

RED HILL VALLEY PARKWAY INQUIRY

TRANSCRIPT OF PROCEEDINGS
HEARD BEFORE THE HONOURABLE J. WILTON-SIEGEL
held via Arbitration Place Virtual
on Thursday, June 16, 2022, at 9:30 a.m.

VOLUME 32

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1 Arbitration Place Virtual

2 --- Upon resuming on Thursday, June 16, 2022

3 at 9:30 a.m.

4 MR. LEWIS: Good morning,
5 Commissioner, counsel, Dr. Uzarowski. May I
6 proceed?

7 JUSTICE WILTON-SIEGEL: Please
8 proceed.

9 MR. LEWIS: Thank you.

10 LUDOMIR UZAROWSKI; RESUMED

11 CONTINUED EXAMINATION BY MR. LEWIS:

12 1 Q. So, Dr. Uzarowski, there
13 are a few things from the last part of our
14 discussion yesterday that I just wanted to
15 recapitulate before moving on further into the
16 Golder report and the Tradewind report.

17 And so, Registrar, if we can
18 pull up two things. The first is GOL2981 at
19 image 10, which is the draft Golder report, and
20 the second is Exhibit 77, which was the last
21 exhibit from yesterday. It doesn't have a -- I'm
22 not sure what the doc ID is. There we go, we've
23 got it. Thank you.

24

25 And so, in section 5, as we

1 discussed yesterday, you indicated typically the
2 FN value should be at least equal to or higher
3 than 40 to be considered adequate, and I just
4 wanted to make sure I understand what I think were
5 three sources from which you derived that adequate
6 number.

7 And the first, if I understand
8 it correctly, is in the TAC guide on the right.
9 And if we go to image 3 and this table 2.7, which
10 is the British Columbia Department of Transport
11 standard for investigatory levels based on the use
12 of the SCRIM testing machine at 50 kilometres an
13 hour, and that gives you the 0.35 number for
14 motorway or dual carriageway. Is that right?

15 A. Yes.

16 2 Q. Okay.

17 A. It is.

18 3 Q. And then the second part
19 of that, if I understood you correctly, was the UK
20 PMS chart, which, again, converted that SCRIM
21 number, 0.35, to 0.41. Is that right?

22 A. Yes, it is.

23 4 Q. Okay. And just for --
24 I'm going to come back to the TAC guide there,
25 Registrar, but if we could go to Exhibit 13, which

1 is EXP189, and image 25. This is
2 Dr. Gerardo Flintsch's report.

3 And am I correct it was
4 something along these lines or the one, the UK PMS
5 chart, which converts the SCRIM number to grip
6 number --

7 A. Sorry, I'll point it out.
8 Yes, it is.

9 5 Q. Yes? Sorry, we were
10 talking over each other. Is that correct? Is
11 this the one you're talking about?

12 A. Yes, it is. I don't know
13 if it's UK PMS, but yes, this is exactly the --
14 yeah, that's what I was thinking, yes, from 0.35
15 to 0.41 --

16 6 Q. Right. Okay. I mean,
17 this is a reproduction of that chart as opposed to
18 being the original source, but I just wanted to
19 make sure we were on the same page with that.
20 Okay. Thank you.

21 If you could take that down
22 and go back to the TAC guide, Registrar,
23 Exhibit 77, and go to image 2.

24 And table 2.6 you referred to,
25 which is an example of a Pennsylvania standard, as

1 you mentioned, from the NCHRP83 paper, which it
2 refers to in the upper right of that table 2.6.

3 Is that correct?

4 A. Yes, it is.

5 7 Q. Okay. And it's then
6 greater than 40 is no further action required
7 under category E. Right?

8 A. Under category E, yes.
9 It's greater than no action required.

10 8 Q. Okay. And so, do I
11 understand, then, correctly it was those three
12 sources that you considered when deriving the FN
13 40 figure that you described as being adequate?

14 A. Yes.

15 9 Q. Okay.

16 A. Yes, they are.

17 10 Q. Okay. And you can take
18 that down, then, Registrar. Thank you.

19 And just to then recapitulate
20 what I understood you concluded with yesterday,
21 was that you thought that the Tradewind results
22 were not alarmingly low, but relatively low. That
23 was --

24 A. Yes, yes, yes, yeah,
25 correct.

1 11 Q. And not a red flag but
2 not adequate either?

3 A. Correct. Exactly.

4 12 Q. And something had to be
5 done and the something you recommended was
6 improving the friction as described in section 6
7 of the Golder report in concert with addressing
8 the distress to the perpetual pavement, the
9 top-down cracking and potential delamination or
10 debonding between the top layer and the second
11 layer. Is that right? That was part of it --

12 A. Yeah. If I can just
13 provide a quick comment, microsurfacing would not
14 address the lamination, so that's why for that
15 short section I recommended a mill and overlay, so
16 remove this. But for the rest, that
17 microsurfacing would address microcracking,
18 cracking, also at that time I called it, I think,
19 depressions or dips and bumps, so this was the
20 same thing.

21 13 Q. Right. And you were also
22 recommending on the part that you were not
23 recommending the mill and pave on, you were
24 recommending that before the microsurfacing, that
25 routing and sealing of cracks occur followed by

1 the microsurfacing. Right?

2 A. Yes. Yeah, exactly.

3 14 Q. Okay. And the
4 combination of those two things would also deal
5 with the relatively low friction issue?

6 A. Yes, yes.

7 15 Q. Okay. And so, I think
8 it's fair to say from all of that that the
9 recommendations are interrelated. The ones
10 dealing with the friction are very much
11 interrelated with the recommendations on how to
12 deal with the cracking and deterioration
13 generally. Is that a fair statement?

14 A. Yeah, it's correct.

15 Yeah.

16 16 Q. Okay. Thank you. I want
17 to talk about the issue of the average numbers
18 that are -- that you reported to Mr. Moore in your
19 January 24 e-mail and in the Golder report.

20 So, Registrar, if we could go
21 back to the Golder report, which is GOL2981, at
22 image 10, and in the same document could we pull
23 up image 116. Okay.

24 Now, it's going to be a bit of
25 a challenge on the eyes, but I'll just describe

1 this. Image 116 is the first page of the actual
2 data in the Tradewind report, which is attached to
3 the Golder report, starting with the LINC. Is
4 that correct?

5 A. Yes, it is correct.

6 Yeah.

7 17 Q. Okay. And then if we go
8 to -- well, we can see the lanes. There's the
9 columns are done out by chainage, by the number of
10 metres from the starting point, and then the lanes
11 are set out as eastbound right, eastbound left,
12 westbound right and westbound left and then the
13 centre reference lane. Correct?

14 A. Yes, correct.

15 18 Q. All right. And then if
16 we go to the next page, 118, unfortunately the
17 headings do not continue from the first page to
18 the second page, but at the bottom there we see
19 that average at the bottom of the screen, and
20 that's for the LINC. Right?

21 A. Correct.

22 19 Q. Okay. And then if we go
23 to the next page, 118, this is -- okay. These are
24 the Red Hill Valley Parkway results and they are
25 still -- the lanes are defined the same way, from

1 eastbound right, eastbound left, westbound right,
2 westbound left, because it's a continuation of the
3 testing from the LINC up to the Red Hill. Right?

4 A. Yes, it is. Yeah.

5 20 Q. Okay. And then at 119,
6 if we go to the next image, it has the averages
7 again at the bottom for the Red Hill by lane. Do
8 you see that?

9 A. Yes, I can.

10 21 Q. Okay. And so, if we
11 could take that one -- I think the best thing is
12 to take that down and bring up the document we
13 provided to you yesterday, Registrar, which is
14 titled "Document Excerpts Re: Tradewind Results."
15 And we provided this to participants' counsel and
16 this, Commissioner, document is a compilation, as
17 you can see from the three bolded titles, it's a
18 compilation of excerpts from Dr. Uzarowski's
19 January 24, 2013 e-mail to Mr. Moore with the
20 overview document paragraph reference OD 6,
21 paragraph 233. Then second one is the Tradewind
22 report attached to the Golder report that we were
23 just looking at.

24 From the top of image 118 and
25 the bottom of image 119 so that we have the lanes

1 lined up, because, as mentioned, the lanes on the
2 second page, the columns don't follow through so
3 you can't see them on the same page. Then lastly
4 from the same Golder report at image 10, which we
5 have on the left. Now, I'm wondering, Registrar,
6 if we only have this document up will that expand
7 it for us, because it's still going to be a little
8 hard to read? If we take down the document on the
9 left. Okay. So, maybe if we can expand just --
10 could we expand the top half first, the top two
11 documents. Yeah. Yeah. It's not super clear
12 because they have been pasted, but hopefully they
13 are legible.

14 What I take from this,
15 Dr. Uzarowski, and you tell me if I'm right, is
16 that in your e-mail to Mr. Moore on January 24,
17 that the southbound lanes and the average numbers
18 that you give there are in fact what would be the
19 northbound lanes in the Tradewind report. Is that
20 right?

21 A. Yes, it's correct. There
22 was an error. Yes.

23 22 Q. Okay. So, in the --
24 where it says -- in your e-mail where it says
25 southbound right lane 35, that's actually, in the

1 Tradewind report, the first column, eastbound
2 right lane, which would be northbound right lane
3 35. Is that right?

4 A. It would be, yes,
5 northbound -- it would be northbound right, which
6 is lane 2. That's like --

7 23 Q. Yeah, the outside lane.
8 Right?

9 A. Outside lane, yes.

10 24 Q. Okay. And so -- and I
11 think, as I've read it, the lane 1 and two or the
12 left lane and right lane, those aren't reserved.
13 It's just the direction overall?

14 A. Yeah.

15 25 Q. Okay. So, if we were to
16 look at your e-mail, if we were just to reserve
17 southbound and northbound, that would be the
18 correct results. It should be northbound right
19 lane is 35, northbound left lane is 34, southbound
20 right lane should be 36, southbound left lane, 39?

21 A. Yes, that's correct.

22 Yeah, it's correct. Yeah.

23 26 Q. Okay. Thank you. And
24 then if you could take that down, Registrar, and
25 then if we could expand the Golder report excerpt.

1 These same numbers are then
2 transposed into the Golder report from your
3 e-mail. Is that right, although it refers to lane
4 1 and lane 2 rather than left and right. Is that
5 correct?

6 A. It's correct, yeah.

7 27 Q. And the same error is
8 continued through from the e-mail into the Golder
9 report?

10 A. Yes, it is.

11 28 Q. Okay. All right. If we
12 could take that down. So, leave this document up
13 for a moment, Registrar. Thank you.

14 And I asked you yesterday
15 about the conversation that you had on the 24th in
16 the morning with Rowan Taylor of Tradewind
17 following the message or communication from
18 Mr. Moore that he needed the results for a
19 management meeting, and then that morning and then
20 by noon, and then you provided it to him in the
21 January 24 e-mail.

22 Do you know, looking at this
23 now, how this error occurred?

24 A. No, I don't recall
25 exactly. I know that, you know, in the report

1 there is, I think it's figure 1 or whatever, that
2 shows the LINC and Red Hill Valley Parkway. So, I
3 think I have everything prepared and I was just
4 waiting for the numbers, so this is when the error
5 occurred. I don't recall exactly how, how it
6 happened. You know, it just happened.

7 29 Q. So, the error starts with
8 the January 24 e-mail and --

9 A. Yeah.

10 30 Q. Right? And so, it must
11 have happened at the time of those results being
12 communicated to you or when you put them into that
13 e-mail. Is that fair?

14 A. Yes, it is.

15 31 Q. Okay. Even though you
16 don't recall how Mr. Rowan Taylor conveyed the
17 results to you, whether he said eastbound and
18 westbound or northbound and southbound?

19 A. No, I don't have exact
20 recollection of that conversation.

21 32 Q. All right. And then in
22 terms of putting those numbers into the Golder
23 report, do you think you just took those same
24 numbers from your e-mail?

25 A. I think we just copied,

1 yeah.

2 33 Q. Okay. Because it's not
3 an exact copy. Right?

4 A. Yeah. Yeah, I know.

5 34 Q. Because --

6 A. Yeah.

7 35 Q. Right?

8 A. Yes.

9 36 Q. But the numbers
10 themselves -- okay.

11 If we could make this document
12 Exhibit 78, Commissioner.

13 JUSTICE WILTON-SIEGEL: Yes.

14 THE REGISTRAR: Noted,
15 counsel. Thank you.

16 EXHIBIT NO. 78: Document
17 Excerpts Re: Tradewind
18 Results, RHV989.

19 BY MR. LEWIS:

20 37 Q. If we could take you to
21 and pull back up GOL2981, images 10 and 11.

22 And so, again, this is
23 sections 5 and 6 of the Golder report and
24 section 5 mentions that the LINC was also tested
25 by Tradewind, but it doesn't say anything more

1 than that and there's no reference in the Golder
2 report comparing the LINC results to the Red Hill
3 Valley Parkway results. Can you tell us why that
4 is?

5 A. Because, you know, the
6 subject of this was evaluation of the Red Hill
7 Valley Parkway after initial five and then six
8 years. But in my later note from the meeting, I
9 have -- the meeting and phone call, I talk about
10 both, the LINC and the Red Hill Valley, but no,
11 it's not in the report.

12 38 Q. Okay. And we'll talk
13 about the call and the meeting, which I think were
14 on February 4 and February 7. We'll get to that
15 in a minute.

16 But in terms of the report
17 itself, do you recall why you -- appreciate that
18 this report is about the Red Hill Valley Parkway,
19 but, I mean, was that the only reason why you
20 didn't include the LINC results in there? I mean,
21 it is half of, if I can call it that, of the
22 Tradewind report.

23 A. We attached the Tradewind
24 report in the appendix, no, but here, we didn't
25 say -- yes, for the reasons that you have said.

1 39 Q. And the Tradewind report
2 says that the LINC was consistently between a grip
3 number of 52 to 60, with an overall average of 58,
4 except for -- whereas the Red Hill, except for one
5 approximately 600-metre area in the outside lanes
6 where the Red Hill testing portion joined up with
7 the LINC, that the Red Hill was in the range of 30
8 to 40 with some as low as 27. Do you recall that?

9 A. Yes, I do.

10 40 Q. Okay. And so, that's,
11 you know, roughly a difference of 20 at the low
12 end, 30 to 52, and at the high end, 40 versus 60.
13 Would you agree that's a pretty substantial
14 difference for a single continuous facility?

15 A. Yes, I do.

16 41 Q. And some might say that
17 the difference between the results on the LINC and
18 the Red Hill is the most striking thing about the
19 Tradewind report, given that it shows drastically
20 different results on a continuous road, which were
21 paved at different times and using a different
22 mix.

23 But was that not a relevant
24 thing to mention and refer to, was this very
25 significant difference?

1 A. I didn't mention, but if
2 my, our, recommendation was followed,
3 microsurfacing offers a very high friction number
4 that would be close to what was on the LINC.

5 42 Q. Right.

6 A. But it's not here in the
7 report.

8 43 Q. Okay. Now, internally at
9 Golder, you did mention this. If we go to
10 overview document -- maybe leave up one of these
11 pages, Registrar, and pull up overview document 6,
12 images 93 and -- actually, no, you'll have to do
13 93 and 94 and take down the other document. Thank
14 you.

15 So, after receiving the
16 Tradewind report but before sending it to
17 Mr. Moore on January 27, if you look at
18 paragraph 245, you e-mailed internally at Golder
19 to Michael Maher, Andrew Balasundaram,
20 Dr. Henderson and Ms. Rizvi about the Tradewind
21 results.

22 And if you could expand the
23 paragraphs on the bottom of that page and the top
24 of the next, and you start with:

25 "I hope this will be of

1 interest to you."

2 And you go on to describe the
3 FN results for the Red Hill and the LINC and the
4 mixes used on the Red Hill, being the SMA and an
5 SP 12.5 FC2 with Ontario Trap Rock and 10 RAP used
6 on the LINC.

7 And then in the second
8 paragraph, you refer to the trap rock used on the
9 RHVP meeting all the specified requirements. You
10 go on to say:

11 "We haven't tested
12 polished stone value
13 (PSV) for any of the
14 aggregates. There is
15 also an interesting
16 question. Are the SN
17 numbers for the surface
18 on the LINC so much
19 better only because of
20 better trap rock or the
21 fact that there was
22 10 percent RAP with much
23 softer limestone
24 aggregate added to the
25 LINC mix, so a mixture of

1 hard and soft rock had a
2 big impact on the
3 frictional
4 characteristics?"

5 And then you go on to indicate
6 that you're interested in buying PSV testing
7 equipment, given the importance of frictional
8 characteristics in pavements.

9 So, here you described it as
10 drastically better on the LINC as compared to the
11 Red Hill. And, again, you thought this was
12 worthwhile to mention internally at Golder. Can I
13 ask you again why it was something that was not
14 considered worthwhile to mention in the Golder
15 report itself?

16 A. Well, to me, it was a
17 technical question to discuss with my colleagues,
18 because the values on the LINC were unusually high
19 and I thought that that was, in my opinion,
20 because of the additional 10 percent of soft
21 material and I read some papers, I think, about
22 this. I also had some practical experience with
23 one of the airports, that they observed something
24 similar, so I thought that was interesting to
25 bring to their attention and ask if it was worth,

1 you know, research and buying PSV equipment or
2 looking into this.

3 44 Q. Right. So, I understand
4 the final paragraph in that respect about what
5 Golder's interest might be in future testing on
6 other matters, but it's why, again, the
7 differential, which you describe as drastically
8 different, is not put into the Golder report.

9 You don't have any other
10 further insight on that, or do you?

11 A. You know, to me, the
12 values that were on the Red Hill Valley Parkway
13 were not lower than would be typically anticipated
14 on other roads, so, you know, even if, when I look
15 at that MTO, I think it was 2000, paper on ten
16 years of SMA and compared with DFC, so that was
17 not lower. For me, it was rather, you know, as I
18 say, you know, this interest of this technical
19 aspect of the difference.

20 45 Q. Okay. So, I'm having a
21 little bit of problem now. When you say that the
22 values on the Red Hill were not lower than would
23 be typically anticipated on other roads and yet
24 you've said that the results were not adequate,
25 how do you square that?

1 A. Oh, you know, it is, you
2 know, friction numbers only one aspect of safety
3 and there's, you know, a large number of factors
4 and I mentioned that, you know, presentation by
5 John Emery, "Get a Grip," when he lists a number
6 of factors, friction numbers are only one line in
7 other factors, so that's what I had in mind. So,
8 those numbers, and even if you look at the MTO
9 paper, those values were pretty close to what was
10 observed on the 401 using not only SMA but also
11 DFC mixes, so they were not significantly lower
12 than that. They were, you know, typical values,
13 but there was a concern about safety, but, you
14 know, it should be look at, you know, wider than
15 just these numbers. So, that was --

16 46 Q. Okay. So, when you refer
17 to MTO numbers, those are using the locked-wheel
18 tester at the posted speed, which is 100
19 kilometres per hour?

20 A. Yes.

21 47 Q. So, you're dealing with a
22 different measuring device at twice the speed.
23 Right?

24 A. Yes.

25 48 Q. Okay. So, when you refer

1 to it being comparable to those MTO numbers,
2 you're dealing with a different measuring device
3 at a different speed. Is that something that --

4 A. I think, you know, all
5 these devices, they have the value. So, you know,
6 whether it's locked-wheel or grip tester, you
7 know, the lower -- the higher the number, the
8 better the friction, the better it is. So, I
9 think in my initial comparison I'm estimated that
10 roughly the grip tester, grip tester, would be
11 slightly higher, I think initially I think it was
12 about 2.5 units, than the locked-wheel. So, you
13 know, when I compare this, they would be similar.

14 And as I mentioned later on,
15 later on I verified and compared EnGlobe are ARA
16 and got some similar difference. So, there was
17 some difference, but not drastic in my opinion.
18 And -- yeah.

19 49 Q. All right. And so, you
20 referred to it being a wider issue than just the
21 numbers. And so, is one of those issues you're
22 talking about the geometry of the facility?

23 A. Yes. So, you know, I
24 think, you know, I'm not a geometry consultant,
25 but I remember that -- I worked for John Emery for

1 ten years, so I know that at one of Swift
2 conferences, John had a presentation, "Get a
3 Grip," and he listed number of factors and it's
4 geometry, like, you know, aspects related to
5 roadway. This includes geometry, also driveway
6 and environment. You know, and, of course, you
7 know, in my opinion speed is number one.

8 50 Q. Right. Okay. So, from
9 having worked extensively on the Red Hill for a
10 period of years at this point and having driven
11 the LINC and the Red Hill, you were aware at the
12 time that the geometry of the LINC and the Red
13 Hill were very different. Is that right?

14 A. Oh, I didn't have any
15 details. I didn't have drawings, but I knew that
16 the LINC was straight and the Red Hill Valley had
17 a lot of turns. Yeah?

18 51 Q. Right. Exactly. And the
19 LINC is straight vertically and horizontally and
20 the Red Hill is not. It has vertical curves, the
21 Red Hill, and horizontal curves. Right?

22 A. Yes --

23 52 Q. Right. And, as well,
24 interchanges that are relatively close together is
25 another issue? Certainly Golder's counsel has

1 raised this many times. Is that something you
2 adverted to at the time?

3 A. No, not at the time. You
4 know, I look at this during the inquiry --

5 53 Q. Okay.

6 A. -- and I look at MTO
7 guideline, but at the time I just knew from my
8 practical experience driving. Mainly, you know, I
9 had been mainly to the monitoring station, what it
10 was, and particularly the speed.

11 54 Q. Okay. So, speed and the
12 curvy nature of the Red Hill, these are things
13 which, what, you thought were also relevant
14 factors to consider when looking at the frictional
15 qualities of the road. Is that what you're
16 saying?

17 A. I didn't think about --
18 you know, I didn't know the geometry. I'm not a
19 geometry consultant. So, I was concerned about,
20 you know, mainly about the speed on the Red Hill
21 Valley Parkway, because it was -- we monitored the
22 speed and we delivered the report to the City, and
23 actually driving to the station was not -- how can
24 I say? -- not nice because of the speed.

25 Actually, driving there was

1 not that bad and then, you know, we have to pull
2 over to the station, but merging was not nice
3 because of very high speed of the traffic there.
4 So, you had to step on gas and then merge the
5 traffic and often they will honk, so it wasn't
6 nice. I knew that this -- I didn't like the speed
7 on the parkway.

8 55 Q. Were those things that
9 were in your mind when you were assessing the need
10 for frictional remediation on the Red Hill?

11 A. Like, you know, such
12 aspect as speed, I think I didn't mention in the
13 report, but, you know, it was discussed with the
14 City. I discussed with the City. I also, in all
15 technical papers, we always stated that the speed
16 much exceeds the posted speed. I didn't know the
17 range, because the monitoring station was not very
18 accurate. It only said, you know, 120 plus. I
19 don't know what the maximum was. I could only see
20 what was in that station.

21 56 Q. I understand. I'm asking
22 whether or not that was something that informed
23 your recommendations in the Golder report?

24 A. Whether it impacted? I
25 think my main concern was that, you know, if

1 police say it's slippery, then, you know, I think
2 you have to take action. You have to, you know,
3 consider this thing seriously. And there was
4 also, you know, in that chain of e-mails, there
5 was information that there was some collision. I
6 think at that point in time, the statement was
7 that there is nothing really significant, but
8 there were. As far as I'm aware, they said about
9 collision and slipperiness of the pavement, so it
10 was obviously concern for me.

11 57 Q. And several minutes ago
12 we were talking about the error in reporting the
13 average numbers, reversing the north and
14 southbound lanes. Had you understood and reported
15 that correctly, would it have caused you to change
16 your conclusions and recommendations in any way?

17 A. No. I think my
18 recommendations were final and I was comfortable
19 with them and, in my opinion, they were made both
20 aspects, friction and structural capacities, and
21 increase the number close to the LINC. So, no,
22 they would not.

23 58 Q. Okay. And what if you
24 had come to the conclusion on what you just
25 described as the structural capacity? So, there,

1 you're talking about the cracking or the potential
2 delamination or debonding, the pavement
3 deterioration issues. What if you had come to the
4 conclusion that those did not require any action,
5 that those were not as much as of problem or a
6 problem, what would you have recommended with
7 respect to the relatively low friction issue on
8 its own in that situation?

9 A. So, you mean that the
10 structural capacity and pavement visual conditions
11 would be perfect with no distresses, so only
12 friction aspect?

13 59 Q. Yes. You said it's never
14 been perfect before. Right?

15 A. Yeah.

16 60 Q. It's not perfect but it
17 didn't require any action on its own, what would
18 your recommendation have been with regards to
19 friction in that instance?

20 A. It would be the same. I
21 would still recommend microsurfacing.

22 61 Q. Right. You wouldn't
23 recommend, presumably, the mill and pave at that
24 point, because that was -- rather, it would be a
25 microsurfacing across the entire facility. Is

1 that right?

2 A. So, yeah, you know,
3 obviously I would not recommend mill and pave. I
4 would not recommend route and seal the cracks
5 because they would not exist. But I might
6 recommended microsurfacing.

7 62 Q. Okay. At first you said
8 you would have and then you said I might have
9 recommended microsurfacing. Would you have or
10 might?

11 A. No, I would. I would
12 recommend. I would recommend microsurfacing.

13 63 Q. Okay. All right. Now,
14 if we can take that down, Registrar, and go to
15 overview document 6, paragraphs 99 and 100.

16 And earlier you referred to a
17 call and a meeting with Mr. Moore, and these
18 paragraphs, 259 and 260, reflect your notes on
19 February 3 and 4 and then on February 7. First,
20 in paragraph 259, indicating just a reference to
21 Mr. Moore on February 3, and then a subsequent
22 note referencing a telephone call with him on
23 February 4. Then, in paragraph 260, reflecting a
24 meeting with Mr. Moore on February 7 at 8:00 a.m.

25 And do you recall first the

1 call and the meeting on February 4 and 7
2 respectively?

3 A. I definitely remember the
4 meeting very well. The call, I think the call
5 was, you know, it was like -- the notes are so
6 tidy, so I must have prepared them before the
7 call. It was just to discuss with or request a
8 meeting with Mr. Moore and to cover the following
9 subjects. But, you know, it was just, you know, a
10 list of subjects that were discussed, so --

11 64 Q. Right. Part of your
12 practice of doing notes in advance of an event?

13 A. Yes. So, that was only
14 for the call. And then before the meeting, I
15 also, you know, I prepared more items, more exact,
16 you know, what to discuss during the meeting.

17 65 Q. Okay. So, what about the
18 call? We can see what your notes say. Do you
19 recall what you discussed on the call?

20 A. I don't have exact
21 recollection of that call, no. But I think it was
22 probably I called him -- this is can we meet, you
23 know, on whatever, whenever Mr. Moore was
24 available, to discuss the following subjects?

25 66 Q. Okay. So, to set the

1 agenda to let him know what you wanted to talk
2 about?

3 A. Yes, basically like the
4 initial agenda for, you know, what we could
5 discuss during the meeting.

6 67 Q. Okay. And so, in your
7 note in paragraph 259, it refers to a number of
8 things, but B is RHVP and LINC friction, then
9 instrumentation and then CTAA six years after,
10 then PMTR 3. That's, again, the third phase of
11 the PMTR?

12 A. Yes.

13 68 Q. Okay. And CTAA six years
14 after, is that coming back to the paper that you
15 had proposed way back in 2013?

16 A. So, in 2013, that was a
17 TAC -- abstract for a TAC paper. This was a CTAA,
18 Canadian Technical Asphalt Association, for me.
19 It would be a perfect subject for a CTAA paper.
20 So, you know, I like teaching, I like sharing the
21 knowledge. And I don't know if I can elaborate a
22 little bit.

23 69 Q. You were contemplating --
24 at that point you wanted to raise the issue of
25 doing a paper again on the issue of the Red Hill

1 six years after?

2 A. Yes, exactly.

3 70 Q. Okay. And then what

4 about the meeting itself on February 7?

5 A. So, the meeting --

6 71 Q. Maybe we can expand

7 those, Registrar, the notes in 260.

8 While he is doing that, first

9 of all, it indicated that it was, I think, at

10 8:00. Is that typically when you would -- you

11 described that you would meet with him early in

12 the morning until he got too busy?

13 A. Yes. Typically I think

14 Mr. Moore started working at 7:30, but I would

15 meet with him at 8:00. I would come to the

16 office, I would give him a call, he would come to

17 the door, open the door and let me in, and then we

18 would -- typically would be one hour meeting, but

19 as I mentioned before, first half an hour was

20 productive, but then later on the phone started to

21 ring and then it would be difficult to discuss the

22 subject, so I had these items prepared that I knew

23 I had a short time to or half an hour or more to

24 cover those, the subjects.

25 72 Q. Okay. And do you recall

1 how long this meeting went for?

2 A. For an hour.

3 73 Q. This meeting took an
4 hour?

5 A. It took an hour, yes.

6 74 Q. Okay. And did you bring
7 a copy of the Golder report to the meeting?

8 A. I brought two copies of
9 the Golder report, one for Mr. Moore, one for,
10 like, myself and that I could look at this. And,
11 also, I believe that I brought a copy of a
12 brochure on microsurfacing that I got from
13 Mr. Trevor Moore from Miller. I don't have this
14 in the notes, but I think I brought a copy of the
15 brochure.

16 75 Q. And that's Trevor Moore
17 of Miller Paving?

18 A. Trevor Moore of Miller
19 Paving, yes.

20 76 Q. Right. And we can get to
21 that, but a brochure about microsurfacing?

22 A. About microsurfacing,
23 yes.

24 77 Q. Okay. So, we'll come
25 back to that. So, you had a hard copy for

1 yourself and a hard copy for Mr. Moore of the
2 Golder report, and did that include the Tradewind
3 report as the appendix?

4 A. Yeah. It was a bulky, I
5 don't remember the total, like close to 200 pages
6 or something. Everything was attached.

7 78 Q. And you had already sent
8 it to him by e-mail, so why are you bringing him a
9 hard copy?

10 A. You know, I send it to
11 him just, you know, for his information, but, you
12 know, this meeting and hard copy was, you know, in
13 order to discuss the subject, the subject that
14 were listed and particularly the subject of Red
15 Hill Valley Parkway and six years and friction and
16 LINC, these aspects.

17 79 Q. Did Mr. Moore have any
18 comment about hard copies and e-mailing reports?

19 A. I recall that he wasn't
20 happy with me sending the e-mail to him. I think
21 he said that I should bring a hard copy, not send
22 an e-mail.

23 80 Q. And is that -- did he say
24 that to you in the meeting or at another time?

25 A. No, in the meeting.

1 81 Q. In the meeting?

2 A. Yes.

3 82 Q. So, that you should bring
4 a hard copy, not send an e-mail. You did bring a
5 hard copy, so he was talking about your previously
6 having e-mailed him?

7 A. Yes. A few days before,
8 I e-mailed him the entire report.

9 83 Q. Right. Right. So, what
10 was his concern about e-mailing? Did he describe
11 what that was?

12 A. No, he didn't.

13 84 Q. What did you take him as
14 meaning?

15 A. About this statement?

16 85 Q. Yeah.

17 A. I thought he was too
18 busy, you know, and it was, you know, a bulky
19 report, 200 pages. So, at that time, my
20 impression was that he was too busy. He wasn't
21 happy with the e-mail.

22 86 Q. But it was typically your
23 practice to e-mail him draft reports. Right?

24 A. Typically, yes.

25 87 Q. Right. And did you

1 subsequently send him reports by e-mail?

2 A. Yeah. I think, you know,
3 yes. I think so.

4 88 Q. Right. So, was it just
5 this report that he didn't want by e-mail?

6 A. I think that was this
7 particular one, yes.

8 89 Q. Okay. Do you recall
9 anything else he said around that?

10 A. No, not about this aspect
11 of e-mailing, no. Only what I said.

12 90 Q. Okay. All right. And
13 so, how did the meeting then proceed?

14 A. Oh, you know, as you see,
15 I had, you know, prepared the agenda quite well,
16 so I had these items. So, I, you know, was just
17 going I think probably in the order that I have
18 it, just item by item, to make sure that I would
19 cover everything within that hour. So, you know,
20 whatever was on the list, we discussed. You know,
21 discussed, we talk this about, whatever was in
22 this agenda.

23 91 Q. Okay. And how long did
24 you spend going through the Golder report and the
25 appended Tradewind report?

1 A. You know, time --

2 92 Q. Did you actually look at
3 individual pages in the report with him?

4 A. You know, probably maybe
5 not, you know, page by page because it was too
6 much and the actual report itself is not that big.
7 The appendices are huge with all this profile, et
8 cetera, so it would just be just, you know, going
9 through aspects, you know. Like, six years, that
10 would be six years that would be structure
11 conditional, the pavement recommendations. I
12 don't know if you want me to briefly go item by
13 item.

14 93 Q. Well, before you go
15 item -- specifically with respect to the Golder
16 report, whether you -- I think you just described
17 you looked at sections 5 and 6, which were the
18 conclusions and the recommendations, the friction
19 thing and then the recommendations. Did you go
20 through those with him?

21 A. Oh, definitely 5 and 6,
22 but also the structure condition, coring. I know
23 that for us it was very important that it was
24 perpetual pavement, so the cracking was top-down.
25 So, you know, this aspect. But I believe at that

1 time mainly, you know, the report part of the
2 entire document, yes.

3 94 Q. And did you actually walk
4 through the Tradewind report in the appendix with
5 him?

6 A. I don't think so. I told
7 him that, you know, it was attached in the
8 appendix, but no, we -- I don't recall, like,
9 going with him through the Tradewind appendix.

10 95 Q. Okay. And did you have
11 any sense one way or the other of whether
12 Mr. Moore had read the Golder report and the
13 Tradewind report prior to the meeting?

14 A. In my opinion, he didn't.

15 96 Q. That he did not?

16 A. He did not.

17 97 Q. Okay. So, you don't
18 know, but that was your impression from your
19 discussion with him?

20 A. Yeah, that was -- yeah,
21 that was my impression during the conversation,
22 during the meeting, that he didn't.

23 98 Q. Okay. And so, how long
24 did you think you spent going through the actual
25 report with him?

1 A. Probably, you know,
2 number 1 and number 2, number 1 and number 2 would
3 probably be about, you know, 10, 15 minutes.

4 99 Q. So, that's the six years
5 and then the CTAA paper and then RHVP and LINC
6 friction report?

7 A. Yes.

8 100 Q. Okay. And did you
9 describe to him, since you didn't take him
10 physically through the Tradewind report, as you
11 mentioned, did you describe the differential
12 results between the Red Hill and the LINC?

13 A. Yes, I did.

14 101 Q. You have a specific
15 recollection of having done so?

16 A. No, I don't have detailed
17 recollection, but this is, like, you know, my
18 notes show exactly that I talk about Red Hill
19 Valley and LINC friction report, so I must have
20 talk about -- I'm positive I talk about, you know,
21 what was the, you know, opinion about the Red Hill
22 Valley Parkway and the LINC and the difference.
23 We talk about this.

24 102 Q. Okay. And did Mr. Moore
25 raise any concern with you about a UK standard

1 being used in the Tradewind report?

2 A. No, he didn't.

3 103 Q. Do you recall if you
4 discussed that a UK standard had been used in the
5 Tradewind report?

6 A. In my, you know -- I
7 think I did. Maybe not too, you know,
8 extensively, but I think I mentioned what -- you
9 know, I talked to him what was in the report and
10 what he compared it to, but we didn't discuss this
11 thing, you know, broadly or over long period of
12 time.

13 104 Q. Did Mr. Moore instruct
14 you to contact Tradewind to obtain more
15 information about UK standards and how they
16 applied to Ontario?

17 A. No, no, not at that time.

18 105 Q. Okay. We'll get to a
19 later time, but not at this time?

20 A. No.

21 106 Q. All right. Do you recall
22 Mr. Moore's reaction to the Tradewind report and
23 the Golder report commentary on it?

24 A. You know, he just -- I
25 think my -- he accepted what I said, so he --

1 okay, that was -- this is what the information
2 that I provided. He understood and there wasn't
3 any particular, you know, concern or -- about the
4 recommendations and the findings, no. It was just
5 me presenting what was there and he understood
6 this thing.

7 107 Q. And how did you present
8 your recommendations? What did you say to him?

9 A. Well, I think it's, you
10 know, and this is what's in my note, that I told
11 him that we recommend -- not, like, you know, it
12 wasn't not only microsurfacing for the friction,
13 but because we talk obviously about the structure
14 of the stresses, et cetera, et cetera, so, you
15 know, I think definitely I recommended
16 microsurfacing, I provided the brochure, and that
17 would address both aspects, the friction and
18 structure and visual condition of the pavement.
19 So, in my opinion, you know, it was clear what we
20 recommended.

21 108 Q. And do you recall if
22 Mr. Moore described the Tradewind test results as
23 being inconclusive?

24 A. No, no, not -- no, I
25 don't -- no. No, I don't recall any inconclusive.

1 The results are what they are, so no, I don't
2 recall any -- this sort of statement from him.

3 109 Q. And was there any comment
4 from Mr. Moore that the Golder report, whether its
5 reasoning or recommendations were, you know,
6 invalid or incomplete or unclear? Was there any
7 sort of negative commentary from him of that
8 nature?

9 A. No, I don't recall any
10 these sort of comments. I think they were very
11 clear.

12 110 Q. And you thought that
13 Mr. Moore understood your recommendations and the
14 reasons for your recommendations?

15 A. I think he did.
16 Mr. Moore is a very good engineer and a very
17 intelligent person, so I think he did.

18 111 Q. Okay. There's a
19 reference at number 10 in your notes. It says
20 PSV-no. What is that referring to? I know it's
21 polished stone value, but what was this about?

22 A. So, PSV is a polished
23 stone value, so because of that, you know,
24 friction aspect that we discussed on the Red Hill
25 Valley Parkway, then I ask if he was interested in

1 us, you know, testing PSV of that material.

2 At that time, I knew that the
3 mix quarry was on the DSM list, so, you know, the
4 question was: Do you want us to test? But, you
5 know, the answer was no, so we didn't -- I don't
6 remember if I also was interested in testing PSV
7 on the LINC material. That would be my other
8 theory, but that was rather PSV of potential
9 testing of PSV of recovered material from the Red
10 Hill Valley Parkway. But no, there was -- the
11 conclusion was no, don't test.

12 112 Q. Okay. So, just to back
13 up a bit, in the e-mail we looked at before dated
14 January 27, internally at Golder, of course, you
15 talked about PSV testing internally and you
16 ruminated about whether the difference between the
17 LINC and the Red Hill might be related to the
18 aggregates being used and specifically the Demix
19 aggregates being used in the SMA surface course on
20 the Red Hill. Do you remember that? We just
21 discussed it a few minutes ago.

22 A. Yes, I do.

23 113 Q. Okay. So, is it on that
24 sort of topic that you think you raised this with
25 Mr. Moore?

1 A. You know, I don't have a
2 detailed recollection whether we talk about the
3 LINC. It is possible that because I mentioned it
4 before why was the PSV value so high on the LINC.
5 But I think the main thing was on the Red Hill
6 Valley Parkway that, you know, it is on the DSM,
7 don't test. I was interested, you know, in the
8 LINC aggregate, but I don't recall details whether
9 I suggested to him to test it. I know it was Red
10 Hill Valley.

11 114 Q. So, to unpack what you
12 said before about Demix aggregates, you knew it
13 was on the Designated Sources for Materials, the
14 DSM, of the MTO. You knew that quarry was on the
15 DSM at that point. Right?

16 A. Yes. The quarry appeared
17 on the DSM list in 2009.

18 115 Q. Right. And from that,
19 you derived, because you knew what the
20 requirements were for being listed on the DSM,
21 that it had tested as having a PSV of 50 on
22 average with no result being lower than 48.
23 Right?

24 A. Yes. So, it would have
25 to be not less than 50, yes.

1 116 Q. Yeah. And so, why, then,
2 the wanting to test it now, that being the case?
3 Is that because of the friction testing results,
4 which, as you described, were relatively low and
5 you wanted to ascertain whether the polished stone
6 value testing would verify that, that it would
7 provide more evidence of that or something else?

8 A. Just to get more
9 information about this because, you know, the
10 aggregate was good because it was on the DSM list,
11 but then police says it's slippery and, you know,
12 those results were, you know, relatively low. But
13 then the police saying that it was slippery, so
14 just, you know, in my opinion the aggregate
15 characteristics change when the pavement is in
16 service. So, just I was thinking about verifying
17 this thing.

18 117 Q. Right. Verifying the
19 friction results, the test results, by Tradewind?
20 I appreciate it's a different test, but it's --

21 A. Yeah. So, you know,
22 verifying, you know, the characteristics of the
23 aggregate, you know, this PSV is recovered, what
24 would it be? Would it be higher than 50 or not?
25 I didn't know what the test results were, so just

1 to verify whether it's an aggregate issue or not.

2 118 Q. Right. And when you say

3 to verify if it's an aggregate issue, to see if

4 PSV was unduly low, that you would have concern

5 that the low frictional or relatively low

6 frictional quality was related to the aggregate.

7 Is that fair?

8 A. Yes, it is.

9 119 Q. And then in the same note

10 here under 13, it says "micro, blasting." And

11 actually, I'm sorry, before we get on to that.

12 You recall that Mr. Moore said

13 no to PSV testing. Right?

14 A. Yes, no to PSV testing.

15 120 Q. Okay. Did he give a

16 reason?

17 A. Because it was on the DSM

18 list.

19 121 Q. Okay. So, you told him

20 it was on the DSM list as part of your

21 conversation and he said no, we don't need to test

22 it as a result of that?

23 A. Yeah. So, that would be

24 like, you know, I don't remember the detailed

25 words what we said, but that was the conclusion.

1 No, it's on the DSM list. This was six-year --
2 was it? 2007. It's six years, old pavement, so
3 no, we don't need to test it.

4 122 Q. All right. So, here, it
5 says micro and blasting. Is that referring to
6 microsurfacing and shot blasting?

7 A. Definitely microsurfacing
8 and blasting is probably more than shot blasting
9 because, you know, I used the word blasting but I
10 think skidabrading, shot blasting, there are a
11 number of terms, but I simplified to the word
12 blasting.

13 123 Q. Okay. Because
14 skidabrading is a type of shot blasting. Right?

15 A. Yes, skidabrading is a
16 type of shot blasting. Yes, it is.

17 124 Q. All right. And you
18 talked about the information you had obtained from
19 Trevor Moore of Miller Paving, and so we'll come
20 to that, but what did you describe to Mr. Moore
21 here? What was your discussion around those
22 topics?

23 A. So, microsurfacing, you
24 know, as I mentioned, in my opinion it was perfect
25 solution. Trevor gave me the -- Trevor was from

1 Miller Paving which, in my opinion, was the best,
2 not to offend other contractors, you know, but the
3 experts in this type of treatment and he provided
4 me with the price, \$3.5 per metre squared. You
5 know, it's always important to know the price of
6 this sort of treatment.

7 And, you know, just to
8 present, yes, this is the technology, this is the
9 contractor who can do it and this is the price of
10 application, yes. So, that was for micro.

11 Do you also want me talk about
12 blasting?

13 125 Q. Yes, what you told him.

14 A. So, blasting is like, you
15 know, like, a cheap version of friction numbers
16 improvement. A cheap, I mean it's not cheap in
17 terms of quality, but it's lower cost and it's
18 very quick.

19 Now, I think I told him at
20 that time that airports, because I do a lot of
21 airport work, airports used skidabrading and shot
22 blasting for rubber removal first of all and also
23 to improve friction, so they a call it texture.
24 And it's very quick, very cost effective, doesn't
25 change the appearance of the pavement, but it

1 improves micro and macrotexture of the pavement.

2 126 Q. And you referred to
3 Trevor Moore having sent you a brochure. I think
4 you indicated that you believed you gave a copy of
5 the brochure to Mr. Moore, to Gary Moore?

6 A. I believe I did. I don't
7 have this thing in my note, but I think this --
8 you know, he sent me -- a few days before this
9 meeting, he send me a brochure, so I believe I
10 would give him, I gave him, a copy of the
11 brochure.

12 127 Q. Okay. So, if we could
13 take that down but keep image 100 up and if we
14 could go to image 82 as well.

15 We know that in paragraph 212,
16 you see there's a reference on December 20 that
17 Trevor Moore e-mailed you, attaching various
18 brochures and guidelines related to microsurfacing
19 and slurry seal. Is that what you're referring
20 to?

21 A. Yes. Yes, it is. At
22 that time, I don't think I sent -- I gave him the
23 slurry seal because it was no -- I was no -- I
24 didn't consider this slurry seal to be applicable.
25 But microsurfacing, yes, this is the brochure that

1 I got from Trevor.

2 128 Q. We can take that down and
3 go back to the notes, please. If you could expand
4 the notes. Thank you.

5 So, what was Mr. Moore's
6 reaction to the microsurfacing and shot blasting
7 that you raised?

8 A. You know, the reaction
9 was, okay, you know. You know, I gave him the
10 brochure and then, you know, talk about the
11 technology and he just -- in my opinion, I would
12 say he, you know, acknowledged that he received
13 this information.

14 129 Q. Did he give an indication
15 of whether he was inclined to accept your
16 recommendations or no?

17 A. No, he didn't.

18 130 Q. Like, not one way or the
19 other?

20 A. No, no. I don't recall,
21 no.

22 131 Q. And what about the
23 resurfacing of -- the shave and pave of
24 approximately 2.5 kilometres of the Red Hill?
25 What about that? He received it. Did he give an

1 indication as to what his viewpoint was on it?

2 A. I don't recall. I know,
3 like, you know, microsurfacing, I knew that I
4 described, you know, microsurfacing, also in terms
5 of dips. I think at that time I told him that,
6 you know, for -- sorry, you know. I think I told
7 him that, you know, the dips and depressions, you
8 can put a scratch coat and then the surface coat,
9 so that was, for me, an attractive alternative for
10 addressing this thing quickly.

11 When it comes to this mill and
12 overlay of that short section, I don't recall any,
13 you know, what he said about this. To me, it was
14 obvious it had to be done on a perpetual pavement,
15 but I don't recall what he said, no. I don't
16 recall details of what his response was.

17 132 Q. There's a reference in
18 your note, number 3, to crosswalks and friction
19 and BPN. And we know that one of the things that
20 Golder asked Tradewind to do at Mr. Moore's
21 request was to test some painted crosswalks. Am I
22 correct that that's what this is about?

23 A. Yes, it is.

24 133 Q. Okay. And Tradewind
25 wasn't able to do it. It wasn't the proper

1 equipment, so am I correct you're suggesting here
2 that potentially it could have been done using the
3 British pendulum?

4 A. Yes. I think Tradewind
5 tried but they didn't get any reasonable numbers,
6 so, you know, the only solution would be to use
7 BPN.

8 134 Q. Okay. And that's an
9 independent issue, am I correct, from the Red
10 Hill? It's a separate point?

11 A. It's not on the Red Hill.
12 No, it's not.

13 135 Q. Well, no crosswalks on
14 the Red Hill itself?

15 A. No.

16 136 Q. Okay.

17 A. No.

18 137 Q. All right. And so, the
19 issue with the crosswalks, was that anything that
20 would have prevented the Golder report from being
21 finalized? It was currently in draft form. But
22 would that prevent it from being finalized?

23 A. No. No, that had nothing
24 to do with the Red Hill Valley Parkway. No, it
25 didn't.

1 138 Q. All right. And were
2 there any action items or followup respecting the
3 Red Hill Valley Parkway or the Golder report or
4 the Tradewind report following from this meeting?

5 A. No. You know, I think it
6 was, you know, our analysis and recommendations
7 were final and presented to the client. No, there
8 wasn't any action requested by Mr. Moore. No.

9 139 Q. And did Mr. Moore ever
10 provide you with comments on the Golder report?

11 A. No, he didn't. Like,
12 about two years later he went by, but no, he
13 didn't. No, he didn't.

14 140 Q. And, again, we'll get to
15 that, but certainly not at this time?

16 A. No.

17 141 Q. And did Mr. Moore ever
18 ask you to finalize the Golder report?

19 A. No, he didn't.

20 142 Q. Did he ever tell you not
21 to finalize the Golder report?

22 A. No, he didn't.

23 143 Q. Why did you not finalize
24 it following this meeting?

25 A. You know, you know, it

1 was, like -- well, Mr. Moore often, he didn't care
2 about finalizing. He just wanted the information.
3 He wanted the numbers and move ahead. That was
4 his attitude. And, you know, for me, it was, you
5 know, the analysis were final, recommendations
6 were final and there was no request. I ask him
7 even in the e-mail if, you know, there was any
8 comment to provide. Nothing was provided, so...

9 144 Q. So, you mean in the
10 e-mail when you e-mailed the report to him on
11 January 31, 2014, when you asked him if he had any
12 comments?

13 A. Yes.

14 145 Q. And is that unusual or is
15 that usual? Not with just with respect to the
16 City of Hamilton or Mr. Moore, but you had been
17 retained to conduct a project, you write a report
18 and are not asked to finalize it?

19 A. Well, our practice would
20 be to submit draft report to the client, discuss
21 or sometimes, you know, even discussion, get their
22 comments and finalize. Typically, you know, the
23 request could come from the client, please
24 finalize the report, here are the comments or we
25 have no comments. So, that was our practice.

1 146 Q. Right. And so, am I
2 correct, then, that it was unusual for you it not
3 finalize a report once you'd submitted a draft to
4 a client?

5 A. Yeah, so typically we
6 would finalize after we got comments and requests
7 from the client, please finalize these, here are
8 the comments or no comments, yeah.

9 147 Q. Right. And if you
10 haven't heard back from a client respecting a
11 draft report, would you typically follow up to ask
12 them if they would like it to be finalized?

13 A. Yeah. In some cases, we
14 could. But, you know, typically, you know,
15 Mr. Moore didn't care about this. He always
16 wanted to move ahead, so he didn't care about it.
17 He just wanted to get the information, get the
18 numbers and move ahead.

19 148 Q. Were there other
20 instances with Mr. Moore where you didn't finalize
21 a report?

22 A. You know, so, for
23 instance, when we got the dips, and the dips were
24 in 2016, he didn't want anything. He just wanted
25 the numbers, you know, Excel spreadsheet and maps

1 and he wanted to move ahead. He didn't want any
2 report. He wanted the numbers, decide what to do
3 and move ahead.

4 149 Q. Right. And we'll get to
5 that, but, again, that wasn't a report itself. It
6 was just the numbers. You went out, did inertial
7 profile testing, I believe, but there wasn't a
8 draft report. Correct?

9 A. No, there wasn't any.
10 Yeah, you know, I think in 2006 when we did -- we
11 finalized the feasibility study, but the design,
12 he just wanted to move ahead. We didn't. So, you
13 know, I think it was his attitude or his approach,
14 that he just wanted to move ahead.

15 150 Q. Okay. And, at this time,
16 were you waiting for any other information from
17 Tradewind in order to finalize the Golder report?

18 A. No, I didn't.

19 151 Q. And were your, Golder's,
20 analysis and recommendations complete?

21 A. Yes, they were.

22 152 Q. In your experience, if
23 Mr. Moore wanted more steps to be taken or wanted
24 more work to be done to complete a draft report,
25 how long after delivery of the draft would he

1 provided those instructions?

2 A. Oh, Mr. Moore respond
3 promptly. He responded -- typically he responded
4 right away or always, you know, within a day or
5 two. He would respond immediately.

6 153 Q. And before we leave the
7 meeting on the 7th, did you and Mr. Moore talk
8 about the complaints from the police or
9 slipperiness? Was that something that you
10 specifically discussed with him at the meeting?

11 A. No. I don't recall
12 details. Obviously I knew why they wanted us to
13 do this thing from his initial request, but I
14 don't recall any discussion about, you know,
15 police complaints or -- no. No, I don't recall
16 anything during the meeting.

17 154 Q. Number 9 in your notes
18 refers to HIR fibre projects that we sampled.
19 What's that a reference to?

20 A. Hot in-place recycling
21 fibre project that we sampled. That was 2014. I
22 believe that the City of Hamilton was the leader
23 in using hot in-place recycling years ago, before.
24 I had a list of a larger number of projects where
25 they used hot in-place recycling.

1 Now, they were interested in
2 bringing this technology back, because it was very
3 cost effective and considered to be
4 environmentally friendly because you didn't have
5 to -- you know, when you mill, overlay, you have
6 to (indiscernible) the material. In this case,
7 you just reuse existing material. So, they were
8 very interested in bringing back the hot in-place
9 recycling technology.

10 Fibre, fibre, fibre project.
11 I don't recall what is this fibre. I know that I
12 consider fibre for microsurfacing for steel slag.
13 Maybe this is -- maybe it's like this. Hot
14 in-place recycling -- oh, yeah, I think now it
15 makes -- so, Rick Andoga was to look at sections
16 for hot in-place recycling. Fibre was for
17 sections from steel slag. Fibre, that would be
18 what I said I think yesterday. Microsurfacing
19 with the addition of fibre reinforcement is the
20 treatment for old pavement that incorporated old
21 poor quality steel slag and cracked.

22 And project that we sampled
23 asphalt cement, I don't have a detailed
24 recollection of the last project --

25 155 Q. At this point in time, at

1 this meeting, is that then, do I understand you
2 correctly, is talking about hot in-place recycling
3 on City roads as opposed to on the Red Hill Valley
4 Parkway?

5 A. On City roads only, yes.

6 156 Q. Okay. So, those
7 references do not pertain to the part of the
8 conversation with Mr. Moore about the Red Hill
9 Valley Parkway. Is that right?

10 A. Oh, that was much later.

11 No. No, they don't.

12 157 Q. Okay. All right. And
13 then you referred to, when I asked you about
14 whether Mr. Moore asked you to do anything arising
15 out of this meeting and out of the Golder report,
16 and you said, no, no, it was not until a couple of
17 years later.

18 So, if we could jump ahead
19 almost a couple of years and if we could go to
20 overview document 7, image 81, and I just want to
21 use this to place it in time.

22 On December 17, 2015 -- sorry,
23 this is 22 odd months later -- at 8:47 a.m.,
24 Mr. Moore e-mailed Dr. Uzarowski under the subject
25 line FW, forward, Red Hill SMA, and he gives us --

1 he says:

2 "Here's a summary of the
3 skid resistance tests."

4 And then we see the language
5 that we saw from your e-mail to Mr. Moore on
6 January 24, 2014.

7 And so, the inquiry doesn't
8 have any written communications that have been
9 provided to us between your meeting on February 7,
10 2014 and this e-mail from Mr. Moore on
11 December 17, 2015 with respect to the Tradewind
12 report and the Tradewind friction test results.

13 Do you recall having any
14 communications with Mr. Moore on that topic
15 between February 7, 2014 and December 2015?

16 A. No, there was nothing,
17 nothing between those two dates. Nothing. No
18 communication.

19 158 Q. And do you know why
20 Mr. Moore sent you this e-mail on December 17,
21 2015?

22 A. No, I don't. I think I
23 said it was like out of the blue. It surprised
24 me. That was edited version of my e-mail. No, I
25 don't know. And it was 8:47, very early. I don't

1 know.

2 159 Q. Okay. So, then to place
3 it in time, I'm just going to go back to a couple
4 of note references and other communications in
5 that interim period between your meeting in
6 February 2007 and receipt of this e-mail.

7 So, if we could now go back to
8 overview document 6, Registrar, and images 137 to
9 138. And it's paragraph 398, which covers both
10 images.

11 It says:

12 "On January 22, 2015,
13 Mr. Moore left
14 Dr. Uzarowski a
15 voicemail. And the
16 message did not provide
17 context regarding the
18 intended purpose of the
19 call. Dr. Uzarowski's
20 notebook contains an
21 entry for the same date
22 which lists 2) Gary
23 Moore-RHVP, six years
24 later."

25 Do you recall what this was

1 about?

2 A. No, I don't recall. I
3 think it definitely was -- it was -- it must have
4 been about our pavement evaluation six years
5 after, but I don't have any recollection of that,
6 of that call, what was discussed. I don't.

7 160 Q. Do you recall having a
8 conversation with him around about that time, even
9 if you don't recall specifics, about the RHVP six
10 years later, which does appear to be a reference
11 to the Golder report and its investigations?

12 A. I don't -- you know, if
13 it's in my notes, then, you know, we must have
14 talked about this. I don't recall. It could be
15 about dips because I know he was interested in,
16 always interested in, dips and bumps, but no, I
17 don't have -- I don't want to speculate. I don't
18 recall.

19 161 Q. Okay. You can take that
20 down, Registrar.

21 And we know that in 2015, the
22 City retained CIMA again to conduct a safety
23 assessment of the Red Hill Valley Parkway. Were
24 you aware of that in 2015?

25 A. No, not in 2015.

1 162 Q. Yesterday you talked
2 about not being aware of CIMA's involved with
3 respect to the Red Hill until much later,
4 December 2018. Is it the same with respect to
5 this report or this safety assessment in 2015?

6 A. That's correct.

7 163 Q. All right. If we could
8 go to overview document 7, Registrar, images 36
9 and 37.

10 And this is not an e-mail that
11 you're copied on, but in paragraphs 106 and 107,
12 it's indicating that Mr. Moore forwarded your
13 January 24, 2014 e-mail to Brian Malone at CIMA
14 and it contains the same transposed right
15 lane-left lane reversal. Do you see that?

16 A. Yes, I can.

17 164 Q. Sorry, not right
18 lane-left lane. Southbound and northbound
19 transposition. I apologize.

20 A. Mm-hmm.

21 165 Q. Okay. And do you have
22 any awareness of Mr. Moore sending this to
23 Mr. Malone at that time?

24 A. No, I don't.

25 166 Q. Was it just -- sorry, you

1 didn't at that time?

2 A. No, I didn't know

3 anything about this.

4 167 Q. Okay. And when did you
5 become aware of that?

6 A. I became aware of CIMA
7 involvement when I met with Mr. Gord McGuire on
8 December 18, 2018, and then during this inquiry I
9 look at the documents.

10 168 Q. This specific document
11 you were aware of in the context of this inquiry?

12 A. Of this inquiry, yes.

13 169 Q. Okay. Thank you. If you
14 could go, Registrar, to overview document 7,
15 images 77 to 78.

16 And there's a number of
17 paragraphs here beginning at 246 and 247 and it
18 guess on to the next image. And I'll just
19 summarize it for you. It's a community group
20 called the Lakewood Beach community council who
21 e-mailed the mayor and council on December 9,
22 2015, so now we're shortly before the e-mail I
23 took you to from Mr. Moore on December 17. And
24 they're asking questions about friction testing on
25 the Red Hill Valley Parkway. There's a response,

1 as you'll see in paragraph 247, on December 10
2 from Councillor Jackson to the Lakewood Beach
3 community council, copied to a number of people,
4 including Mr. Moore.

5 And then just go to the next
6 image, Registrar.

7 Paragraphs 248 and 249 are
8 just, again, further communications between the
9 community council and Councillor Jackson with
10 other individuals copied.

11 Did Mr. Moore ever tell you
12 that a community group was asking questions
13 related to friction testing?

14 A. No, he didn't.

15 170 Q. Were you aware of it at
16 that time?

17 A. About this e-mail and
18 request? No, I was not.

19 171 Q. Okay. Did Mr. Moore ever
20 mention that group, the Lakewood Beach community
21 council?

22 A. No. I don't recall him
23 mentioning this thing to me, no.

24 172 Q. Okay. All right. And
25 then if we go to image 80, and in paragraph 253,

1 if you could call that up, Registrar, so there's a
2 number of notes you have with just Hamilton in it.
3 So, on November 19, 2015 your notebook indicates
4 "talk to Gary Moore," and then you wrote
5 "Hamilton" in your notebook on November 20, 27,
6 30, and again on December 7, 2015.

7 Do you recall if you and
8 Mr. Moore spoke about the Tradewind report or
9 friction testing on the Red Hill on or about those
10 dates, before Mr. Moore sends you the e-mail on
11 December 17?

12 A. No. No, I don't recall
13 any.

14 173 Q. All right. And then if
15 we could go to the next image, 81 and 82, please.

16 And so, at paragraph 254 and
17 255, 255 is the e-mail from the 17th of December
18 that we already briefly looked at from Mr. Moore
19 to you.

20 And above that, in 254, if you
21 could call that up, please, Registrar.

22 It's a December 17 note in
23 your notebook, same day as the e-mail from
24 Mr. Moore sent to you in the morning. Do you
25 recall if you had a discussion with him that same

1 day?

2 A. Definitely, like, you
3 know, I rely a lot on my notes and I must have had
4 a discussion with him. But I think this was
5 probably, this number 254, was after 255, because
6 he send that e-mail so early to me that I believe
7 he sent me an e-mail and then we talk about this.
8 We definitely talk about this because it's in my
9 notes.

10 174 Q. Okay. And so, do I
11 understand correctly you're saying that although
12 you don't specifically recall, you think Mr. Moore
13 sent you the e-mail first in the morning on
14 December 17 and then you had a discussion with
15 him?

16 A. Yes. Yeah, that's
17 correct.

18 175 Q. Okay. And do you recall
19 the discussion or is it just the notes that you
20 have?

21 A. You know, like, you know,
22 I can see, you know, the subjects, dips. Yeah,
23 so, you know, I would have to rely on my notes
24 because this is definitely what we covered in our
25 discussion, but I don't have, like, a detailed

1 recollection of our conversation.

2 176 Q. Okay. What is your
3 recollection? If it's not detailed, what is your
4 recollection of your discussion with him?

5 A. So, you know, it's like
6 it says, asphalt cement, asphalt cement. I think
7 roughly about that time he -- okay. I don't know
8 how much you can talk, you want me to talk about
9 it. Asphalt cement there was a big issue later to
10 asphalt cement in the entire province, so, you
11 know, and the --

12 177 Q. So, is this related to
13 the Red Hill?

14 A. No.

15 178 Q. Okay. What parts of
16 these are related to the Red Hill?

17 A. That would be definitely
18 not the first three:

19 "- AC.
20 - a survey by Sandy
21 - specification."

22 That wasn't. "Results
23 review," no, I don't think. So, that would be
24 item, "LINC, Red Hill Valley." LINC, Red Hill
25 Valley, that would be. And then the last one,

1 "dips." So, those two items, LINC, Red Hill, and
2 dips, those were related to the Red Hill Valley
3 Parkway and LINC.

4 179 Q. And what did you discuss
5 about it? Do you recall?

6 A. Oh, that was, you know,
7 after receiving that e-mail from Mr. Moore --

8 180 Q. Take that down,
9 Registrar, so we can see the e-mail. Thank you.

10 A. So, you know, in the
11 morning I received the edited version of my old
12 e-mail sent to him and followed with a telephone
13 call. I'm just looking at another one on the same
14 date. Okay. So, you know, I received the e-mail,
15 then we had a telephone conversation and then I
16 responded sending him -- sorry, this is, like,
17 255. Resending him the Tradewind report.

18 So, we must have -- he must
19 have requested the Tradewind report and we must
20 have talk about the dips on the Red Hill Valley
21 Parkway and, you know, the way of fixing it. You
22 know, initially measuring and then fixing. So, I
23 think he requested the report, pavement report.

24 181 Q. Okay. And, yeah, that's
25 about three and a half hours after Mr. Moore's

1 e-mail to you that you send him the Tradewind
2 report, and that's just the Tradewind report not
3 attached to the Golder report? I can take you to
4 it, but that is just the Tradewind report itself,
5 not the Golder report. Do you recall if he just
6 said, just send me the Tradewind report?

7 A. You know, this is what my
8 e-mail says, so I resended him the Tradewind
9 report. So, I understand from that e-mail that he
10 must have ask me about some standards or
11 anticipated values, so that would be for that,
12 what was shown in the Tradewind report.

13 182 Q. Okay. And did you have
14 any sense that Mr. Moore had, in your
15 conversation, that he had forgotten about the
16 Tradewind report? I mean, he already had it. You
17 had e-mailed it to him, you had given him a copy
18 and then you're sending it to him again, so did
19 you have any sense that maybe he forgot about it?

20 A. No. No, he didn't, you
21 know. No, he didn't --

22 183 Q. Okay. But you don't
23 recall specifically why he asked you to send it to
24 him again?

25 A. No, you know, I don't

1 specifically remember why. I see, yes, he asked
2 me to resend him the report, but why, I don't --
3 the reason, I don't know. Like, he just simply
4 ask and he ask about some, you know, standards,
5 some comparisons, so...

6 184 Q. Do you recall if you
7 asked him why he sent you this edited version of
8 your January 24, 2014 e-mail?

9 A. If I ask him why?

10 185 Q. Yeah. He didn't just
11 flip you your prior e-mail or reply to it. Why
12 don't we go to it itself.

13 This is Golder 2681,
14 Registrar. There it is.

15 So, it's from Mr. Moore to you
16 on December 17, 2015 at 8:47 a.m., and so it's an
17 independent self-standing e-mail from Mr. Moore,
18 which has the very similar language to your
19 January 24, 2014 e-mail, but it's not a reply to
20 it. It looks like a cut and paste, to an extent?

21 A. Yes, this is an edited
22 version of -- this is actually, like, what you
23 showed yesterday, what he sent me. So, for me, I
24 know it was a surprise to me, receive something
25 like this at 8:47 in the morning. No, I don't

1 remember if I ask him why, but I was surprised
2 that I suddenly received my own e-mail.

3 186 Q. But not your actual
4 e-mail?

5 A. No, no. Okay. Like, not
6 my actual e-mail, but what was in -- edited
7 version of what I sent him roughly about two years
8 ago, so --

9 187 Q. Okay. You can take that
10 down, please, Registrar, and, sorry, go back to
11 overview document 7, image 82, please.

12 Then you wrote back, with the
13 Tradewind report, you wrote:

14 "Please find attached the
15 November 2013 report from
16 Tradewind Scientific on
17 friction testing on Red
18 Hill Valley Parkway and
19 Lincoln Alexander
20 Parkway. I will look at
21 some standards or
22 anticipated values and
23 call you."

24 But I think you indicated that
25 I think Mr. Moore asked you to do that. Is that

1 right?

2 A. Yes, he did.

3 188 Q. Okay. Did you understand
4 why he was looking for that? Did he describe it
5 to you?

6 A. I understand from that
7 e-mail that he requested Tradewind report and also
8 he wanted to have some understanding of the
9 correlation between the grip tester and
10 locked-wheel and the standards in the UK. So, I
11 think later on I started talking to Mr. Taylor, so
12 that was the starting point and he ask for the
13 report.

14 189 Q. Right.

15 A. The Tradewind report, not
16 my report.

17 190 Q. He asked for the
18 Tradewind report, right. And you had indicated at
19 the February 7 meeting, February 7, 2014 meeting,
20 that he had expressed some displeasure about you
21 having e-mailed the Golder report to him at this
22 time. But, as you indicated, he asked you to
23 e-mail him the Tradewind report now. Is that
24 right?

25 A. Yes.

1 191 Q. Okay. And at any time
2 prior to this date, had Mr. Moore asked you to
3 look into standards or anticipated values or ask
4 you to conduct any additional work in
5 understanding the Tradewind report?

6 A. No, not before this. No,
7 he didn't.

8 192 Q. All right. Then later
9 than same day, at 2:57 p.m., if we look at
10 paragraph 257, thank you, you responded to an
11 e-mail from Leonard Taylor of Tradewind titled
12 "Re: Hamilton Friction Test Results," and
13 Mr. Taylor, his original e-mail was the one that
14 he sent providing you with the Tradewind report
15 back on January 26, 2014, so he's just replying to
16 the earlier from almost two years before e-mail.

17 And then you asked him a
18 question about standards and specifically you're
19 asking about the ASTM1844 standard and friction
20 results that you carried out on the Red Hill
21 Valley Parkway and Lincoln Alexander Parkway in
22 the City of Hamilton in 2013.

23 And then you talk about the
24 ASTM501 standard, so those are the tire standards.
25 Is that right?

1 A. Yeah. You know, that's a
2 part of the testing, because, you know, it's 274
3 and tire is covered by 501. Yes, so these are the
4 standards that MTO used in 2007 and Tradewind used
5 in 2013.

6 193 Q. But are those both
7 respecting the tires that are used?

8 A. No, no, no, no. I didn't
9 maybe include everything because I think it was --
10 274 was the test, but 501 covers the type of tires
11 that should be used in the test.

12 194 Q. Right. That's what I was
13 asking. 501 is the type of tire. What about
14 ASTM 1844?

15 A. This is for grip tester.

16 195 Q. Okay.

17 A. Yeah.

18 196 Q. All right. And then you
19 ask about the correlation:

20 "Is there any correlation
21 between GTN, which is
22 grip test number, and FN,
23 which is friction number?
24 The GTN limits you gave
25 in the report are from

1 the UK. Do you know what
2 the limits are typically
3 used in the U.S. or in
4 Canada?"

5 So, is this arising from your
6 discussion with Mr. Moore that you described?

7 A. Yes, it is.

8 197 Q. And do you recall if this
9 is the first time you contacted Mr. Taylor about
10 the UK standards referenced in the Tradewind
11 report?

12 A. I think this is the first
13 time that I have documented, so I think it's
14 probably -- you know, after that 2013, 2014, so
15 this is the first time after this two years that I
16 contact -- I think this is the first time after
17 two years that I contacted him about this.

18 198 Q. Okay. Just to make sure
19 I understand you, are you suggesting that you
20 contacted him about it at the time the Tradewind
21 report was issued to you?

22 A. No, I don't think about
23 the results. Just about the testing. Or maybe it
24 was only Dr. Henderson. But that was my, at that
25 time, contact with him and, after that, no. I

1 don't recall anything in between that time and
2 this --

3 199 Q. So, is this the first
4 time that you had contact with Mr. Taylor about
5 the UK standards referenced in the Tradewind
6 report?

7 A. I think it is.

8 200 Q. Okay. And then a couple
9 months later, on February 19, 2016, you followed
10 up with Mr. Taylor. You sent him an e-mail
11 following up on your December 17, 2015 e-mail. Do
12 you recall if you had any discussions or
13 communications with Mr. Taylor or anyone else at
14 Tradewind in between those two dates?

15 A. I would have to rely on
16 the e-mails in my notes, because if I had a
17 conversation with Mr. Taylor, that would end up in
18 my notes.

19 201 Q. Right. And we don't have
20 an e-mail or that, so I just --

21 A. So --

22 202 Q. You don't recall anything
23 in between those two dates?

24 A. No. If it's not in my
25 notes, it's likely that I didn't have any.

1 203 Q. All right. And then if
2 we could go -- we have 82. If we could pull up 83
3 as well.

4 So, in 258, on December 23,
5 2015, you e-mailed internally at Golder to a
6 number of people, Steven Jagdat, copying Vimy
7 Henderson, Ms. Rizvi and Joe Lin about a call with
8 Mr. Moore. It's at the top of the next page. If
9 you could expand that. Thank you. You're
10 indicating you had a phone call with Mr. Moore and
11 say:

12 "Please go ahead with the
13 inertial profiler scan on
14 the Red Hill. It would
15 be great if we could do
16 it between Christmas and
17 the New Year. I will
18 then need localized
19 roughness analysis. I
20 will have to tell them
21 where to do the repairs
22 and what repairs would be
23 best. We would
24 definitely need the GPS
25 coordinates."

1 So, what was this about? You
2 referred earlier, I think, to inertial profiler
3 that was done in 2016 and it not resulting in a
4 report. Is this the lead-in to that?

5 A. Yes, yes. That was the
6 inertial profiler testing in -- so, requested in
7 2015. Yes, this is the one.

8 204 Q. Okay. And was this a
9 separate phone call with Mr. Moore? How did this
10 arise?

11 A. I think it was a separate
12 call. He wanted to know the locations of dips and
13 bumps, so it was a totally separate request,
14 separate call.

15 205 Q. Okay. And we actually,
16 Registrar, if we could go to RHV933 -- I think we
17 do have a note -- at image 705. There we go.

18 We have a few. On the 21st
19 and 22nd, we have references to Hamilton and
20 profiler and then Hamilton on December 23, 2015,
21 if that assists you. What can you tell us,
22 though, about what was going on here and what you
23 were asked to do by Mr. Moore?

24 A. So, it must have been at
25 least on December 21 or before because I can see

1 Rabiah, so this is Ms. Rizvi. I asked her to
2 arrange profile graph testing, so that must have
3 been roughly requested at that time.

4 And then following the
5 Hamilton profile LU, just probably discuss, you
6 know, what to do. And this was just before
7 Christmas, you know, so I think the intention was
8 to test it before the new year or before,
9 actually, the winter setup.

10 206 Q. Okay. And what's the
11 concern that Mr. Moore was asking you to address?

12 A. His concern was about the
13 location of dips and bumps and then how to repair
14 them, but first locate where they are, exactly
15 where they are.

16 207 Q. Okay. And dips and
17 bumps, is that descriptive?

18 A. Yeah. Actually, you
19 know, we typically call it dips. So, you know, I
20 would say irregularities in longitudinal profile
21 of the road. So, you know, I think we typically
22 called it dips. But sometimes it's possible that
23 you may also have a bump and you will have to
24 grind it a little bit. So, locate where those
25 irregularities are and then determine what to do

1 with them.

2 208 Q. And did these
3 conversations and what Mr. Moore was directing you
4 to do, do these pertain at all to the Tradewind
5 report or friction testing or friction test
6 results or no?

7 A. No, not at all.

8 209 Q. Commissioner, it is
9 almost 11:30. I wonder if this would be a good
10 time to take a break.

11 JUSTICE WILTON-SIEGEL: It
12 certainly would be. Let's take a break until a
13 quarter to 12:00.

14 --- Recess taken at 11:27 a.m.

15 --- Upon resuming at 11:45 a.m.

16 MR. LEWIS: We are back. May
17 I proceed, Commissioner?

18 JUSTICE WILTON-SIEGEL: Yes,
19 please do so.

20 MR. LEWIS: Thank you.

21 BY MR. LEWIS:

22 210 Q. Just before the break,
23 Dr. Uzarowski, we were talking about the inertial
24 profiler scanning.

25 If we could go back,

1 Registrar, to overview document 7, images 82 and
2 83.

3 And you directed on
4 December 23, as we saw, some of the folks at
5 Golder to proceed with the profile scans. And am
6 I correct that was something that was done back in
7 the 2013 investigations as part of the Golder
8 report investigations. Is that right?

9 A. Correct, yes.

10 211 Q. So, same test, inertial
11 profiler testing. Right?

12 A. Yes, it's the same test.

13 212 Q. Okay. And so, why is it
14 being done again now? What's the difference?

15 A. Let's say the same
16 equipment was used, but the test was slightly
17 different because in 2013 we determined IRI,
18 international roughness index, which would
19 generally evaluate the pavement surface, the
20 roughness of the pavement surface. So, it's for
21 100-metre sections, determine IRI.

22 Here, you will see later on we
23 initially determined IRI, too, but then Mr. Moore
24 wanted the exact location of the dips. IRI will
25 not tell you this. IRI is for 100 metres, but he

1 wanted the exact location of the dips.

2 213 Q. Okay. That's the precise
3 location and that isn't something that you had
4 done back in 2013. Is that right?

5 A. Yeah, exactly.

6 214 Q. Okay. And if we could go
7 now to image 84 and 85, the next two pages. In
8 paragraph 264, we see that on February 2, 2016,
9 you e-mailed Mr. Moore the results of the inertial
10 profile survey and there was -- you just referred
11 to the 100-metre long sections for the IRI, the
12 international roughness index, and described the
13 results. And what was your view of the results?

14 A. Well, overall the profile
15 was good. You know, it's slightly deteriorated
16 compared to 2013, but not too much. So, overall,
17 still, you know, the profile was good, the IRI was
18 low.

19 215 Q. And did you have a
20 discussion with Mr. Moore about this?

21 A. No. I sent him an
22 e-mail. I sent him an e-mail --

23 216 Q. Yes. This is the e-mail
24 on the 2nd. Maybe if we could pull that down.
25 There is a response from Mr. Moore on February 3

1 to your e-mail that we just had up. So, on the
2 third, he said:

3 "This really does nothing
4 for me. We do IRI for
5 our entire roads and our
6 asset management group
7 has an entire pavement
8 management program and
9 process for dealing with
10 this type of input. I am
11 only interested in
12 dealing with settlements
13 along the Red Hill.
14 Where are they? Are they
15 related to any buried
16 infrastructure, trench,
17 excavation, duct? That's
18 what I want to fix."

19 Is that the response that you
20 were talking about?

21 A. Yes, it is.

22 217 Q. So, he's not very happy
23 with it and is that what you were describing, that
24 he wanted the more precise results?

25 A. Yes, he wanted. So, you

1 know, what he send him was the initial stuff
2 because, you know, you determine IRI with a click.
3 It's in a program. But to go into precise
4 location of the dips and bumps, you have to do
5 more detailed analysis. You have to coordinate
6 GPS, et cetera, to determine the location. Yeah,
7 but that was obviously that was his response and
8 we acted based upon this.

9 218 Q. Okay. And it's quite a
10 blunt response, if I can characterize it that way.
11 But in terms of the timing of this, is this in
12 line with what you described earlier about
13 Mr. Moore's typical approach if he had feedback on
14 work that you had done?

15 A. Yes. He was -- he
16 typically -- he was very direct responding and
17 very promptly.

18 219 Q. Okay. And then if we
19 could go to 85 and 86. We already have 85 up.
20 Pull up 86 as well.

21 And these just describe from
22 paragraphs 266 to 272 -- we don't need to go
23 through each of them, but it just describes that
24 in February and March 2016, further work was done
25 on the profiles on this project that you were

1 working on. Is that right? Just in terms of the
2 timing, does that accord with your recollection?

3 A. Yes, it is. And I recall
4 I did it myself, so it was very cumbersome and
5 time-consuming.

6 220 Q. Okay. And then at 274 in
7 the right-hand image, on March 17, 2016 you
8 e-mailed Mr. Moore the proposal for the profile
9 testing, but it had already been done at that
10 point. Is that right?

11 A. Yes, that's right.

12 221 Q. Okay. Just sort of fell
13 behind and then the proposal came after the work?

14 A. It was so urgent for him.
15 So, you know, I knew that a proposal and PO from
16 the client, but sometimes if the work was very
17 urgent, then Golder allowed us to do the work
18 based on e-mail or verbal approval. Sometimes if
19 it was very urgent, then Golder allowed me to do
20 it.

21 222 Q. Okay. One moment,
22 please. And during that period that you're
23 working on the inertial profile analysis, you sent
24 Leonard Taylor at Tradewind an e-mail that I
25 alluded to earlier.

1 If we could go to overview
2 document 7, image 113, and this is a followup on
3 February 19, 2016 to Mr. Taylor under the subject
4 line "Re: Contact Information." You just ask:

5 "I would very much
6 appreciate if you could
7 send me some information
8 about the correlation
9 between the locked-wheel
10 tester numbers and the
11 grip tester. My contact
12 information is given
13 below."

14 You didn't forward or attach
15 your prior e-mail, but am I correct this is a
16 followup on your e-mail back on December 17, 2015?

17 A. I think yes, it is.

18 223 Q. And then if we could keep
19 that up but also pull up 114. And in
20 paragraph 362, he responds. If you could pull
21 that up, the actual e-mail, on both pages.

22 Right. And so, this is
23 February 20, 2016. He responds with some
24 information about this and he says "per our
25 discussion" in that third paragraph. Do you

1 recall having a discussion with him after your
2 e-mail?

3 A. I think it's in my notes,
4 Leonard Taylor, so, you know, we must have
5 discussed this thing definitely if he says and I
6 think it's in one of my notes I believe.

7 224 Q. Do you have a
8 recollection of it or just --

9 A. No. You know, probably I
10 don't have detailed recollection. I would have to
11 rely on the notes.

12 225 Q. One second. I'm not sure
13 that we do. We'll see if we can pull it up and,
14 if we can, we will.

15 And he expresses what we would
16 characterize as the advantages of the grip tester
17 over the locked-wheel tester and gives three
18 reasons, and he attaches a paper relating to the
19 correlation of friction values.

20 And if we could pull that up.
21 It's at GOL2687.

22 This is titled "A White Paper
23 on Correlation of the Grip Tester Trailer to the
24 ASTM E274 Skid Trailer" by a Professor James C.
25 Wambold and others dated April 18, 2006.

1 numbers, I'm not assigning -- 40, that that equals
2 a friction number from the locked-wheel tester of
3 whatever number, 35, that sort of thing. It
4 wasn't helpful --

5 A. Yes.

6 229 Q. -- for that sort of
7 specific analysis. Is that right?

8 A. Yes, for this sort of
9 correlation because they analyzed different slip
10 speed and different speed, different water level.
11 So, as you say, I didn't find, you know, any
12 similar correlation to what you've just mentioned.

13 230 Q. Okay. But directionally,
14 though, would you agree that it supports the
15 general point that the grip tester is going to
16 return a higher grip number than the locked-wheel
17 tester will return directionally?

18 A. Overall, yes. It was
19 like, you know, the grip tester should show
20 somewhat higher number than the locked-wheel
21 tester.

22 231 Q. Right. And, if we can go
23 to image 12, I'll just give an example of that so
24 that we have a visual. Maybe it's the next image.
25 Maybe it's page 12. There we go.

1 So, there's a few graphs of
2 this. This is just one page. It's showing the
3 grip tester on the X axis and the locked-wheel
4 tester on the Y axis and plotting the results.
5 And, generally speaking, it's showing the higher
6 grip tester numbers than locked-wheel. Right?

7 A. Yes, yes. Yeah, it is.

8 232 Q. Okay. Thank you. You
9 can take that down, Registrar. If we go back to
10 overview document 7, image 114, and paragraphs 363
11 and 364, if you could call those up.

12 February 22, you responded to
13 him asking him for the paper and the response and
14 asked if there are any values for the grip tester
15 used for highway evaluation in Canada or the U.S.
16 And he responds same day, February 22:

17 "I'm not aware of any
18 official recognized
19 highway GT reference
20 levels in Canada or the
21 U.S. The best approach
22 is probably to use
23 cross-correlation with
24 values from other
25 established devices, such

1 as the ASTM 274
2 standard."

3 And do you recall if you had
4 any further discussions or communications with
5 Mr. Taylor on this issue?

6 A. I know I had, you know, a
7 few -- you know, in my notes there are some, but I
8 don't -- I would have to check my notes if -- I
9 know I had some discussions with him about this,
10 but, you know, the exact date, I would have to
11 check in my notebook.

12 233 Q. Okay. So, just going
13 back to your prior one, I can tell you we do have
14 some notes, which we'll get to, from May 2016
15 referencing Mr. Taylor, but we don't have anything
16 back in February, you know, after your call and
17 your e-mails with him in February here. I can
18 just advise you of that. We don't have anything
19 until May in your notebook.

20 Would that suggest to you that
21 you didn't speak with him around this time period,
22 in February?

23 A. Well, I would have to --
24 you know, if I don't have in my notes, then
25 probably wouldn't. Probably the conversation, you

1 know, like, ended somewhere in May. Because if I
2 talked to him, that would be in my notes, so no, I
3 don't recall anything between.

4 234 Q. Right. And then if you
5 could take that down, Registrar. And then 365 on
6 the same page, you'll see that, again, on
7 February 22, you have a notebook reference to Gary
8 Moore, RR-LU-VH. What's that refer to?

9 A. So, I was probably
10 preparing myself for, you know, a meeting with
11 Mr. Moore. And RR is Rabiah Rizvi, LU is myself
12 and VH is Vimy Henderson, so maybe just to discuss
13 this thing. But I think it was in, you know,
14 preparation for that meeting with Gary Moore that
15 I see I had on March 4, so it would be --

16 235 Q. Okay. Was that a meeting
17 with Mr. Moore on the fourth or a telephone call?
18 Do you recall?

19 A. No, it was a face-to-face
20 meeting.

21 236 Q. A face to face, okay.
22 Take that down, Registrar, and if we could pull up
23 the next page as well, 115, and if we could call
24 up paragraph 366, which continues on to the next
25 page.

1 So, does this note refer to
2 the meeting with Mr. Moore that you just described
3 on March 4?

4 A. Yeah, that was a meeting
5 with Mr. Moore.

6 237 Q. All right. Then, these
7 notes, are these taken before or during your
8 meeting?

9 A. I believe they were
10 after, after the meeting.

11 238 Q. Okay.

12 A. Spec, profile, results.
13 I would have to look at my hand notes, how tidy
14 they are, but it looks to me it was rough -- and
15 from that last item, steve@skidabrader, so that
16 was definitely after or maybe it was -- I would
17 have to look at my notes, how tidy they are. If
18 they are tidy, that would be my preparation. If
19 they are just, you know --

20 239 Q. Understood. I think we
21 can get you the number for that and pull it up.
22 One moment. You can take that down, Registrar,
23 and go to GOL7409, image 25. There we go.

24 That's your handwritten note,
25 does your messiness or lack thereof tell you that

1 you took it at, before or after?

2 A. I think it was
3 preparation what to discuss during the meeting,
4 but the last item was added after. I can only,
5 you know -- I see that these are the item I wanted
6 to discuss, so I would say that was probably
7 before.

8 240 Q. Okay. So, what did you
9 talk to Mr. Moore about at this meeting? I guess
10 first, did you talk to him about the issue that he
11 wanted you to look into and that you did look into
12 with Mr. Taylor of Tradewind?

13 A. I think so. So, you
14 know, when I look at those items, so specification
15 is a total different subject, but profile results,
16 blasting and micro, that was related. The results
17 were likely those results that we discussed with
18 Mr. Taylor. So, that was -- I would cover it
19 under results.

20 241 Q. Okay. And do you recall
21 what you told him?

22 A. Sorry, what was your
23 question?

24 242 Q. Do you recall what you
25 told him about on that --

1 A. I told him basically, you
2 know, like -- I don't have direct, you know,
3 detailed recollection, but I think probably there
4 was no clear correlation between the grip tester
5 and locked-wheel, so I conveyed this message to
6 him and, you know -- so, basically a summary of
7 what I discussed with Leonard Taylor and my
8 conclusions with that discussion.

9 243 Q. Okay. Profile, does that
10 refer to the profiler testing?

11 A. The profile was the
12 results profile testing and locations of this what
13 you call dips is and bumps or dips, whatever.

14 244 Q. Because you were working
15 on that project at that time? You were in the
16 middle of that right then. Right?

17 A. Yes. That was the main
18 subject of the meeting, so, you know, I brought
19 the Excel spreadsheet and I brought the maps where
20 I mark those locations.

21 245 Q. Okay. For the dips and
22 bumps?

23 A. Yes.

24 246 Q. All right. And then, as
25 you said, you also discussed the correlation

1 issues relating to Mr. Taylor. And then blasting
2 and micro, what's that about?

3 A. So, again, blasting was,
4 you know, my recommendation. This is what, as I
5 said before, you know, this low cost version of
6 improving frictional characteristics on the Red
7 Hill Valley Parkway in a low cost, but in my
8 opinion, very good and very quick. And, you know,
9 again, you know, like, you know, microsurfacing is
10 the option that was recommended in the report.
11 And, you know, microsurfacing, that would address
12 other aspects, like structural aspects, visual
13 aspects, and blasting is only for friction.

14 247 Q. Okay. Do you recall
15 exactly what you said to Mr. Moore about the need
16 for improving the friction?

17 A. I think that he -- I
18 don't remember of course the detailed
19 conversation, but he was still concerned with, you
20 know, the police said that it was slippery. It
21 didn't go because, you know, unless you do
22 something, the friction will not improve, so he
23 had concerns. So, that was my response, you know,
24 how to improve it quickly and my -- I don't know
25 if you want me to just elaborate a little bit

1 more. Because my conclusion was that he was
2 interested in doing this thing. So, you know,
3 almost immediately after the meeting, I contacted
4 this guy. I don't know when I wrote the last
5 line, but almost like immediately after coming
6 back to the office I contacted Skidabrader.

7 248 Q. You're right. You
8 actually contacted a few different entities about
9 it after that meeting. So, while we're on the
10 meeting itself, I think what you said was -- was
11 it in this meeting you are saying that Mr. Moore
12 indicated that he was still concerned with
13 slipperiness on the road, with the police and
14 slipperiness, or is that something that you
15 inferred from your discussion?

16 A. You know, you know, City
17 employees are, you know, very savvy bureaucrats,
18 so, you know, they word this thing carefully. But
19 I think he said, you know, in a careful way about,
20 you know, the police was expressing opinion that
21 the pavement was slippery. So, I think it, you
22 know, that was my -- this is my recollection.

23 And then my immediate
24 conclusion at this thing was that he wanted to do
25 something. He wanted me -- he wanted to do

1 something, so me to tell him how to do it, yes.

2 249 Q. All right. If you take
3 that down, Registrar, and go back to overview
4 document 7, start with 115 and 116. In these
5 paragraphs following the meeting, let's start with
6 367, on March 4, same day, a gentleman named Garry
7 Krampien from Blastrac/Diamatic e-mailed you under
8 the subject line "RP Shot Blasting Quebec." He
9 indicates:

10 "It was very nice to
11 speak with you and
12 discuss your shot
13 blasting project here in
14 Toronto. Please
15 contact."

16 And then he gives information
17 about RP shot blasting in Quebec. So, do you
18 recall how that arose?

19 A. Yeah. Actually, from my
20 records, I know that almost right away when I came
21 back to the office and started talking to his guy
22 and Blastrac was one of the options. Another one
23 was Skidabrader, so, you know, first I called him
24 and then followed up. So, you know, I contacted
25 these two contractors asking them about, you know,

1 possibility of doing shot blasting or skidabrading
2 in the area near Toronto, yes.

3 250 Q. Right. So, in 368, 369
4 and 370, you have a bit of back and forth. You
5 try to contact the person in Quebec, Alex Baudin,
6 indicating that you're interested in shot blasting
7 about 120,000 metres square of asphalt pavement on
8 a highway near Toronto, "Please let me know how
9 you charge for this."

10 But then shortly after you
11 wrote to Mr. Krampien at Blastrac saying that
12 Baudin's contact information doesn't work, and he
13 responded in 370 attaching a document entitled
14 "Shot Blasting Systems, AIRPORT, ROAD & BRIDGE,"
15 and recommends you contact Group Lefebvre in
16 Quebec.

17 Then as well in 371 -- sorry.
18 In 372 it looks like you contacted him because on
19 March 10, Alexandre Lefebvre e-mails you. So,
20 fair to say you did make contact with him and he
21 replied?

22 A. I think so. Based on,
23 like, this correspondence, I know I maybe not
24 aggressively but it was urgent for me, so I really
25 followed and wanted to get this information from

1 both of potential contractors as soon as possible.

2 251 Q. All right. And in 371,
3 that's your contact on March 4 again with
4 steve@skidabrader, is the e-mail address, again
5 asking him about skidabrading.

6 And then if we keep 116 up and
7 go to the next page, 117, 373 and 374, you are
8 communicating with John Swain at Skidabrader on
9 March 10 and 11. So, that was the other one you
10 referred to. And he gives you a quote for
11 \$301,888. Right?

12 A. Yes.

13 252 Q. And was that quote for
14 the entire Red Hill mainline from Mr. Swain at
15 Skidabrader?

16 A. I think before I
17 mentioned 120,000 metres square, so that was his
18 quote for the entire surface. Yeah, for this
19 120,000, yes.

20 253 Q. Now, I just want to be
21 clear. Was that amount for the entire mainline of
22 the Red Hill?

23 A. Yes, it is.

24 254 Q. Okay. In paragraph 372,
25 Mr. Lefebvre -- 372 and 375, he actually gives you

1 a couple of different options. If you can expand
2 that, his e-mail at 372. Thank you.

3 He gives you option one, is a
4 high-friction surface treatment, and gives you the
5 price per square foot without shot blast prep.
6 And then option two is shot blasting, which is
7 obviously significantly less expensive. I think
8 you already referred to that.

9 And so, did you convey this
10 information to Mr. Moore?

11 A. No. I only conveyed to
12 him the shot blasting part.

13 255 Q. Okay. From
14 Mr. Lefebvre's e-mail, not the high-friction
15 surface treatment?

16 A. No, not the -- you know,
17 like, both skidabrading and shot blasting, I pass
18 it to him, but not for high-friction surface
19 treatment, no.

20 256 Q. Okay. Why is that?

21 A. Because first it is very
22 expensive. It's roughly about -- the price would
23 be, this is per square foot, so it would be almost
24 \$50 per metre square, so almost twice as high as
25 mill and overlay. And this is not technology that

1 is used in Ontario. We have no specification.

2 It's not used here.

3 257 Q. Okay. If you could take
4 those down, Registrar.

5 In paragraph 375, you'll see
6 there's a note on March 2013 which simply says,
7 "Gary Moore spec, friction, proposals." And then
8 the next day, on March 15, in paragraph 376, he
9 e-mailed you. If we could expand 375 and 376
10 together, please. Okay.

11 Okay. So, can you describe
12 what this note and then Mr. Moore's e-mail
13 reflect?

14 A. So, you know, like I must
15 have sent him this \$300,000 quotation and then his
16 response was, no, \$300,000 is just a ridiculous
17 amount. You know, when I read this thing, I see
18 that he was thinking that this \$300,000 quote was
19 for testing, so he says, you know, I don't need
20 the whole road tested, so he was thinking about
21 testing and he says that, actually, he doesn't
22 need everything, he only needs four to six spots.
23 So, his understanding was different than what I
24 sent him. So, in the next e-mail, I clarified
25 what I meant in my e-mail, that this \$300,000 was

1 for skidabrading, yes. So, it was, like, some
2 misunderstanding.

3 258 Q. All right, I don't think
4 that we have an e-mail from you on that. I may be
5 mistaken, but I don't think we do. Give me one
6 moment. Mr. Moore's is just a standalone e-mail.
7 It's not replying to anything. I don't think we
8 have any indication of a specific e-mail from you.
9 We'll confirm that, but I believe that's the case.

10 So, when you say, though, that
11 he only needs four to six spots, what's he
12 referring to? Spots for what?

13 A. I think he -- you know,
14 my cost estimate or let's say not mine, the
15 quotation that I passed to him was for the entire
16 mainline on the Red Hill Valley Parkway, so his
17 response -- but he was thinking that I was writing
18 about testing, so he says he doesn't need
19 everything, he only needs certain locations, you
20 know, these four to six spots that would be
21 representative of our worst case on the mainline.
22 This is my understanding of his e-mail.

23 259 Q. Right. And what sort
24 of -- do you mean friction testing?

25 A. I understand from this

1 that he was thinking about friction testing.

2 260 Q. Okay. In four to six
3 locations?

4 A. In four -- yes, four to
5 six locations, I understand on the mainline, yes.

6 261 Q. Do you know which
7 locations he was talking about?

8 A. No.

9 262 Q. Did you have a discussion
10 about that?

11 A. No, I don't. Sorry.

12 263 Q. Okay. You can take that
13 down, please.

14 You did respond the next day,
15 if we can pull up 377 and 378. Okay. So, you
16 then explain it, as you just have, that this is
17 about doing the entire surface with a Skidabrader.
18 And then Mr. Moore responds that:

19 "Sorry, I thought you
20 were talking about more
21 testing. I have never
22 heard of this technology
23 or what it does.

24 Besides, it doesn't
25 address the cracking and

1 I need to address the
2 surface distresses and
3 deformations (humps and
4 sumps)."

5 Maybe that means bumps. I
6 don't know. Is sump a term of art that I'm not
7 aware of?

8 A. No, I don't know what he
9 meant. I know that he was thinking about dips and
10 bumps. I don't know what sumps --

11 264 Q. Okay. So:

12 "I don't think we are
13 interested. Thanks."

14 Okay. And so, did you have
15 any further discussion with Mr. Moore about this?

16 A. About this, no. I was
17 surprised, but no, I didn't have any further --
18 because, you know, I know Mr. Moore. If he says
19 he's not interested, this is it.

20 265 Q. All right. So, on the
21 14th, we have your note that we already looked at,
22 which said, "Gary Moore, spec, friction,
23 proposals." I just want to be clear because these
24 e-mails on the 15th are after that. Does this
25 give you any insight into -- did you discuss

1 anything with Mr. Moore on the 14th?

2 A. No, I don't think so,
3 because these notes show that I was still working
4 on this thing, preparing the e-mail and, you know,
5 just dealing with this subject. No, I don't
6 recall any. I think it was -- not with Mr. Moore,
7 because I think I was also trying to -- for
8 Skidabrader, because Skidabrader is mainly used
9 for airports, so airports here get it from
10 Louisiana typically twice a year, so I was
11 thinking that I could match when they come. Then
12 that would cut the demob cost for this, so I was
13 maybe trying to arrange this way. This is why the
14 cost that I stated is about two metres. This area
15 would be relatively low, but that's the only thing
16 that I recollect. I don't have any other memories
17 about --

18 266 Q. I'm just thinking -- we
19 just don't have an e-mail and you must have
20 conveyed that quote of \$300,000 for skidabrading
21 somehow to Mr. Moore, so I'm just trying to figure
22 out what you said to him at the time, but you
23 don't have a specific recollection. Is that fair?

24 A. I think so. I think it
25 must have been -- you know, it was very likely by

1 e-mail, but no, I don't have any -- I couldn't
2 find any e-mail from me to him with this.

3 267 Q. Okay. So, then Mr. Moore
4 says in his e-mail on the 15th, after clearing up
5 the part about the testing, so he hadn't heard of
6 that technology, so he's not interested in the
7 options that you presented to him there, being the
8 skidabrading and shot blasting. Right?

9 A. Yeah.

10 268 Q. And previously you'd
11 recommended microsurfacing. Right?

12 A. Yes, I did.

13 269 Q. Right. And it appears
14 here that what he is doing is focusing on the
15 cracking, the distresses and deformations, which
16 is of course, back in the Golder report, is
17 something that you addressed in concert with the
18 friction remediation recommendation. Right?

19 A. Are you asking about my
20 interpretation of his --

21 270 Q. Yeah. Well, he appears
22 at this point to have rejected all of your
23 suggestions?

24 A. I think he justifies.
25 He's justifying why he's not interested.

1 271 Q. Okay. And that
2 justification being that this specific proposal
3 that you're giving to him, while maybe it will
4 address friction, the doesn't address the other
5 issues, the non-friction issues?

6 A. This is right. No, it
7 doesn't.

8 272 Q. Okay. And had anything
9 in the intervening two years changed that your
10 recommendations in the Golder report would no
11 longer apply or be sufficient to address the
12 surface issues that Mr. Moore was concerned with?

13 A. No. I think, you know,
14 the recommendation that was in our report would
15 address -- 2016. It's possible that by 2016 there
16 could be some very small localized potholes, very
17 small, that would require more than crack filling,
18 but very small. I don't recall anything.

19 So, I think our 2014
20 recommendation would basically be very applicable
21 to that condition.

22 273 Q. And did you follow up
23 with Mr. Moore after his e-mail on March 15, 2016,
24 when he said he was not interested in the
25 skidabrading?

1 A. No. I don't recall. It
2 was clear. He responded not interested. This is
3 it.

4 274 Q. And, sorry, is that why
5 you did not follow up, because you took this as,
6 what, a final answer from him?

7 A. Yes.

8 275 Q. But you also didn't say,
9 by the way, we could address your concerns by the
10 measures that we proposed in the Golder report?

11 A. Oh, yeah. I think -- so,
12 he was very familiar with the report. He knew
13 what it was and he mentioned cracks and bumps, et
14 cetera, so he knew that what our recommendation
15 would address it, our recommendation, but shot
16 blasting would not, so I think he was very aware
17 of this thing. But he said -- because the
18 blasting and skidabrading would be for only a
19 narrow piece, only friction.

20 276 Q. Only friction?

21 A. Only friction. So, he
22 said, no, I'm not interested, so no, I didn't
23 follow. I just accepted that he was not
24 interested.

25 277 Q. All right. Now, I had

1 mentioned that there were a couple of notes of
2 yours showing Mr. Leonard Taylor's name in May.

3 So, if we could go to
4 image 126 and 399.

5 On May 13, you have a note,
6 May 13, 2016, you have a note that says:

7 "15) Hamilton-Leonard
8 Taylor."

9 And then you have a numbered
10 note also in the same notebook for the day:

11 "32) call Gary
12 Moore-pave. perf."

13 Do you have any recollection
14 what these notes were about?

15 A. I see, like, from the
16 numbers that I was probably preparing, you know, a
17 list, what I would have to do, and one of them
18 was, you know, talk to Leonard Taylor and then
19 maybe number 12, no, 15, number 32, Gary Moore,
20 pavement performance. So, I would probably say I
21 prepared, you know, a list, just, you know, make
22 sure that it didn't escape my attention, that I
23 would have to address this and, you know, talk to
24 Leonard Taylor and talk to Gary Moore about
25 pavement performance.

1 278 Q. But what did you have to
2 talk to Mr. Taylor about on this now with
3 Mr. Moore having, as you said, he said, well, no?
4 What was left to talk about at that point?

5 A. Leonard Taylor didn't
6 know about, like, shot blasting or skidabrading,
7 so that would not be the subject. The subject was
8 still, you know, this correlation. I think
9 correlation between grip tester and locked-wheel
10 and, you know, this, you know, standards in Canada
11 and the U.S. just to, you know, probably, you
12 know, exchanging opinion, opinions, between him
13 and me, you know, what would be his final stand on
14 this.

15 279 Q. If we could go to
16 image 127, the next page, and paragraph 402,
17 sorry, 401.

18 On May 24, you made a note,
19 2016, stating "meeting in Hamilton." Then on
20 May 26, 2016, your note is, "Hamilton-Leonard
21 Taylor." Again, do you have any recollection if
22 you spoke with or met with Mr. Taylor on that day?

23 A. I definitely didn't meet
24 with him. I think it was probably telephone
25 conversation. And as far as I recall, on the same

1 day, where I have a note Hamilton, and that
2 probably I passed this thing to Gary and, for me,
3 the subject was Mr. Leonard Taylor was close.

4 280 Q. Sorry, it's not the same
5 day. It's just May 24 it says meeting in
6 Hamilton. May 26 is the note with Mr. Taylor. I
7 just want to make sure that you're clear there.

8 A. Maybe I -- I know that
9 definitely after this conversation with Leonard
10 Taylor, I had a note Hamilton and it was probably
11 the subject was closed.

12 281 Q. Well, the next one, on
13 August 2, if you look at paragraph 402, you have a
14 note, Hamilton, but that's more than three months
15 later. Sorry, not three months. Two and a half
16 month later. And there's no indication of what
17 that's about, so are you suggesting that there's a
18 relationship between your note on May 26 and the
19 note on August 2?

20 A. No, I don't think so. I
21 think, as far as I recall, after my note,
22 Hamilton, Leonard Taylor, on the same day I had a
23 note Hamilton and that would be likely when I
24 passed the final observation to Hamilton. The
25 subject was Leonard Taylor. In my opinion, it was

1 closed.

2 282 Q. Okay. Hold on. I can
3 tell you that --

4 MR. LEDERMAN: Sorry to
5 interrupt. I'm just having some difficulty with
6 some of the evidence as to what this witness is
7 recalling is based on recollection or what is
8 speculation. I've been following the evidence all
9 morning to that effect and I've had some
10 difficulty with the degree to which Dr. Uzarowski
11 is recalling events as opposed to speculating as
12 to what may or may not or probably occurred.

13 And so, I'm just raising it,
14 Commissioner, as to whether or not perhaps as part
15 of the questioning of the witness, greater clarity
16 could be obtained as to whether this is something
17 that he has an independent recollection of or
18 whether or not he is speculating as to whether
19 something occurred or not.

20 JUSTICE WILTON-SIEGEL: Okay.
21 Mr. Registrar, could you take down the document on
22 the screen, please, so that I can see Mr. Lederman
23 and respond.

24 I understand your problem.
25 Again, I don't see this as a systemic issue. I

1 think you go case by case or instance by instance.
2 I've been following this fairly closely and noting
3 whether or not Dr. Uzarowski is able to recall on
4 the basis of a note something more specific or is
5 simply indicating what he thinks had happened. I
6 think we had a lot of that from witnesses for the
7 City as well. It's a long time ago in a lot of
8 cases and so we have to work with it.

9 So, I'm not sure if, in your
10 view, something turns specifically on a particular
11 answer to a particular question. I have no
12 problem with your raising it, but I think we just
13 have to be pragmatic and understanding. And, as
14 much as possible, Mr. Lewis should be putting up
15 the actual note before Dr. Uzarowski answers the
16 question rather than afterwards, so I'll ask
17 Mr. Lewis in connection with this particular
18 matter to put the note up on the screen that we
19 have, the notes that we have, and Dr. Uzarowski
20 can comment on whether or not he thinks any of
21 these notes are somehow misplaced or out of
22 sequence.

23 MR. LEDERMAN: That's fine.

24 Thank you.

25 BY MR. LEWIS:

1 283 Q. I can tell you,
2 Dr. Uzarowski, that we do not have another note on
3 May 26 referring to the City. We simply have
4 yours on May 26 referring to Hamilton-Leonard
5 Taylor. There's the prior one on May 24 referring
6 to meeting in Hamilton, but not on that day. The
7 next one, as I had mentioned, was on August 2,
8 2016.

9 So, with that, what I thought
10 you were saying was that you may have referred
11 to -- sorry, that you may have passed on some
12 information to Mr. Moore following your
13 discussion, if that's what it was, on May 24, 2016
14 with Mr. Taylor. Is that what you were saying?

15 A. Yes. Yes, it is.

16 284 Q. Do you have a
17 recollection of having done so and, if so, what
18 did you pass on?

19 A. I don't have detailed
20 recollection. I think it happened and I don't
21 have, you know, like, detailed, because this was
22 basically -- you know, it would be like almost a
23 replication of my previous observation about
24 correlation or, let's say, lack of good
25 correlation between the two.

1 285 Q. Okay. Can we go to
2 overview document 7, image 108.

3 And this is a slightly
4 different topic but it's within the same time
5 frame, in the first half of 2016. And you recall
6 when you testified in April you referenced
7 recalling some communications with Becca Lane of
8 the MTO -- at the time you were going from
9 memory -- in 2015 and 2016.

10 And so, indeed, if we call up
11 339 and 340, 339, you'll see that on January 22,
12 2016, Ms. Lane e-mailed you under the subject line
13 "Red Hill Valley Parkway" and she wrote:

14 "I received a strange
15 media request about
16 performance of the Red
17 Hill Valley Parkway. Do
18 you keep in touch with
19 Hamilton on that project?
20 Are you aware of any
21 performance issues?
22 Perhaps there is an
23 asphalt cement cracking
24 issue. I'm in the dark
25 on this one."

1 So, first of all, the middle
2 paragraph, the profile surveys are done, is that
3 what we were just talking about, about the
4 inertial profiler surveys that you were doing for
5 Mr. Moore?

6 A. Yes, so I'm talking about
7 the results of the inertial profiler testing.
8 Yes.

9 288 Q. Okay. And there is a
10 couple of responses from you to Ms. Lane on
11 January 25, but I think we need to go to the
12 actual documents. And they're not in the OD, so
13 if we could pull up two of them, the first is
14 MT09526 and the other is MT09528.

15 And in 9526, which is the one
16 on the left, you'll see that it originates on the
17 bottom with Ms. Lane's e-mail to you. And then
18 you respond at 11:54 a.m., it's the middle one:

19 "Hi Becca. Thank you for
20 the e-mail. I will talk
21 to the City. There are
22 short dips and surface
23 cracking. It's an
24 interesting question
25 whether the cracking is

1 related to asphalt
2 cement. RHVP was paved
3 in 2007 and the asphalt
4 cement came from
5 Bitumar."

6 And then she responds at 12:04
7 p.m.:

8 "I don't know what the
9 media are fishing for,
10 but certainly MTO is not
11 aware of any issues."

12 And then we can take that down
13 because there are sort of two diverging chains.

14 In the other one, you respond
15 at 11:54. There's the same one, the bottom e-mail
16 that we see in the other chain, but then Ms. Lane
17 replies:

18 "Do you have Gary Moore's
19 phone number? I thought
20 I should give him a
21 call."

22 And then you reply at the top
23 and give her Gary Moore's phone number and say:

24 "I've already passed your
25 e-mail to Gary and will

1 call him after lunch."

2 Do you recall if you had any
3 further communications with Mr. Moore about this
4 media request?

5 A. No, I don't think so. I
6 think it's only what's in the e-mail, because the
7 subject was different. The subject was asphalt
8 cement cracking. No, I don't recall.

9 289 Q. Okay. Well, you
10 speculated as to whether -- about cracking being
11 related to -- I guess she lays that as a potential
12 issue, perhaps there is an asphalt cement cracking
13 issue, and you say it's an interesting question,
14 but did you actually know that that's what it was
15 related to?

16 A. At that time, Ms. Becca
17 Lane, (indiscernible), myself and other people
18 were involved in -- that was organized by OHMPA,
19 pavement -- asphalt pavement quality group or
20 something. And they were evaluating the impact of
21 the addition of recycled engine oil on asphalt
22 pavement performance and premature cracking
23 because of this. So, that was that time. That
24 was the time that it was a very hot subject and
25 Ms. Lane was very heavily involved. So, that was

1 her understanding and that was my understanding,
2 that it was likely related to cracking.

3 290 Q. Did the media ever
4 contact you about the Red Hill in early 2016?

5 A. No, they -- me myself?

6 291 Q. Yeah.

7 A. No, they didn't.

8 292 Q. And did you ever come to
9 learn the source of this media request or the
10 information being sought?

11 A. No. No, I didn't ask
12 about it.

13 293 Q. Thanks. If we could make
14 those, I guess 9526, Commissioner, if we could
15 make that the next exhibit, 79, and then 9528,
16 MTO9528, I guess, would be 80.

17 THE REGISTRAR: Noted,
18 counsel. Thank you.

19 EXHIBIT NO. 79: E-mail
20 from Becca Lane to Dr.
21 Uzarowski dated January
22 25, 2016, MTO9526.

23 EXHIBIT NO. 80: E-mail
24 response from
25 Dr. Uzarowski to Becca

1 Lane on January 25, 2016,
2 MTO9528.

3 MR. LEWIS: Thank you. We're
4 coming near to lunch, but I have one very short
5 topic and then perhaps it would be a good time to
6 break, if that works for you, Commissioner?

7 JUSTICE WILTON-SIEGEL: Okay.

8 MR. LEWIS: It's quite a short
9 topic.

10 BY MR. LEWIS:

11 294 Q. If we could go to
12 overview document 7, images 119 and 120.

13 And in paragraphs 382 to 384,
14 these aren't e-mails that you're party to. These
15 are City e-mails. And it's indicating -- these
16 are on April 15, 2016 and they're indicating that
17 the City has internally decided that they are
18 going to rehabilitate the Red Hill Valley Parkway
19 and the Lincoln Alexander Parkway, including
20 improving skid resistance.

21 And did you have any knowledge
22 of these communications or this intent by the
23 City?

24 A. No, only during this
25 inquiry.

1 295 Q. But not at that time?

2 A. No. No, I didn't.

3 296 Q. Perhaps that would be a
4 good time to break, Commissioner.

5 JUSTICE WILTON-SIEGEL: Okay.

6 So, let's break, then, until ten past 2:00. We
7 stand adjourned until that time.

8 --- Luncheon recess taken at 12:51 p.m.

9 --- Upon resuming at 2:10 p.m.

10 MR. LEWIS: We're back. May I
11 proceed, Commissioner?

12 JUSTICE WILTON-SIEGEL: Yes,
13 please do so.

14 MR. LEWIS: Thank you.

15 BY MR. LEWIS:

16 297 Q. I would like to jump
17 ahead into 2017 now, Dr. Uzarowski. And if we
18 could go to overview document 7, image 188. And
19 this is a July 15 -- paragraph 554 -- 2017 article
20 in the Hamilton Spectator titled "Highway Traffic
21 Tragedies: Why are there so many crashes on the
22 Red Hill?" and it contains a number of statements
23 attributed to Mr. Moore, which are excerpted here.

24 If you could expand the
25 article. Thank you.

1 And the first three paragraphs
2 of this excerpt refer to friction testing on the
3 Red Hill Valley Parkway in 2015. Are you aware of
4 any friction testing conducted by or for the City
5 in 2015?

6 A. No, I'm not.

7 298 Q. And I should have asked
8 this off the top. Were you aware of this article
9 at the time it was published?

10 A. No. No, I wasn't.

11 299 Q. Okay. Do you recall --
12 do you know when you became aware of it?

13 A. Is this the one that
14 talks about fatalities? Because then I received a
15 link from Mr. Hein in January 2018. Then I read
16 that report, but I don't know whether this is --

17 300 Q. That's a different
18 article.

19 A. So, probably maybe
20 somewhere in 2018, but not -- like as a part of
21 this inquiry, but --

22 301 Q. Certainly not around this
23 time, is what you're saying?

24 A. No, no.

25 302 Q. Okay. And then the

1 article also refers in the subsequent paragraphs
2 to repaving of the Red Hill Valley Parkway. By
3 July 15, 2017, were you aware of a decision in the
4 City to repave?

5 A. Sorry, by what, you said?

6 303 Q. July 15, 2017.

7 A. No. No, I was not.

8 304 Q. Okay. And then if we
9 could go to a note of yours. This is at RHV933,
10 image 783. Maybe go to the next one. There we
11 go, August 15. Thank you.

12 This note of yours on
13 August 15, 2017 refers to:

14 "RHVP - northbound lanes
15 - crack - 2km - v.
16 noticeable, centre of the
17 shoulder lane. Any crack
18 sealing. Crack sealing -
19 1/2 inch."

20 Do you recall what this is
21 about?

22 A. You know, this is -- I
23 understand that this is my observations from
24 driving on the Red Hill Valley Parkway northbound
25 lane, that I notice very noticeable crack and no

1 crack sealing. So, the crack was about half an
2 inch, so that was my observations, my observation
3 from driving on the Red Hill Valley Parkway.

4 305 Q. Okay. It doesn't reflect
5 a meeting or a phone call or anything like that;
6 it's just your personal observations?

7 A. That is my observation.
8 I don't recall whether I had a meeting, no.

9 306 Q. All right. Were you
10 reviewing it for a particular project at the time
11 relating to the Red Hill Valley Parkway or did you
12 just happen to be on it?

13 A. You know, my opinion, you
14 know, I happened to be on it and I was, you know,
15 concerned with the presence of such a big crack,
16 particular that it is a perpetual pavement, so,
17 you know, they should, you know, City should do
18 something to mitigate the crack, apply some
19 maintenance. So, yeah, I was concerned about the
20 condition and that I observed such a crack.

21 307 Q. Okay. And if we could go
22 to overview document 7, images 192 and 193,
23 please.

24 And this reflects, in
25 paragraph 570, 571 and 572, e-mails and an

1 appointment for a meeting with the City that you
2 ultimately had on August 31, 2017. We can see
3 that in paragraph 570 that an invitation for the
4 meeting on August 31 under the subject line
5 "Review of Asphalt Specifications with Ludomir"
6 was sent to Mr. Moore, Ms. Jacob, Mr. Oddi,
7 Mr. Becke and to you. And then Claudio Leon, in
8 the e-mail referred to below that, just speaks of
9 the meeting time and some other items.

10 And then in 571, there is an
11 e-mail from you to Trevor Moore at Miller Paving
12 and you're referring to having a major meeting
13 with the City of Hamilton on August 31 and you
14 indicate -- maybe we could just call it out so we
15 don't have to strain our eyes. Just take a second
16 to read that:

17 "Gary is organizing the
18 meeting on August 31 and
19 although it is about a
20 different subject, I
21 would have a chance to
22 talk to him about it. I
23 would have to know if you
24 already discussed it with
25 the City if you still

1 want me to go ahead and
2 do it."

3 What are you referring to
4 there?

5 A. If it is with Miller
6 Paving, that would be microsurfacing.

7 308 Q. Okay.

8 A. Yeah, Miller, that would
9 be on the microsurfacing.

10 309 Q. Okay. All right. And
11 so, the meeting itself -- you can take that
12 down -- Mr. Cifelli of Miller Paving responds in
13 572. And can you pull up 194 as well so we have
14 193 and 194. He does mention surface treatment
15 and microsurfacing saying that:

16 "On March 21, 2016, I
17 presented our Lunch &
18 Learn in Hamilton on the
19 following."

20 And then he gives a list of a
21 number of items that includes surface treatment
22 and microsurfacing. And then May 20, 2016:

23 "Trevor and Tony at
24 McAsphalt followed up
25 with a presentation on

1 hot mix asphalt
2 (distresses and best
3 practices) and asphalt
4 cements."

5 Take that down, please. And
6 then you have some further discussions. Until
7 575, Mr. Moore says to you -- sorry, this is
8 Mr. Trevor Moore, not Gary Moore, writing:

9 "We have not met or had
10 any discussions with
11 Hamilton since our
12 discussion on fibre
13 micro. If you still need
14 to talk before your
15 discussions with them,
16 you can call my office at
17 the number below or
18 cell."

19 Then he e-mails you again on
20 August 25, giving you a price for single fibre
21 reinforcement microsurfacing. Okay. So, in that
22 lead-up, there's a PowerPoint presentation in
23 paragraph 577 that you presented on August 31. Do
24 you recall that presentation? We're going to pull
25 it up. And do you recall the event?

1 A. Yes, I do recall the
2 presentation. Yes.

3 310 Q. Okay. So, if we could
4 pull up the actual presentation. It's GOL3921.
5 That's not it. Sorry. It is RHV703. There we
6 go.

7 So, what's the primary purpose
8 of this presentation? 2017 MSCR Asphalt
9 Specification, what's MSCR?

10 A. The City, you know,
11 wanted to implement a new asphalt cement
12 specification. MSCR means multiple stress creep
13 recovery, so that was a new way of grading the
14 quality of asphalt cement. So, the City asked me
15 and I work on this thing and I prepare the change
16 or changed, you know, recommended the changes in
17 the specification that would be based on this
18 MSCR, and this presentation was for their
19 technical staff to show them what was the new
20 approach to asphalt cement specification, like
21 technical aspects of the changes in the
22 specification.

23 311 Q. I got everything from the
24 acronym MSCR. Multiple stress, and I got the
25 recovery. What is the C?

1 A. Creep, creep.

2 312 Q. Crib?

3 A. Creep, C-R-E-E-P.

4 313 Q. Creep, got it. Okay.

5 A. Yeah.

6 314 Q. Multiple stress creep --

7 A. Recovery, yes.

8 315 Q. Okay. Thank you. So,

9 that's the main thrust of it. And at whose
10 request were you presenting this? I think in that
11 earlier e-mail you mentioned this was Mr. Moore's
12 request. Is that right?

13 A. This was Mr. Moore's
14 request because he was interested in -- this was
15 like a step ahead of what was currently being used
16 in Ontario, a step ahead. So, he requested that
17 the direct request came from Claudio Leon, who was
18 in charge of specifications in the City of
19 Hamilton, and that was to the large technical
20 audience. But that was -- this was from the City
21 only, I believe.

22 316 Q. Yeah. So, the
23 appointment, as indicated, was Claudio Leon who
24 sent it, but then Mr. Gary Moore, Susan Jacob,
25 Marco Oddi, Michael Becke and you. Were those

1 individuals, other than you, at the presentation?

2 A. I think, yes, at least
3 these people. It's possible there were more
4 people because that was the new, totally new,
5 approach to asphalt specification, but at least
6 the people listed in the invite, they were
7 present.

8 317 Q. All right. There may
9 have been others. Do you have any specific
10 recollection of others who were there?

11 A. I had so many
12 presentations. No --

13 318 Q. I don't you want you to
14 guess.

15 A. No, I don't.

16 319 Q. Okay. And then if we
17 could go to the image 30, which is the second last
18 slide, it refers to other subjects and references
19 fibre reinforced microsurfacing and dips on RHVP.
20 And as well, if you could, while keeping that up,
21 Registrar, if we could go to RHV -- actually, no,
22 we don't need to. Paragraph 578, my apologies.
23 It's at OD 7, image 194. Sorry, if we could keep
24 the presentation up, too, RHV703. Both, yes.
25 Okay. So, you see in

1 paragraph 578 at the bottom it starts off with
2 your note. It refers to Hamilton, 6,500 KM, 5
3 billion. If you go to the next image, 195, while
4 keeping the presentation up and then expand the
5 note, the rest of the note, there. Okay.

6 So, this is a note from the
7 31st and does the note relate to the meeting or
8 your presentation at all?

9 A. Yes, it does.

10 320 Q. Okay. And in what
11 respect? And if you could describe -- I'll back
12 up. On that one -- the balance of your
13 presentation, we skipped over it, the first 29
14 pages, deal with the new specification that you're
15 talking about, but then you have the other
16 subjects listed on this slide.

17 What is it that you were
18 talking about there and did you discuss it at the
19 meeting?

20 A. So, like, you know, maybe
21 briefly. The purpose was to introduce this new
22 specification as a way of improving the pavement
23 performance in Hamilton. So, at the very
24 beginning -- I don't know if you want me to go
25 this way. So, at the very beginning, Mr. Moore

1 introduced, made the introduction, so he said,
2 this is our network, this is the value of the
3 network, we would require \$200 million a year for
4 maintaining. We only have \$30 million, so we have
5 to do -- this is, you know, we have to improve our
6 technology to improve the condition of the
7 pavement. And we, you know, talk about subjects
8 like, you know, the necessity of trial batch and
9 other aspect, surface, you know, like at least
10 asset management, using mastic.

11 Miller in Hamilton, I wrote
12 because I believed at that time Mr. Trevor Moore
13 came to -- I think when we had this meeting, he
14 probably met with Rick Andoga, because I know I
15 arranged this thing and this is the probably day
16 with he met with Rick.

17 And then subject, skid
18 resistance, so --

19 321 Q. What's the skid
20 resistance in reference to?

21 A. So, skid resistance, you
22 know, skid resistance was I believe it must have
23 been Red Hill Valley Parkway and the
24 microsurfacing.

25 And then steel slag would be

1 linked to that subject of fibre reinforced
2 microsurfacing because I think that was -- that's,
3 I think, as far as I wanted Trevor to discuss with
4 Rick Andoga of applying fibre microsurfacing to
5 pavement. And then, you know, some other
6 information about, you know, this. MG50S, that
7 would be a new way of grading asphalt cement. If
8 they put 80 millimetres, it should be in two
9 lifts, not in one, and when the results are deemed
10 rejectable and, you know, what asphalt cement to
11 use. So, that would be my summary of that
12 meeting.

13 322 Q. So, were these notes
14 taken before or during the meeting?

15 MS. JENNIFER ROBERTS: Sorry,
16 may I suggest that we actually go to the notes
17 since how the notes are written down is relevant,
18 if not sometimes important, to what the witness
19 recalls of the events? I think it's Golder 7416,
20 image 44.

21 JUSTICE WILTON-SIEGEL: I
22 think that's fair. Thank you very much.

23 MS. JENNIFER ROBERTS: 7414,
24 sorry.

25 BY MR. LEWIS:

1 323 Q. It's the one on the
2 right, Registrar.

3 A. Yeah. So, definitely
4 these notes are not the preparation, but this is
5 during or -- I think it was during the meeting
6 because, you know, like, I didn't anticipate this
7 introduction from Gary, so that was during the
8 meeting.

9 324 Q. I see, okay. And so, the
10 reference, then, in the presentation to fibre
11 reinforced microsurfacing, that was what you had
12 been talking to Miller in those e-mails we looked
13 back earlier in August. That was part of what
14 your discussion was with Miller Paving. Correct?

15 A. Yeah. I think that was,
16 I think, innovative idea that, in my opinion,
17 would be very cost effective and, you know, proper
18 way of pavement steel slag -- let's say old steel
19 slag pavement rehabilitation method.

20 325 Q. Okay. But I think you
21 said, though, that the microsurfacing at one hand
22 was related to the Red Hill Valley Parkway, but
23 then you spoke about steel slag, which the Red
24 Hill Valley Parkway was not, so that's where I'm
25 confused here.

1 A. Well, these are two
2 different --

3 326 Q. Is microsurfacing
4 discussed in the context of the Red Hill Valley
5 Parkway or in something else?

6 A. No. You know, here what
7 I said fibre reinforced microsurface has nothing
8 to do with Red Hill Valley Parkway.

9 327 Q. Okay.

10 A. Whenever we have fibre,
11 that would be steel slag, old steel slag pavement,
12 because the new one was good. Old one. So, no,
13 it would not be Red Hill Valley.

14 328 Q. Okay. Did you discuss
15 microsurfacing in relation to the Red Hill Valley
16 Parkway?

17 A. Oh, I discussed this
18 thing before with Gary Moore, applying --

19 329 Q. I know you did before.
20 I'm asking about at this meeting.

21 A. I think under item skid
22 resistance that we -- you know, if it's in my
23 notes, we must have talked about skid resistance
24 and that would be on the Red Hill Valley Parkway,
25 so it would be skid resistance, you know, what we

1 observed and the way of improving would be
2 microsurfacing or shot blasting, but I don't have
3 further notes. But there was a discussion about
4 skid resistance on the Red Hill Valley Parkway,
5 because that would have to be Red Hill Valley
6 Parkway.

7 330 Q. Okay. Now, if you were
8 taking those notes during the meeting, as you
9 described, does that mean that you raised it or
10 that someone else raised it?

11 A. I would say that that was
12 the subject of conversation between them and
13 myself. Who raised, I don't know, but, you know,
14 it was a subject of conversation between those
15 people and myself.

16 331 Q. And do you recall
17 anything else about that conversation, then, as
18 you've already described it respecting
19 specifically skid resistance on the Red Hill
20 Valley Parkway and microsurfacing or any other
21 remediation method?

22 A. So, you know, because I
23 had so many meetings, so it's hard to put this
24 thing in the right time. But, you know, I think
25 that it would be, you know, relatively low skid

1 resistance and what to do on the Red Hill Valley
2 Parkway. So, this would be the only thing that I
3 think was discussed.

4 332 Q. Okay. Do you recall was
5 there any resolution arising out of that, any
6 further work to be done? Do you recall anything
7 else about that issue?

8 A. No, I don't -- you know,
9 like, I don't recall any resolution, but I
10 think -- I would say probably, you know, that was,
11 you know, I probably raised this just to make sure
12 that it didn't disappear from the screen, so that
13 was a subject to -- how can I say? -- make sure it
14 doesn't disappear. Keep it, not fresh because it
15 was old, but, you know, it doesn't disappear, so
16 it is there.

17 333 Q. All right. You can take
18 those down, Registrar, please.

19 And before we leave that
20 topic, did anyone in the meeting raise with you at
21 that City was planning to repave the Red Hill?

22 A. That was 2017?

23 334 Q. August 31, 2017.

24 A. You know, I don't recall
25 exactly when I found out that they wanted to

1 resurface the Red Hill Valley Parkway, but it must
2 have been roughly around that time because it was
3 2017, so in November 2017, there was the CTAA
4 conference when we talk about hot in-place
5 recycling, so it must have been somewhere around
6 that time that, you know, I found out that they
7 wanted to do resurfacing, yes. Resurfacing.

8 335 Q. So, we might be able to
9 place it a little closer in time. The CTAA
10 conference that you're talking about, as I
11 understand it, that was held in Halifax from
12 November 12 to 15, 2017. Does that sound right?

13 A. Yes. Yes, it is.

14 336 Q. Okay. And so, before
15 that, if we could go to HAM63122.

16 And this is an e-mail exchange
17 internal to the City with the subject line "Red
18 Hill Valley Parkway (CPMS 10986) - Rehabilitation
19 Project." And in the originating e-mail at the
20 bottom from Sarath Vala, on October 12, 2017, to a
21 number of individuals, it refers in the second
22 paragraph -- after the first paragraph, it talks
23 about the limits for the Red Hill Valley Parkway
24 rehabilitation, but then it says:

25 "In a meeting Tuesday

1 morning with Ludomir
2 Uzarowski (a pavement
3 specialist with Golder
4 Associates who was
5 closely involved in the
6 LINC and the Red Hill
7 from project
8 construction), he
9 recommended that the
10 shoulders also be
11 resurfaced along with the
12 mainlines. There was a
13 dip analysis/pavement
14 smoothness survey using
15 an inertial profiler
16 completed along the Red
17 Hill and to identify
18 locations with dips/bumps
19 that need to be addressed
20 during rehabilitation by
21 (padding the surface
22 after the initial milling
23 and) additional depth
24 milling. The general
25 observation is that most

1 of the dips are due to
2 the presence of utilities
3 under the pavement or in
4 the transition slab areas
5 of structures."

6 Do you recall that meeting
7 Tuesday morning? That would have been October 10.
8 Do you recall the meeting that is referred to by
9 Sarath Vala?

10 A. I don't have
11 recollection, but it's obvious I must have
12 attended that meeting. And it looks like that
13 comment, it looks like mine about the dips and the
14 shoulders.

15 337 Q. And so, just in trying to
16 place when your knowledge was about becoming aware
17 of the City planning to resurface, if you are
18 recommending that the shoulders be resurfaced also
19 along with the mainlines, at that point you must
20 have known. Is that fair?

21 A. Yeah. So, I think
22 roughly at that time I must have been informed
23 that they were planning resurfacing, but I wanted
24 to -- I recommended that on top of resurfacing,
25 also include the shoulders. So, yeah, I must have

1 been informed about this roughly about that time.

2 338 Q. And if we could make that
3 an exhibit. That is not an overview document
4 incorporated e-mail, Commissioner. I believe that
5 would be 81.

6 JUSTICE WILTON-SIEGEL: 81.

7 THE REGISTRAR: Noted,
8 counsel. Thank you.

9 EXHIBIT NO. 81: E-mail
10 exchange, subject line
11 "Red Hill Valley Parkway
12 (CPMS 10986) -
13 Rehabilitation Project,"
14 HAM63122.

15 BY MR. LEWIS:

16 339 Q. All right. Do you recall
17 who you found out from that the resurfacing was
18 going to be taking place?

19 A. So, I understand there
20 was a meeting and somebody must have informed
21 about this plan of resurfacing. I don't recall
22 personally, but I understand that there was a team
23 of people that --

24 MS. JENNIFER ROBERTS:

25 (Inaudible).

1 THE WITNESS: Who, personally,
2 I don't recall.

3 MS. JENNIFER ROBERTS:
4 Commissioner, there is a note on October 10, 7414.
5 It's image 50.

6 JUSTICE WILTON-SIEGEL:
7 Mr. Lewis, are you --

8 MR. LEWIS: Yes.

9 JUSTICE WILTON-SIEGEL: --
10 taking us there?

11 MR. LEWIS: I thought the
12 registrar was. There we go.

13 JUSTICE WILTON-SIEGEL: Yes.

14 BY MR. LEWIS:

15 340 Q. All right. So, there's
16 October 10, 2017. I believe that says Hamilton,
17 Mike Becke. Is that local roads, 58-28?

18 A. Yes, it's there, but
19 local roads had nothing to do with this. So, it
20 looks like, you know, at least I talked to Mike
21 Becke on October 10 and Mike was the PM, project
22 manager, on resurfacing. So, it is likely that
23 I -- but it would have to be -- because the e-mail
24 suggested there was a meeting. But it's possible
25 I learned this from Mike, Mike Becke.

1 341 Q. Okay. Possible but you
2 don't recall specifically?

3 A. No. I think it is
4 likely, but I don't recall specifically.

5 342 Q. Okay. Thank you. You
6 can take that down. Thank you, Ms. Roberts.

7 And I note that on the
8 October 12 e-mail, Mr. Becke is one of the people
9 that is on that e-mail chain that I was referring
10 you to.

11 Okay. So, if we could take
12 that down, Registrar, and if we could go to
13 overview document 8, images 15 and 16.

14 In paragraph 33, it indicates
15 that on November 10, 2017, you e-mailed Mr. Moore
16 about hot in-place recycling, informing him of a
17 discussion you had with Patrick Wiley, who is the
18 president of Ecopave Asphalt Recycling Inc.

19 And if you could call that
20 e-mail up, Registrar.

21 And while he's doing that,
22 this is a couple of days before the CTAA
23 conference which you already mentioned, which
24 began on the 12th of November, and you had
25 indicated that it was around the time of the CTAA

1 conference that you became aware of the City
2 considering hot in-place recycling. Is that
3 right?

4 A. Yes, yes. So, it was
5 mutual interest.

6 343 Q. Sorry, what was mutual
7 interest?

8 A. You know, the City was
9 interested in hot in-place recycling and Ecopave
10 was interested in getting into hot in-place
11 recycling in Ontario, particularly municipal hot
12 in-place recycling --

13 344 Q. Okay. All right. And
14 you indicate in the bottom of your e-mail:

15 "See you in Halifax. I'm
16 going there Monday early
17 morning."

18 So, that's the CTAA conference
19 you were talking about?

20 A. Yes. Yes, it is.

21 345 Q. And Mr. Wiley was going
22 to be there as well. Is that right?

23 A. Yes.

24 346 Q. Okay. So, it's just at
25 some point prior to this e-mail was when you

1 became aware the City was considering the use of
2 hot in-place recycling?

3 A. Oh, hot in-place
4 recycling had been, you know, a subject for -- the
5 City was very interested. They had a very --

6 347 Q. Sorry, that's not what I
7 asked. Was it at some point shortly before this
8 e-mail that you became aware of the City's
9 intention or that the City was considering the use
10 of hot in-place recycling to resurface the Red
11 Hill Valley Parkway?

12 A. No, it wasn't before. It
13 was the result of that meeting or after that
14 meeting. I don't think it was before. Before
15 they wanted to resurface and the meeting with Pat
16 was just to bring this technology to
17 municipalities in Ontario, and I believe as a
18 result of this, then Gary got an idea of doing hot
19 in-place recycling on the Red Hill Valley Parkway.

20 348 Q. I see. So, it's the
21 other way around. It was the opposite of how I
22 put it, that the idea came from your setting up
23 this meeting with Mr. Wiley at the CTAA
24 conference. Is that right?

25 A. Yes. I knew that Pat

1 Wiley was very interested in this, so I knew he
2 would be there because I was presenting a paper.
3 I knew about this and I let Gary Moore know, to
4 let him know about this so they could meet and we
5 could meet and discuss about -- but at that time I
6 think it wasn't -- at the time of this e-mail, it
7 wasn't about hot in-place recycling on the Red
8 Hill Valley Parkway.

9 349 Q. I see. Okay. Thank you.
10 And then if you could take that down and go to
11 images, I guess, 17, so keep up 16 and go to 17.

12 And paragraph 37, on
13 November 21, so following the CTAA conference or a
14 little bit after that, Mr. Moore e-mailed you
15 under the subject "Red Hill testing for hot
16 in-place" and he wrote:

17 "Ludomir, I was expecting
18 to see a proposal and
19 timeline for cores, BPT
20 and PSV testing for the
21 Red Hill. This has to
22 get done before snowfall
23 and freeze up."

24 And then there's a note of
25 yours referred to there in paragraph 38 that just

1 simply says, on the same day, "Gary Moore."

2 So, do you recall what
3 prompted this and what was going on?

4 A. Yeah. So, that was very
5 late in the year, so, you know, PSV was obvious.
6 PSV was entirely for feasibility of hot in-place
7 recycling. Polished stone value, as I mentioned
8 before, actually what we had there. And then
9 British pendulum was, you know, friction testing
10 and I think we also talk about sand patch and
11 macrotexture, so that was -- I know that
12 definitely he was very interested in, you know,
13 testing PSV and seeing if hot in-place was
14 feasible. And other two tests was just for
15 information.

16 350 Q. The PSV of this was to
17 see if hot in-place was feasible and the other two
18 tests were just for information. Sorry, the other
19 two tests being what?

20 A. BPT is British pendulum
21 testing. That is friction testing. And I think
22 we also talk about macrotexture testing using sand
23 patch method, but they had nothing to do with hot
24 in-place recycling. No, nothing.

25 351 Q. All right. So, just to

1 be clear, whose idea was it to do that testing?

2 A. The testing, this is what

3 Mr. Gary Moore requested.

4 352 Q. But did you suggest it to
5 him or did he independently suggest it of you?

6 A. I think he request it.

7 353 Q. Okay. All of the
8 different types of testing, PSV, British pendulum,
9 sand patch?

10 A. No. PSV was -- no. That
11 was the only way to determine what the quality of
12 aggregate was, so that was the only way. Now,
13 British pendulum testing, you know, this is a
14 friction testing, so there were -- you know, there
15 are a few different methods, like including
16 locked-wheel and grip tester or BPT, so these were
17 the three that I had in mind. And sand patch is
18 the most commonly used method of macrotexture
19 testing, yes.

20 354 Q. I'm aware of what they
21 are. I'm asking if he, Mr. Moore, requested all
22 those tests?

23 A. I think, you know, he
24 did. He wanted macrotexture because he had some
25 concerns that maybe the asphalt was filled with

1 rubber, that I don't -- I've never seen anything
2 like that, but he wanted to do this, check this.
3 And also friction. You know, so, friction, just
4 can we test friction? And the winter was coming
5 and the winter and the resurfacing was coming at
6 that time. But he ask if we can test friction.

7 355 Q. Okay. And why testing
8 friction at that point? If resurfacing is planned
9 and hot in-place recycling being contemplated, do
10 you know why he was asking you to do that?

11 A. I think obviously that's
12 a good question why would you do this thing before
13 resurfacing because resurfacing was coming soon,
14 but probably he wanted to know what it was before
15 it was resurfaced --

16 356 Q. Are you speculating or
17 did he say that?

18 A. No, I'm speculating. He
19 just ask me can we do friction testing and quickly
20 because the winter is coming, so we would have to
21 do it very quickly.

22 357 Q. Okay. I just want to be
23 very clear. You're saying that this is
24 Mr. Moore's, it was at his instance to conduct
25 this testing, not yours. Correct?

1 A. The friction testing?

2 358 Q. Yes.

3 A. Friction testing, yes, it
4 was his. Yes, it was -- yeah, friction was his --
5 PSV was likely mine. Macrotexture, I think was
6 likely mine in response to his concern about
7 rubber.

8 359 Q. Okay. So, then to talk
9 about the PSV testing for a moment and the
10 relationship to the hot in-place recycling, is
11 that because when you're recycling asphalt, part
12 of what you're recycling is the aggregate, and if
13 the aggregate has low PSV and low projected
14 frictional qualities, that that's going to be
15 reflected in the recycled pavement. Is that the
16 reason why you're looking at PSV in that
17 circumstance?

18 A. Yes. I wanted to know
19 what it was when recycled, because you recycle not
20 what's at the quarry but what's in the road.

21 360 Q. Right.

22 A. So, I knew that the
23 aggregate was on the DSM list, but that was the
24 aggregate at the quarry. But what was on the road
25 could be significantly -- could be different.

1 361 Q. Right. Because what's in
2 the quarry could be taken at a different time or
3 from a different place in the quarry than the
4 aggregate that's actually in the pavement. Is
5 that right?

6 A. It's possible but not
7 only, because I think if you -- if the
8 aggregate -- maybe it was 2017. 2017, so
9 aggregate was onsite for, you know, ten years.
10 Some degradation will take place and I did the
11 research when I was with John Emery or let's say
12 JEGEL, the company, did research on the damage of
13 asphalt mixes because of deicing chemical. So, I
14 knew that mix including the aggregate can
15 deteriorate while being in service. And I don't
16 know if you want --

17 362 Q. No, I got your point.
18 There's a reason that I postulated that if it's
19 from a different place in the quarry at a
20 different time, but also from being in service
21 from deicing chemicals, that can cause
22 deterioration of the aggregate during service.
23 Right?

24 A. It's not only the deicing
25 chemicals. It's also, you know, SMA is a stone

1 mix, so we have stone-on-stone reaction, so each
2 time a vehicle passes, the stone will touch stone
3 and it will abrade. Actually, I notice in 2000
4 when we did the testing that there was a little
5 bit more dust, so that dust comes from the
6 abrasion and also some metal dust, you know. I
7 don't know if the metal top extraction has some
8 impact on this because it was very strong solvent.
9 But overall, I didn't anticipate that that would
10 be the same aggregate on the road that was taken
11 from the quarry.

12 363 Q. Okay. Why was it decided
13 to conduct British pendulum rather than using a
14 grip tester as in 2013 or a locked-wheel trailer
15 as in 2007? And, as part of that, I should ask
16 you if the friction testing was Mr. Moore's idea,
17 his direction, did he direct you as to a
18 particular type of friction testing or just said
19 do friction testing?

20 A. No, he didn't direct me
21 to a particular type. He asked if we could do a
22 friction test. It was very late in the season
23 because it was towards the end of November, so,
24 you know, basically we had three options. Like,
25 you know, locked-wheel, that would be MTO and MTO

1 us that, but it does create an issue again with
2 correlation, does it not, if you have done prior
3 tests again and you've been through this whole
4 issue of how do you correlate friction tests and
5 now you're going to be doing British pendulum
6 testing? Is that something you considered?

7 A. No, I didn't see the
8 problem with correlation because, you know, we
9 used BPT in the past and also, you know, Hamilton
10 use it because there were certain values. So,
11 whatever is low in BPT, whether it's BPT or a grip
12 tester or whatever, if it's low, so friction
13 numbers are low and I knew roughly what numbers to
14 anticipate from British pendulum testing that
15 would reflect good friction, poor friction or
16 excellent friction, because I used this thing.
17 So, no, the correlation was not the subject, not a
18 concern for me.

19 366 Q. All right. So, if you go
20 to image 18 and keeping 17 up, paragraph 40 and 41
21 reflect that on November 22, 2017, Ms. Rizvi
22 e-mailed you a draft proposal for the RHVP testing
23 requested by Mr. Moore, which then is referred to
24 in the overview document as the 2017 Golder
25 Pavement Evaluation. And she sent the draft to

1 Dr. Henderson that same day.

2 And then the proposal
3 described the scope of work as we've set out
4 there, which includes the surface frictional
5 properties using the British pendulum tester,
6 pavement texture measurements using a volumetric
7 technique, which is the sand patch method. That's
8 what you described. Is that correct?

9 A. Yes, it is.

10 367 Q. And the coring of the
11 surface course layers. And then it refers to them
12 doing the polished stone value testing.

13 And the title of this, we
14 don't have it up there, is called "Evaluation of
15 Pavement Surface and Skid Resistance, Red Hill
16 Valley Parkway." And following this -- sorry, I
17 should back up.

18 Did you then review this
19 draft?

20 A. I remember I reviewed and
21 I made changes.

22 368 Q. Okay. And we'll get to
23 the changes, but do you recall -- did you think
24 that this described in any way inaccurately what
25 was going to be done?

1 A. No. I think when I did
2 the changes, the changes reflected what it was
3 supposed to be and in this initial version this is
4 what -- you know, that was Rabiah's understanding.
5 So, you know, I ask her, she prepare, she send it
6 to me for review and then I made the changes to
7 what it should be.

8 369 Q. Okay. And we'll look at
9 your changes in a few minutes. I want to -- first
10 on this one, am I correct that the focus here is
11 skid resistance and hot in-place recycling? Is
12 that the focus? A?

13 A. Yeah. It was pavement
14 evaluation that included these three aspects, yes.

15 370 Q. Okay. Now, if we could
16 go to GOL5923.

17 And these are e-mails. I
18 think it's four images, four pages of e-mails,
19 between you and Ms. Rizvi about the proposal.
20 Just give me one moment.

21 And if we could go to images 3
22 and 4. Thank you.

23 So, it starts at the bottom of
24 4 with Mr. Moore's e-mail asking for the proposal
25 for the timeframe for cores, BPT and PSV testing.

1 Then at the top of that image 4, it's an e-mail
2 from Ms. Rizvi to you on the 22nd at 1:06 p.m.

3 If you could expand that for
4 us, Registrar. Thank you.

5 And so then, Ms. Rizvi is
6 questioning testing for polished stone value for
7 aggregates that have been in place for a while and
8 have already been polished. She asked:

9 "Can we just not test the
10 aggregate from the source
11 quarry?"

12 She says she understands that
13 there would be variability even within one quarry:

14 "...but I think that
15 would give us more useful
16 information than testing
17 aggregates that have
18 already been polished."

19 And then she refers to while
20 PSV testing uses the British pendulum and we're
21 already going to be doing that, the British
22 pendulum, so those are the questions that she
23 raises.

24 Then if you could keep that up
25 but also pull up the next e-mail, Registrar, which

1 is at image 3, which is Dr. Uzarowski's response.

2 Yes. Same day.

3 So, you reply to her and
4 you're addressing her comments. And, as I
5 understand this, and it's along the lines of what
6 we were already discussing. In point 1 and 2
7 you're addressing her comments about doing the PSV
8 testing on the inservice aggregates as opposed to
9 from the quarry. Right?

10 A. Yes.

11 371 Q. And you make the point
12 that I suggested to you, which is the pavement is
13 ten years old and you don't know if you'll have
14 the same material or if the quarry still operates.
15 So, that's the issue about is it the same
16 aggregate. Right?

17 A. Yes. Yes. So, we know
18 the source but I'm interested what's actually on
19 the road, because I would recycle this. Yes.

20 372 Q. Right. And then you
21 indicate to address her concern about the
22 aggregates already been polished, you say in 2:
23 "When we get cores we
24 will extract the
25 aggregates. Some of the

1 particles will obviously
2 have the faces polished
3 but the majority will
4 not."

5 Do I understand what you're
6 saying there is most of them will not be polished
7 because they're in the asphalt? It's the faces
8 that are exposed to the traffic that may be
9 polished but most of them are not going to be. Is
10 that correct?

11 A. Yes, that's correct.

12 373 Q. And so, you're saying
13 that you are expecting the PSV results will still
14 be reliable. Is that correct?

15 A. Is your question related
16 to that e-mail?

17 374 Q. Well, you don't say that
18 there. I'm trying to get to your point. She's
19 questioning the utility of the PSV testing and
20 what you're saying -- I understand what you're
21 saying, Ms. Rizvi, but I think we're still going
22 to have accurate PSV results for these reasons.
23 Is that fair?

24 A. I understand her
25 question. That was a very good question, a very

1 good suggestion. However, my interest was
2 different. The quarry is different from the
3 material I have there. Yes, the polishing will
4 occur on the surface only, but on polishing there
5 were also some abrasion of the aggregate and, you
6 know, some change because of aggregates. But my
7 interest was what's on the road, so that's why I
8 insisted, you know, maybe not as consistent, but I
9 insisted on testing that particular material.

10 375 Q. Right. And that's
11 because if you're doing the hot in-place
12 recycling, you want to make sure that the recycled
13 aggregate has a good polished stone value. Right?

14 A. Yes. I know, I want to
15 make sure that, you know, if, you know, the
16 requirement is for 50, it should be 50. Yes.

17 376 Q. Right. Well, that's the
18 MTO requirement?

19 A. The MTO requirement, yes.

20 377 Q. And that's the thing.
21 PSV measures, if as I understand it correctly and
22 maybe I don't, the terminal polished state.
23 Right? Once the aggregate has been polished, what
24 is its terminal polished state. It's not
25 measuring the current state. It's what's

1 projecting into the future, that right? After
2 it's been polished?

3 A. This is the idea, but
4 actually, you know, it's important what is the
5 material that you test. Because when you get that
6 material from the stockpile at the quarry, it's
7 what you call virgin aggregate that was just
8 crushed. It has sharp edges. Everything is
9 perfect.

10 Now, if you have this
11 aggregate in the pavement, it polishes on the top,
12 it abrades, et cetera, and then it can also change
13 some, you know, chemical composition. It can have
14 some damage.

15 So, and on top of this, during
16 PSV testing of that recovered aggregate, you apply
17 again the same procedure, the same polishing
18 procedure, to the aggregate that has been already
19 deteriorated.

20 378 Q. Right. But here, you
21 say, if we look at paragraphs 3 and 4 in your
22 e-mail, you say:

23 "Gary wants to know what
24 he has onsite. He's
25 asked me about PSV. He

1 is considered the hot
2 in-place recycling there.
3 My first concern would be
4 to make sure the recycled
5 material is suitable from
6 PSV point of view."

7 Which is what we discussed.

8 And then you say:

9 "I am not too keen on HIP
10 there for three reasons.
11 If we use the same rock,
12 we will not improve
13 friction for a longer
14 period of time. I
15 anticipate low PSV."

16 That's the first thing. Why
17 did you anticipate low PSV?

18 A. Because in my opinion,
19 this PSV could only go down. It will not improve
20 because we also polish, it will abrade, so those
21 sharp edges that were originally there, in my
22 opinion, they are maybe not 100 percent gone, but
23 they will be compromised. So, this good
24 characteristics of the aggregate that you have,
25 they are already compromised. So, you know, I

1 anticipate, you know, PSV will go -- in my
2 opinion, it will go down. And, you know, plus
3 this, you know, I knew from my research when I was
4 with JEGEL that aggregate will deteriorate also
5 because of the icing chemical, so that was another
6 concern.

7 379 Q. Isn't with hot in-place
8 recycling, aren't you always going to have --
9 isn't it always the case you're doing new
10 pavement, you're taking old pavement and recycling
11 it into new pavement. Isn't that always an issue
12 with the aggregates, that they would be degraded?
13 How is that any different here?

14 A. Yeah. That's a very good
15 point. This is why, you know, doing hot in-place
16 recycling on major highway or high-speed,
17 high-volume, high-speed highway was, as I
18 expressed, a concern for me.

19 380 Q. Okay. And then if we
20 could go back to the overview document, images 18
21 and 19.

22 And, at paragraph 43, it
23 indicates that you sent Mr. Moore the draft
24 proposal, but it was the version that you revised
25 from Ms. Rizvi's original that we looked at. And

1 you indicate to Mr. Moore:

2 "Please find attached the
3 initial version of the
4 proposal for pavement
5 surface and aggregates
6 evaluation on the Red
7 Hill Valley Parkway in
8 Hamilton."

9 And then at the top of
10 image 19:

11 "We would like to do the
12 field testing ASP. I
13 will confirm the
14 timeframe tomorrow."

15 Then if you could expand 44
16 there, Registrar -- actually, could you do the
17 entire paragraph. Yeah, thank you.

18 So, this isn't in what you
19 sent to Mr. Moore, the track changes, but we did a
20 comparison of Ms. Rizvi's draft to yours and the
21 first paragraph of page 1 and then the second
22 paragraph of page 2. And the red strikeouts are
23 what, as we understand it, you deleted from
24 Ms. Rizvi's initial draft and that the blue
25 underlining is your additions. Is that correct?

1 A. Yes. Yeah. The red was,
2 yeah, what was -- what I suggested removing and
3 the blue is my suggestion, my changes.

4 381 Q. I just want to be clear,
5 Commissioner, that's not what Mr. Moore saw. It's
6 a clean copy that was sent to him, but this just
7 shows the changes as between the original and this
8 one.

9 So, the first thing I want to
10 ask about is the change to the title of the
11 proposal. Ms. Rizvi's draft had "Evaluation of
12 Pavement Surface Skid Resistance" and you changed
13 it to "Evaluation of Pavement Surface and
14 Aggregates." Why did you make that change?

15 A. Because that was -- this
16 is what he requested, yes. Pavement surface --

17 382 Q. Sorry, Mr. Moore
18 requested the title change? No.

19 A. No. This is what Gary
20 Moore request. You know, that was the purpose of
21 the project, of the assignment.

22 383 Q. Okay. Although the skid
23 resistance via the British pendulum test was
24 something that he asked -- you said that he had
25 asked to be done. Correct?

1 A. Yes.

2 384 Q. Okay.

3 A. But -- mm-hmm.

4 385 Q. Okay. As for the rest of
5 it, can you describe what was the purpose of your
6 revisions overall? You made a bunch of changes.
7 We can see what they are. What were you trying to
8 accomplish?

9 A. Because, you know, this
10 is what, you know -- that's what was my
11 understanding what he wanted. And, actually, you
12 know, this pavement was close to resurfacing, so,
13 you know, this was -- this is what was to be done.
14 So, that's what he wanted. He wanted to evaluate
15 the surface and evaluate pavement surface and he
16 wanted to be pavement rehabilitation just -- you
17 know, I understood it was in the couple of months,
18 in 2018. So, that's why I made the changes, yeah.

19 386 Q. Okay. Although skid
20 resistance was still something that was being
21 evaluated, is it fair to say you were
22 de-emphasizing that aspect of it in favour of
23 emphasizing the HIR side of things?

24 A. No, I think maybe not
25 de-emphasizing, but obviously the main purpose was

1 hot in-place recycling. But the other subject
2 were just for information, you know, so it was not
3 the main purpose, just for information, what it
4 was. Because, you know, in my opinion at that
5 time, very soon it would be changed. Whether it
6 was hot in-place recycling or resurfacing within,
7 you know, a few months or several months, this
8 would be changed.

9 387 Q. Apart from anything else,
10 that would deal with any frictional shortcomings.
11 Correct?

12 A. Yeah. That would be
13 changed, yeah. That would be addressed.

14 388 Q. All right. And do you
15 recall if you had any discussions with Mr. Moore
16 after sending him the draft proposal? You send
17 him the final signed proposal --

18 A. I think he also -- I
19 don't recall. I think he -- as far as I recall,
20 he just said go ahead as quickly as possible.

21 389 Q. And then, if you could
22 keep that up, Registrar, and keep up 19 and pull
23 up 20.

24 So, November 23, you had a
25 back and forth with Ms. Rizvi.

1 If you could pull that up from
2 paragraph 46, please, Registrar, the top of the
3 next page as well.

4 You're going back and forth
5 with her about the timeframe and getting it done.
6 And in the last communication from you, you state:

7 "I'm concerned with the
8 BPN testing. We have to
9 use water for it and will
10 not we able to use it if
11 the temperature drops
12 significantly below 0."

13 So, is that to do if the water
14 applied to conduct the British pendulum testing
15 freezes, then the test is going to be inaccurate?
16 Is that the issue?

17 A. Yes, that was my concern.
18 You know, it can be a dry test and wet test, but
19 you do dry test in the lab but in the field you do
20 a wet test. So, yeah, that was my concern.

21 390 Q. I mean, the ASTM standard
22 is that you apply the water film?

23 A. Yes, you apply the water
24 film for the field test.

25 391 Q. Field test, right. But

1 the issue isn't that it's cold. The issue is the
2 water freezing. Is that correct?

3 A. Yeah. So, you know,
4 there are three concerns that I had. Like, you
5 know, the temperature, the water can freeze, and
6 also if the temperature is low, that, you know,
7 the owner can apply some deicing chemical, so it
8 can snow. So, that was my concern when I was
9 expressing -- I had in my mind when I send it to
10 Rabiah.

11 392 Q. Okay. You don't mention
12 deicing as an issue there nor did you in your
13 earlier e-mail, but you're saying that was in your
14 mind at the time?

15 A. Yeah. You know,
16 typically you don't know what they apply and you
17 don't see it, but, you know, you anticipate that
18 the temperature is below 0, the owner will likely
19 do something, like maybe -- yes. Of course,
20 depending on the weather. But I think you can
21 anticipate some deicers to be used.

22 393 Q. Just on the freezing
23 point, though, you used the word significantly
24 below 0. It's not going to freeze the second the
25 water hits the pavement. Is that right?

1 A. That's right.

2 394 Q. Okay. So, how
3 significantly below 0 in your experience does it
4 have to be before it freezes and renders the
5 British pendulum testing inaccurate?

6 A. No, I don't have any
7 particular numbers in my mind, but it was my
8 concern. Yes, it was my concern. And then it
9 depends whether you do it in nighttime, daytime.
10 So, I wanted to express my concern.

11 395 Q. Okay. And then take that
12 down, Registrar, please. In paragraph 47, you
13 sent the final proposal to Mr. Moore that day, the
14 23rd of November, and indicating that work could
15 be performed in the first or second week of
16 December and that Golder would monitor the weather
17 to ensure the field work could be conducted
18 without frost.

19 And then we can go to it if
20 you want, but would you agree with me is that
21 final version, the executed version you sent to
22 Mr. Moore, actually reverted to Ms. Rizvi's
23 original draft?

24 A. Yes, I think so. By
25 accident, it was -- the change wasn't saved, so

1 the original version that Rabiah sent to me was
2 sent to the client instead of what I changed.

3 396 Q. All right. And did that
4 change anything in terms of what Golder was going
5 to do, the terms of the testing that was going to
6 be done and --

7 A. No, we didn't. It was
8 still the same test.

9 397 Q. Fair to say it was more
10 the framing of it? What we looked at in
11 paragraph 44 was, again, the description of
12 purposes and the focus as opposed to the actual
13 testing that was going to be done?

14 A. Yeah, so that would be,
15 you know -- no, it didn't change. Look, in my
16 mind, it was still what's here in item 44. That
17 was the objective.

18 398 Q. Okay. And just as we see
19 in 48, Mr. Moore approved the proposal the
20 following day. And am I correct that the testing
21 for the pavement evaluation took place on the
22 night of December 6 and 7, 2017?

23 A. Yes. Yes, it did.

24 399 Q. If we go to image 27,
25 paragraph 63 indicates that the testing took place

1 that night in the handwritten notes, the field
2 notes, from the testing?

3 A. Yes.

4 400 Q. And the field notes
5 provided the results from the British pendulum and
6 sand patch testing at each core location and that
7 Golder staff removed 30 cores. Right?

8 A. Yes.

9 401 Q. And am I correct that the
10 British pendulum and sand patch testing were done
11 in each of those locations, the core locations?

12 A. Yeah. Yes, the British
13 pendulum testing and then sand patch and core.
14 Yeah, they were taking each at the same location,
15 at each location, yeah. All three were done at
16 the same location.

17 402 Q. All right. And the notes
18 also included a comment that three collisions
19 occurred during the testing?

20 A. Yes.

21 403 Q. And just generally
22 speaking at Golder, field notes, is the practice
23 that you want to take down, of course, the results
24 of any testing that you have done and to take down
25 any other relevant information that might be

1 relevant to the test results? Is that the usual
2 practice?

3 A. Yes, it is.

4 404 Q. And that would be your
5 expectation of the people conducting the tests?

6 A. Yes, it is. Yeah.

7 405 Q. Okay. Commissioner, I
8 want to finish off one topic. I think I'll just
9 be a few more minutes and then it might be a good
10 time to break, as Ms. Roberts and Dr. Uzarowski
11 would prefer to finish at 3:30.

12 JUSTICE WILTON-SIEGEL: That
13 would be fine.

14 MR. LEWIS: A couple more
15 things, but I'll try to be brief.

16 BY MR. LEWIS:

17 406 Q. If we could pull up 28 as
18 well as 27. At paragraph 64 and 65, you contacted
19 Stephen Lee of the MTO on December 11, 2017 to
20 enquire about who conducted PSV testing at the
21 MTO. Do you recall that?

22 A. Yes, I do.

23 407 Q. And at the top is your
24 e-mail to him and it -- if you call that out,
25 Registrar, the top of 28. You say:

1 "Typically we would send
2 the samples to Ireland or
3 the UK, but due to
4 urgency, I wonder if this
5 could be done by the
6 MTO."

7 And the proposal referred to
8 having the testing done by Testconsult Ireland
9 Ltd., which is based in Dublin, Ireland, and that
10 was in the proposal. What was the urgency in the
11 interim that caused you to contact the MTO?

12 A. The urgency was because
13 the City wanted to do it. At that point, the City
14 wanted to do it in 2018, but, you know, the first
15 step would have to be -- would be to know PSV if
16 it's feasible. The first step before they do
17 anything, they would have to know this, so that
18 was the urgency. Not to mention that the mix
19 procedure and hot in-place recycling is complex
20 and takes time.

21 408 Q. Right. Okay. And I'm
22 just wondering what changed in between the
23 proposal where it stated that Testconsult Ireland
24 would be doing the PSV testing and when you
25 contacted Mr. Lee, if anything changed in the

1 interim?

2 A. No. You know, that would
3 be -- I would -- you know, we would save
4 significant amount of time. If MTO did the
5 testing, then no need to ship the material. That
6 would save a significant amount of time. And the
7 time, you know, was, ticking. You know, if they
8 wanted to decide, I would have to know ASAP.

9 409 Q. And without going
10 through -- you can pull that down, Registrar --
11 and looking at each of the e-mails, the MTO gets
12 back to you. Mr. Joel Magnan replies that the MTO
13 doesn't have the capacity to do it and gives you
14 some options, including AMEC in Hamilton. You
15 have a bit of back and forth with him. He
16 reiterates that AMEC does PSV testing at a lab in
17 Hamilton.

18 And then at paragraph 69 --
19 those are the e-mails at 65 through 67. If you go
20 to the next image, Registrar. Thank you. You
21 forwarded that e-mail exchange to Ms. Rizvi and
22 state:

23 "The MTO is too busy to
24 do the PSV testing for us
25 for the Hamilton project.

1 Please see the e-mail
2 below. We will have to
3 send it to Ireland or the
4 UK."

5 Do you recall why you didn't
6 consider AMEC in Hamilton?

7 A. I considered AMEC. I
8 called AMEC and I ask them. I have a friend
9 there. I called her and then she send me to the
10 person who was doing the lab testing and they told
11 me that they only had British pendulum but didn't
12 have the equipment to do polished stone, so they
13 couldn't do it.

14 410 Q. Okay. And if we go to
15 the next image, 30, and it's paragraph 73, if you
16 could expand that.

17 And on December 19, 2017,
18 Ms. Rizvi sent an e-mail to Mr. Rose, another
19 employee at Golder, regarding the extraction of
20 the aggregate to be sent to Ireland and she wrote:

21 "Is there any way it can
22 be started the week of
23 January 2? I hate to be
24 a pain, but the
25 aggregates then have to

1 be shipped to Ireland and
2 the testing there will
3 take another couple
4 weeks. The client is
5 facing an urgent safety
6 issue with their road and
7 would like an answer
8 before further issues
9 arise. Please let me
10 know if that will be
11 possible. Also, how long
12 do you think the
13 extraction will take?"

14 Was there an urgent safety
15 issue that you were aware of?

16 A. You know, not that I was
17 aware. I think she wanted to put some pressure on
18 the lab. No, I -- oh, there was a concern
19 obviously discussed and then she knew that I was
20 frustrated. The City didn't follow my advice and
21 so she knew about this, but nobody told me about
22 urgent safety issue.

23 411 Q. Okay. And when you
24 described that there was a concern obviously that
25 was discussed and she knew you were frustrated, am

1 I correct you're talking about what we've been
2 discussing for the last couple of days, your
3 recommendations to the City about friction
4 remediation and improvement? Is that what you're
5 talking about?

6 A. Yes. As I say, I can
7 advise the client but I can't force them to follow
8 my advice, so obviously, you know, I knew about,
9 you know, this issue with the police opinion, et
10 cetera. So, I was frustrated. I, you know,
11 contacted the contractors, gave them the price,
12 provided recommendations and nothing was done, so
13 I was frustrated, yes, and I had concerns.

14 412 Q. All right. I think it is
15 3:33 and I would be moving on to the new year, in
16 2018, so this may be a good time to stop,
17 Commissioner.

18 JUSTICE WILTON-SIEGEL: Okay.
19 So, we will stand adjourned, then, until Monday at
20 9:30. Is there anything that counsel should be
21 discussing, Mr. Lewis?

22 MR. LEWIS: Yes. If we could
23 have the breakout room for a couple of minutes,
24 that would be helpful.

25 JUSTICE WILTON-SIEGEL: Thank

1 you very much and I wish everyone a good weekend.

2 --- Whereupon the proceedings adjourned at

3 3:34 p.m. until Monday, June 20, 2022 at

4 9:30 a.m.

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