

# 65-F-71

HWY. # 103

& C.N.R.

OVERHEAD,

WAUBAUSHENE

1965 JUN 23 AM 11:33

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DOWN OWEN 4 JUNE 23/65 11:25 AM

W D BIRCH BR MTCE ENGR

CC K G SELBEY FOUNDATION ENGR

ATTN E VANBEILEN

RE C N R OVERHEAD HWY 103 AT WAUBAUSHENE

THE SETTLEMENT AT THE APPROACH ON THE ABOVE STRUCTURE APPEARS TO BE CAUSED DUE TO SETTLEMENT OF THE APPROACH SLAB. A SERIES OF STAKES PLACED BY THE SURVEY PARTY FOR ELEVATION AND ALIGNMENT HAVE NOT SHOWN ANY SIGN OF MOVEMENT OF THE SIDE SLOPE OF THE AREA OUT FROM THE TOP OF SLOPE AT THIS TIME

J LOUGHEED GEN FOREMAN FOR H E JEPHSON DIST MTCE ENGR

Mr. A. Rutka,  
Materials & Testing Engineer,  
Room 102, Lab. Bldg.

Foundation Section,  
Room 107, Lab. Bldg.

65 F-71

June 17, 1965

Site Visit to C.N.R. Overhead, Hwy. 103,  
at Waubaushe -- June 16, 1965. (Dist.No.5)

The above-mentioned site was visited on June 16, 1965, by the writer, following advice by the District that some settlement of the South approach fill had occurred over a relatively short period of time. Following is a summary of observations made at the site:

(1) According to Mr. J. Loughheed, D.H.O. Maintenance Foreman, a settlement of  $1\frac{1}{2}$  inches between the approach pavement and the bridge deck, was first observed by the D.H.O. Patrolman on the evening of June 15. On June 16, the settlement was about 4 inches and by about 3:00 P.M. the settled zone had been patched up by the Maintenance Crew. On the West side of the pavement, a thin crack extended along the pavement edge for a distance of about 20 feet from the abutment.

(2) A careful visual investigation of the embankment and surrounding area revealed no signs of instability anywhere and, in consequence, no definite conclusions could be made as to the cause of the settlement or movement of the fill adjacent to the abutment.

(3) It is believed that there are two possible reasons for the settlements which should be investigated further:

(a) The fill under the approach slab may have settled over the years and the resulting voids have been bridged by the approach slab which eventually broke away from the bridge and settled suddenly.

(b) The settlements are due to some movements in the underlying soft to firm clay layers. In this event, the stability of the whole approach would be in danger.

(4) The District were advised to install a number of stakes in the vicinity of the abutment on the embankment sides and check these daily for elevation and alignment. Any slight movement of the embankment would then become apparent at which time, remedial measures could be taken.

KGS/MdeF  
cc: Foundations Office  
Gen. Files

K. G. Selby,  
SENIOR FOUNDATION ENGINEER

*WLR*

Mr. H. F. Gilbert,  
District Engineer,  
Owen Sound.

Mr. A. Rutka,  
Materials & Testing  
Engineer.

Attention Mr. H. E. Jephson

June 18, 1965.

C.N.R. Overhead, Highway 103 at Waubauskene.

Further to our telephone conversation of June 16, 1965, I wish to advise that our Mr. K. G. Selby visited the bridge at Waubauskene, and has prepared some comments. I am sending these to you.

You will note that while there is a settlement at the bridge approach, there is no sign of any movement of the embankment. It is quite possible that the concrete bridge slab has settled (if there is one). We have had bridge slabs settle before with a 3 - 6" settlement on the surface.

As this may not be the cause Mr. Selby has suggested the installation of several lines of stakes to determine if there is any movement of the approach embankment. I believe your district survey staff have already placed these stakes and that very accurate checks over the next few days will show if the embankment is moving, and if so this is quite serious. If not, then the settlement of the pavement is likely due to the settlement of the granular backfill.

Your staff will keep Mr. Selby advised of their readings, and we will keep you advised of any action that will be required.

*AR*

A. Rutka,  
Materials & Testing Engineer.

AR/pa

c.c. K. Lo,  
J. Roy.