked="" type="checkbox"/>	WO NO	337301-A
DATE 9 SEPTEMBER 1974	SITE NO		BRIDGE DRAWING NO
APPROVED	CONT NO		



Ministry of  
Transportation  
and  
Communications

# DIAMOND DRILL RECORD

DIP

90°

PROPERTY LOCATION W. P. 33-73-01  
Highway #401 & 1st Line  
Mississauga

LATITUDE  
DEPARTURE  
BEARING

TOTAL FOOTAGE 25:61

ELEV. COLLAR

DATUM

DATE STARTED

DATE COMPLETED

DRILLED BY

LOGGED BY

Z. D. Koniuszy

[illegible]

DATE OF EXAMINATION

August 21, 1974

Z. D. Koniuszy

# DIAMOND DRILL RECORD

DIP

HOLE NO. 3 SHEET NO. 1

PROPERTY W. P. 33-73-01  
LOCATION Highway #401 & 1st Line  
Mississauga  
LATITUDE \_\_\_\_\_  
DEPARTURE \_\_\_\_\_  
BEARING \_\_\_\_\_

900  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
TOTAL FOOTAGE 381

ELEV. COLLAR \_\_\_\_\_  
DATUM \_\_\_\_\_  
DATE STARTED \_\_\_\_\_  
DATE COMPLETED \_\_\_\_\_  
DRILLED BY \_\_\_\_\_  
LOGGED BY \_\_\_\_\_

Z. D. Koniuszy

FOOTAGE		FORMATION	SAMPLE NUMBER			REMARKS
FROM	TO					
19'5"	25'3"	Shale, red colour, soft, fissile, fine texture.				Core broken and ground
25'3"	26'2"	Limestone, silty and shaly, green-grey colour, fine texture, hard, with seams of greenish shale up to 1".				
26'2"	26'8"	Limestone, silty and shaly, greenish colour, fine texture, medium hard.				
26'8"	33'0"	Shale, red colour, soft, fissile, fine texture with few silty sections up to 2".				
33'0"	34'0"	Limestone, silty and shaly, greenish colour, medium hard, fine texture, narrow 1" shale section.				
34'0"	34'6"	Shale, redish colour, soft, fine texture, fissile.				
34'6"	36'8"	Limestone, shaly and silty, fossiliferous, redish grey colour, fine texture, hard to medium hard with 2 thin red and green seams of shale.				
36'8"	37'0"	Shale, redish grey colour, medium hard, fine texture with 2 seams 1" of Limestone.				

DATE OF EXAMINATION August 21, 1974

D. Z. Koniuszy

Oversized Drawings:

Tunnel Section for  
first line east

## LISTING OF VERIFIED BIDS

## NOTICE OF AWARD OF CONTRACT

CONTRACT NO. 75-28TENDER OPENING NO. 3DATE April 16, 1975

## DESCRIPTION

GRADING, DRAINAGE, GRANULAR BASE, HOT MIX PAVING AND LIGHTING  
NECESSARY AVAILABLE RATING IS (G) IN (G) OR (P)

Mississauga, First Line East, Westerly to First Line West, 1.8 Miles

HIGHWAY 401

TORONTO DISTRICT

MILEAGE: 1.85

Dufferin Materials & Construction Limited	\$ 1,907,093.77
Pitts Engineering Construction Limited	2,002,736.00
Ambro Materials & Construction Limited	2,078,893.76
Fermar Paving Limited	
Fermar Asphalt Limited	2,116,610.89
Bot Holdings Limited	
Bot Construction Limited	
Bot Construction (Canada) Limited	
Clarkson Construction Company Limited	2,163,121.11
Warren Bitulithic Limited	2,166,665.16
All-Weather Asphalt Mix Limited	2,209,933.50
Dagmar Construction Limited	2,292,222.22
K. J. Beamish Construction Company Limited	2,374,127.15

AWARDED TO:

DUFFERIN MATERIALS & CONSTRUCTION LIMITED  
1925 BARTON ST. E.,  
HAMILTON, ONTARIO.DATE APRIL 24th, 19 75

## MEMORANDUM

TO: Mr. C. Mirza  
Soils Mechanics Section  
West Building

FROM: Mr. G. J. Ricker  
Proj. Eng. (Freeways)  
District #6, Toronto

ATTENTION: Mr. M. S. Devata

DATE: June 27, 1975

OUR FILE REF.

IN REPLY TO

SUBJECT:

Re: Contract 75-28

107.  
3-73-01

Enclosed are the contractor's drawings showing the details of the tunnel support and lining he proposes to use to construct the 60 inch monolithic tunnel on the above noted contract.

May we have your comments on this method please.

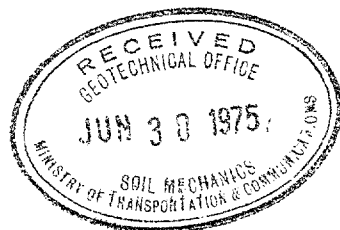


G. J. Ricker  
Proj. Eng. (Freeways)

For: H. Greenland  
District Engineer

GJR:rr  
Encl.

cc Comments  
M. Devata  
July 15/75





DOCUMENT MICROFILMING IDENTIFICATION

GEOCRÉS No. 30 m 12-105

DIST. 6 REGION CENTRAL

W.P. No. 33-73-01

CONT. No. 15-24

W. O. No. \_\_\_\_\_

STR. SITE No. \_\_\_\_\_

HWY. No. 401

LOCATION HWY. 401 AND FIRST

LIN E

OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. ☒

REMARKS: DOCUMENTS TO BE UNFOLDED

BEFORE MICROFILMED

01/08 1105 PM

