

DOCUMENT MICROFILMING IDENTIFICATION

GEOCRES No. 30M13-140

DIST. _____ REGION _____

W.P. No. 141-87-00
144-87-00

CONT. No. _____

W. O. No. _____

STR. SITE No. _____

HWY. No. 407

LOCATION HYDRO TOWERS

No. of PAGES -

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OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. _____

REMARKS: _____



Ministry
of
Transportation

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des
Transports

Engineering Materials Office
Foundation Design Section
Room 315, Central Building
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

Tel: (416) 235-3731

Geocres 30M13-140

1991 09 20

Totten Sims Hubicki Associates
30 Dupont Street East
Waterloo, Ontario
N2J 2G9

Atten: Mr. E. Heinrichs, P. Eng.
Project Manager

Re: Proposed Grading Adjacent to
Ontario Hydro Transmission Tower (170)
Highway 407 - W.P. 144-87-00

Dear Sir,

After reviewing the Ontario Hydro Tower (170) Layout with respect to the proposed Hwy. 407 we have the following comments:

For the W-NS Ramp 5 m cut adjacent to the hydro tower, localized 2:1 sideslopes which were proposed are acceptable from the standpoint of geotechnical stability. However landscaping requirements specify that sideslopes of 3:1 be maintained. If this specification is to be adhered to, the following options could be implemented. Either a 3:1 slope could be used by taking some length away from the 10 m offset of the tower, with the permission of Ontario Hydro or by utilizing a 2 m retaining wall at the toe of the sideslope.

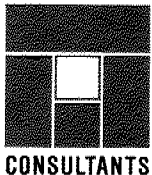
If there are any questions, please do not hesitate to call this office.

Yours truly,

MARTIN LUKHACHUK
FOR

Dr. Balu Iyer, P. Eng.
Sr. Foundation Engineer

BI/mmj
c.c. - W.R. Lankinen
F. Conforti



totten sims hubicki associates

August 26, 1991

W. R. SWAIN, B.A.Sc., P.Eng., O.A.A.
Architect and Engineer

C. G. RUPNOW, C.E.T.

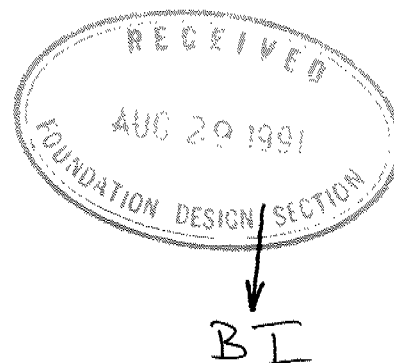
TOTTEN SIMS HUBICKI ASSOCIATES (1981) LIMITED
30 DUPONT STREET EAST, WATERLOO, ONTARIO
CANADA N2J 2G9 (519) 886-2160 FAX (519) 886-1697

File: 42-0762-07

Mr. M. S. Devata, P.Eng.
Chief Foundation Engineer
Ministry of Transportation
Foundation Design Section
3rd Floor, Central Building
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

Attention: Dr. B. Iyer
Senior Foundation Engineer

Re: **Proposed Grading Adjacent
to Ontario Hydro Transmission Tower (170)
Highway 407 - WP 144-87-00
From CNR McMillan Yard Westerly
to Kipling Avenue
District 6 Toronto**



Dear Sir:

Further to our recent conversation, attached please find the following for your reference in the review of proposed grading for the Highway 407W-Pine Valley Drive W/S Ramp adjacent to Ontario Hydro Tower (170):

- a) 1:500 scale preliminary design partial prints showing location,
- b) Typical cross-section,
- c) W-NS ramp profile.

As discussed, Ontario Hydro has requested that there be an offset of 10m from the closest base of the Tower to the top of slope for maintenance reasons. Ontario Hydro notes that they require a minimum offset of 6m only to maintain the structural integrity of their foundations.

The ramp would be in a 5[±]m cut. A 2:1 sideslope has been proposed, along with a shallower localized ditch and longitudinal culvert to convey storm flows, in order to maintain a 10m offset to the Tower.

Could you kindly provide comments regarding slope stability on the acceptability of the proposed 2:1 slope.

Yours very truly

totten sims hubicki associates

A handwritten signature in cursive script, appearing to read "E. Heinrichs".

E. Heinrichs, P.Eng.
Project Manager

EH/cs

TO ISLINGTON ←

HWY 407 → TO PINE VALLEY DR

SEE PLAN
B-73-407

2.50 Sh

3.00

3.75

3.75

3.75

3.00 Sh

1.00 Sh

+100

W-N/S RAMP

3.75

2.50 Sh

160.3

REINFORCE

POST 11+074.285 W-N/S RAMP

HOT 15+845.906 HWY 407

3:1

3:1 2:1

3:1

2)
CULVERT
TREATMENT

10m
CLEARANCE

REVISED
T/BS

TWR 170
PLOTTED FROM MTD
SURVEY NOTES
SEPT/89

memorandum



March 4, 1991

To : Mr. F. Conforti
Utility Coordinator, Dist. 6, Toronto
Atrium Tower, 1st Floor

Attn.: Mr. H. Wendland

From : Foundation Design Section
Central Building, Room 315

Re : Proposed Ontario Hydro 500 kv Tower Line crossing Hwy.
407 and Pinevalley, W.P. 141-87-00 & W.P. 144-87-00
District 6, Toronto

I refer to your memorandum dated Feb.15, 1991, requesting our comments on slope stability for the above projects.

The drawings provided did not include a cross section showing the exact location and dimensions of the footings. Ontario Hydro's Plan No.0247 is an orthophoto showing Hwy. 407 and Pinevalley drive and is not adequate enough for our review.

Please provide us with a drawing that shows the required details of the footings.

If you have any questions, please contact us.

A handwritten signature in cursive script, appearing to read "B. Iyer", with a horizontal line drawn underneath it.

Dr. B. Iyer, P.Eng
Sr. Foundation Engineer

cc: W.R. Lankinen

30 International Blvd
Toronto (Rexdale), Ontario
Canada M9W 5P3

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Offices:
Toronto, Ottawa,
Cambridge

January 22, 1991

Ministry of Transportation,
Ontario
Central Region
Planning and Design
Atrium Tower, 4th Floor
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

Re: Highway 407 Advanced Structures -
Humber River to Pine Valley Drive
WP 141-87-00
Giffels Project No. W8820501

Attention: Mr. W. Lankinen, P.Eng.
Senior Project Manager

Dear Sir:

This letter is in reply to your memo dated January 9, 1991 and will confirm our discussion regarding proposed and existing tower locations shown on Ontario Hydro's Plan No. 0247.

A. Tower Lines Crossing Highway 407

- (1) Tower 170, which was plotted from MTO Survey notes, is located within the south 407 right-of-way.
- (2) Proposed Towers 170A and 170B are planned outside the 407 right-of-way.

Concerns/Comments

- (1) We suggest that planned Tower 170B be moved north to provide 5 m clear between the north right-of-way limit and the southern most footing. We suggest that this space be allocated for the proposed header tile parallel to the north right-of-way. It would appear that the span between towers 170A and 170B can be maintained.
- (2) The enclosed plans and cross sections show the proposed 407 grading at all 3 sites. In light of the soil conditions and slope stability concerns, we strongly recommend that your Foundation Design Section assess 407 grading impacts at all 3 sites. Impacts on structural components (footings/foundations) should also be addressed.

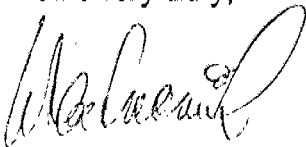
B. Tower Lines Crossing Pine Valley Drive

The proposed tower locations are approved.

C. Profiles

Profile information from Ontario Hydro was not available. We enclose the proposed Pine Valley Drive profile showing the 4 tower lines crossing Pine Valley. Ontario Hydro should review and comment regarding vertical clearances.

Yours very truly,



**W. Lachmaniuk, P.Eng.
Manager, Transportation Engineering**

WL:jm(W8820599)407-Tower-Lines

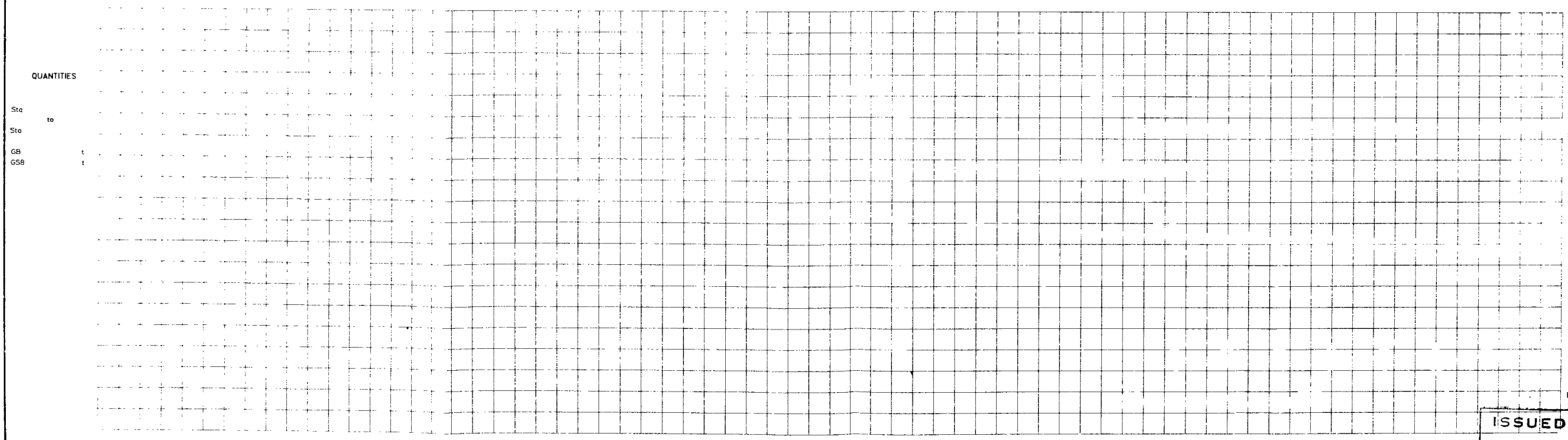
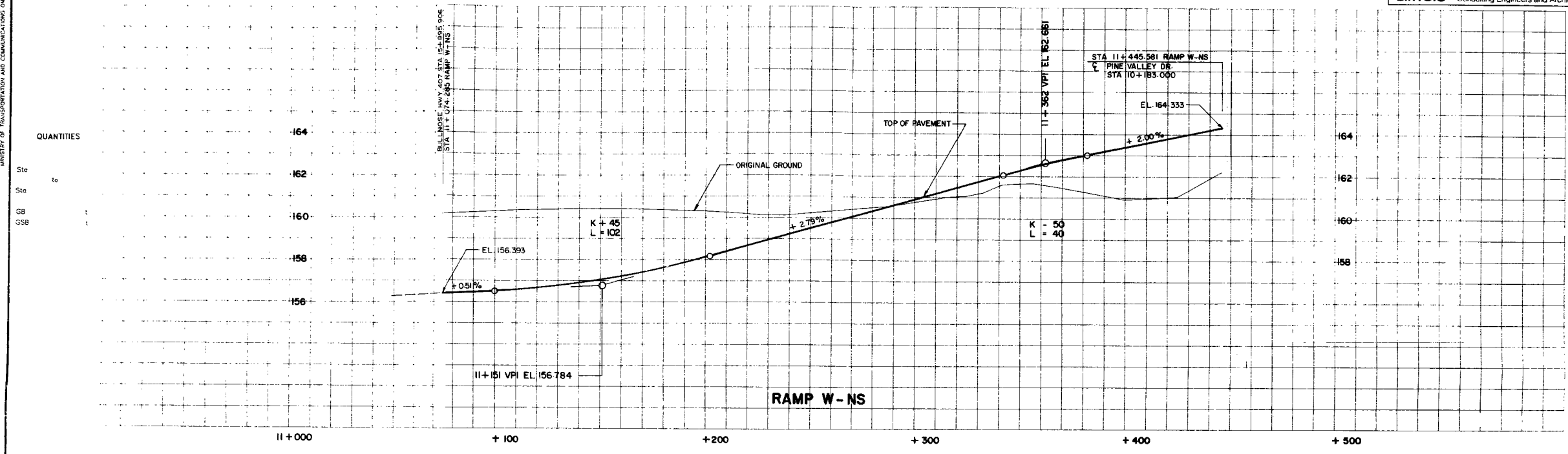
cc:

MINISTRY OF TRANSPORTATION AND COMMUNICATIONS DRAFT RD-710 87-88

METRIC
DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES
UNLESS OTHERWISE SHOWN

PLATE No	
CONT No	
WP No 141 - 87 - 00	
PROFILE	
Survey	Revised
Giffels Giffels Associates Limited Consulting Engineers and Architects	

SHEET



ISSUED
JUL 3 1991
GIFFELS ASSOCIATES
LIMITED