
APPENDIX H
Photographs – Deck Condition from Bent #295 to #297

November 11, 2011

City of Toronto
 Technical Services
 Designs and Construction
 Linear Infrastructure
 310 Front Street West
 Suite 815
 Toronto ON M5V 3B5

Attention: Mr. Vic Zubacs, P. Eng.
 Senior Project Manager
**RE: F.G.Gardiner Expressway
 Existing Deck Condition Observations
 on October 23, 2011**
 Our File: W.O. 3211118

Dear Vic:

On the morning of October 23, 2011, the undersigned was requested by the City to review a section of F. G. Gardiner Expressway Deck in the eastbound direction from Bent 295 to Bent 297.

The City's own forces had previously removed the asphalt from a segment of the deck in this area as the asphalt was extensively cracked and was continuing to "break up".

Upon arriving at the location the asphalt had been removed from two (2) areas. One area was approximately 2.2m wide and 14m long. The second area was 2m long by 1.5m wide (See Photograph 1 and Photograph 2 respectively). These areas occupied the number 2 and number 3 lane (Photograph 2).

The exposed reinforced concrete in the deck (which supports traffic) was in very poor condition. The concrete had deteriorated to the point where it could easily be removed by hand or with small hand tools (Photograph 3). The top mat of reinforcing steel in the deck was exposed (Photograph 4) over much of the area. Water was standing in the deteriorated deck concrete. From below (viewed later) it was evident as damp areas on the deck soffit.

Where the reinforcing steel was not exposed, the concrete cover was fractured into fragments that could be easily removed (Photograph 5) with little effort.

Our assessment of this section of the Expressway deck is that there is a high risk of a localized punch-through of the deck. Freezing temperatures during this winter may also cause concrete on the deck soffit to be spalled off due to the freezing action on the saturated deck concrete. Either of these occurrences would result in concrete falling to the area beneath the elevated Expressway and short term closure of the roadway to repair the decks.

We would recommend that the same system of heavy timber falsework be installed in this general area as soon as practical. This system will help prevent both a punch-through of the deck and debris from falling from the deck soffit.

If you have any questions please do not hesitate to contact the undersigned.

Yours very truly
 McCormick Rankin Corporation

Doug Dixon, P. Eng.
 Senior Project Manager - Bridge Engineering
 Mississauga Office

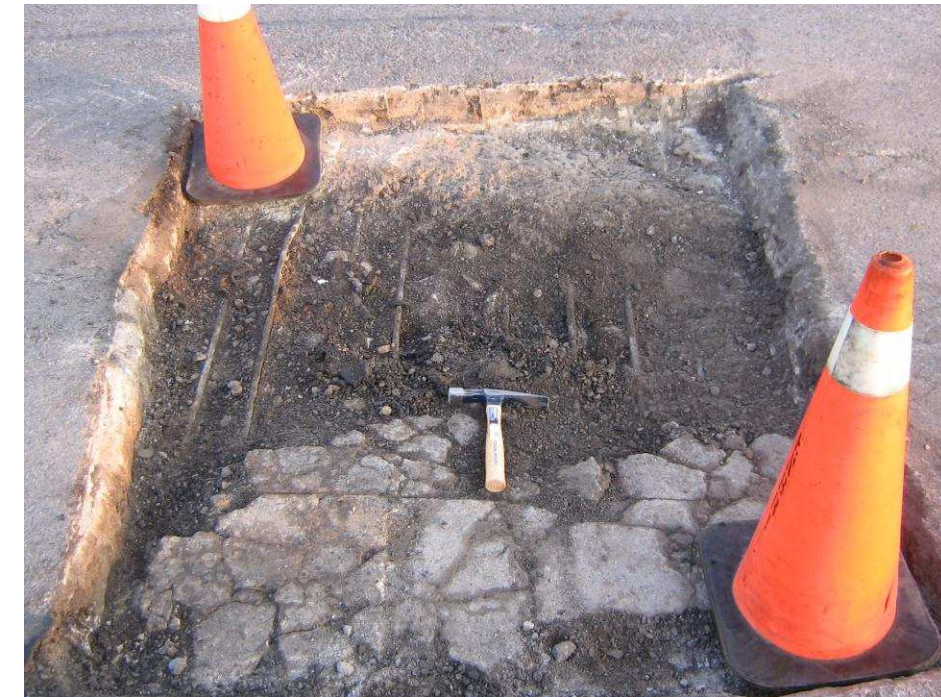
DD:mh



Photograph 1. - Showing removed Asphalt.



Photograph 2. - Showing removed Asphalt lanes 2 and 3.



Photograph 3. - Exposed reinforced concrete in very poor condition.



Photograph 4. - Exposed top mat of reinforcing steel.



Photograph 5. - Fractured fragments of concrete cover.