

Page 1

IN THE COURT OF CLAIMS OF OHIO
PORTAGE COUNTY, OHIO
- - -
JASON WOLGAMOTT, et al.,
Plaintiffs,
vs.
E.R. TRUCKING, INC., et al.,
Defendants & Third-Party Plaintiffs,
No. 97-03611-PR
vs.
ODOT, et al.,
Third-Party Defendants.)
- - -
Deposition of WILLIAM T. JACKMAN, a Witness herein,
called by the Third-Party Defendants for
cross-examination pursuant to the Rules of Civil
Procedure, taken before me, the undersigned, Melissa
Karm, a Stenographic Reporter and Notary Public in and
for the State of Ohio, at the offices of Black, McCuskey,
Souers & Arbaugh, 1000 United Bank Building, 220 Market
Avenue South, Canton, Ohio, at 8:59, a.m., on Wednesday,
the 10th day of December, 1997.
- - -

Page 2

APPEARANCES:

On behalf of the Plaintiffs:

Young & McDowall

By: Debera Talkington, Paralegal sitting in for
Dean A. Young, Attorney at Law
507 Canton Road
Akron, Ohio 44312

On behalf of the Defendant & Third-Party Plaintiffs:

Black, McCuskey, Souers & Arbaugh

By: Robert E. Soles, Attorney at Law
Gust Callas, Attorney at Law
1000 United Bank Plaza
Canton, Ohio 44702

On behalf of the Third-Party Defendants:

Ohio Attorney General's Office

By: Gregg H. Bachmann, Assistant Attorney General
65 East State Street
Suite 1630
Columbus, Ohio 43215
- - -

Page 3

EXHIBITS
- - -
EXHIBITS DESCRIPTION MARKED
Jackman A deposition duces tecum 4
Jackman B accident report 30
Jackman C analysis/evaluation report 40
Jackman D curves and radiuses 78
Jackman E drawn diagram 80
Jackman F Mr. Jackman's resume 110
- - -

Page 4

WILLIAM T. JACKMAN
of lawful age, a Witness herein, having been first duly
sworn as hereinafter certified, deposed and testified as
follows:
CROSS-EXAMINATION
By Mr. Bachmann:
Q Would you state your full name for the record, sir.
A William T. Jackman.
Q And what is your address?
A Westlake, Ohio.
Q Is it 1500 Mozart Drive?
A Yes.
Q What county is that in?
A Cuyahoga County.
(Thereupon, Jackman Exhibit A was marked for
purposes of identification.)
By Mr. Bachmann:
Q Mr. Jackman, I'm handing you what has been marked as
Jackman Exhibit A. That's a copy of a notice of
deposition duces tecum.
Have you ever seen a copy of that before?
A Yes.
Q Attached to that is a list. If you'll look on the
second page, it's requesting lots of things, Items A
through H.

Page 5

1 Did you bring those items with you today, sir?
 2 A Some I did.
 3 Q What did you not bring with you?
 4 A There is no contract that I have with this firm.
 5 Q Okay.
 6 What else did you not bring?
 7 A That's it.
 8 Q Who is your contract with?
 9 A I hate to disappoint you. I don't have a contract.
 10 Q Do you have an agreement?
 11 A Verbal.
 12 Q Tell me what your agreement is.
 13 A I don't understand what you are asking me.
 14 Q Well how did you find out about this case, sir?
 15 A I was contacted by them.
 16 Q By whom?
 17 A I think Mr. Soles, but I'm not sure. It could have
 18 been Mr. Callas.
 19 Q What were you told when you were contacted?
 20 A A very brief description of the accident and they
 21 asked if I could be of assistance to them in evaluating
 22 the roadway.
 23 Q What was the accident that was described to you?
 24 A I was told that there were a number of vehicles
 25 stopped at a grade crossing and a truck coming down the

Page 6

1 grade through a series of curves was unable to stop, was
 2 involved in a rear-end collision.
 3 Q What were you asked to do?
 4 A Look at materials that became available and make a
 5 determination as to whether or not the roadway itself
 6 played a role in the occurrence of the accident.
 7 Q Were you asked anything more specific about the
 8 roadway or did they say they wanted you to look at this
 9 particular aspect of the roadway?
 10 A No. They said, "You're the expert."
 11 Q So they asked you to make a determination as to
 12 whether the roadway played a role in the accident?
 13 A Correct.
 14 Q Before I go any further, I guess there are some
 15 preliminaries here. You have had your deposition taken
 16 before?
 17 A Yes.
 18 Q How many times have you been deposed?
 19 A Guesstimate of 350.
 20 Q So you know the ground rules and what this process
 21 is all about probably better than most, right?
 22 A I've been through it 350 plus or minus times, so if
 23 you want to change the rules just tell me.
 24 Q Well let me tell you what my general procedure is.
 25 If I ask you a question and you don't understand what it

Page 7

1 is that I have asked or you feel that I have
 2 mischaracterized something, perhaps something that you
 3 have said or a piece of information that's contained in
 4 the materials that you have looked at or you want me to
 5 repeat or rephrase the question, please ask me to do so.
 6 A Okay.
 7 Q So you know you have got to respond verbally as
 8 opposed to a nod or a shake of the head.
 9 A Yes.
 10 Q What is the fee arrangement that you have with
 11 Mr. Callas and Mr. Soles?
 12 A It's on an hourly basis.
 13 Q What is that arrangement?
 14 A Because of when they brought me into it, it was
 15 under the old fee schedule. It was \$120 an hour.
 16 Q That's the fee you are charging throughout the case?
 17 A For them, yes.
 18 Q What are you charging them to testify at trial?
 19 A That's \$1,000 for an eight hour day.
 20 Q What is your fee for deposition testimony?
 21 A I don't charge them. You have to pay.
 22 Q What is your fee for deposition testimony?
 23 A \$700.
 24 Q Flat rate?
 25 A Yes, for up to four hours. I was told that you

Page 8

1 received a copy of the hour policy.
 2 Q Okay.
 3 What happens after four hours?
 4 A Did you not receive that, sir?
 5 Q Well, Mr. Jackman, I'm not here to answer your
 6 questions. I'll be asking the questions.
 7 A It has to do with my fee and you're committed.
 8 That's why I'm asking.
 9 Q Just keep that here. We'll make a copy.
 10 A I am going to want it back. Sure we can leave it
 11 there. I apologize.
 12 MR. CALLAS: Off the record.
 13 (Thereupon, a discussion was held off the
 14 record.)
 15 By Mr. Bachmann:
 16 Q When were you first contacted by these gentlemen?
 17 A The materials I first received were the beginning of
 18 January of this year -- beginning of February of this
 19 year. Oh, prior to that there was a telephone call, but
 20 I never kept track of when that was. It's been a long
 21 time, but if memory serves me I think the materials came
 22 within a week or so after I talked to them, but I'm not
 23 sure about that. It would have been sometime at the end
 24 of January or the beginning of February when the phone
 25 call occurred. Then the materials, as I said, arrived on

Page 9

1 the 7th of February, the first materials.
 2 Q In the course of your -- I guess I'll call it
 3 investigation of the accident. Is that a fair term,
 4 investigation?
 5 A It's as good as any.
 6 Q Did you have occasion to talk to Mr. Ruegg?
 7 A No, sir.
 8 Q You never talked to him?
 9 A No, sir.
 10 Q Who did you talk to other than Mr. Callas and
 11 Mr. Soles?
 12 A That's it.
 13 Q You never talked to any police officers or state
 14 troopers or eyewitnesses?
 15 A Correct, I did not.
 16 Q What date did the accident occur?
 17 THE WITNESS: Is that a 7 or an 8? That's a 7,
 18 isn't it?
 19 MR. CALLAS: Yes.
 20 THE WITNESS: The 12th of July of 1996.
 21 By Mr. Bachmann:
 22 Q You have been looking at the OHI accident report?
 23 A Yes. I just had a hard time making out the month.
 24 Q And do you know how fast Mr. Ruegg was going?
 25 A No, I don't.

Page 10

1 Q You didn't do any speed calculation or anything?
 2 A No.
 3 Q Before we get into detail, can you tell me kind of
 4 the -- you talked to Mr. Callas and Mr. Soles and you
 5 received some materials. Can you tell me the process
 6 that you went through.
 7 A Shortly after receiving the initial
 8 materials -- toward the end of February we inspected the
 9 scene, took a series of measurements, made observations,
 10 and so on.
 11 Q Who's we?
 12 A Mr. Soles met my partner and myself.
 13 Q Who's your partner?
 14 A My daughter, Lyn, L-y-n, single N.
 15 Q Lyn Jackman?
 16 A Yes.
 17 Q Tell me what you did when you went down to the scene
 18 in February.
 19 A We took a series of measurements and made
 20 observations.
 21 Q What did you measure?
 22 A The road.
 23 Q Where did you measure it?
 24 A I don't understand what you are asking me. What do
 25 you want to know?

Page 11

1 Q Where on the road did you measure it? Tell me what
 2 you measured.
 3 A We determined -- we measured the two curves. We
 4 measured distance along the road using the -- we measured
 5 distances along the road going from just south of the
 6 Conrail tracks to almost Orrville Street.
 7 Q Okay.
 8 Do you have a diagram there of what you --
 9 A Of course I do.
 10 Q May I see it.
 11 You took a bunch of measurements along the road
 12 measuring distances. What was the purpose of taking
 13 those measurements?
 14 A To determine where the various devices were to be in
 15 order to calculate the design speed of the curves and to,
 16 if necessary, prepare a diagram.
 17 Q By devices do you mean the warning signage?
 18 A Yes, traffic control devices.
 19 Q You said to calculate the design speed of the curve,
 20 the devices, and there was a third thing.
 21 A If necessary to be able to prepare a diagram.
 22 Q What else did you do out there at that time?
 23 A That's it, made observations.
 24 Q What sort of observations?
 25 A Observed the fact that the foliage had been cut back

Page 12

1 dramatically, fill had been brought in, at least on the
 2 west side of the road near the tracks.
 3 Q Any other observations made?
 4 A Offhand that's all I can think of.
 5 Q What was the next -- did you do anything else out
 6 there that day?
 7 A No.
 8 Q How long were out there?
 9 A We arrived at 11:20 and left at approximately 12:50.
 10 Q What was the purpose of Mr. Soles being out there
 11 that day?
 12 A I have no idea. You'll have to ask Mr. Soles.
 13 Q What was his role when you were out there for that
 14 period of time?
 15 A He didn't have any role. He did whatever he did.
 16 Q What did he do?
 17 A I don't know. My daughter and I were making
 18 measurements, sir. I really wasn't paying attention to
 19 what Mr. Soles was doing.
 20 Q You didn't talk to him at all while you were out
 21 there?
 22 A Sure I did. He was asking questions and I was
 23 responding.
 24 Q What sort of questions was he asking?
 25 A Oh boy. "What are you doing? Why are you doing

Page 13

1 it. Why are you doing it here and not there?" Those
 2 kinds of things.
 3 Basically he wanted to be educated in what a
 4 reconstructionist does or at least as far as our role in
 5 this case was concerned, what we were doing. He was to
 6 be one with us I guess.
 7 Q Did he make any suggestions? "Well I want you to
 8 measure this instead of that. I want you to look at this
 9 section of the roadway versus that section of the
 10 roadway."
 11 A No.
 12 Q Did you make any suggestions at all?
 13 A No.
 14 Q So you made some observations, you took some
 15 measurements, and inspected the scene. Tell me what
 16 happened next in the process.
 17 A Based on the material that I had, I returned to the
 18 office and made some calculations as to the design speed
 19 of the two curves and the appropriateness, obviously, of
 20 the signage associated with it.
 21 Q So the second step was you made calculations of the
 22 design speed and you checked the appropriateness of the
 23 signage that was in place, correct?
 24 A That was a question? I don't know about the second
 25 step, but that's what we did next, yes.

Page 14

1 Q Is that all that was involved in that step?
 2 A You have steps. What are you talking about? What
 3 steps?
 4 Q Well, Mr. Jackman, let's just try to be straight
 5 with each other, okay?
 6 A Wait a minute. You set the ground rules. You said
 7 if I don't understand what you are asking, I should tell
 8 you. I don't understand what you are asking.
 9 Q Well you rendered an opinion in this case, a written
 10 report, right?
 11 A Yes, sir.
 12 Q What I am trying to do is -- I set forth
 13 initially -- I just want to find out the steps that you
 14 had in the process, everything you did at certain points
 15 in time that lead up to that report.
 16 First you got some materials, then you went out to
 17 the scene, then you went back to the office and made some
 18 design speed calculations and the appropriateness of the
 19 signage. That's what I mean by steps.
 20 A Okay. Well what I'm having a problem with is you
 21 took step one as our being there. You discounted the
 22 fact that I possibly looked at the materials that were
 23 sent to me before I went out there. That's why I have a
 24 problem with steps one, two, and three.
 25 If you want to say, "What did you do next," I'd be

Page 15

1 more than happy to answer that question.
 2 Q So step one was looking at the materials that these
 3 fellows gave you, right? Let's just go through it step
 4 by step. Tell me what step one was.
 5 A The first thing I did was to review the materials
 6 that were sent. The next thing I did is I went out to
 7 the scene.
 8 Q All right. The next thing you did was what?
 9 A I made calculations as far as what the design speed
 10 of the curves was and the appropriateness of the various
 11 signage.
 12 Obviously I used the materials that were sent to me
 13 as an aid, for instance the accident report, the
 14 photographs. All of these things I used. I didn't just
 15 sit down with a calculator and a pencil and paper.
 16 Q Okay.
 17 What was the next step in the process?
 18 A The next step was waiting around for things to
 19 come. I had some questions as far as what ODOT did or
 20 didn't do. I understand that someplace along the way
 21 ODOT was presented with a list of requests for production
 22 of documents or interrogatories or some combination of
 23 the above.
 24 So as time went on, certain materials came to me
 25 from ODOT, but actually from Mr. Soles. Obviously I

Page 16

1 reviewed those things, trying to make a determination.
 2 Since so much had changed between the time of the
 3 accident and when I was out there, I was trying to
 4 determine what the characteristics of the area were as
 5 far as -- at least the west side of the road from the
 6 pavement edge of the road into the right-of-way. I
 7 wanted to find out what the characteristics were and
 8 things obviously having to do with vegetative growth.
 9 Q What sort of documents were you looking for?
 10 A What I was looking for and what I got were two
 11 different things. But they needed a report, so I went
 12 with what I had. One of them was a photolog of the state
 13 route and the first two submissions of ODOT.
 14 To tell you the truth, things have gotten jumbled up
 15 in the file. I have no recollection as to which specific
 16 documents came on what days. Someplace in there I
 17 prepared a scale drawing of the roadway from the railroad
 18 tracks north some distance. I forget what it was
 19 precisely.
 20 Q What was the purpose of that scale drawing?
 21 A Because of lacking other information, I wanted to
 22 use it to attempt to measure across the curve to see what
 23 sight distance was available once I determined what the
 24 foliage or what the vegetative growth was like.
 25 Now at someplace in there, in the materials that

Page 17

1 ODOT made available, were some plans for the roadway
 2 itself that contained design information. As a result, I
 3 felt that the scale drawing that I prepared was
 4 superfluous. I preferred to use the information that
 5 ODOT made available rather than the diagram that I had
 6 prepared.
 7 Q What was the next step in the process?
 8 A I prepared the report.
 9 Q How many drafts did you make?
 10 A How many drafts did I make? I write in longhand. I
 11 may have crossed out some words.
 12 Q Okay.
 13 So the one draft you made in handwritten form became
 14 the final draft in typewritten form?
 15 A Yes.
 16 Q If we can, let's go through your file that you
 17 brought with you and just go through it piece by piece
 18 and have you explain to me what it is you have. Some
 19 stuff I'm sure I have seen and some stuff I'm sure I
 20 haven't seen. I know you've got a lot of material in
 21 here.
 22 Is it in any particular order?
 23 A Just this, two small stacks that are paper-clipped
 24 together. This. (Indicating.)
 25 Q Let's go through what you have just for purposes of

Page 18

1 seeing what it is that you have. Why don't you just tell
 2 me so we can make a record what it is that you have, then
 3 we'll mark what we need for exhibits.
 4 A This is in no particular order. This is an
 5 interoffice communication about the fatality
 6 investigation and it's to a Mr. Dreger from a Mr. Ray.
 7 They are both ODOT personnel.
 8 Q What's the date of that?
 9 A July 29, 1996.
 10 These are black and white copies of selected
 11 photolog pictures.
 12 Q Those are dated September of 1995 by the way; is
 13 that right?
 14 A Yes. Purchase orders -- well, wait a minute. A
 15 purchase order and a whole series of interoffice
 16 communications. The communications are to a Pat Ziegler
 17 from a Harry Anderson. There are various dates.
 18 Q Those are weekly road reports?
 19 A Biweekly road reports, it states.
 20 Q Okay.
 21 A A third-party complaint.
 22 MR. CALLAS: Off the record.
 23 (Thereupon, a discussion was held off the
 24 record.)
 25 THE WITNESS: A third-party complaint. It's a

Page 19

1 legal document.
 2 This, I believe, is the original complaint.
 3 By Mr. Bachmann:
 4 Q The original complaint by the Wolgamott's against
 5 Eugene Ruegg and E.R. Trucking?
 6 A That's what it says.
 7 Q Is that in Stark County?
 8 A Yes.
 9 Q Continue please.
 10 A There's an invoice from American Sand & Gravel.
 11 There are a number from Ontario Stone. There are
 12 seven from Ontario Stone.
 13 There are four sheets entitled Daily Log of
 14 Mr. Ruegg. There are some more. Sorry. No, those are
 15 duplicates. No, they aren't. Let me stop.
 16 Q Take your time.
 17 A There are four more. So there are two sets, if you
 18 will.
 19 Q Two sets? They are not the same sets, they are
 20 different sets?
 21 A The number had been written over. It looked like a
 22 five but one is 15 and one is 16.
 23 Q Here's another set.
 24 A Then there is a state highway patrol vehicle
 25 inspection report. It's several pages.

Page 20

1 Q What is the date of that?
 2 A 7/12/96.
 3 These are time sheets received from ODOT for ODOT
 4 personnel.
 5 Q May I see those. Is there a series of dates on
 6 those?
 7 A 6/25/96. They jump around. Yes, there is a series
 8 of dates. It appears that the earliest one is 6/25/95.
 9 The latest one or the last one is 11/7/96.
 10 Q Okay. Thank you.
 11 A But they are not all inclusive. There are days
 12 missing.
 13 Q Okay.
 14 A This is apparently a computer printout of
 15 maintenance history. If I'm reading this correctly, it's
 16 from October 31, 1995 to October 31, 1995. I'm not quite
 17 sure what that means. They have other dates on here, but
 18 this is the title.
 19 Q May I see it.
 20 A Maybe that's when they printed it or something.
 21 An inspector's daily report together with an
 22 interoffice communication for a request for a survey and
 23 another one talking about the accident, and basically
 24 giving approval to trim the foliage back to the
 25 right-of-way line.

Page 21

1 Q Okay.
 2 What's the next one?
 3 A A letter from you to Mr. Callas apparently
 4 transmitting your answers to the first set of
 5 interrogatories and requests for production.
 6 Q Okay.
 7 A This is a piece of paper entitled Field Notes
 8 obviously done in the office. It has to do with the
 9 right-of-way configuration of the section of highway in
 10 question.
 11 Q Okay.
 12 A I have two drawings. These are half-size plan
 13 sheets of the road. One shows line and grade. No, they
 14 both show line and grade -- I'm sorry -- from some
 15 distance south of the grade crossing up to and just
 16 beyond Massillon/Orrville Road.
 17 Q Okay.
 18 A I'd give you the page numbers, but the one is off.
 19 Q That's fine.
 20 A These are more time sheets and worksheets. Some of
 21 it has to do with signage and the other is for work on
 22 the road.
 23 Q Is it all about State Route 93?
 24 A Yes, as best as I can tell.
 25 Q Is there a time frame?

Page 22

1 A This says 7/7/96. This sheet is undated. This says
 2 6/28/96 and 7/31/95.
 3 Q They jump around. Okay. What's next?
 4 A The next is a hodge podge. It's stapled together
 5 and it says, "Question three."
 6 Apparently this is your response to the
 7 interrogatories. One is a letter to the Lawrence
 8 Township Board of Trustees from Robert Smith. Another is
 9 a letter from the Lawrence Township Trustee to ODOT.
 10 Another is a map.
 11 Interoffice communications from Mr. Dreger,
 12 D-r-e-g-e-r, from Mr. DeFuria, D-e-F-u-r-i-a. The
 13 subject is the crash history of the railroad crossing on
 14 State Route 93.
 15 There is interoffice communicate having to do with
 16 various traffic-related items below. They are both State
 17 Route 93.
 18
 19 A letter from Mr. Bunkley, B-u-n-k-l-e-y, to the
 20 police chief of Lawrence Township.
 21 Interoffice communicate having to do with the removal
 22 of the sign. It has to do with the tracks being uneven.
 23 They asked that the sign be removed because the tracks
 24 had been repaired.
 25 There is a computer printout.

Page 23

1 Q Is there a title on the computer printout?
 2 A It says State Route 93 around railroad
 3 at -- something -- south of Canal Fulton.
 4 The printing is terrible. Here, maybe you can tell
 5 better than I can.
 6 Q These are all crashes it says there underneath
 7 that. Is the rest of that packet computer printouts?
 8 A No, the next several pages are. There's a breakdown
 9 of accidents under various categories.
 10 This is a copy of the accident report or at least
 11 part of it. It's several accident reports.
 12 There's a diagram.
 13 Q A diagram of the section of the roadway we're
 14 talking about?
 15 A Yes, Orrville Street down to the railroad crossing.
 16 It's not to scale, it's just a diagram showing signage
 17 apparently in place at the time, but it says 10-89.
 18 I suppose that could mean October of '89, but I don't
 19 know. It also says in handwritten cursive, "From Lou
 20 Mata," M-a-t-a. I have no idea who that gentleman is.
 21 Q What else is in there? Is the rest just
 22 correspondence?
 23 A This section is, then there are some more of the
 24 police reports and another computer printout page.
 25 Q All right. What's next in your stack there?

Page 24

1 A Letters and interoffice correspondence.
 2 Here's a work order. Well apparently there is more
 3 than one. There are a number of work orders and there is
 4 a copy of an accident report involving Conrail tracks, a
 5 newspaper article, more work orders. There's
 6 correspondence, a work order -- I mean work orders.
 7 Q What's the next in your stack?
 8 A Interoffice communicate having to do with the Route
 9 93 fatality and it's a list of critical dates, things
 10 that happened.
 11 Q That's --
 12 A And another interoffice communication.
 13 Q What is the date of that IOC on top of there?
 14 A This one? October 31, 1996.
 15 Q What's next in your stack?
 16 A Xerox copies of four photographs.
 17 Q Next?
 18 A Work orders having to do with signage.
 19 Q What's next?
 20 A Center line log of Route 93, Page 5 of 7.
 21 Q Okay.
 22 A Pavement marking instructions. This has to do with
 23 the railroad crossing.
 24 Q Okay.
 25 A One page out of -- I'm assuming it's the most recent

Page 25

1 account book for District No. 4, Interstate Route 77, and
2 State Route 93.

3 Q Okay.

4 A This is a page out of the ODOT design manual having
5 to do with stopping sight distance.

6 A letter to you from -- well it's unsigned, but it's
7 from Mr. Soles requesting things.

8 Q All right. What's next? Another letter?

9 A Yeah, from you to Mr. Soles explaining -- well
10 you're transmitting some of the responses and you're
11 explaining why you don't have them all.

12 Q Okay.

13 A This is the photolog, the complete photolog, laser
14 color copy.

15 Q Okay.

16 A This is a report from Mr. Hilbert. I'm sorry.

17 Q Go ahead.

18 A This is the report of Carmen Daecher,
19 D-a-e-c-h-e-r.

20 Pictures.

21 Q Are they dated?

22 A 9/19/95. The first two are from the photolog. The
23 rest appear to be specifically taken of the roadway.

24 They are not photolog pictures.

25 Q Is there a date on them?

Page 26

1 A According to this, July 22, 1996.

2 Q Okay. What's next?

3 A Deposition testimony of Robert Smith, S-m-i-t-h.

4 Q Okay. What's next?

5 A Deposition testimony --

6 Q Pardon me for interrupting, but let's pull out your
7 notes too and we'll do the notes all at once.

8 A I'd like to keep these in a separate pile from this.

9 Q I understand.

10 A Deposition testimony of David Ray, R-a-y.

11 Deposition testimony of James Marginean,
12 M-a-r-g-i-e-a-n.

13 Deposition testimony of Michael Young, Y-o-u-n-g.

14 Expert report I think -- well it's actually -- it's
15 a letter to Mr. Bachmann from Mr. DeFuria.

16 This is a report. It's unclear to me, at least at
17 this point in time, who it's from or to because there is
18 no letter of transmittal. There is no title page and
19 there is nothing. It's my understanding that it is in
20 fact -- well it's my understanding -- I don't know about
21 the fact that it was prepared by Sergeant Veppert,
22 V-e-p-p-e-r-t, state highway patrol, but I'm ready to
23 stand corrected because there is really nothing on here
24 that says anything about that, at least not that I can
25 find.

Page 27

1 Q Okay.

2 Now you've got a series of your own notes and it
3 looks like some other papers there. All your notes are
4 contained on the yellow sheets there?

5 A Yes. I don't think I used any white ones. I think
6 they are all yellow.

7 Q Other than the yellow sheets, there is one with a
8 green paper clip. What's behind that?

9 A That's my report. It's a copy of the report.

10 Q Underneath the other white sheets there are more
11 white sheets. What are those?

12 A This is a letter to Mr. Soles and another letter to
13 Mr. Soles. There are four letters to Mr. Soles from
14 yours truly.

15 MR. BACHMANN: At this point I'd like to take a
16 break and get Xeroxed copies of those letters and
17 those yellow sheets, if we could.

18 (Thereupon, a recess was taken.).

19 By Mr. Bachmann:

20 Q Mr. Jackman, while your personal notes and letters
21 to Mr. Callas and Mr. Soles are xeroxed, of these --
22 while we're dealing with these documents, let's stay on
23 that subject.

24 Can you tell me of these documents that we've gone
25 through, are these the only documents that you have

Page 28

1 reviewed to date?

2 A Specific to this case, yes, sir.

3 Q Did you review all these documents in preparation of
4 your report?

5 A No, because some came after the report was prepared.

6 Q Can you tell me what documents you have relied upon
7 in preparation for your report. I know you looked
8 and -- perhaps that's a bad question.

9 What I want to get to is the documents that you
10 specifically used to come to the opinions that you
11 arrived at.

12 A I probably put the greatest weight -- well obviously
13 on the accident report and the photographs, the photolog,
14 and the line and grade sheets, those two sheets that I
15 described as line and grade. They were half-sized
16 prints. I would say I relied on that material most
17 heavily.

18 Q Other than those documents -- let's go to those
19 documents then. What I'd like for you to do is explain
20 to me what you relied upon.

21 A We are going to have a problem here because as I
22 review these things it becomes a body of knowledge, if
23 you will. I don't really -- when I sit down to write a
24 report, I don't really say, "Aha, here's the piece that
25 goes under Line B."

Page 29

1 I don't do that. What I do is list on my
 2 report -- and I'm assuming that they sent you a copy
 3 someplace along the way. I list the materials that I
 4 have reviewed and relied on, to whatever extent, all of
 5 the materials listed. Anything that's not listed, I
 6 haven't gotten yet.
 7 For instance, the depositions came after the fact.
 8 There were other things that came after the fact. You
 9 know that doesn't -- if those materials -- if after the
 10 fact stuff had changed my opinion, then I would have had
 11 to write an addendum. They didn't necessarily change the
 12 opinion. They could have reinforced the opinion, so I
 13 don't want to say that.
 14 Therefore, since I didn't have them, I am not
 15 relying on them in any way when I testify, assuming I
 16 testify. Because it's all a body of knowledge, I have a
 17 problem. You're not the first attorney that's asked me,
 18 "What did you rely on? Show me specifically on this
 19 piece of paper what it is that was important to you."
 20 It's almost impossible to do without leaving things
 21 out. I don't want to expose myself at some later date
 22 and have somebody say, "Well you never told me," so with
 23 that in mind I'll do anything you want.
 24 Q You said you relied upon the accident report?
 25 A Sure.

Page 30

1 Q What information did you glean from the accident
 2 report?
 3 A My speech was for naught. Everything in the
 4 accident report. I read the statements, the
 5 descriptions, the location, where the crash occurred,
 6 time of day. All of those things are important.
 7 (Thereupon, Jackman Exhibit B was marked for
 8 purposes of identification.)
 9 By Mr. Bachmann:
 10 Q Mr. Jackman, I am handing you what has been marked
 11 as Jackman Exhibit B. Can you tell me what that is.
 12 A It's a copy of the report of the accident in this
 13 case.
 14 Q There is a lot of information in this report. I
 15 don't want to go through it line by line obviously. Can
 16 you tell me in terms of your analysis -- and I understand
 17 there are lots of factors as you indicated that go into
 18 your analysis -- what information you glean from this
 19 report that ultimately formulates your opinion.
 20 MR. SOLES: Jack, answer the question as best
 21 as you can.
 22 THE WITNESS: I've already been through this.
 23 It's the fact that he's driving an International
 24 truck.
 25 By Mr. Bachmann:

Page 31

1 Q Let me be more specific and try and help you out a
 2 little bit.
 3 What about the accident itself and about
 4 Mr. Ruegg driving down that stretch of roadway to the
 5 point of the accident from this report do you glean that
 6 helps you formulate your opinion?
 7 A The fact that he was driving a large truck. The
 8 details, the accident itself, the fact that there were a
 9 series of vehicles stopped at the crossing. They were
 10 waiting for a train, so there was a reason to stop. The
 11 manner in which the accident happened. The reference
 12 point the troopers used -- well I'm sorry. It's not a
 13 trooper, it's the township police.
 14 Obviously I read the materials that were included in
 15 here and I know that the following truck avoided being in
 16 the accident by going left of center. I'm not sure if
 17 that's contained in this report or not.
 18 As I said, this material becomes all of one to me.
 19 It's difficult for me to say, "Well you know here's where
 20 I found that." I don't remember anymore where a lot of
 21 these things are.
 22 Q You said the following truck avoided the accident by
 23 going left of center. You mean there was a truck behind
 24 Mr. Ruegg?
 25 A Yes.

Page 32

1 Q Can you describe for me, to the best of your
 2 recollection from the documents that you have reviewed,
 3 the manner in which the accident happened. If this helps
 4 you, that's fine.
 5 A The manner in which the accident happened?
 6 Q Yes.
 7 A Mr. Ruegg attempted to stop, jackknifed and ran into
 8 the back end of the van, then there was a domino effect.
 9 Several other vehicles were involved.
 10 Q He attempted to stop, jackknifed, then ran into the
 11 van; is that correct?
 12 A Well since I didn't do a reconstruction, I really
 13 wasn't too concerned about this.
 14 Q That's fine.
 15 A That's my understanding at this point in time. I
 16 want to take another look at the photographs if you are
 17 going to tie me down to this.
 18 Q So you didn't actually reconstruct the accident?
 19 A You asked me this before and I said no.
 20 Q You said you put your greatest weight on certain
 21 types of documents. We'll go through those.
 22 What weight from this did you put on it other than
 23 gathering information?
 24 A I can't answer that. I don't weigh these things.
 25 Q I am just trying to use your terminology. You said

Page 33

1 you put your greatest weight on the accident report, the
 2 photos, the photolog, and the line and grade sheet.
 3 A Yes. Now you want me to talk about weight on
 4 individual items and I didn't do that. I used weight as
 5 a term of art, if you will. These were the more
 6 important things to me.
 7 Q So all you used the accident report for was to
 8 gather information about how the accident appeared, where
 9 it occurred, maybe the conditions under which it
 10 occurred?
 11 A Date, time, light conditions, and so on.
 12 Q Was there anything other than general background
 13 information about the accident that you used the accident
 14 report for?
 15 A Other than background information? Everything is
 16 background information.
 17 Q Did you use -- well here I can pick up that report,
 18 if you will.
 19 Did you use these measurements that occurred on the
 20 fourth page of the report?
 21 A Only to locate where the actual impact was.
 22 Q How about the witnesses' statements that are
 23 attached?
 24 A I read them.
 25 Q That's just to gain an understanding of how the

Page 34

1 accident occurred; is that correct?
 2 A Sure.
 3 Q Did you have any other reason for reading it?
 4 A It sounds like I'm being nefarious or something.
 5 It's part of the report and I read it. I apologize.
 6 Maybe I shouldn't have.
 7 Q On the sixth page, if you'll turn to that --
 8 A Yes.
 9 Q -- there is -- it looks like a handwritten drawing
 10 to me of the truck jackknifing and impacting with the
 11 minivan. Is that your understanding of what that drawing
 12 is?
 13 A Yes.
 14 Q Is this of any particular significance to you or is
 15 it just more background material as to how the accident
 16 occurred?
 17 A Well there are letters on this diagram and they
 18 refer to another page here in the report describing what
 19 they are. I told you I used this report to determine
 20 where the impact occurred, so yes, I used the report to
 21 determine where the impact occurred.
 22 Q Other than determining the conditions, that's
 23 really -- then am I correct in saying that's really the
 24 main purpose of what you used this report for?
 25 A What's that for?

Page 35

1 Q For determining where the impact occurred?
 2 A And the fact that it was a large tractor/trailer and
 3 that it was a clear day and it was light and there was no
 4 rain. All of these things are significant if I am going
 5 to make a determination as to the role the road played in
 6 the occurrence of the accident.
 7 Q Now you also stated you put your greatest weight on
 8 the accident report, photolog, photographs, and line and
 9 grade sheets.
 10 You mentioned photos. What photos are you talking
 11 about?
 12 A The ones that you just looked at.
 13 Q I'm handing you a series of photos.
 14 A I am not going the pick out individual photos. I
 15 looked at them all. I attempted to determine what the
 16 character of the vegetation was. That's what I was
 17 looking for.
 18 Q What were you able to determine from the character
 19 of the vegetation or about the character of the
 20 vegetation?
 21 A That it was close to the driving lane. It varied.
 22 That was the reason I wanted the photolog. I knew what I
 23 wanted was previous to the accident along the stretch of
 24 the road. Not all of those photographs were specifically
 25 identified as to where they were taken. Some you could

Page 36

1 tell were of the accident scene.
 2 The accident scene photographs were obviously very
 3 specific, but I wanted to see what it was like further
 4 back up the road, and the photographs were not specific
 5 enough.
 6 The photolog allowed me to look at the road
 7 progressively to see what it was that the drivers could
 8 see as they were approaching and rounding the curves.
 9 Q Did you use any of the accident photos to help you
 10 with regard to the vegetation?
 11 A Not really, no. They were used just in a very
 12 general way.
 13 Q That would be the packet marked police photos?
 14 A Yes, correct.
 15 Q So those really didn't help you out that much?
 16 A Not as far as vegetation is concerned, but I looked
 17 at them. I can't tell you specifically what I looked
 18 at. I don't know where you're coming from as to what
 19 helped me and what didn't. I'm telling you it's all a
 20 body of information and I used everything that I had.
 21 Q I'm sure you did. So with regard to the vegetation
 22 and the accident photos, they were not of much help to
 23 you, right?
 24 A Well --
 25 MR. CALLAS: Objection.

Page 37

1 THE WITNESS: I answered with a qualification
2 and that's it. I'm sorry. That's the best I can do
3 for you.
4 By Mr. Bachmann:
5 Q You have got a package marked vehicles at salvage
6 area.
7 A Right.
8 Q You looked at them, I assume.
9 A Absolutely.
10 Q Were they of any assistance to you in rendering your
11 opinions?
12 A Not in my part of this scenario, no.
13 Q Now you have also got a packet marked van and scene
14 and after that it says, "Later."
15 A Yes, meaning not at the time. I should have said
16 site rather than scene.
17 Q There are three sets of photographs.
18 A Okay.
19 Q Do you know where those photos came from?
20 A This office. I have no idea.
21 Q You don't know who did them?
22 A No.
23 Q Did those help you in determining vegetation?
24 A To a degree. The problem is that some of these are
25 so innocuous it's difficult to determine where the camera

Page 38

1 was. The scenery there really doesn't matter where you
2 are. It kind of looks like all the same. There is
3 nothing distinctive. You'd almost have to go out there
4 and look at tree limbs and everything else to make a
5 determination as to where a specific photograph was
6 taken. I was using these as a general reference, just
7 getting an idea of what the whole area looked like.
8 There are two reasons I separated the two site
9 sets. One is obviously before the pavement markings were
10 put down. The other is postpavement markings. They were
11 taken at different times is what I am telling you.
12 Q Do you have an understanding of where those sets
13 were taken?
14 A Before and after the pavement markings went down.
15 It's pretty obvious. The pavement markings were put down
16 sometime in the latter part of July.
17 Q Okay.
18 A It's in some of the ODOT stuff.
19 Q In your one hand you have got a photo.
20 A I have no idea when it was taken. Afterward.
21 MR. BACHMANN: Gust, can I get copies of those
22 two sets of photos?
23 MR. CALLAS: Yes.
24 MR. BACHMANN: Color copies just like that.
25 By Mr. Bachmann:

Page 39

1 Q Mr. Jackman, I'm sure you'll correct me if I'm wrong
2 in my statement, but it sounds to me like the set of
3 photographs that were most helpful to you in terms of
4 determining what the vegetation was like prior to the
5 accident was the photolog.
6 A The photolog in conjunction with the scene photos,
7 particularly the ones before the striping.
8 Q So two sets of photos were your primary source of
9 information?
10 A Correct.
11 Q Do you consider one set of photographs -- that is
12 the photos prior to striping or another set of
13 photographs that is the photolog -- to be more
14 representative of what the vegetation was at the time of
15 the accident?
16 A Obviously the ones that show the area before the
17 striping, not the photolog. The photolog was taken the
18 year before and growth has occurred over that year.
19 Q I'm not sure if I asked this or if I haven't. The
20 set of photographs where the temporary striping is in
21 place, do you know if that was before or after the
22 accident?
23 A It's my understanding it was after the accident.
24 That's what I was told.
25 Q Sometime in July it sounds like, from what you have

Page 40

1 said.
2 A It would have to be, yeah.
3 Q Now you also said you used the line and grade sheets
4 from ODOT, correct?
5 A Yes.
6 Q That would be in that category of documents that you
7 put your greatest weight on, correct?
8 A The ones that were most important to me, yes,
9 because there was engineering details in there that I
10 used specifically.
11 Q Can you tell me what about those line and grade
12 sheets that factors into your analysis?
13 A By definition, the line is horizontal alignment.
14 The grade is vertical alignment and you need those to
15 make calculations of the design speed of the curve.
16 Q So the line and grade sheets did not tell you the
17 design speed of the curve, you had to calculate that
18 yourself, right?
19 A Yes.
20 Q All you used those sheets for were to calculate the
21 design speed of the curve?
22 A They also show right-of-way, but there was another
23 sheet that showed right-of-way. I was interested in the
24 right-of-way line.
25 (Thereupon, Jackman Exhibit C was marked for

Page 41

1 purposes of identification.)
 2 By Mr. Bachmann:
 3 Q Mr. Jackman, I'm handing you what has been marked as
 4 Exhibit C.
 5 A Yes, sir.
 6 Q Would you please tell me what that is.
 7 A This is a copy of the report that I prepared in this
 8 matter and directed it to Mr. Soles.
 9 Q And does this report contain all of your opinions
 10 with regard to this accident?
 11 A As of this date. I understand from listening to a
 12 conversation before the deposition started that more
 13 information is forthcoming. I have no idea what it
 14 contains. Obviously I reserve the right to modify this
 15 report or, in fact, supplement the report with additional
 16 opinions if this additional information proves it to be
 17 necessary, but I don't know.
 18 At this point in time this basically summarizes my
 19 opinions with the understanding that you're asking a lot
 20 of questions that are also asking me for opinions that go
 21 beyond the report. So anything that is included in the
 22 deposition that might be considered an opinion is also
 23 there.
 24 Q All your written opinions to date are contained in
 25 Exhibit C?

Page 42

1 A Correct.
 2 Q In here on the first page you've got A through P.
 3 It says that these are documents that you had reviewed.
 4 Other than the depositions you had mentioned, are there
 5 any other documents that you reviewed since the time you
 6 rendered this report?
 7 A The maintenance management system manual, at least a
 8 current copy. I have one of my own, but I didn't know if
 9 it was current or not. And some additional material that
 10 was sent from ODOT. As I said -- to be honest with you,
 11 I don't know what it was anymore.
 12 Q Neither of those items change your opinion
 13 obviously.
 14 A Correct.
 15 Q Anything else?
 16 A Oh, the two reports. Did you mention those? The
 17 Veppert report and the DeFuria report.
 18 Q Anything else?
 19 A No.
 20 Q In here you --
 21 A Here is C.
 22 Q Yes. On the first page you mentioned a copy of a
 23 report by Steven Hilbert, I guess.
 24 A Yeah. That's Letter N.
 25 Q And I mean you read that obviously because somebody

Page 43

1 had rendered an opinion. Was that Mr. Hilbert?
 2 A Yeah, I read it. It was sent to me.
 3 Q Can you pull that out.
 4 A As soon as I find it.
 5 Q Is that all the information you had on Hilbert?
 6 A Yes.
 7 Q So I gather you couldn't really say whether what he
 8 was doing in there was valid or not valid, because you
 9 don't have that much information about his opinion,
 10 right?
 11 A This may sound self-serving, but this is a terrible
 12 report. I mean it says nothing as far as I'm concerned.
 13 Q It's of no value to you?
 14 A No.
 15 Q How about this? Is it Daecher's or DeFuria's
 16 report?
 17 A He pronounces it Daecher.
 18 Q I gather you read that also?
 19 A Yes.
 20 Q And was that of any value to you?
 21 A Value to me? You mean in the preparation of my
 22 report?
 23 Q Yes.
 24 A No, because he doesn't concern himself with this.
 25 He concerns himself with how the accident happened. I

Page 44

1 noted that he did, in fact, recognize the fact that
 2 Mr. Ruegg was sitting higher than the average vehicle
 3 driver would be. Other than that, no. I Knew how high
 4 Mr. Ruegg was sitting anyway, so I don't need Mr. Daecher
 5 to tell me that.
 6 Q You already knew that?
 7 A Sure, because I knew what kind of truck he was in.
 8 Q Otherwise that's of no value to you?
 9 A Basically, no. It was of interest, academic
 10 interest, because I do the same thing.
 11 Q The Sergeant Veppert report?
 12 A Yes.
 13 Q Was that of any value to you in your analysis and
 14 opinions?
 15 A No. Again it's of academic interest, what he did
 16 and how he did it.
 17 Q Do you have any criticisms of his report?
 18 A Of course.
 19 Q What are they?
 20 A I'm not doing a reconstruction, so I don't think
 21 it's fair for me to address any criticisms. I didn't
 22 really look at it that closely. I just don't feel it's
 23 appropriate at this point in time.
 24 Q Can you tell me generally what your criticisms are.
 25 MR. CALLAS: Objection. Answer it if you can.

Page 45

Page 47

1 THE WITNESS: He obtained a drag factor, a very
2 specific value, by going to a different location
3 that he believes was newly paved, had the same grade
4 and mixture of asphalt, and took a -- I don't even
5 know how he obtained it. I'm assuming he used an
6 accelerometer to do it. But be that as it may, he
7 apparently got a drag factor value by going to
8 another location.

9 This always bothers me. He, as I said, didn't
10 say how he obtained it. He just said that he did
11 it. In making use of it he did, in fact, modify for
12 the fact that it was a truck rather than a passenger
13 car. As far as perception/reaction time is
14 concerned, he ignored the built-in brake-lag time
15 with the air-brake system. I have no idea why, but
16 at least it doesn't appear in his calculations.

17 There are a number of other things that I
18 remember commenting to my daughter on without really
19 making any notes of, so those are some of the things
20 that I have a problem with.

21 But again, I didn't do a reconstruction, so I
22 can't -- I don't want to be more specific than
23 that.

24 By Mr. Bachmann:

25 Q Did you read the Davidson report?

Page 46

1 A What Davidson report? Obviously not.

2 Q Mr. Soles or Mr. Callas hasn't provided you with a
3 report from a man by the name of Davidson?

4 A No.

5 Q Have they told you about it?

6 A A report by Mr. Davidson?

7 Q Yes.

8 A I thought I heard them ask you if you got a copy of
9 a report. Other than that, no.

10 Q They haven't discussed it with you?

11 A No.

12 Q Do you plan on creating any exhibits for trial?

13 A I have no idea. If asked, I will.

14 Q Have you been asked to?

15 A No, not yet.

16 Q You haven't done any yet?

17 A No. I made that drawing that I showed you during
18 the break.

19 Things and drawings of less precision than that have
20 been used in trial, so while I'm not waving a flag that
21 that's a trial exhibit, it could be if necessary. But
22 nothing has been said to me one way or the other.

23 Q Since you didn't do an accident reconstruction, you
24 are not going to do a computer simulation and/or make any
25 sort of scale model or any scale drawing with regard to

1 how the accident occurred or a computer printout of
2 how --

3 A I don't do that. As far as a drawing, anything that
4 I would draw would relate to the role of the road. You
5 said how the accident occurred. I'm saying that the road
6 played a role in the occurrence of the accident. So if I
7 do a diagram, it would address at least in part how the
8 accident occurred.

9 Q I think before you said you hadn't had any
10 discussions with Mr. Ruegg. You never talked to him?

11 A I never met him.

12 Q Did you obtain or were you told about or discussed
13 with anybody evidence of any oily substance bleeding
14 through the surface of the asphalt on July 12, 1996?

15 A No. It wouldn't surprise me.

16 Q When you went out there in February of 1997, did you
17 see any such evidence?

18 A You wouldn't.

19 Q Why not?

20 A What you are referring to is the normal evaporation
21 of the soluble materials used in an asphaltic concrete
22 mix to make them -- I am going to use the word fluid, but
23 I don't mean like water, but to make them pliable so that
24 they can be poured and rolled in place. Then the
25 solvents come up to the surface and they are evaporated.

Page 48

1 How quickly they can evaporate is based upon temperature
2 and the humidity. So obviously, hot, dry, weather will
3 allow this phenomenon to exist for a much shorter period
4 of time than cooler, damp, weather.

5 Q Is that a usual occurrence or unusual occurrence?

6 A No. It always happens. That's the nature of the
7 asphalt. You can't help it.

8 Q But in this case you hadn't heard of that?

9 A I'm not aware of it.

10 Q How long -- you said obviously depending on the
11 temperature and the humidity -- how long would such a
12 condition last?

13 A As little as seven days if you got a string of hot,
14 dry days. And maybe as much as four to six weeks if it's
15 miserable weather. Obviously in any place it depends
16 upon the conditions.

17 Q Did you have any opinions as to the signage that was
18 in place at the time of the accident?

19 A From what I gathered in reviewing the materials, the
20 signs are misleading or the sign was misleading.

21 Q What signage in particular are you talking about?

22 A Advisory speed plate associated with the curve sign.

23 Q What was that advisory speed plate?

24 A With the left reverse curve sign, the advisory speed
25 plate was 35 miles per hour.

Page 49

1 Q How is that misleading?

2 A Drivers have learned that where curves are concerned

3 and an advisory speed is associated with the sign that

4 the state -- assuming it's a state sign -- is based on

5 the geometric conditions. In other words, super

6 elevation, the degree of curve. They have learned that

7 just from experience. I mean not intellectually, but

8 just experiences. If properly done, the advisory speed

9 will be the design speed of the curve.

10 If you drive your vehicle at that speed, all of the

11 forces on you are neutralized; therefore, you feel very

12 comfortable sitting in your vehicle as you go around the

13 curve. If you drive faster than the design speed, then

14 you feel centrifugal force throwing you forward, outside

15 of the curve. You'd better hang on to the steering

16 wheel, depending upon how much faster you are going.

17 On the other hand, if you go slower than the

18 advisory speed, then you feel gravity pulling you into

19 the curve; and again you are either ending up against the

20 door or hanging on to the steering wheel.

21 So if the design speed is 35 miles an hour and if

22 you drive 35 miles an hour, you are very comfortable

23 sitting in the car. There are no forces acting on you.

24 If, on the other hand, the design speed is higher

25 than 35 -- if it, for instance, is 45 and you're driving

Page 50

1 it 35; you feel uncomfortable. So to attain that feeling

2 of comfort, you will speed up.

3 Q What was the speed limit through this section of

4 roadway?

5 A 55, I believe. Yes.

6 Q And am I correct in thinking that you believe the

7 advisory speed should have been 45?

8 A Associated with the curve sign, yes. If the state

9 follows their policies, yes.

10 Q So you believe the advisory speed should have been

11 45 miles an hour associated with that left -- I think you

12 said left reverse curve sign.

13 A Correct.

14 Q Is there any sort of standard or technical standard

15 or something that tells you that this should be -- I mean

16 is there anything in the ODOT materials? You mentioned

17 something in your answer about according to ODOT --

18 A According to their policies.

19 Q What policies are you talking about?

20 A The sign. The manual says if you are going to put

21 up an advisory speed sign, you shall do it in such a way

22 as to properly inform the driver as to what the safe

23 speed is for the conditions, assuming that you have bad

24 weather.

25 Forget snow, ice, fog, and all that stuff; assuming

Page 51

1 that you have normal driving conditions, in that case

2 what is of concern here is the degree of curve and the

3 rate of super elevation, banking, if you will. The

4 banking of the curve.

5 Q Is there a particular page or section or chapter of

6 the manual?

7 A There is a section in the manual that describes how

8 when you have a curve the design speed can be

9 determined. There are two ways of determining it. One

10 is actually going into the field using a device called a

11 ball-bank indicator and actually driving the road at

12 various speeds, noting the readings on the device and

13 then making various adjustments. But this means you have

14 to get involved in traffic and driving at various speeds

15 and it's time consuming.

16 It's really something that two people should be

17 involved in, not one, because speed is critical. You

18 have to maintain your speed and you have to maintain your

19 alignment on the roadway. That quite often is done and I

20 know the state does do that. I know they have -- to the

21 best of my knowledge, every district has at least one

22 ball-bank indicator that they can install in a car.

23 The other way of doing it is mathematically. That's

24 determining what the characteristics of the alignment

25 are, physically determining the super elevation and the

Page 52

1 degree of curve, then getting the same results

2 mathematically. Both of these methods are explained in

3 the manual.

4 Q The 35 miles-an-hour advisory speed plate was

5 designed to warn motorists to moderate their speed as to

6 the condition of going around the curve?

7 A Correct.

8 Q Not the grade, the curve?

9 A The curve, yes.

10 Q Do you have any other opinions as to the signage?

11 A Not really.

12 Q Other than your opinion that the advisory speed

13 plate should have been 45 miles-an-hour associated with

14 the left reverse curve sign, all the other signage was up

15 to standards?

16 A Some of it's unclear as to what was in place at the

17 time. Apparently ODOT can't agree as to what was in

18 place, what size they were, and when they were in place.

19 It got a little confusing to me and I just kind of gave

20 up on it and said, "What the heck." So, you know,

21 whatever was there --

22 Q Your focus is just on that one sign, the advisory

23 speed sign, right?

24 A You asked the question. I didn't focus on anything.

25 Q Perhaps that was a bad question for you, sir.

Page 53

1 Your opinion as to signage that was in place and the
 2 only opinion you have is that the 45 miles an hour should
 3 have been a 45 miles-an-hour advisory plate?
 4 A Based on ODOT's methods of doing things and
 5 substantiated in my readings of the deposition testimony
 6 of the several people.
 7 Q Can you tell me what from the depositions
 8 substantiated that?
 9 A I think the deposition testimony of Smith states
 10 that they are not concerned with stopping sight distance.
 11 Q Why is that a problem?
 12 A Why is that a problem?
 13 Q Yes.
 14 A I didn't say it was. You said what in the
 15 deposition substantiated my opinion and I told you.
 16 Q Do you have any criticisms of that statement by
 17 Smith?
 18 A It's a statement. How can I criticize a statement?
 19 Q Well is that the way it should be done or should it
 20 be done differently?
 21 A I'm telling you that's the way it is being done.
 22 Q Is that the correct way to do it?
 23 A As with the attorney's general office, ODOT is God.
 24 If somebody tells Smith to do something, he will do it.
 25 Q But I mean you're a professional engineer, are you

Page 54

1 not?
 2 A Yes.
 3 Q According to your background, training, and
 4 education, is that the correct thing ODOT should be doing
 5 with regard to signage and sight distance?
 6 A Well now you're changing the question. They
 7 should. Where possible and where practical, they should
 8 give the needed sight distance. They should give
 9 whatever sight distance they can to approximate -- at
 10 least the speed limit of the road, if not the design
 11 speed of the road. Quite often roads are designed at
 12 higher rates of speed than they are signed for. As a
 13 traffic engineer --
 14 Q I don't understand what you said.
 15 A As traffic engineers, we have a responsibility not
 16 to fool the public. We have to advise them of the
 17 conditions as best we can so that they are prepared to
 18 handle the circumstances that they are driving into.
 19 Now it's very inexpensive to put up a sign.
 20 Relatively speaking, signs are cheap. To post signs and
 21 all that stuff is cheap. It's better to remove an
 22 obstacle than to say, "Watch out. There is an obstacle
 23 ahead."
 24 So when we're looking at sight distance, yes, we can
 25 put up a speed advisory lowering the speed limit, but

Page 55

1 sight distance is not something that the typical motorist
 2 is aware of. They don't realize that they can't see far
 3 enough to stop until a situation occurs where they have
 4 to stop and all of a sudden they realize that they can't
 5 stop in the distance they had.
 6 So the better way to do this -- as long as we're not
 7 tearing down mountains which can get very expensive.
 8 We're talking about cutting trees or cutting back
 9 vegetation. You do that so that as people are rounding a
 10 curve, they can see across the inside of the curve, away
 11 from the road, across this open area, if you will, and
 12 see what's ahead of them on the road. Not just along the
 13 road, but at an angle so they can see what's around the
 14 corner, if you will. Now they can attach some reason to
 15 the signage.
 16 As a result you put up a curve sign and you set the
 17 speed limit for the curve, whatever it is. In this case
 18 it would be 45 miles an hour. You give them enough sight
 19 distance so when they are driving
 20 comfortably -- which they are going to do anyway, most
 21 people are. When they are driving comfortably, they will
 22 have adequate sight distance so that if something
 23 transpires on the road ahead, they can do something about
 24 it and bring their car to a safe stop or whatever is
 25 necessary, adjust their speed or whatever.

Page 56

1 Q This is something a traffic engineer should be
 2 doing?
 3 A Well the traffic engineer doesn't cut the trees, but
 4 the traffic engineer makes a determination of what's
 5 necessary and would advise the appropriate parties that
 6 certain maintenance procedures have to be done.
 7 Q So it's really up to the traffic engineer to make
 8 that determination, right?
 9 A Well sight distance -- look, you're asking me to
 10 determine ODOT policy and I can't do that.
 11 Sight distance is a design feature. The design
 12 engineers are aware of it. At least they should be,
 13 because they are designing these roads.
 14 The construction engineer should be aware of it
 15 because they are building the roads.
 16 I would like to believe that the maintenance
 17 engineer, since he associates or -- they associate
 18 themselves with these other engineering disciplines,
 19 would also be aware of it. They really ought to talk to
 20 one another. It's a team effort, so there should be an
 21 awareness of what is necessary as far as stopping sight
 22 distance is concerned on all sections of the roadway, if
 23 certain things have to be done in certain areas to attain
 24 that desired result, whatever it is.
 25 The traffic engineer out there is interested in

Page 57

1 signage. And generally a traffic engineer will look at
2 things a little differently because the job of the
3 traffic engineer is to take something that is already
4 built and make it work. So when I suggested that he
5 might be the one to be aware of this, I don't think it's
6 his duty to do it. I just think because of his training
7 and because of the things he does on a day-to-day basis,
8 he's the one who more probably will be aware of it or
9 should become aware of it.

10 The maintenance engineer is saying, "Do I need to
11 cut the grass? Are there limbs overhanging the road?
12 Does the ditch need cleaning?" It's those kinds of
13 things. He's looking at things on a very microlevel, you
14 know, right here.

15 The traffic engineer has to take the long picture
16 because he has to worry about somebody that is on a 55
17 mile-an-hour road. He has to worry about somebody
18 driving 55 miles an hour. That guy really doesn't care
19 if the grass is cut or not. Who cares? So it's not his
20 duty as such, but he's the one most logically that would
21 come up with that need, if you will.

22 Q Is it in terms of roadway engineering, I guess, is
23 what we're talking about, correct?

24 A Stopping sight distance is an element of that, yes.

25 Q In terms of roadway engineering, if removing an

Page 58

1 obstacle as you say is part of that roadway engineering
2 process, is it a standard practice in this roadway
3 engineering process -- whether it be design,
4 construction, maintenance, or traffic -- to remove
5 obstacles like that?

6 Is that a standard practice?

7 A The idea is to remove obstacles.

8 Q What is the standard though? What is the standard
9 practice?

10 A It depends. The idea is to remove obstacles. If
11 the obstacle cannot be removed reasonably, then you must
12 guard against the obstacle. You do that in two ways.

13 You do that by erecting guardrails, for instance.
14 Impact attenuators, these types of devices that would
15 restrain an errant vehicle from becoming involved with an
16 obstacle. You post the appropriate signage, warning the
17 driver of a condition that either on a temporary basis or
18 on a permanent basis the driver has to live with at least
19 as he traverses his section of road.

20 Remember I talked about a mountain before this,
21 cutting back a mountain. It's easier to cut trees than
22 to shave a top off a mountain. Well it gets expensive,
23 so if the mountain is too close or if there are jagged
24 boulders or something that can't be reasonably removed,
25 then you put up a guardrail.

Page 59

1 If you're building a road and it costs too much
2 money to fill this valley next to you that's 200 feet
3 deep -- and it really would -- you put up a guardrail so
4 that an errant vehicle doesn't end up tumbling down 200
5 feet of hillside.

6 If for some reason you are resurfacing and this
7 procedure or -- maybe shoulder work requires that the
8 edge line that the driver had the benefit of for the last
9 umpteen miles is no longer there -- temporary, but it's
10 no longer there. Now you can't guard that; but you can
11 put up a sign or signs that warn motorists that, "Hey,
12 buddy, you know you've had the benefit of an edge line,
13 but you don't have it for the next umpteen miles. For
14 whatever reason, it's not your concern. You don't have
15 one."

16 So these are the techniques that we use to inform
17 the drivers of a situation and hopefully make them safer
18 drivers as they traverse this area.

19 Q Tell me if this is a fair statement then. The
20 standard with regard to this roadway engineering is to
21 either remove the obstacle and if it can't be removed,
22 then to place the appropriate signage to warn the
23 motorists of that condition.

24 A Or a guard.

25 Q Or a guard?

Page 60

1 A Right, or both. The situation might be such that
2 you use both guard and warning.

3 Q Some human being obviously had to make that
4 determination, correct? Whose responsibility is it to
5 make that determination whether they're going to remove
6 the obstacle, guard, or guard and post the appropriate
7 signage?

8 A The highway department, assuming that it's a state
9 highway.

10 Q Assuming it's a state highway.

11 A Yeah, the highway department does.

12 Q Is there a certain range of options in which they
13 can operate as to determine "Well we could do this. We
14 could do that."

15 Do they have discretion to determine what they are
16 going to do under the circumstances or is there a set
17 standard for certain conditions?

18 A Well the standard is there. How they meet that
19 standard, I think is what you are asking me, is a
20 discretionary thing. You know, that's the basis of
21 lawsuits.

22 It's a little difficult for me to pass judgement,
23 but obviously one of the constraints that the highway
24 department has is money. They have got X number of
25 dollars with which to operate and Y number of demands for

Page 61

1 those dollars. So somebody has to figure out how to
2 apportion the dollars to get the maximum benefit. That's
3 generally a judgement call.
4 Q So if the highway department has a choice between
5 removing an obstacle, like cutting down trees, and
6 putting up signage, the signage is cheaper to do and in
7 their judgement is enough to warn the motorist of a
8 hazard ahead, whatever that hazard is, then they have met
9 the standard; is that right?

10 MR. CALLAS: Objection. Go ahead.

11 THE WITNESS: I've been talking generally about
12 situations. I thought that's what we were talking
13 about. Now you're getting specific. Cutting trees
14 is not that damn expensive, so I don't believe that
15 we can equate \$100 worth of signs against \$1,000
16 worth of man-hours to cut some trees.

17 By Mr. Bachmann:

18 Q Would it be in the highway department's discretion
19 to make that judgement whether they are going to place
20 signage or cut trees? Do they have that discretion or is
21 there no discretion?

22 MR. CALLAS: Objection.

23 THE WITNESS: Well you're asking as if it were
24 an either/or. In this case they did nothing. That
25 in itself is a decision.

Page 62

1 Now I don't know if it was based on knowledge.
2 I have a hunch it was based on ignorance. They
3 didn't know that they had a problem out there. It
4 took a series of accidents to beat them over the
5 head with it to go out and take a look and figure
6 out that maybe they could improve the situation and
7 somebody saying, "Hey, okay. Go ahead. Do it."

8 By Mr. Bachmann:

9 Q When you say they did nothing, I assume you are
10 talking about ODOT, correct?

11 A Yes.

12 Q Can you be more specific when you say they did
13 nothing?

14 A Well it's my understanding that a series of
15 accidents have happened in this area before. It's my
16 understanding that they have been asked to take a look at
17 this area before and everybody seemed to think that
18 everything was honky dory.

19 It's my belief that they were limiting their view to
20 the roadway itself.

21 "Hey, we put up a hill sign. Hey, we warned about
22 the left reverse curve. We even put up an advisory speed
23 sign. What more do you want from us? We've got
24 crossbucks and flashing lights on the railroad and we've
25 got pavement markings. You know, this is high-class

Page 63

1 stuff."

2 They never looked at the road sign. They never
3 looked at the fact that people have to see around the
4 curve. They can't. Even with all of this, along comes
5 an accident where somebody is killed. Now they get
6 letters that say, "Hey, now we've killed somebody. Are
7 you going to do something yet?"

8 All of a sudden, people jump into action. Thank God
9 for state representatives.

10 Q You think it was wrong that ODOT somehow breached a
11 standard by limiting their view of this stretch of State
12 Route 93 to the roadway?

13 A Absolutely. They breached a duty of care that they
14 owe the motorists.

15 Q What is that duty of care?

16 A To make the road as safe as is reasonably possible
17 and not to confuse or not to misinform the motorist.

18 Q In this case how did ODOT confuse and/or misinform
19 the motorist?

20 A They had a curve. They had a set of curves. They
21 had a left reverse curve that was of such a design that
22 the safe speed, the design speed if you will, basically
23 was 45 miles an hour. They signed it for 35.

24 Motorists, as I told you before, drive so that they
25 are comfortable. If you come into this area and you

Page 64

1 believe the sign and you slow down to 35 when you are
2 driving the curve, you will know that something is wrong
3 and you will tend to pick up speed until you feel more
4 comfortable. You may not know why you're uncomfortable.
5 You may not know what's wrong, what fooled you. You just
6 know that 35 miles an hour is not the appropriate speed
7 for driving purposes.

8 Sight distance doesn't enter the mind of the typical
9 motorist until they need that sight distance for some
10 reason. Now the highway department posted a sign that
11 says 35 miles an hour associated with the curve. We
12 know, based on the deposition testimony of Smith at
13 least, that ODOT doesn't consider sight distance when
14 they put up these advisory speed signs. If they did, you
15 don't associate it with the curve. You put up another
16 sign that says, "Limited sight distance 35 MPH, 25 MPH,"
17 whatever it is.

18 So if you're going to tell the motorist you want
19 them to slow down because of limited sight distance, then
20 you tell them that it's limited sight distance. It has
21 nothing to do with the curve.

22 Q Is that something that's in the manual that you are
23 talking about; this limited sight distance sign?

24 A The manual is a guide for commonly used signs and
25 their application. The manual says that as a traffic

Page 65

1 engineer you have got to use your brain and you use the
 2 manual's principles, apply those principles to the
 3 situation, and develop the required traffic control
 4 devices that you need to handle this particular
 5 situation.
 6 If it means you have to develop a new sign, if you
 7 will, a sign with a particular legend that may not be in
 8 the manual or you may not have on the shelf someplace, so
 9 be it. You do what you have to do. It's done all of the
 10 time.
 11 Q Is this limited sight distance sign one of the signs
 12 in the manual or is that something that you have to
 13 develop?
 14 A I'm sorry. I'm not getting through to you. I'm not
 15 sure if it's in the current manual or not. I didn't
 16 look. In this instance I didn't think it was important,
 17 because it was so inexpensive to cut back the
 18 vegetation. No traffic engineer worth his salt would
 19 even think about putting up a sign rather than cutting
 20 back the vegetation.
 21 Q Let me try to summarize the point I think we're at.
 22 So it's your opinion that the history of this particular
 23 location, this particular stretch of State Route 93
 24 between Orrville Street and the railroad tracks -- more
 25 specifically from the area of the railroad tracks -- was

Page 66

1 such that ODOT had a duty to trim back that vegetation,
 2 to cut back the vegetation?
 3 A Yes, sir.
 4 Q How far does that duty extend in terms of cutting
 5 back the vegetation?
 6 A Obviously to the right-of-way line. They don't
 7 control anything beyond that.
 8 Now the highway department can, if necessary, go to
 9 private property owners and ask permission to go beyond
 10 the right-of-way and make whatever adjustments are
 11 necessary.
 12 Stark County has a history of doing this to improve
 13 sight distances at intersections. They have been cutting
 14 back fields, banks on fields. It doesn't belong to the
 15 county. They approach the farmer and ask if they can
 16 come in to grade back to this particular field and they
 17 show the farmer how they are going to do it. They make
 18 the change to open up the cross corner sight distance at
 19 intersections. The land still belongs to the farmer.
 20 Obviously money is being spent on private property,
 21 but it's being spent for a public safety purpose, so it's
 22 legal.
 23 All I'm saying is you don't have to go out and use
 24 eminent domain to buy a farmer's field to accomplish your
 25 need. You don't necessarily have to buy a couple of

Page 67

1 acres of land to cut down a couple of trees if it's
 2 necessary. I'm not suggesting that in this case it was.
 3 All I'm saying is ODOT has the responsibility to look at
 4 their entire right-of-way and see if there is anything
 5 they can do within those limits to maximize safety.
 6 If they find in that investigation that they can
 7 partially meet the needs of traffic -- but it better meet
 8 the needs of traffic. If they went beyond the limits of
 9 the right-of-way, then they have two options. They can
 10 acquire additional right-of-way or if it's something
 11 simplistic like cutting back vegetative growth or cutting
 12 back a farmer's field, then the least expensive and most
 13 expedient method would be just to approach the land owner
 14 and ask permission, obviously paying the expense of doing
 15 it because it's for a public good. The farmer doesn't
 16 need it. So as long as ODOT or whoever pays the costs
 17 involved, that would be the better way to go. I believe
 18 ODOT along with any public agency has that duty.
 19 I had that duty when I was traffic engineer in
 20 Erie. I utilized it. I went to private property owners
 21 to ask them to cut evergreen trees so there would be a
 22 view underneath the canopy of the evergreen trees so that
 23 people at a stop sign could see oncoming traffic.
 24 Q It's your opinion that there was limited sight
 25 distance around this second curve?

Page 68

1 A Absolutely.
 2 Q Limited sight distance to where?
 3 A To where?
 4 Q Yes.
 5 A Stopping sight distance.
 6 Q At some point -- you mean to a fixed point in the
 7 roadway? Tell me how that works.
 8 A To any point in the roadway. How do you know when
 9 you're going to run across something in the roadway that
 10 you are going to have to react to?
 11 Q So there is --
 12 A It's a constant thing as you go along the road. How
 13 far down the road can you see?
 14 Q So anytime that -- and I'm sure you'll correct me if
 15 I'm wrong. Anytime according to the design speed of the
 16 roadway that there is not adequate sight distance and
 17 there is some sort of obstacle, like around a curve, ODOT
 18 has a duty to -- if there is brush there -- to cut back
 19 to the right-of-way?
 20 A If necessary. If you don't have to cut back to the
 21 right-of-way, you don't cut back to the right-of-way.
 22 I'm not saying you've got to clear-cut everything.
 23 You look at the individual situation and whatever
 24 the needs are you accomplish it. You may only have to go
 25 back 10 feet and you've got 50 feet, so go back 10 feet.

Page 69

1 Go back 12 feet, whatever works for the maintenance
2 people.
3 Remember, this is not something that ODOT does all
4 the time. If you don't want a no-passing zone, ODOT
5 makes a determination as to when it's safe to pass or
6 not. All I'm saying is they can't reasonably make a
7 determination and advise the motorist the way they can
8 with yellow lines as to what the safe stopping sight
9 distance is. They tell them what the safer passing
10 distance is, but not the stopping sight distance. So if
11 you can't tell the motorist, then at least give him the
12 stopping sight distance that he needs if it's within your
13 reasonable control to do it.
14 Q In reasonable control within the right-of-way?
15 A Within the right-of-way, as long as you
16 know -- obviously if we've got a hill sign here, I'm not
17 telling you you've got to blast away half a mountain to
18 do it.
19 Q At what point in time does this duty arise when they
20 build the roadway? When you discover there are accidents
21 at locations?
22 A When they build the roadway these things are looked
23 at. That's part of the design standard. The problem is
24 roads that have been in existence for a while, you will
25 be told that they weren't designed. That's a lot of

Page 70

1 malarky. Maybe an engineer didn't sit down and draw a
2 sophisticated set of plans like similar to what they
3 would do today, for instance, but somebody did
4 something. That road didn't just happen.
5 Over time -- if you go back in history enough, some
6 of these roads believe it or not date back to nothing
7 more than animal paths through the forest. Over time
8 they are used by various people and things are cut back.
9 Back in the 20s and 30s, it was "Get us out of the
10 mud," so we started paving roads. Dirt roads and stone
11 roads began to be paved, so roads happened. But they
12 happened in an organized fashion, so there are design
13 standards whether the road was designed or not.
14 The people who maintain the roads -- I'm not talking
15 just about maintenance or the maintenance department, I'm
16 talking about the people who have the responsibility for
17 the road in question, who have to look at what the design
18 standards are existing on that road --
19 Q So --
20 A -- and act accordingly.
21 Q So when this road was built and around that curve
22 you had the 45 miles-an-hour design speed and those trees
23 were there, they should have cut back to whatever line
24 they had to cut back to in order to get this accurate
25 sight distance?

Page 71

1 A Unless it was one of those roads that dates back to
2 the early 1800s before we even had automobiles. Then at
3 some point when these roads were built for automobiles
4 and engineers started to take a look at this thing,
5 that's when something should have been done.
6 Q Would you agree with me that on the date of this
7 accident, July 12, 1996, the driving conditions were
8 ideal?
9 A No.
10 Q Why not? I mean other than the trees -- I
11 understand you have a problem with the vegetation.
12 A Well that goes a long way. If you can't see far
13 enough to stop --
14 Q Other than the vegetation.
15 A It was not ideal. The highway department
16 misinformed the motorist as to the design speed of the
17 curve.
18 I don't know what the pavement surface conditions
19 were like at the time. You seem to be telling me that
20 there might have been an accusation that there was an
21 oily substance on the road that might have contributed to
22 the occurrence of an accident. That's not ideal. I'm
23 not saying that's something that you have to live with,
24 but it doesn't make it ideal.
25 Q How about the weather conditions?

Page 72

1 A I understand it was a sunny day, so to that extent
2 it's the design weather conditions. You don't have
3 inclement weather.
4 Q What do you mean design weather conditions?
5 A I thought I explained that before. We assume that
6 you have noninclement weather, if that's a word. We
7 assume that you have nice weather conditions as opposed
8 to rain, fog, sleet, snow, ice, etc.
9 Q Assume for what purposes?
10 A Design purposes. 55 mile-an-hour signs, for
11 instance, are -- well the speed limit in the State of
12 Ohio is prima facie. That means speed reasonable for
13 conditions. The 55 mile-an-hour and the 35 mile-an-hour
14 sign are for normal conditions. Normally -- although
15 today is not a perfect example, normally here in Ohio we
16 have more noninclement weather conditions than we have
17 inclement weather conditions.
18 Q Correct me if I'm wrong, but you don't have an
19 opinion as to the condition of the pavement or whether
20 the stopping conditions were good?
21 A You mean as far as the characteristics of the
22 surface of the road are concerned?
23 Q Yes.
24 A No, other than what you were alluding to earlier.
25 Q Since I gather you didn't do an accident

1 reconstruction, then let's go to Exhibit C, Page 2.
 2 A I'm there.
 3 Q On Page 2 you've got points which you call your
 4 analysis and evaluation work. Are these factual
 5 observations really?
 6 A It's setting the scene, if you will.
 7 Q Going to No. 5 on Page 2 of Jackman Exhibit C, do
 8 you know how many vehicles were stopped at the railroad
 9 crossing grade?
 10 A I suppose I can look it up. I don't know, three or
 11 four, something like that.
 12 Q Does the number of vehicles have any bearing on your
 13 opinion?
 14 A No. It would just change the point of impact.
 15 Q In No. 6 here on Page 2 of Jackman Exhibit C, it has
 16 "That Eugene Ruegg was southbound on State Route 93 at a
 17 stated speed of 45 miles an hour."
 18 Where did you get that information?
 19 A Police report.
 20 Q Does that have any bearing on your opinion?
 21 A All this does is set the scene.
 22 Q It doesn't figure into the opinions that you have
 23 arrived at, though, the speed of his vehicle and whether
 24 he was going 45 or 105?
 25 A Well I made some observations in my opinion,

1 statements as to what he could or couldn't have done had
 2 the vegetation been cut back, so 105 wouldn't work.
 3 Q Obviously I was being extreme.
 4 A I know, but to that end I did use the 45.
 5 Q Do you know at what point in the curve he became
 6 aware of the stopped vehicles?
 7 A No. That would be a reconstruction element. I'd
 8 have to back up from the skid marks, make assumptions as
 9 to his perception/reaction time.
 10 Q You haven't done that, correct?
 11 A I haven't done a reconstruction.
 12 Q Do you intend to do such --
 13 A I haven't been asked to do it.
 14 Q Let me just ask a series of questions about it. I
 15 guess it would be true that you don't know how fast he
 16 was going when he saw the vehicles or how fast he was
 17 going when he applied his brakes, etc.?
 18 A Well they would probably be the same speed; but what
 19 that speed was I don't know other than the police officer
 20 indicates an estimate of 45.
 21 Q Let's go down to No. 7. You said: "There was no
 22 advisory speed plate W-143 supplementing the Hill sign."
 23 Is there a requirement for that?
 24 A There is never a requirement for an advisory speed
 25 sign. There are suggestions as to when one should be

1 used, yes or no.
 2 Q So that would be a discretionary thing in other
 3 words?
 4 A Yes.
 5 Q You're talking about the Ohio Uniform Manual of
 6 Traffic Control Devices, correct?
 7 A Correct.
 8 Q That's the standard that you apply with regard to
 9 signage in the State of Ohio?
 10 A By law that's what we apply, yes.
 11 Q In No. 8 you also say, "About 426 feet north of the
 12 start of the left reverse curve" -- let me withdraw that
 13 and start again.
 14 "At about 426 feet north of the start of the left
 15 reverse curve ODOT had installed a pair of left reverse
 16 curve signs."
 17 Who did that measurement?
 18 A We did when we were out there.
 19 Q Did you do it or did Lyn do it?
 20 A I was recovering from hip replacement surgery, so
 21 she did most of the walking. Since we're talking about
 22 an 8 percent grade --
 23 Q How did she measure that?
 24 A We have a wheel.
 25 Q Did you do any surveying when you were out there or

1 did Lyn do any surveying?
 2 A I'm assuming you mean with a transit and level --
 3 Q Or with an EDM or whatever.
 4 A No.
 5 Q Did the foliage obstruct any of the signage?
 6 A No.
 7 MR. SOLES: At what point in time?
 8 By Mr. Bachmann:
 9 Q To your knowledge, at the time of the accident?
 10 A No.
 11 Q So again, in your mind the issue is not whether they
 12 could see the warning, it was whether the warning was the
 13 right warning?
 14 A Warning has nothing to do with this other than you
 15 misinformed the motorist as to the proper speed at which
 16 the curve should be taken. The problem is you didn't
 17 give the motorist adequate stopping sight distance so
 18 that if a problem arose at the design speed of the curve,
 19 the motorist could take appropriate action.
 20 Q You mention in No. 10 a letter from State
 21 Representative Johnnie Maier.
 22 What bearing does that have on your opinion?
 23 A I am setting the scene. Why else would David Ray,
 24 maintenance area engineer, decide to undertake an
 25 investigation? I'm saying that he did that because he

Page 77

1 was prodded to do it, and because of that certain things
 2 happened.
 3 Q Did you talk to Mr. Maier?
 4 A No.
 5 Q You haven't read Mr. Ray's deposition?
 6 A Yes, I did.
 7 MR. BACHMANN: Would you like to stretch your
 8 legs for a moment?
 9 THE WITNESS: Would you mind?
 10 (Thereupon, a recess was taken.)
 11 By Mr. Bachmann:
 12 Q Mr. Jackman, let's go to Jackman Exhibit C and Page
 13 3 of that. Again, all your opinions are contained on
 14 Pages 3 and 4 of Jackman Exhibit C, Items 1 through 10?
 15 A Yes.
 16 Q Did you actually drive the roadway? I mean I know
 17 you're out there looking at the scene, making
 18 observations, taking measurements, etc. You were trying
 19 to get the lay of the land, so to speak, but did you
 20 actually drive up and down the roadway?
 21 A I went up and down once.
 22 Q In what type of vehicle?
 23 A My car.
 24 Q What kind of car?
 25 A It's a Lincoln Town Car.

Page 78

1 Q How fast did you go coming down?
 2 A I don't know. I never paid much attention to it.
 3 Q Now you said the design speed of the left reverse
 4 curve is 45 miles an hour, correct?
 5 A Yes, that's what I said.
 6 Q Now is that -- when we're talking about the left
 7 reverse curve, is that when you are coming down that
 8 hill, you make one to the left and one to the right down
 9 to the railroad tracks?
 10 A That's why it's called a left reverse curve.
 11 Q Is that 45 miles-an-hour design for the entire curve
 12 or just for segments of it?
 13 A One is 45 and one is 46.
 14 Q May I see the document that you are referring to.
 15 A Signs are made at 5 mile-an-hour increments. We
 16 don't put up a sign that says 46 miles an hour. We go to
 17 the nearest 5-mile increment. When we have 45 and 46,
 18 clearly the appropriate sign is 45.
 19 Q Which one is 45 and which one is 46?
 20 A I say curve number one -- and I'm trying to remember
 21 which one curve number one is. Since there is only one
 22 mile an hour difference, it really doesn't matter.
 23 Q It's a minimal difference?
 24 A One mile an hour, absolutely.
 25 (Thereupon, Jackman Exhibit D was marked

Page 79

1 for purposes of identification.)
 2 By Mr. Bachmann:
 3 Q Let me hand you what has been marked as Jackman
 4 Exhibit D. You also have an original in front of you.
 5 Can you tell me --
 6 A Is this everything?
 7 Q Make sure that's complete.
 8 A Okay. Go ahead.
 9 Q Can you tell me what page you got that information
 10 from.
 11 A Which information?
 12 Q What you just testified as to the design speed of
 13 the curve.
 14 A Design speed of the curve I got from this page.
 15 (Indicating.)
 16 Q I am just going to mark these one through whatever.
 17 A Be my guest. They are your exhibits.
 18 Q It's a nine-page exhibit and you are talking about
 19 the seventh page; is that right?
 20 A According to your numbering, yes.
 21 Q These are the calculations you used to arrive at the
 22 design speed?
 23 A Yes.
 24 Q The measurements, the chord, middle ordinate, and
 25 super elevation were taken from that one ODOT drawing?

Page 80

1 A No, this was done from the fieldwork that we did.
 2 Q Are those notes contained in your personal notes,
 3 your notes from the fieldwork?
 4 A That's this. (Indicating.)
 5 Q The drawing that you did?
 6 A Well it's not -- I wouldn't classify it as a
 7 drawing. It's just field notes really. It's always the
 8 last one.
 9 (Thereupon, Jackman Exhibit E was marked
 10 for purposes of identification.)
 11 By Mr. Bachmann:
 12 Q So Exhibit E is the sketch?
 13 A Yes, sir.
 14 Q These were notes made in the field?
 15 A Yes, sir.
 16 Q Then these notes translate into the design speed
 17 calculations that you made on Page 7 of Jackman
 18 Exhibit D?
 19 A Well I used some of the information contained in
 20 this field worksheet to make the determination of the
 21 design speed which occurs.
 22 Q On Page 7 of Jackman Exhibit D, you've got some
 23 measurements here at the top right of each edge line.
 24 You have 168.9 feet right at the center southbound line,
 25 655.9, etc. Then you have similar measurements and 602

Page 81

1 for the second curve.
 2 Where do these measurements come from?
 3 A If you're in the same order I am, this is
 4 seven. Look at the last page.
 5 Q Okay.
 6 Can you show me or are you able to show me on
 7 Jackman Exhibit E?
 8 A Which one is E?
 9 Q The sketch where those measurements came from.
 10 A They are not on E.
 11 Q Can you show me, for example, on the last page of
 12 Jackman Exhibit D, which is Page 9, it says, "Curve to
 13 radius of west edge line."
 14 I guess the R meant radius -- approximately 602
 15 feet. Can you show me where that measurement -- roughly
 16 where on Exhibit E that measurement occurs?
 17 A It doesn't.
 18 Q Okay.
 19 Tell me how you got that measurement.
 20 A It's calculated down here on Page 7. And if you'll
 21 look at curve two, you'll see R of west edge line is
 22 602.0. This is a simplistic formula. If you know the
 23 chord and you know the middle ordinate, then you can
 24 determine the radius of the circle. Apparently I just
 25 punched it out of the chart. I didn't bother writing it

Page 82

1 down.
 2 Q So you used the chord and the ordinate for all these
 3 radiuses of the edge line and pavement edges, etc?
 4 A No. As far as pavement edges and center lines are
 5 concerned, I used the one over here on E. There is a
 6 cross-section of the road.
 7 Q Where it says, "Edge to edge"?
 8 A Correct, yes. So I knew where the pavement edge was
 9 and the edge lines and so on. I could then adjust that
 10 so that I could get to the center line and use it. We
 11 didn't want to go stand out in the middle of a 55
 12 mile-an-hour road with 100 foot tape, then run to the
 13 middle of that tape and measure the middle ordinate.
 14 It's not safe. So we do it off on the berm and then
 15 mathematically add to it. We know that if you're out
 16 measuring the inside of the curve, the radius gets
 17 longer. The farther out you go -- as the curve gets
 18 bigger, the circle gets bigger and the radius gets
 19 longer.
 20 Q Did any trains pass through while you were out there
 21 on February the 26th?
 22 A Darned if I know.
 23 Q So simply put, opinion No. 1 is what the design
 24 speed is, 45 miles an hour of the left reverse curve, and
 25 that if a driver drives at that speed around the curve

Page 83

1 they will be comfortably positioned.
 2 Basically that's what you are saying?
 3 A Yes.
 4 Q Now for what type of vehicle is this design speed?
 5 A ~~truck or a passenger vehicle or what?~~
 6 A We're talking about centrifugal force, the gravity
 7 being balanced. What difference does it make what you're
 8 riding in?
 9 Q That's what I'm asking you.
 10 A ~~I'm telling you it makes no difference. We are not~~
 11 ~~talking about vehicles. We are talking about forces~~
 12 ~~acting out on the body.~~
 13 Q So it could be Mr. Ruegg's tractor/trailer rig or it
 14 could be a regular old sedan?
 15 A Yes.
 16 Q It doesn't matter?
 17 A Yes.
 18 Q You didn't use a ball-bank indicator that day?
 19 A It takes too much time. It would cost the client
 20 too much to do that. No, I did not.
 21 Q Is that a preferable method or more accurate method?
 22 A You really haven't been listening to my answers.
 23 No. It's an alternate method. It's what the highway
 24 department uses. Why is beyond me. It just means that
 25 they don't have to do the kinds of things that I did, get

Page 84

1 out of the car and take some measurements or go to a set
 2 of plans and use the geometric information contained in
 3 the plans.
 4 Q Both would yield the same result, right?
 5 A If the ball-bank indicator is properly handled. Now
 6 I gave you a five-minute dissertation on the shortcomings
 7 of a ball-bank indicator. If you want me to go through
 8 it again, I will, but it is critical. It's kind of like
 9 a computer. Garbage in is garbage out.
 10 I told you that the line of the car and the roadway
 11 must be constant. You can't move back and forth between
 12 the edge line and the center line. You have got to keep
 13 the same spacing. Your speed must be kept constant.
 14 Since the driver is concerned with both speed and
 15 alignment, that same person cannot take readings of a
 16 moving weight inside a bubble of glycerin, so a second
 17 party is needed. How good can they read that ball-bank
 18 indicator? It's a very gross instrument. It is not a
 19 precise reading. It is not digital. It's an old -- if
 20 you have ever ridden in old airplanes, this is the old
 21 horizontal instrument for the small planes. That's all
 22 it is, yes.
 23 Q What is the required sight distance for such a curve
 24 with a design speed of 45 miles an hour?
 25 MR. SOLES: This particular curve or what curve?

Page 85

Page 87

1 are you talking about?

2 THE WITNESS: 45 miles an hour, minimum 325,

3 preferred 400.

4 By Mr. Bachmann:

5 Q Now that's minimum and preferred stopping sight

6 distance, right?

7 A Yes.

8 Q That's per the LMD Manual, correct?

9 A Yes, sir.

10 Q What section of that are we talking about?

11 A Hell, it was something that you sent to them.

12 Q Why don't you tell me what you are looking at

13 there.

14 A 201.1, reference section 201.2.

15 Q Now is this for -- are there any assumptions that go

16 into this stopping sight distance of 325 to 400 feet?

17 A The minimum is based on average running speed and

18 driver's reaction time of two and a half seconds. The

19 preferred is based on stopping sight distance and -- I'm

20 sorry. The preferred stopping sight distance is based on

21 the design speed and a driver's reaction time of two and

22 a half seconds.

23 Q Could you go through that again a little more slowly

24 for me. The minimum was based upon an assumption of the

25 average running speed of --

Page 86

1 A Not the average running speed. Whatever it says,

2 you know, pick a number.

3 Q -- 45 miles an hour?

4 A If we're working on that assumption, yes.

5 Q On a 45 mile-an-hour design speed?

6 A If we're assuming a 45 mile-an-hour design speed,

7 the minimum is based on the average running speed. ODOT

8 assumes that people drive under the design speed. This

9 is a rather antiquated idea, but that's their basic

10 assumption. It assumes a driver's reaction time of two

11 and a half seconds.

12 Now the preferred -- the higher number is based on

13 the design speed -- in other words, 45 miles an hour, not

14 41 or 42 -- and the same reaction time of two and a half

15 seconds.

16 Q Now how is that two and a half second reaction

17 time -- why two and a half seconds?

18 A That's the design standard.

19 Q Do you know what factors go into that?

20 A There are no factors. It's a given number.

21 Q How do they get that number? Is it arbitrary?

22 A Yes.

23 Q Somebody said, "Well let's figure at two and half

24 seconds to react at 45 miles an hour. That's what we

25 get."

1 A It doesn't matter how fast you are going. Two and a

2 half seconds reaction time -- two is the specific

3 impetus. It's used for design purposes. You've got to

4 have something.

5 Q Why not three seconds? Why not five seconds?

6 A I don't know. Why not?

7 Q You don't know why? In other words --

8 A I'm telling you the standard is two and a half.

9 Q I'm asking you if you know why it's two and a half.

10 A Because ASHTO said so.

11 Q Do you know why ASHTO said so?

12 A Jesus Christ. There are certain things that are

13 given, okay? An individual doesn't fight it. This stuff

14 happens over time. A lot of research has gone into

15 developing what a reasonable design reaction time is.

16 How they finally arrived at it is beyond me. It was done

17 by a committee. That means it's a camel, not a horse.

18 But these things are given and it is a standard.

19 Now if you don't like it, I don't care. I'd be more

20 than happy to make it three. If it's three, you would

21 need more distance. We know that in a panic situation,

22 perception/reaction time is less. But we also know that

23 the typical driver doesn't -- the need for reacting to

24 traffic control devices is different from the need to

25 react to somebody who darts out in front of you from

Page 88

1 behind a parked car.

2 So we use two and a half seconds reaction time for

3 design purposes and for everything. We use it when we

4 post a sign that tells a driver that there is a curve

5 that he's got to slow down for or tells the driver there

6 is a hidden driveway ahead. We know the drivers are not

7 driving focused on the road ahead. It's not reasonable.

8 It's not safe. They have got to know what's going on

9 around them. That means they are looking in their

10 rearview mirrors and their side-view mirrors so when the

11 object first is capable of being viewed by them, they may

12 not be looking in that direction. So if you give them

13 two and a half seconds, hopefully if they happen to

14 glance in their rearview mirror, within that two and half

15 seconds' time their view will come back to the road

16 ahead. They will see the sign or they will see the need

17 to adjust their speeds accordingly.

18 We don't design so that people are put in a sudden

19 emergency situation. That's not good design. But you

20 have a good question. Why not three seconds? I don't

21 know. Somebody has decided in their virtual wisdom that

22 two and half is appropriate.

23 Q Now ASHTO, is that a recognized standard-setting

24 body?

25 A It sure is. At least the State of Ohio says if it

1 doesn't tell you in our book, use ASHTO.
 2 Q Is ASHTO the State of Ohio standard or is that a
 3 national organization?
 4 A No. If you want federal dollars, you'd better
 5 follow ASHTO standards. If you want to know what it
 6 means, you should have asked that.
 7 Q Is ASHTO something that you recognize as a standard
 8 authority for this type of thing?
 9 A Not me. In the industry.
 10 Q In the industry?
 11 A The State of Ohio recognizes it as an authority.
 12 Q But also the engineering industry too recognizes it,
 13 correct?
 14 A I thought we were talking about the department of
 15 transportation, their engineers.
 16 Q Well you are an engineer. I mean you recognize it
 17 as an authority, don't you?
 18 A What difference does it make if I recognize it? The
 19 important thing is that the State of Ohio recognizes it.
 20 Q Do you recognize it?
 21 A Of course I do.
 22 Q Thank you.
 23 Now in terms of this reaction time, do you know what
 24 goes into that? Is that for a particular vehicle that's
 25 being driven?

1 A Perception/reaction time goes with the individual.
 2 The vehicle doesn't respond to a sign, the driver
 3 responds to the sign.
 4 Q So again, that could be a driver in a semi-tractor
 5 truck and a driver in a sports car?
 6 A That's a redundant question. Obviously, yes.
 7 Q I think somewhere I saw where you had an 8 percent
 8 or 8.3 percent grade.
 9 A It's about 8 percent grade.
 10 Q Does that sound about right?
 11 A You probably saw it on that drawing.
 12 Q I think you're right. That does not come into play
 13 with regard to the design speed of this curve, right?
 14 A No.
 15 Q We talked about reaction time. We may have covered
 16 this, but I want to make double sure.
 17 With regard to the actual stopping sight distance at
 18 the 45 miles-an-hour design speed, you have got a minimum
 19 of 325 feet and the preferred feet of 400 feet, correct?
 20 A If you are using the design speed, it's 400. If you
 21 are using the so-called operating speed, then it's 325.
 22 Q That's for any type of vehicle? That's just what
 23 the standard is?
 24 A That's what the standard is. Obviously a truck
 25 needs greater distance to stop than a passenger car, but

1 the feeling is, at least as far as the law is concerned,
 2 the truck driver knows the shortcomings of his vehicle.
 3 Any driver knows the shortcomings of his or her vehicle
 4 and they have to accommodate that into their thinking as
 5 they drive down the road.
 6 Again, our speed laws are prima facie, reasonable
 7 for the conditions. One of the conditions that must be
 8 taken into consideration is the vehicle itself. So if
 9 your brakes are bad, you'd better not drive as fast as
 10 you would if the brakes are good.
 11 Q Let's go to Jackman Exhibit C and No. 3. I'm
 12 sorry. Let's go to No. 2.
 13 So it's your understanding the branches extended to
 14 the pavement edge? Is that to the pavement edge? Not to
 15 the edge of where the stripe is on the side, right? Is
 16 that what you are talking about ---
 17 A Yes.
 18 Q -- to the point where the back-up material would be?
 19 A This is a variable. I'm generalizing here. The
 20 state only cuts back a certain height. They cut back
 21 four to five feet, but they only go up so high. They
 22 disregard trucks basically. They also disregard
 23 motorcycles.
 24 That has nothing to do with this case, but I've
 25 been involved in so many of these things. The state

1 assumes that these vehicles are unique and they don't
 2 exist. They concern themselves with the average
 3 motorist, John Doe, the driver in the pickup truck, the
 4 passenger car, and the van. That's what they are
 5 concerned with.
 6 Trucks will cut their own trees if you have enough
 7 trucks on the road. You look at the canopy of the tree
 8 limbs over the roadway, you will see the profile of the
 9 trucks that have gone by. They'll knock off the leaves
 10 and they will knock off the branches. So depending upon
 11 how close the trucks drive to the edge of the road, that
 12 is where the branches are. You know, it's going to vary.
 13 Q In No. 2 here on Jackman Exhibit C of Page 3 of that
 14 exhibit you say, "The foliage acted as a view obstruction
 15 to any driver of a large truck."
 16 You're not talking about foliage that extended into
 17 the roadway itself, correct?
 18 A Correct.
 19 Q You are talking about being able to see through the
 20 curve to what's down below?
 21 A Correct.
 22 Q The standard you are advocating would allow the
 23 driver in this particular circumstance to see through
 24 that curve to what's down below, correct?
 25 A By cutting back the foliage, yes.

Page 93

1 Q What you used to determine the basis for your
2 opinion in No. 2 were the photographs?
3 A As far as this written report is concerned, yes.
4 It's substantiated in subsequent deposition testimony.
5 Q Okay.
6 In No. 4 you say, "ODOT knew, or should have known,
7 that trucks regularly use this route."
8 A Yes.
9 Q I guess my question is -- and I don't want to be
10 smart about it, but so what. What is the point here?
11 A The point -- if you'll read down lower you'll see
12 that because of the various setbacks of the vegetative
13 growth, the driver of a large truck was at a greater
14 disadvantage than was the driver of a passenger car.
15 Both of them were at a disadvantage. Neither had
16 adequate stopping sight distance.
17 Q Why was the driver of a large truck at a greater
18 disadvantage?
19 A Because the foliage at his eye level was hanging out
20 farther over the roadway or closer to the edge of the
21 road than was the foliage for the passenger car driver.
22 Q Let's go to No. 5. You say that, "The available
23 stopping sight distance was nominally 175 feet at the eye
24 level of drivers at large trucks and 220 to 225 at the
25 eye level of passenger vehicle drivers."

Page 94

1 Can you tell me or show me where you calculated that
2 or how you figured that?
3 A I used the construction drawings.
4 Q Can you pull that out and just give me a brief
5 description on what you did. What is the drawing
6 called? You had a name for it earlier.
7 A I call it line and grade.
8 Q Line and grade is what you called it. Looking at
9 the line and grade drawing, tell me what you did.
10 A I went from -- this is the center line of the road.
11 (Indicating.) So I went from -- I determined where the
12 pavement edge was -- actually where the two driving lanes
13 were. I went to the center of the driving lane and to
14 the center of the other driving lane.
15 Based upon where the foliage was in the drawing
16 itself, we knew that the state cut back the low stuff 5
17 to 7 feet. We know that for practical purposes the
18 overhead foliage was up to the edge of the road. As far
19 as large trucks are concerned, to the eye level of the
20 higher driver, so it's just a matter of going from center
21 of road to center of road and determining what the sight
22 distance is.
23 Q So what did you do? You just took a rural tour and
24 you somehow figured along the center line?
25 A It's a scale drawing. What are you asking me?

Page 95

1 Q Well I mean do you actually -- on the center line --
2 A These are station numbers.
3 Q Show me how you count.
4 A Well each station is 100 feet.
5 Q So going around this -- we'll call this the second
6 curve, the reverse curve closest to the railroad tracks.
7 A This is the one near the tracks. Here's Orrville
8 Street. (Indicating.)
9 Q Going toward Orrville Street, this sight distance is
10 at what point along the roadway?
11 A Center of lane to center of lane.
12 Q Continuous around the reverse curve?
13 A Well, yeah, but I assumed that it was uniform. I
14 assumed that the foliage up to about 5 feet was cut back
15 5 to 7 feet. Above that it was to the edge of the
16 pavement because they don't cut high and the trucks would
17 beat back whatever was up there.
18 Now, as I said, it's not uniform. I mean the state
19 doesn't go out there with a yardstick and precisely cut
20 back exactly -- that's why they say 5 to 7 feet. It
21 isn't precise. It's someplace in there, so it's going to
22 vary depending upon what's there.
23 It's the same way with the overhead stuff, depending
24 on where the trucks are as they follow the curvature of
25 the road. We are going to get branches lopped back and

Page 96

1 maybe some are hanging out as far as the white edge
2 line. Others might be farther back, if trucks go over
3 the white edge line. The white edge line and the edge of
4 pavement are not one and the same, so it can be anyplace
5 in there.
6 Q So in going to Jackman Exhibit C at No. 5 on Page 3,
7 Mr. Ruegg had 175 feet of available stopping sight
8 distance?
9 A That's why I say nominally.
10 Q So there is a minimal or maximum?
11 A You know, plus or minus. I don't know. Nobody can
12 prove it one way or the other. The stuff is gone. It
13 depends on where we are in space, because it's not
14 uniform. It isn't a brick wall that somebody has nicely
15 laid up.
16 Q Can you tell me where, relatively speaking, this 175
17 feet of stopping sight distance was?
18 A In the curve and along the entire length of the
19 curve. As he moves forward, he can see the -- this is a
20 uniform curve. It's a simple curve. The radius remains
21 the same. So if you're here, you can see 175 feet. When
22 you move another 100 feet ahead, you can still see 175
23 feet. It's a different 175 feet, because you have
24 moved. But that's all you can see ahead until you get
25 past the point, wherever that is, that the foliage is

Page 97

1 interfering with your view.
 2 ~~At some point the curve ceases being a curve and~~
 3 ~~it's very -- the PC, the point of curvature or where the~~
 4 ~~curves ends if you are southbound; from that point on,~~
 5 ~~the road is tangent or straight. So the closer you get~~
 6 ~~to that point, the less the foliage is going to be~~
 7 ~~obstructing your view. That's assuming that the foliage~~
 8 ~~is uniform all the way along here.~~
 9 Even if it's along the tangent, at some point when
 10 you hit the railroad tracks -- even if the foliage is
 11 still back to the edge of the pavement, as long as the
 12 road is straight, you can see forever. Now the trees
 13 don't bother you.
 14 Q You don't know how much available stopping sight
 15 distance Mr. Ruegg had for that minivan that was sitting
 16 there in the road, do you?
 17 A No. ~~He had an average of 175 feet as he was~~
 18 ~~approaching.~~
 19 Q ~~As he was approaching, but you don't know if he had~~
 20 ~~175 or 225 feet or 300 feet before he saw that minivan,~~
 21 ~~do you?~~
 22 A I doubt very much if it was 300.
 23 Q You don't know if he did?
 24 A I know it wasn't 300.
 25 Q Okay.

Page 98

1 How do you know that?
 2 A The vegetative growth was too dense.
 3 Q Can you give me a maximum that he would have had?
 4 A Now come on now. We've been talking about
 5 averages. Don't try to pin me down. I don't know. The
 6 cops don't know. The state doesn't know, and they cut
 7 the trees down.
 8 Q You don't know?
 9 A And I don't know.
 10 Q Good.
 11 A But I know what the average growth was and I know
 12 how it limited it and I know that that van was in the
 13 curve. This accident happened while still in the curve,
 14 not on the straightaway.
 15 Q Let's go to No. 6 of Jackman Exhibit C on Page 3.
 16 So the design speed for large trucks and for passenger
 17 vehicles correlates to the available stopping sight
 18 distance in No. 5?
 19 A Yes.
 20 Q So in other words -- so I can kind of state it more
 21 directly -- given what you called the nominal stopping
 22 sight distance for drivers of large trucks, then the
 23 design speed for all practical purposes was 27 miles an
 24 hour?
 25 A Correct. That's because of the height of the eye of

Page 99

1 the driver, not because it was a truck.
 2 Q You have talked about advisory speed plates and how
 3 drivers naturally moderate their behavior, right, so they
 4 can drive comfortably around a curve?
 5 A Yes.
 6 Q ~~Do drivers also naturally moderate their behavior~~
 7 ~~for sight distance as well?~~
 8 A No.
 9 Q ~~Why not?~~
 10 A ~~Because it isn't of importance to them until they~~
 11 ~~realize they don't have it.~~
 12 Q Is that based upon some sort of ASHTO standard or
 13 study? How do you know that?
 14 A We're talking about human factors, what a person
 15 does. What a person does is based upon their senses. If
 16 you ask -- count me out -- but if you ask the other four
 17 people in the room how long this table is, you are going
 18 to get four different answers. It's the same length. It
 19 doesn't change.
 20 Now you get out on the road and you ask somebody how
 21 far down the road they can see, the number is going to
 22 change. Make it better, ask them how far down the road
 23 they would be -- if they had to stop right now, where
 24 would they end up. I'll guarantee you it's going to be
 25 awfully short until it happens. That's why we have

Page 100

1 accidents.
 2 Q Now you were driving your Lincoln Town Car that day?
 3 A Yes, I was.
 4 Q You were the driver, not Lyn?
 5 A I don't remember. I think I was the driver. I am
 6 not absolutely -- yeah, I think I was the driver.
 7 Q In No. 6 -- and I don't want to do this because the
 8 table would tell us -- but if we went to that same LMD
 9 table --
 10 A That's where it came from, yes. Now obviously there
 11 is no 27 miles an hour, so this was extra --
 12 Q How did you get to No. 7 here if this area had been
 13 cleared on the day of the accident? The sight distance
 14 available to all motorists would be only 400 feet. How
 15 did you do that?
 16 A Same thing, to where the straight line met the
 17 right-of-way line, you know.
 18 Q In the standard that you are applying here -- the
 19 standard for cutting back is what we discussed earlier?
 20 A Well I don't know if it's a standard. I'm telling
 21 you they had a responsibility to maintain the road in a
 22 safe a fashion as is practical. It's my opinion that
 23 cutting the trees down was practical. Their actions
 24 proved it. The fact that they did cut it down was after
 25 the fact, but it was practical because they did cut it

Page 101

1 down.

2 If they did what was practical at an appropriate

3 time, this accident wouldn't have happened and possibly

4 some of the previous accidents wouldn't have happened,

5 depending upon when they realized that they had a problem

6 with inadequate stopping sight distance.

7 Q Let's go to No. 8 on Jackman Exhibit C, Page 4.

8 If the growth had been cut back and 400 feet of

9 sight distance made available, the design speed would

10 have been 40 to 50 miles an hour to the design speed

11 based upon --

12 A You misread. It's 45 to 50, not 40 to 50.

13 Q I'm sorry. I probably mumble too much.

14 A That would be design speed based on stopping sight

15 distance. The design speed based on the force still

16 remains the same, but the two would be -- would

17 approximate one another.

18 In other words, if you're driving at the design

19 speed of the curve, 45 miles an hour, you would have

20 sufficient sight distance and sufficient stopping sight

21 distance to safely drive at 45 miles an hour. Now I'm

22 saying up to 50.

23 Q You say the forces acting on the vehicle are

24 gravitational?

25 A And centrifugal.

Page 102

1 Q Does it matter what the type of vehicle is?

2 A No. I really should have said the person, because

3 it's what you sense. You adjust your driving to what you

4 as the driver sense happening, to you what you feel.

5 Q In No. 9 then on Page 4 of Jackman Exhibit C, you

6 said, "Had Mr. Ruegg's available sight distance around

7 the last curve been about 400 feet, given his stated

8 approach speed of 45 miles per hour, he would have been

9 able to stop his vehicle short of the vehicles already

10 stopped for the passing train and no impact would have

11 occurred."

12 But again you didn't do any calculations with regard

13 to his skid marks or any sort of reconstruction. This is

14 based solely upon design speed and what the sight

15 distance needed for the design speed is?

16 A Yeah, whether 400 feet would have been sufficient

17 for him to bring his vehicle to a stop at 45 miles an

18 hour.

19 Q For that vehicle or for just any vehicle generally?

20 A Any vehicle. He locked his brakes up, so we know

21 he's got brakes.

22 Q You didn't do any analysis of his reaction time, did

23 you?

24 A How can I do that?

25 Q The answer is no?

Page 103

1 A The question is unreasonable.

2 Q Well what's the answer? You didn't do any analysis

3 of his reaction time, did you?

4 A If I say no it implies that it's possible. I'm

5 telling you it can't be done.

6 Q Let's go to No. 1 on Page 4 of Jackman C. "The

7 failure of ODOT to trim back the vegetation to afford

8 approaching drivers a sight distance in keeping with the

9 other design characteristics of the curve was a proximate

10 cause of the accident."

11 What do you mean by proximate cause?

12 A The same thing that everybody else means. It was

13 because of the situation. It contributed to the

14 occurrence of the accident.

15 Q Are there other proximate causes?

16 A I don't know.

17 Q Do you attribute any faults to Mr. Ruegg?

18 A That wasn't my objective. My objective was to look

19 at the role the road played in the accident. I wasn't

20 reconstructing the accident.

21 Q So it wasn't a factor in what you did, Mr. Ruegg's

22 driving?

23 A No, other than it was a truck that he was driving.

24 Q Did you know that he was convicted of vehicular

25 homicide?

Page 104

1 MR. CALLAS: Objection.

2 THE WITNESS: No, I didn't. What does that

3 have to do with this case, sir?

4 By Mr. Bachmann:

5 Q Was that used in obtaining your analysis at all?

6 A Absolutely not.

7 Q Why not?

8 A Why not? If you don't have sight distance and you

9 hit somebody, someone in their wisdom may decide that you

10 were negligent because you were driving too fast and

11 couldn't stop. But the fact remains had the sight

12 distance been there and given that sight distance you

13 could have avoided the accident, then why should I

14 concern myself with what some individual decided was

15 imperfect driving?

16 Q You would agree with me, wouldn't you, in any

17 accident there are really three factors? One is the

18 roadway or conditions of the roadway. Two is the driving

19 and three the vehicle being driven?

20 A Yeah, very good.

21 Q You agree with that?

22 A That's my mantra, yes. These are three possible

23 things. You said there are three things, no. Three

24 elements, yes. There is physically a vehicle, physically

25 a driver, physically a road. But one, two, or three of

Page 105

1 those elements could have contributed to the cause of the
 2 accident. At least one in all accidents. Most accidents
 3 will have two and some accidents will have all three.
 4 Q You haven't done that sort of analysis to take into
 5 account all those factors, you have just analyzed roadway
 6 conditions?
 7 A That's all I was asked to do, sir, yes.
 8 Q Let's go to Page 6 of Jackman Exhibit D. The radius
 9 of the center line is 572.76?
 10 A Yes.
 11 Q This is for which, left or the reverse?
 12 A No, this is for the reverse curve. This is using
 13 the data that's on here. (Indicating.)
 14 Q Which document is that?
 15 A This is the line and grade sheets that we were
 16 looking at before.
 17 Q Now you have down below stopping sight distances.
 18 This is from the LMD manual, correct?
 19 A Yes.
 20 Q Then you said offset to sight --
 21 A Obstruction.
 22 Q Where does that come from?
 23 A Well I'm talking now about the -- if we assume that
 24 we have a 10.1 degree curve, to get the minimum and
 25 maximum. Assuming the stopping sight distance as being

Page 106

1 minimum; the maximum would be looking at 35 miles an
 2 hour, 225 to 250. Then the offset would be 12 to 14 feet
 3 for the obstruction. In other words, where does that
 4 straight line go?
 5 Q That's how far through the curve you need to see,
 6 correct? In other words -- let me state it differently.
 7 In other words, how far back you have to trim the
 8 vegetation --
 9 A Yeah.
 10 Q -- so you can see through the curve?
 11 A Yes.
 12 Q So going the design sign speed of 45 miles an hour
 13 and giving the minimum preferred sight distance here on
 14 Page 6 of Jackman Exhibit D, you'd have to trim back 27
 15 to 34 feet --
 16 A Correct.
 17 Q -- in order for you to be able to see through that
 18 curve?
 19 A Yes.
 20 Q Then down below it says, "Available offset that was
 21 existing"; is that right?
 22 A Yes.
 23 Q Can you explain to me what the four lines down below
 24 that are.
 25 A Underneath the horizontal line you mean?

Page 107

1 Q Yes. Is this just another written explanation of
 2 what you have done?
 3 A Yes.
 4 Q Let's go to Page 8 which is two pages back. Can you
 5 explain to me what this --
 6 A Don't worry yourself about it. All it does is it
 7 allows me to make that drawing. I don't have something
 8 that's 3,000 feet long or to the scale or 300 inches long
 9 to make an arc, so to lay this out. There are other ways
 10 of doing it. Using tangents did offer other sets.
 11 That's what I did here. It's just a calculation so that
 12 I could make the drawing. It has nothing to do with
 13 anything.
 14 Q Did you use the line and grade drawing, the point of
 15 intersection, the point of tangent, and the point of
 16 curvature for any of these calculations?
 17 A No. I didn't have this when I was drawing all of
 18 this.
 19 Q Okay.
 20 On Jackman Exhibit E, which is your sketch, you've
 21 got the grades here. Were those grades given to you or
 22 did you measure them?
 23 A This is all fieldwork.
 24 Q Mr. Jackman, I'm just about done, but I've got a few
 25 more things I want to get through here.

Page 108

1 How many active cases do you currently have?
 2 A I have no idea.
 3 Q More than 100?
 4 A There is no way of telling. Quite often we will
 5 work up a case and the attorney says, "Fine. Send out a
 6 report." Or "Don't bother sending out a report. I'll get
 7 back to you."
 8 I've got cases that date back five years. I carry
 9 them as open files because I closed one file once and
 10 eight years later I had to appear in court. So I'm very
 11 careful now about what I call closed. I really don't
 12 know. We've got a lot of open files.
 13 Q Is what you do, forensic engineering because I saw
 14 that term.
 15 A That is what I call forensic engineering, but I
 16 limit it to vehicular accident reconstruction.
 17 Q What is forensic engineering?
 18 A It's kind of like forensic medicine. You utilize
 19 facts available to you postaccident and work backward to
 20 see if there is something and if you have enough evidence
 21 to help you determine what caused the accident
 22 initially.
 23 Q Do you work solely for attorneys and insurance
 24 companies?
 25 A Well we've taken a couple of private clients, but

Page 109

1 they have been a problem. So for practical purposes,
 2 that's it.
 3 Q How long have you been engaged in this forensic
 4 engineering solely for attorneys and insurance companies?
 5 A Since '74. I wasn't doing it full time then. I was
 6 still doing design work. I started my design practice in
 7 '68, so I was doing traffic engineering design work. In
 8 '74 I got involved in accident reconstruction work.
 9 That year probably, at most, 10 percent of my effort was
 10 in accident reconstruction.
 11 Then 12 years later, in '86, I looked at my work and
 12 it had reversed. So 90 percent of my effort was accident
 13 reconstruction and 10 percent was design work. I said
 14 the heck with the design work.
 15 Q When was the last time you designed a state or
 16 interstate highway?
 17 A I don't design highways. I am a traffic engineer.
 18 Q You have never designed a roadway?
 19 A I've worked with -- not in private practice, but in
 20 other -- I worked with Howard, Needles, Tammen &
 21 Bergendoff and the work there was designing roadways.
 22 Q It says, "Responsible for the traffic engineering
 23 aspects of the 185 mile Cuyahoga County freeway system."
 24 You are responsible for setting up traffic warning
 25 devices?

Page 110

1 A Where are you?
 2 Q Let's just mark it.
 3 (Thereupon, Jackman Exhibit F was marked
 4 for purposes of identification.)
 5 By Mr. Bachmann:
 6 Q Mr. Jackman, I am handing you what has been marked
 7 as Exhibit F. That's your resume, I assume.
 8 A Yes.
 9 Q It's current?
 10 A Yes.
 11 Q You were working for Howard, Needles, Tammen &
 12 Bergendoff. What is the traffic engineering you were
 13 doing there?
 14 A Specifically this was the major project. I did
 15 other work for them, but this major project was the
 16 preparation of a corridor report for the Cuyahoga County
 17 freeway system. At that time it was 185 miles. Some of
 18 that has been eliminated. The purpose for our work
 19 effort was to develop a -- I might as well use the title
 20 corridor for each of the freeways that were proposed in
 21 Cuyahoga County.
 22 My concern was looking at the desires of motorists.
 23 A study had been done, an origin and destination study,
 24 using the information of where people are coming from to
 25 where they are going. The purpose of the trip was to try

Page 111

1 to locate freeways to serve the motoring public, to
 2 locate interchanges on freeways, and to roughly design
 3 the interchanges.
 4 For instance, my work says the efforts I made
 5 determined the number of lanes that would probably be
 6 needed. This is very preliminary. Number of lanes,
 7 interchange design based on volume, where should they be
 8 located relative to surface streets, those kinds of
 9 things.
 10 Q Have you done any design work that involves stopping
 11 sight distance or design speed calculations?
 12 A Actual design work?
 13 Q Yes, sir.
 14 A No. I taught it when I was teaching college. I
 15 taught this stuff. I use it when I review plans.
 16 Q You are licensed in Ohio, Pennsylvania and Michigan
 17 currently?
 18 A We like to consider ourselves registered as opposed
 19 to licensed.
 20 Q Okay, registered. Have you ever had any
 21 organization attempt to take away your PE license?
 22 A No, sir. I sure as heck wouldn't show it down
 23 there.
 24 Q Just asking. Some questions you don't like to ask,
 25 but you've got to ask.

Page 112

1 Have you ever been terminated from employment?
 2 MR. SOLES: Objection.
 3 THE WITNESS: Terminated? No. As a matter of
 4 fact, the mayor would not accept my resignation. He
 5 made me hire my replacement, believe it or not.
 6 By Mr. Bachmann:
 7 Q How many depositions do you give a year?
 8 A It varies. As I said, from '74 until now the number
 9 is about 350, whatever that works out to.
 10 Q About how many have you given this year?
 11 A Well I had double surgery last year, so my work load
 12 this year is way down. It's five or six, maybe seven.
 13 Q Prior to your surgery?
 14 A It would vary, anywhere from 10 to 20.
 15 Q How many times have you testified on an average
 16 annual basis in court?
 17 A On an average, nine times, eight to nine.
 18 Q Just stretch your legs for a minute. Let me just
 19 take a minute. I think I'm done, but I just want to make
 20 absolutely certain.
 21 (Thereupon, a recess was taken.)
 22 By Mr. Bachmann:
 23 Q Mr. Jackman, you said before we actually started the
 24 deposition that you didn't want to be here. I just want
 25 to know what you meant by that.

Page 113

1 A You asked to take my deposition. I didn't really
 2 feel like getting up early this morning and driving
 3 through that rain to be here.
 4 I was concerned about payment and the policies of
 5 the state, which I disagree with. I understand their
 6 state policies and I understand you can't control them.
 7 I was just explaining to you that I am not here by
 8 choice. I'm basically here under subpoena. I'm here,
 9 but that's what I meant by I didn't want to be here.
 10 It's nothing against you.
 11 Q No offense taken. You have read the Joe DeFuria
 12 report. Do you have any criticisms of that?
 13 A Yes.
 14 Q Please tell me what they are.
 15 A His railroad advance warning signs.
 16 Q What is your criticism?
 17 A He says the prevailing approach speed is 35 to 45
 18 and I underlined it and I said study it. I was under the
 19 impression that we had not -- I was under the impression
 20 that the attorneys requested any studies that were made
 21 in the area and I didn't see any speed studies, so I
 22 don't know how he determined what the prevailing approach
 23 speed is.
 24 He is using 45 miles an hour. The particular table
 25 for a stop condition justifying the location of the

Page 114

1 railroad advance warning sign, he is saying it needs a
 2 minimum of 550 feet versus the 600 feet at which they are
 3 actually located.
 4 I guess he wants a pat on the back, but my concern
 5 is the speed limit is 55 and you sign for the speed
 6 limit. So the advance warning should be placed 750 feet
 7 back as opposed to 600 which is actual, so I have a
 8 problem with Mr. DeFuria.
 9 Q Any other problem?
 10 A Basically, no, other than the 35 miles an
 11 hour. You know, I don't know whether I know that there
 12 was a 35 mile-an-hour sign up there. I have no way of
 13 knowing where it came from, and it's my understanding
 14 neither does he.
 15 Q What do you mean where it came from?
 16 A Well somebody had to put it up. Nobody that is
 17 there now put it up. There is no paperwork indicating
 18 the basis for the erection of that sign. There is no
 19 study that's been made. The manual requires a study.
 20 There is no record of any study that was made and no
 21 one knows why a 35 mile-an-hour sign was put up other
 22 than it's there, so they continue to leave it in place.
 23 In fact, I'm assuming as one wears out or is vandalized
 24 or knocked down or what have you, they replace it.
 25 MR. BACHMANN: Thank you, sir.

Page 115

1 ---
 2 (Thereupon, the deposition was
 3 concluded at 1:05 p.m.)
 4 ---

Page 116

1
 2
 3
 4
 5
 6
 7 I, WILLIAM T. JACKMAN, do verify that I have
 8 read this transcript consisting of one-hundred seventeen
 9 (117) pages, and that the questions and answers are
 10 correct.

WILLIAM T. JACKMAN

16 Subscribed and sworn to before me this
 17 _____ day of _____, 1997.

Notary Public.

My commission expires

1 CERTIFICATE

2

3 STATE OF OHIO,)
4 SUMMIT COUNTY.) SS:

5

6 I, Melissa Karm, a Notary Public in and for the
7 State of Ohio, duly commissioned and qualified, do hereby
8 certify that the within named witness, WILLIAM T. JACKMAN
9 was by me first duly sworn to testify the truth, the
10 whole truth and nothing but the truth in the cause
11 aforesaid, that the testimony then given by him was by me
12 recorded in stenotype in the presence of said witness,
13 afterwards transcribed using computer-assisted
14 transcription; and that the foregoing is a true and
15 correct transcription of the testimony so given by him as
16 aforesaid.

17 I do further certify that this deposition was taken
18 at the time and place in the foregoing caption specified,
19 and was completed without adjournment.

20 I do further certify that I am not a relative,
21 counsel or attorney of either party, or otherwise
22 interested in the event of this action.

23 IN WITNESS WHEREOF, I have hereunto set my hand and
24 affixed my seal of office at Akron, Ohio on this 15th day
25 of December, 1997.

MELISSA KARM, Stenographic
Reporter and Notary Public for
the State of Ohio.

My commission expires November 29, 2000.

L

| Year | Percentage of Population Aged 65 and Over |
|------|-------------------------------------------|
| 1950 | 7.0 |
| 1960 | 8.0 |
| 1970 | 9.0 |
| 1980 | 10.0 |
| 1990 | 11.0 |
| 2000 | 12.0 |
| 2010 | 13.0 |
| 2020 | 14.0 |
| 2030 | 15.0 |
| 2040 | 16.0 |
| 2050 | 16.0 |

100

[illegible]

WILLIAM T. JACKMAN

Condenselt™

\$1,000 - Anderson

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|------------------------------|----------------------------|-------------------------------|-------------------------------|------------------------------------|
| \$1,000 [2] 7:19 | 25 [1] 64:16 | 57:18 72:10 72:13 | 33:13 33:13 34:1 | 52:12 52:22 53:3 |
| 61:15 | 250 [1] 106:2 | 82:11 114:5 | 34:15 35:6 35:8 | 54:25 62:22 64:14 |
| \$100 [1] 61:15 | 26th [1] 82:21 | 550 [1] 114:2 | 35:23 36:1 36:2 | 74:22 74:24 99:2 |
| \$120 [1] 7:15 | 27 [3] 98:23 100:11 | 572.76 [1] 105:9 | 36:9 36:22 39:5 | advocating [1] 92:22 |
| \$700 [1] 7:23 | 106:14 | 59 [1] 1:22 | 39:15 39:22 39:23 | affixed [1] 117:17 |
| '68 [1] 109:7 | 29 [2] 18:9 117:23 | 6 [5] 73:15 98:15 | 41:10 43:25 46:23 | afford [1] 103:7 |
| '74 [3] 109:5 109:8 | 3 [6] 77:13 77:14 | 100:7 105:8 106:14 | 47:1 47:5 47:6 | aforesaid [2] 117:8 |
| 112:8 | 91:11 92:13 96:6 | 6/25/95 [1] 20:8 | 71:7 71:22 72:25 | 117:10 |
| '86 [1] 109:11 | 98:15 | 6/25/96 [1] 20:7 | 76:9 98:13 100:13 | Afterward [1] 38:20 |
| '89 [1] 23:18 | 3,000 [1] 107:8 | 6/28/96 [1] 22:2 | 101:3 103:10 103:14 | afterwards [1] 117:9 |
| 05 [1] 115:3 | 30 [1] 3:6 | 600 [2] 114:2 114:7 | 103:19 103:20 104:13 | again [1] 44:15 |
| 1 [4] 77:14 82:23 | 300 [4] 97:20 97:22 | 602 [2] 80:25 81:14 | 104:17 105:2 108:16 | 45:21 49:19 75:13 |
| 103:6 115:3 | 97:24 107:8 | 602.0 [1] 81:22 | 108:21 109:8 109:10 | 76:11 77:13 84:8 |
| 10 [7] 68:25 68:25 | 30s [1] 70:9 | 65 [1] 2:19 | accidents [9] 23:9 | 85:23 90:4 91:6 |
| 76:20 77:14 109:9 | 31 [3] 20:16 20:16 | 655.9 [1] 80:25 | 62:4 62:15 69:20 | 102:12 |
| 109:13 112:14 | 24:14 | 7 [1] 9:17 9:17 | 100:1 101:4 105:2 | against [5] 19:4 |
| 10-89 [1] 23:17 | 325 [4] 85:2 85:16 | 24:20 74:21 80:17 | 105:2 105:3 | 49:19 58:12 61:15 |
| 10.1 [1] 105:24 | 90:19 90:21 | 80:22 81:20 94:17 | accommodate [1] 91:4 | 113:10 |
| 100 [4] 82:12 95:4 | 34 [1] 106:15 | 95:15 95:20 100:12 | accomplish [2] 66:24 | age [1] 4:2 |
| 96:22 108:3 | 35 [17] 48:25 49:21 | 7/12/96 [1] 20:2 | 68:24 | agency [1] 67:18 |
| 1000 [2] 1:21 2:13 | 49:22 49:25 50:1 | 7/31/95 [1] 22:2 | according [6] 26:1 | agree [4] 52:17 71:6 |
| 105 [2] 73:24 74:2 | 52:4 63:23 64:1 | 7/7/96 [1] 22:1 | 50:17 50:18 54:3 | 104:16 104:21 |
| 10th [1] 1:23 | 64:6 64:11 64:16 | 750 [1] 114:6 | 68:15 79:20 | agreement [2] 5:10 |
| 11 [1] 12:9 | 72:13 106:1 113:17 | 77 [1] 25:1 | accordingly [2] 70:20 | |
| 11/7/96 [1] 20:9 | 114:10 114:12 114:21 | 78 [1] 3:8 | 88:17 | Aha [1] 28:24 |
| 110 [1] 3:10 | 350 [3] 6:19 6:22 | 7th [1] 9:1 | account [2] 25:1 | ahead [13] 25:17 |
| 117 [1] 116:9 | 112:9 | 8 [8] 1:22 9:17 | 105:5 | 54:23 55:12 55:23 |
| 12 [6] 12:9 47:14 | 4 [7] 3:5 25:1 | 75:11 75:22 90:7 | accurate [2] 70:24 | 61:8 61:10 62:7 |
| 69:1 71:7 106:2 | 77:14 93:6 101:7 | 90:9 101:7 107:4 | 83:21 | 79:8 88:6 88:7 |
| 109:11 | 102:5 103:6 | 8.3 [1] 90:8 | accusation [1] 71:20 | 88:16 96:22 96:24 |
| 12th [1] 9:20 | 40 [3] 3:7 101:10 | 80 [1] 3:9 | acquire [1] 67:10 | aid [1] 15:13 |
| 14 [1] 106:2 | 101:12 | 9 [2] 81:12 102:5 | acres [1] 67:1 | air-brake [1] 45:15 |
| 15 [1] 19:22 | 400 [8] 85:3 85:16 | 9/19/95 [1] 25:22 | act [1] 70:20 | airplanes [1] 84:20 |
| 1500 [1] 4:11 | 90:19 90:20 100:14 | 90 [1] 109:12 | acted [1] 92:14 | Akron [2] 2:7 |
| 15th [1] 117:17 | 101:8 102:7 102:16 | 93 [10] 21:23 22:14 | acting [3] 49:23 | 117:17 |
| 16 [1] 19:22 | 41 [1] 86:14 | 22:17 23:2 24:9 | 83:12 101:23 | al [3] 1:4 1:7 |
| 1630 [1] 2:20 | 42 [1] 86:14 | 24:20 25:2 63:12 | action [3] 63:8 | 1:11 |
| 168.9 [1] 80:24 | 426 [2] 75:11 75:14 | 65:23 73:16 | 76:19 117:15 | alignment [5] 40:13 |
| 175 [8] 93:23 96:7 | 43215 [1] 2:20 | 97-03611-PR [1] 1:8 | actions [1] 100:23 | 40:14 51:19 51:24 |
| 96:16 96:21 96:22 | 44312 [1] 2:7 | a.m [1] 1:22 | active [1] 108:1 | 84:15 |
| 96:23 97:17 97:20 | 44702 [1] 2:14 | able [6] 11:21 35:18 | actual [4] 33:21 | allow [2] 48:3 |
| 1800s [1] 71:2 | 45 [36] 49:25 50:7 | 81:6 92:19 102:9 | 90:17 111:12 114:7 | 92:22 |
| 185 [2] 109:23 110:17 | 50:11 52:13 53:2 | 106:17 | add [1] 82:15 | allowed [1] 36:6 |
| 1995 [3] 18:12 20:16 | 53:3 55:18 63:23 | above [2] 15:23 | addendum [1] 29:11 | allows [1] 107:7 |
| 20:16 | 70:22 73:17 73:24 | 95:15 | additional [4] 41:15 | alluding [1] 72:24 |
| 1996 [6] 9:20 18:9 | 74:4 74:20 78:4 | absolutely [7] 37:9 | 41:16 42:9 67:10 | almost [3] 11:6 |
| 24:14 26:1 47:14 | 78:11 78:13 78:17 | 63:13 68:1 78:24 | address [3] 4:9 | 29:20 38:3 |
| 1997 [4] 1:23 47:16 | 78:18 78:19 82:24 | 100:6 104:6 112:20 | adequate [4] 55:22 | along [15] 11:4 |
| 116:17 117:18 | 84:24 85:2 86:3 | academic [2] 44:9 | 68:16 76:17 93:16 | 11:5 11:11 15:20 |
| 2 [7] 73:1 73:3 | 86:5 86:6 86:13 | accelerometer [1] 45:6 | adjournment [1] 117:13 | 29:3 35:23 55:12 |
| 73:7 73:15 91:12 | 86:24 90:18 101:12 | accept [1] 112:4 | adjust [4] 55:25 | 63:4 67:18 68:12 |
| 92:13 93:2 | 101:19 101:21 102:8 | accident [74] 3:6 | 82:9 88:17 102:3 | 94:24 95:10 96:18 |
| 20 [2] 12:9 112:14 | 102:17 106:12 113:17 | 5:20 5:23 6:6 | adjustments [2] 51:13 | 97:8 97:9 |
| 200 [2] 59:2 59:4 | 113:24 | 6:12 9:3 9:16 | 66:10 | alternate [1] 83:23 |
| 2000 [1] 117:23 | 46 [4] 78:13 78:16 | 9:22 15:13 16:3 | advance [3] 113:15 | always [3] 45:9 |
| 201-1 [1] 85:14 | 78:17 78:19 | 20:23 23:10 23:11 | 114:1 114:6 | 48:6 80:7 |
| 201.2 [1] 85:14 | 5 [10] 24:20 73:7 | 24:4 28:13 29:24 | advise [3] 54:16 | American [1] 19:10 |
| 20s [1] 70:9 | 78:15 93:22 94:16 | 30:1 30:4 30:12 | 56:5 69:7 | analysis [9] 30:16 |
| 22 [1] 26:1 | 95:14 95:15 95:20 | 31:3 31:5 31:8 | advisory [19] 48:22 | 30:18 40:12 44:13 |
| 220 [2] 1:21 93:24 | 96:6 98:18 | 31:11 31:16 31:22 | 48:23 48:24 49:3 | 73:4 102:22 103:2 |
| 225 [3] 93:24 97:20 | 5-mile [1] 78:17 | 32:3 32:5 32:18 | 50:10 50:21 52:4 | 104:5 105:4 |
| 106:2 | 50 [6] 12:9 68:25 | 33:1 33:7 33:8 | | analysis/evaluation [1] 3:7 |
| | 101:10 101:12 101:12 | | | analyzed [1] 105:5 |
| | 101:22 | | | Anderson [1] 18:17 |
| | 507 [1] 2:7 | | | |
| | 55 [7] 50:5 57:16 | | | |

| | | | | | | | | | | |
|---------------------|-------------|-----------------|------------|-------------------|-------------|----------------|-------------|-------------------|-------------|--------|
| angle [1] | 55:13 | article [1] | 24:5 | average [10] | 44:2 | beginning [3] | 8:17 | 5:6 | 55:24 | 102:17 |
| animal [1] | 70:7 | ASHTO [8] | 87:10 | 85:17 85:25 | 86:1 | 8:18 8:24 | | brought [3] | | 7:14 |
| annual [1] | 112:16 | 87:11 88:23 | 89:1 | 86:7 92:2 | 97:17 | behalf [3] | 2:3 | 12:1 17:17 | | |
| answer [8] | 8:5 | 89:2 89:5 | 89:7 | 98:11 112:15 | 112:17 | 2:9 2:16 | | brush [1] | | 68:18 |
| 15:1 30:20 | 32:24 | 99:12 | | averages [1] | 98:5 | behavior [2] | 99:3 | bubble [1] | | 84:16 |
| 44:25 50:17 | 102:25 | aspect [1] | 6:9 | avoided [3] | 31:15 | 99:6 | | buddy [1] | | 59:12 |
| 103:2 | | aspects [1] | 109:23 | 31:22 104:13 | | behind [3] | 27:8 | build [2] | 69:20 | 69:22 |
| answered [1] | 37:1 | asphalt [3] | 45:4 | aware [9] | 48:9 | 31:23 88:1 | | building [3] | | 1:21 |
| answers [4] | 21:4 | 47:14 48:7 | | 55:2 56:12 | 56:14 | belief [1] | 62:19 | 56:15 59:1 | | |
| 83:22 99:18 | 116:9 | asphaltic [1] | 47:21 | 56:19 57:5 | 57:8 | believes [1] | 45:3 | built [3] | 57:4 | 70:21 |
| antiquated [1] | 86:9 | assistance [2] | 5:21 | 57:9 74:6 | | belong [1] | 66:14 | 71:3 | | |
| anyplace [1] | 96:4 | 37:10 | | awareness [1] | 56:21 | belongs [1] | 66:19 | built-in [1] | | 45:14 |
| anytime [2] | 68:14 | Assistant [1] | 2:19 | away [3] | 55:10 69:17 | below [6] | 22:16 | bunch [1] | | 11:11 |
| 68:15 | | associate [2] | 56:17 | 111:21 | | 92:20 92:24 | 105:17 | Bunkley [1] | | 22:19 |
| anyway [2] | 44:4 | 64:15 | | awfully [1] | 99:25 | 106:20 106:23 | | buy [2] | 66:24 | 66:25 |
| 55:20 | | associated [7] | 13:20 | B [5] | 3:1 3:6 | benefit [3] | 59:8 | C [19] | 3:7 | 40:25 |
| apologize [2] | 8:11 | 48:22 49:3 | 50:8 | 28:25 30:7 | 30:11 | 59:12 61:2 | | 41:4 41:25 | 42:21 | |
| 34:5 | | 50:11 52:13 | 64:11 | B-u-n-k-l-e-y [1] | | Bergendoff [2] | 109:21 | 73:1 73:7 | 73:15 | |
| appear [3] | 25:23 | associates [1] | 56:17 | 22:19 | | 110:12 | | 77:12 77:14 | 91:11 | |
| 45:16 108:10 | | assume [7] | 37:8 | Bachmann [30] | 2:19 | berm [1] | 82:14 | 92:13 96:6 | 98:15 | |
| APPEARANCES [1] | 2:1 | 62:9 72:5 | 72:7 | 4:6 4:17 | 8:15 | best [6] | 21:24 30:20 | 101:7 102:5 | 103:6 | |
| 2:1 | | 72:9 105:23 | 110:7 | 9:21 19:3 | 26:15 | 32:1 37:2 | 51:21 | 117:1 117:1 | | |
| appeared [1] | 33:8 | assumed [2] | 95:13 | 27:15 27:19 | 30:9 | 54:17 | | calculate [4] | 11:15 | |
| application [1] | 64:25 | 95:14 | | 30:25 37:4 | 38:21 | better [10] | 6:21 | 11:19 40:17 | 40:20 | |
| applied [1] | 74:17 | 86:10 92:1 | 86:8 | 38:24 38:25 | 41:2 | 23:5 49:15 | 54:21 | calculated [2] | 81:20 | |
| apply [3] | 65:2 | 86:10 92:1 | | 45:24 61:17 | 62:8 | 55:6 67:7 | 67:17 | 94:1 | | |
| 75:8 75:10 | | assuming [14] | 24:25 | 76:8 77:7 | 77:11 | 89:4 91:9 | 99:22 | calculation [2] | 10:1 | |
| applying [1] | 100:18 | 29:2 29:15 | 45:5 | 79:2 80:11 | 85:4 | between [4] | 16:2 | 107:11 | | |
| apportion [1] | 61:2 | 49:4 50:23 | 50:25 | 104:4 110:5 | 112:6 | 61:4 65:24 | 84:11 | calculations [11] | | |
| approach [5] | 66:15 | 60:8 60:10 | 76:2 | 112:22 114:25 | | beyond [7] | 21:16 | 13:18 13:21 | 14:18 | |
| 67:13 102:8 | 113:17 | 86:6 97:7 | 105:25 | back-up [1] | 91:18 | 41:21 66:7 | 66:9 | 15:9 40:15 | 45:16 | |
| 113:22 | | 114:23 | | background [5] | 33:12 | 67:8 83:24 | 87:16 | 79:21 80:17 | 102:12 | |
| approaching [4] | 36:8 97:18 | assumption [3] | 85:24 | 54:3 | | bigger [2] | 82:18 | 107:16 111:11 | | |
| 103:8 | 97:19 | 86:4 86:10 | | backward [1] | 108:19 | 82:18 | | calculator [1] | 15:15 | |
| appropriate [10] | 44:23 56:5 | assumptions [2] | 74:8 85:15 | bad [4] | 28:8 50:23 | bit [1] | 31:2 | Callas [17] | 2:13 | |
| 59:22 60:6 | 64:6 | attach [1] | 55:14 | 52:25 91:9 | | Biweekly [1] | 18:19 | 5:18 7:11 | 8:12 | |
| 76:19 78:18 | 88:22 | attached [2] | 4:23 | balanced [1] | 83:7 | black [3] | 1:20 | 9:10 9:19 | 10:4 | |
| 101:2 | | 33:23 | | ball-bank [6] | 51:11 | 2:11 18:10 | | 18:22 21:3 | 27:21 | |
| appropriateness [4] | 13:19 13:22 | attain [2] | 50:1 | 51:22 83:18 | 84:5 | blast [1] | 69:17 | 36:25 38:23 | 44:25 | |
| 15:10 | 14:18 | 56:23 | | 84:7 84:17 | | bleeding [1] | 47:13 | 46:2 101:10 | 61:22 | |
| approval [1] | 20:24 | attempt [2] | 16:22 | Bank [2] | 1:21 2:13 | Board [1] | 22:8 | 104:1 | | |
| approximate [2] | 54:9 101:17 | 111:21 | | banking [2] | 51:3 | body [5] | 28:22 29:16 | camel [1] | 87:17 | |
| Arbaugh [2] | 1:21 | attempted [3] | 32:7 | 51:4 | | 36:20 83:12 | 88:24 | camera [1] | 37:25 | |
| 2:11 | | 32:10 35:15 | | banks [1] | 66:14 | book [2] | 25:1 89:1 | Canal [1] | 23:3 | |
| arbitrary [1] | 86:21 | attention [2] | 12:18 | based [21] | 13:17 | bother [3] | 81:25 | cannot [2] | 58:11 | |
| arc [1] | 107:9 | 78:2 | | 48:1 49:4 | 53:4 | 97:13 108:6 | | 84:15 | | |
| area [13] | 16:4 37:6 | attenuators [1] | 58:14 | 62:1 62:2 | 64:12 | bothers [1] | 45:9 | canopy [2] | 67:22 | |
| 38:7 39:16 | 55:11 | attorney [8] | 2:6 | 85:17 85:19 | 85:20 | boulders [1] | 58:24 | 92:7 | | |
| 59:18 62:15 | 62:17 | 2:12 2:13 | 2:17 | 85:24 86:7 | 86:12 | boy [1] | 12:25 | Canton [3] | 1:22 | |
| 63:25 65:25 | 76:24 | 2:19 29:17 | 108:5 | 94:15 99:12 | 99:15 | brain [1] | 65:1 | 2:7 2:14 | | |
| 100:12 113:21 | | 117:15 | | 101:11 101:14 | 101:15 | brake-lag [1] | 45:14 | capable [1] | 88:11 | |
| areas [1] | 56:23 | attorney's [1] | 53:23 | 102:14 111:7 | | brakes [5] | 74:17 | caption [1] | 117:12 | |
| arise [1] | 69:19 | attorneys [3] | 108:23 | basic [1] | 86:9 | 91:9 91:10 | 102:20 | car [16] | 45:13 49:23 | |
| arose [1] | 76:18 | 109:4 113:20 | | basis [8] | 7:12 57:7 | 102:21 | | 51:22 55:24 | 77:23 | |
| arrangement [2] | 7:10 7:13 | attribute [1] | 103:17 | 58:17 58:18 | 60:20 | branches [4] | 91:13 | 77:24 77:25 | 84:1 | |
| arrive [1] | 79:21 | authority [3] | 89:8 | 93:1 112:16 | 114:18 | 92:10 92:12 | 95:25 | 84:10 88:1 | 90:5 | |
| arrived [5] | 8:25 | 89:11 89:17 | | bearing [3] | 73:12 | breached [2] | 63:10 | 90:25 92:4 | 93:14 | |
| 12:9 28:11 | 73:23 | automobiles [2] | 71:2 71:3 | 73:20 76:22 | | 63:13 | | 93:21 100:2 | | |
| 87:16 | | available [13] | 6:4 | beat [2] | 62:4 95:17 | break [2] | 27:16 | care [4] | 57:18 63:13 | |
| art [1] | 33:5 | 16:23 17:1 | 17:5 | became [3] | 6:4 | 46:18 | | 63:15 87:19 | | |
| | | 93:22 96:7 | 97:14 | 17:13 74:5 | | breakdown [1] | 23:8 | careful [1] | 108:11 | |
| | | 98:17 100:14 | 101:9 | become [1] | 57:9 | brick [1] | 96:14 | cares [1] | 57:19 | |
| | | 102:6 106:20 | 108:19 | becomes [2] | 28:22 | brief [2] | 5:20 94:4 | Carmen [1] | 25:18 | |
| | | Avenue [1] | 1:22 | 31:18 | | bring [5] | 5:1 5:3 | carry [1] | 108:8 | |
| | | | | becoming [1] | 58:15 | | | case [15] | 5:14 7:16 | |
| | | | | began [1] | 70:11 | | | 13:5 14:9 | 28:2 | |

| | | | | | | |
|---------------------|-----------------------|-------------------|-------------------|-----------------------|---------------------|----------------------|
| 30:13 48:8 51:1 | cleared [1] | 100:13 | concerns [1] | 43:25 | 41:7 42:8 42:22 | 97:3 107:16 |
| 55:17 61:24 63:18 | clearly [1] | 78:18 | concluded [1] | 115:3 | 46:8 | curve [86] |
| 67:2 91:24 104:3 | client [1] | 83:19 | concrete [1] | 47:21 | corner [2] | 16:22 40:15 40:17 |
| 108:5 | clients [1] | 108:25 | condition [6] | 48:12 | 66:18 | 40:21 48:22 48:24 |
| cases [2] 108:1 | clip [1] | 27:8 | 52:6 58:17 59:23 | 72:19 113:25 | correct [41] | 49:6 49:9 49:13 |
| categories [1] | close [3] | 35:21 58:23 | conditions [24] | 33:9 | 6:13 | 49:15 49:19 50:8 |
| category [1] | 92:11 | | 33:11 34:22 48:16 | 34:1 34:23 36:14 | 9:15 13:23 32:11 | 50:12 51:2 51:4 |
| caused [1] | closed [2] | 108:9 | 49:5 50:23 51:1 | 39:1 39:10 40:4 | 39:1 39:10 40:4 | 51:8 52:1 52:6 |
| causes [1] | 108:11 | | 54:17 60:17 71:7 | 40:7 42:1 42:14 | 40:7 42:1 42:14 | 52:8 52:9 52:14 |
| ceases [1] | closely [1] | 44:22 | 71:18 71:25 72:2 | 50:6 50:13 52:7 | 50:6 50:13 52:7 | 55:10 55:10 55:16 |
| center [17] | closer [2] | 93:20 | 72:4 72:7 72:13 | 53:22 54:4 57:23 | 53:22 54:4 57:23 | 55:17 62:22 63:4 |
| 31:16 31:23 80:24 | 97:5 | | 72:14 72:16 72:17 | 60:4 62:10 68:14 | 60:4 62:10 68:14 | 63:20 63:21 64:2 |
| 82:4 82:10 84:12 | closest [1] | 95:6 | 72:20 91:7 91:7 | 72:18 74:10 75:6 | 72:18 74:10 75:6 | 64:11 64:15 64:21 |
| 94:10 94:13 94:14 | college [1] | 111:14 | 104:18 105:6 | 75:7 78:4 82:8 | 75:7 78:4 82:8 | 67:25 68:17 70:21 |
| 94:20 94:21 94:24 | collision [1] | 6:2 | configuration [1] | 85:8 89:13 90:19 | 85:8 89:13 90:19 | 71:17 74:5 75:12 |
| 95:1 95:11 95:11 | color [2] | 25:14 38:24 | 21:9 | 92:17 92:18 92:21 | 92:17 92:18 92:21 | 75:15 75:16 76:16 |
| centrifugal [3] | Columbus [1] | 2:20 | confuse [2] | 92:24 98:25 105:18 | 92:24 98:25 105:18 | 76:18 78:4 78:7 |
| 83:6 101:25 | combination [1] | 15:22 | 63:18 | 106:6 106:16 116:10 | 106:6 106:16 116:10 | 78:10 78:11 78:20 |
| certain [12] | 15:22 | | confusing [1] | 117:10 | 117:10 | 78:21 79:13 79:14 |
| 15:24 32:20 56:6 | comfort [1] | 50:2 | 39:6 | corrected [1] | 26:23 | 81:1 81:12 81:21 |
| 56:23 56:23 60:12 | comfortable [4] | 49:12 | Conrail [2] | correctly [1] | 20:15 | 82:16 82:17 82:24 |
| 60:17 77:1 87:12 | 49:22 63:25 64:4 | | 24:4 | correlates [1] | 98:17 | 82:25 84:23 84:25 |
| 91:20 112:20 | comfortably [4] | 55:20 55:21 83:1 | consider [3] | 23:22 24:1 24:6 | 98:17 | 84:25 88:4 90:13 |
| certified [1] | 55:20 55:21 83:1 | 99:4 | 64:13 111:18 | correspondence [3] | 23:22 24:1 24:6 | 92:20 92:24 95:6 |
| certify [3] | 99:4 | | consideration [1] | corridor [2] | 110:16 | 95:6 95:12 96:18 |
| 117:12 117:14 | coming [5] | 5:25 | 91:8 | 110:20 | 110:20 | 96:19 96:20 96:20 |
| change [7] | 36:18 78:1 78:7 | 110:24 | considered [1] | cost [1] | 83:19 | 97:2 97:2 98:13 |
| 29:11 42:12 66:18 | commenting [1] | 45:18 | consisting [1] | costs [2] | 59:1 67:16 | 98:13 99:4 101:19 |
| 73:14 99:19 99:22 | commission [2] | 116:23 | constant [3] | counsel [1] | 117:15 | 102:7 103:9 105:12 |
| changed [2] | 117:23 | | 84:11 84:13 | count [2] | 95:3 | 105:24 106:5 106:10 |
| 29:10 | commissioned [1] | 117:6 | constraints [1] | 99:16 | 95:3 | 106:18 |
| changing [1] | committed [1] | 8:7 | 56:14 58:4 94:3 | county [10] | 1:2 | curves [10] |
| chapter [1] | committee [1] | 87:17 | consuming [1] | 4:13 4:14 19:7 | 4:13 4:14 19:7 | 6:1 11:3 11:15 |
| character [3] | commonly [1] | 64:24 | 51:15 | 66:12 66:15 109:23 | 66:12 66:15 109:23 | 13:19 15:10 36:8 |
| 35:18 35:19 | communication [3] | 18:5 20:22 24:12 | contacted [3] | 110:16 110:21 117:4 | 110:16 110:21 117:4 | 49:2 63:20 97:4 |
| characteristics [5] | communications [3] | 18:16 18:16 22:11 | 5:19 8:16 | couple [3] | 66:25 | cut [28] |
| 16:4 16:7 51:24 | communique [3] | 22:15 22:21 24:8 | contain [1] | 67:1 108:25 | 66:25 | 57:11 57:19 58:21 |
| 72:21 103:9 | companies [2] | 108:24 | contained [9] | course [4] | 9:2 | 61:16 61:20 65:17 |
| charge [1] | 109:4 | | 17:2 27:4 31:17 | 11:9 44:18 89:21 | 9:2 | 66:2 67:1 67:21 |
| charging [2] | complaint [4] | 18:25 19:2 19:4 | 41:24 77:13 80:2 | court [3] | 1:1 108:10 | 68:18 68:20 68:21 |
| 7:18 | complete [2] | 25:13 | 80:19 84:2 | 112:16 | 112:16 | 70:8 70:23 70:24 |
| chart [1] | 79:7 | | contains [1] | covered [1] | 90:15 | 74:2 91:20 92:6 |
| 81:25 | completed [1] | 117:13 | 41:14 | crash [2] | 22:13 30:5 | 94:16 95:14 95:16 |
| cheap [2] | computer [8] | 20:14 | continue [2] | crashes [1] | 23:6 | 95:19 98:6 100:24 |
| 54:21 | 22:25 23:1 23:7 | | 114:22 | creating [1] | 46:12 | 100:25 101:8 |
| cheaper [1] | 23:24 46:24 47:1 | | Continuous [1] | critical [3] | 24:9 | cuts [1] |
| checked [1] | 84:9 | | 95:12 | 51:17 84:8 | 51:17 84:8 | 91:20 |
| chief [1] | computer-assisted [1] | 117:9 | contract [3] | criticism [1] | 113:16 | cutting [13] |
| 22:20 | 117:9 | | 5:8 5:9 | criticisms [5] | 44:17 | 55:8 58:21 61:5 |
| choice [2] | concern [7] | 43:24 | contributed [3] | 44:21 44:24 53:16 | 44:21 44:24 53:16 | 61:13 65:19 66:4 |
| 113:8 | 51:2 59:14 92:2 | | 103:13 105:1 | 113:12 | 113:12 | 66:13 67:11 67:11 |
| chord [3] | 104:14 110:22 114:4 | | control [8] | criticize [1] | 53:18 | 92:25 100:19 100:23 |
| 81:23 82:2 | 32:13 36:16 43:12 | | 65:3 66:7 69:13 | cross [1] | 66:18 | Cuyahoga [4] |
| Christ [1] | 45:14 49:2 53:10 | | 69:14 75:6 87:24 | cross-examination [2] | 1:17 4:5 | 4:14 |
| circle [2] | 56:22 72:22 82:5 | | 113:6 | 1:17 4:5 | 1:17 4:5 | 109:23 110:16 110:21 |
| 82:18 | 84:14 91:1 92:5 | | conversation [1] | cross-section [1] | 82:6 | D [8] |
| circumstance [1] | 93:3 94:19 113:4 | | 41:12 | 82:6 | 82:6 | 3:8 78:25 |
| 92:23 | | | convicted [1] | crossbucks [1] | 62:24 | 81:12 105:8 106:14 |
| circumstances [2] | | | cooler [1] | crossed [1] | 17:11 | D-a-e-c-h-e-r [1] |
| 54:18 60:16 | | | copies [5] | crossing [7] | 5:25 | 25:19 |
| Civil [1] | | | 24:16 27:16 38:21 | 21:15 22:13 23:15 | 21:15 22:13 23:15 | D-e-F-u-r-i-a [1] |
| CLAIMS [1] | | | 38:24 | 24:23 31:9 73:9 | 24:23 31:9 73:9 | 22:12 |
| 1:1 | | | cops [1] | current [4] | 42:8 | D-r-e-g-e-r [1] |
| classify [1] | | | 98:6 | 42:9 65:15 110:9 | 42:9 65:15 110:9 | 22:12 |
| cleaning [1] | | | copy [14] | cursive [1] | 23:19 | Daccher [3] |
| 57:12 | | | 4:21 8:1 8:9 | curvature [3] | 95:24 | 43:17 44:4 |
| clear [1] | | | 23:10 24:4 25:14 | | | Daccher's [1] |
| 35:3 | | | 27:9 29:2 30:12 | | | 43:15 |
| clear-cut [1] | | | | | | daily [2] |
| 68:22 | | | | | | 19:13 20:21 |
| | | | | | | damn [1] |
| | | | | | | 61:14 |
| | | | | | | damp [1] |
| | | | | | | 48:4 |
| | | | | | | Darned [1] |
| | | | | | | 82:22 |
| | | | | | | darts [1] |
| | | | | | | 87:25 |

| | | | | |
|-------------------------------|-----------------------------------------|-------------------------------------------|------------------------------|-----------------------------|
| data [1] 105:13 | describe [1] 32:1 | devices [9] 11:14 | distinctive [1] 28:3 | 107:7 107:12 107:14 |
| date [13] 9:16 18:8 | described [2] 5:23 | 11:17 11:18 11:20 | district [2] 25:1 | 107:17 |
| 20:1 24:13 25:25 | 28:15 | 58:14 65:4 75:6 | 51:21 | drawings [3] 21:12 |
| 28:1 29:21 33:11 | describes [1] 51:7 | 87:24 109:25 | ditch [1] 57:12 | 46:19 94:3 |
| 41:11 41:24 70:6 | describing [1] 34:18 | diagram [10] 3:9 | document [3] 19:1 | drawn [1] 3:9 |
| 71:6 108:8 | description [3] 3:4 | 11:8 11:16 11:21 | 78:14 105:14 | Dreger [2] 18:6 |
| dated [2] 18:12 | 5:20 94:5 | 17:5 23:12 23:13 | documents [16] 15:22 | 22:11 |
| 25:21 | descriptions [1] 30:5 | 23:16 34:17 47:7 | 16:9 16:16 27:22 | drive [13] 4:11 |
| dates [6] 18:17 20:5 | design [78] 11:15 | difference [5] 78:22 | 27:24 27:25 28:3 | 49:10 49:13 49:22 |
| 20:8 20:17 24:9 | 11:19 13:18 13:22 | 78:23 83:7 83:10 | 28:6 28:9 28:18 | 63:24 77:16 77:20 |
| 71:1 | 14:18 15:9 17:2 | 89:18 | 28:19 32:2 32:21 | 86:8 91:5 91:9 |
| daughter [3] 10:14 | 25:4 40:15 40:17 | different [7] 16:11 | 40:6 42:3 42:5 | 92:11 99:4 101:21 |
| 12:17 45:18 | 40:21 49:9 49:13 | 19:20 38:11 45:2 | Doe [1] 92:3 | driven [2] 89:25 |
| David [2] 26:10 | 49:21 49:24 51:8 | 87:24 96:23 99:18 | doesn't [24] 29:9 | 104:19 |
| 76:23 | 54:10 56:11 56:11 | differently [3] 53:20 | 38:1 43:24 45:16 | driver [29] 44:3 |
| Davidson [4] 45:25 | 58:3 63:21 63:22 | 57:2 106:6 | 56:3 57:18 59:4 | 50:22 58:17 58:18 |
| 46:1 46:3 46:6 | 68:15 69:23 70:12 | difficult [3] 31:19 | 64:8 64:13 66:14 | 59:8 82:25 84:14 |
| day-to-day [1] 57:7 | 70:17 70:22 71:16 | 37:25 60:22 | 67:15 71:24 73:22 | 87:23 88:4 88:5 |
| days [4] 16:16 20:11 | 72:2 72:4 72:10 | digital [1] 84:19 | 78:22 81:17 83:16 | 90:2 90:4 90:5 |
| 48:13 48:14 | 76:18 78:3 78:11 | directed [1] 41:8 | 87:1 87:13 87:23 | 91:2 91:3 92:3 |
| dealing [1] 27:22 | 79:12 79:14 79:22 | direction [1] 88:12 | 89:1 90:2 95:19 | 92:15 92:23 93:13 |
| Dean [1] 2:6 | 80:16 80:21 82:23 | directly [1] 98:21 | 98:6 99:19 | 93:14 93:17 93:21 |
| Debera [1] 2:6 | 83:4 84:24 85:21 | Dirt [1] 70:10 | dollars [4] 60:25 | 94:20 99:1 100:4 |
| December [2] 1:23 | 86:5 86:6 86:8 | disadvantage [3] 93:14 93:15 93:18 | 61:1 61:2 89:4 | 100:5 100:6 102:4 |
| 117:18 | 86:13 86:18 87:3 | disagree [1] 113:5 | domain [1] 66:24 | 104:25 |
| decide [2] 76:24 | 87:15 88:3 88:18 | disappoint [1] 5:9 | domino [1] 32:8 | driver's [3] 85:18 |
| 104:9 | 88:19 90:13 90:18 | disappoint [1] 5:9 | done [23] 21:8 | 85:21 86:10 |
| decided [2] 88:21 | 90:20 98:16 98:23 | disciplines [1] 56:18 | 46:16 49:8 51:19 | drivers [11] 36:7 |
| 104:14 | 101:9 101:10 101:14 | discounted [1] 14:21 | 53:19 53:20 53:21 | 49:2 59:17 59:18 |
| decision [1] 61:25 | 101:15 101:18 102:14 | discover [1] 69:20 | 56:6 56:23 65:9 | 88:6 93:24 93:25 |
| deep [1] 59:3 | 102:15 103:9 106:12 | discretion [4] 60:15 | 71:5 74:1 74:10 | 98:22 99:3 99:6 |
| Defendant [1] 2:9 | 109:6 109:6 109:7 | 61:18 61:20 61:21 | 74:11 80:1 87:16 | 103:8 |
| Defendants [4] 1:8 | 109:13 109:14 109:17 | discretionary [2] 60:20 75:2 | 103:5 105:4 107:2 | drives [1] 82:25 |
| 1:12 1:16 2:16 | 111:2 111:7 111:10 | 60:20 75:2 | 107:24 110:23 111:10 | driveway [1] 88:6 |
| definition [1] 40:13 | 111:11 111:12 | discussed [3] 46:10 | 112:19 | driving [28] 30:23 |
| DeFuria [5] 22:12 | designed [6] 52:5 | 47:12 100:19 | door [1] 49:20 | 31:4 31:7 35:21 |
| 26:15 42:17 113:11 | 54:11 69:25 70:13 | discussion [2] 8:13 | dory [1] 62:18 | 49:25 51:1 51:11 |
| 114:8 | 109:15 109:18 | 18:23 | double [2] 90:16 | 51:14 54:18 55:19 |
| DeFuria's [1] 43:15 | designing [2] 56:13 | discussions [1] 47:10 | 112:11 | 55:21 57:18 64:2 |
| degree [5] 37:24 | desired [1] 56:24 | disregard [2] 91:22 | doubt [1] 97:22 | 64:7 71:7 88:7 |
| 49:6 51:2 52:1 | desires [1] 110:22 | 91:22 | down [44] 5:25 | 94:12 94:13 94:14 |
| 105:24 | destination [1] 110:23 | dissertation [1] 84:6 | 10:17 15:15 23:15 | 100:2 101:18 102:3 |
| demands [1] 60:25 | detail [1] 10:3 | distance [70] 11:4 | 28:23 31:4 32:17 | 103:22 103:23 104:10 |
| dense [1] 98:2 | details [2] 31:8 | 16:18 16:23 21:15 | 38:10 38:14 38:15 | 104:15 104:18 113:2 |
| department [10] 60:8 | 40:9 | 25:5 53:10 54:5 | 55:7 59:4 61:5 | dry [2] 48:2 48:14 |
| 60:11 60:24 61:4 | determination [12] 6:5 6:11 16:1 | 54:8 54:9 54:24 | 64:1 64:19 67:1 | duces [2] 3:5 |
| 64:10 66:8 70:15 | 35:5 38:5 56:4 | 55:1 55:5 55:19 | 68:13 70:1 74:21 | 4:20 |
| 71:15 83:24 89:14 | 56:8 60:4 60:5 | 55:22 56:9 56:11 | 77:20 77:21 78:1 | duly [3] 4:2 117:6 |
| department's [1] 61:18 | 69:5 69:7 80:20 | 56:22 57:24 64:8 | 78:7 78:8 81:20 | 117:7 |
| depending [6] 48:10 | determine [13] 11:14 | 64:9 64:13 64:16 | 82:1 88:5 91:5 | duplicates [1] 19:15 |
| 49:16 92:10 95:22 | 16:4 34:19 34:21 | 64:19 64:20 64:23 | 92:20 92:24 93:11 | during [1] 46:17 |
| 95:23 101:5 | 35:15 35:18 37:25 | 65:11 66:18 67:25 | 98:5 98:7 99:21 | duty [10] 57:6 57:20 |
| deposed [2] 4:3 | 56:10 60:13 60:15 | 68:2 68:5 68:16 | 99:22 100:23 100:24 | 63:13 63:15 66:1 |
| 6:18 | 81:24 93:1 108:21 | 69:9 69:10 69:10 | 101:1 105:17 106:20 | 66:4 67:18 67:19 |
| deposition [23] 1:15 | determined [6] 11:3 | 69:12 70:25 76:17 | 106:23 111:22 112:12 | 68:18 69:19 |
| 3:5 4:20 6:15 | 16:23 51:9 94:11 | 84:23 85:6 85:16 | 114:24 | E [13] 2:12 3:1 |
| 7:20 7:22 26:3 | 111:5 113:22 | 85:19 85:20 87:21 | draft [2] 17:13 17:14 | 3:9 80:9 80:12 |
| 26:5 26:10 26:11 | determining [8] 34:22 | 90:17 90:25 93:16 | drafts [2] 17:9 | 81:7 81:8 81:10 |
| 26:13 41:12 41:22 | 35:1 37:23 39:4 | 93:23 94:22 95:9 | 17:10 | 81:16 82:5 107:20 |
| 53:5 53:9 53:15 | 51:9 51:24 51:25 | 96:8 96:17 97:15 | drag [2] 45:1 45:7 | 117:1 117:1 |
| 64:12 77:5 93:4 | 94:21 | 98:18 98:22 99:7 | dramatically [1] 12:1 | E.R. [2] 1:7 19:5 |
| 112:24 113:1 115:2 | develop [4] 65:3 | 100:13 101:6 101:9 | draw [2] 47:4 70:1 | earliest [1] 20:8 |
| 117:12 | 65:6 65:13 110:19 | 101:15 101:20 101:21 | drawing [20] 16:17 | early [2] 71:2 113:2 |
| depositions [4] 29:7 | developing [1] 87:15 | 102:6 102:15 103:8 | 16:20 17:3 34:9 | easier [1] 58:21 |
| 42:4 53:7 112:7 | device [2] 51:10 | 104:8 104:12 104:12 | 34:11 46:17 46:25 | East [1] 2:19 |
| | 51:12 | 105:25 106:13 111:11 | 47:3 79:25 80:5 | edge [25] 16:6 59:8 |
| | | distances [4] 11:5 | 80:7 90:11 94:5 | 59:12 80:23 81:13 |
| | | 11:12 66:13 105:17 | 94:9 94:15 94:25 | 81:21 82:3 82:7 |

| | | | | |
|-----------------------------------|-----------------------|-----------------------|------------------------|------------------------|
| 82:7 82:8 82:9 | et [3] 1:4 1:7 | extreme [1] 74:3 | 95:20 96:7 96:17 | forces [4] 49:11 |
| 84:12 91:14 91:14 | 1:11 | eye [5] 93:19 93:23 | 96:21 96:22 96:23 | 49:23 83:11 101:23 |
| 91:15 92:11 93:20 | etc [4] 72:8 77:18 | 93:25 94:19 98:25 | 96:23 97:17 97:20 | foregoing [2] 117:9 |
| 94:12 94:18 95:15 | 80:25 82:3 | eyewitnesses [1] | 97:20 100:14 101:8 | 117:12 |
| 96:1 96:3 96:3 | etc. [1] 74:17 | 9:14 | 102:7 102:16 106:2 | forensic [5] 108:13 |
| 96:3 97:11 | Eugene [2] 19:5 | F [4] 3:10 110:3 | 106:15 107:8 114:2 | 108:15 108:17 108:18 |
| edges [2] 82:4 | 73:16 | 110:7 117:1 | 114:2 114:6 | 109:3 |
| EDM [1] 76:3 | evaluating [1] 5:21 | facie [2] 72:12 91:6 | fellows [1] 15:3 | forest [1] 70:7 |
| educated [1] 13:3 | evaluation [1] 73:4 | fact [22] 11:25 14:22 | felt [1] 17:3 | forever [1] 97:12 |
| education [1] 54:4 | evaporate [1] 48:1 | 26:20 26:21 29:7 | few [1] 107:24 | forget [2] 16:18 |
| effect [1] 32:8 | evaporated [1] 47:25 | 29:8 29:10 30:23 | field [8] 21:7 51:10 | 50:25 |
| effort [4] 56:20 | evaporation [1] 47:20 | 31:7 31:8 35:2 | 66:16 66:24 67:12 | form [2] 17:13 17:14 |
| 109:9 109:12 110:19 | event [1] 117:15 | 41:15 44:1 44:1 | 80:7 80:14 80:20 | formula [1] 81:22 |
| efforts [1] 111:4 | evergreen [2] 67:21 | 45:11 45:12 63:3 | fields [2] 66:14 | formulate [1] 31:6 |
| eight [3] 7:19 108:10 | 67:22 | 100:24 100:25 104:11 | fieldwork [3] 80:1 | formulates [1] 30:19 |
| 112:17 | everybody [2] 62:17 | 112:4 114:23 | 80:3 107:23 | forth [2] 14:12 84:11 |
| either [4] 49:19 | 103:12 | factor [3] 45:1 | fight [1] 87:13 | forthcoming [1] 41:13 |
| 58:17 59:21 117:15 | evidence [3] 47:13 | 45:7 103:21 | figure [4] 61:1 | forward [2] 49:14 |
| either/or [1] 61:24 | 47:17 108:20 | factors [7] 30:17 | 62:5 73:22 86:23 | 96:19 |
| element [2] 57:24 | exactly [1] 95:20 | 40:12 86:19 86:20 | figured [2] 94:2 | found [1] 31:20 |
| 74:7 | example [2] 72:15 | 99:14 104:17 105:5 | 94:24 | four [12] 7:25 8:3 |
| elements [2] 104:24 | 81:11 | facts [1] 108:19 | file [3] 16:15 17:16 | 19:13 19:17 24:16 |
| 105:1 | exhibit [35] 4:15 | factual [1] 73:4 | 108:9 | 27:13 48:14 73:11 |
| elevation [4] 49:6 | 4:19 30:7 30:11 | failure [1] 103:7 | files [2] 108:9 108:12 | 91:21 99:16 99:18 |
| 51:3 51:25 79:25 | 40:25 41:4 41:25 | fair [3] 9:3 44:21 | fill [2] 12:1 59:2 | 106:23 |
| eliminated [1] 110:18 | 46:21 73:1 73:7 | 59:19 | final [1] 17:14 | fourth [1] 33:20 |
| emergency [1] 88:19 | 73:15 77:12 77:14 | far [23] 13:4 15:9 | finally [1] 87:16 | frame [1] 21:25 |
| eminent [1] 66:24 | 78:25 79:4 79:18 | 15:19 16:5 36:16 | fine [4] 21:19 32:4 | freeway [2] 109:23 |
| employment [1] 112:1 | 80:9 80:12 80:18 | 43:12 45:13 47:3 | 32:14 108:5 | 110:17 |
| end [6] 8:23 10:8 | 80:22 81:7 81:12 | 55:2 56:21 66:4 | firm [1] 5:4 | freeways [3] 110:20 |
| 32:8 59:4 74:4 | 81:16 91:11 92:13 | 68:13 71:12 72:21 | first [14] 4:2 8:16 | 111:1 111:2 |
| 99:24 | 92:14 96:6 98:15 | 82:4 91:1 93:3 | 8:17 9:1 14:16 | front [2] 79:4 87:25 |
| ending [1] 49:19 | 101:7 102:5 105:8 | 94:18 96:1 99:21 | 15:5 16:13 21:4 | full [2] 4:7 109:5 |
| ends [1] 97:4 | 106:14 107:20 110:3 | 99:22 106:5 106:7 | 25:22 29:17 42:2 | Fulton [1] 23:3 |
| engaged [1] 109:3 | exhibits [4] 3:4 | farmer [4] 66:15 | 42:22 88:11 117:7 | gain [1] 33:25 |
| engineer [20] 53:25 | 18:3 46:12 79:17 | 66:17 66:19 67:15 | 51:21 108:8 112:12 | garbage [2] 84:9 |
| 54:13 56:1 56:3 | exist [2] 48:3 92:2 | farmer's [2] 66:24 | five [5] 19:22 87:5 | 84:9 |
| 56:4 56:7 56:14 | existence [1] 69:24 | 67:12 | 91:21 108:8 112:12 | gather [4] 33:8 |
| 56:17 56:25 57:1 | existing [2] 70:18 | farther [3] 82:17 | fixed [1] 68:6 | 43:7 43:18 72:25 |
| 57:3 57:10 57:15 | 106:21 | 93:20 96:2 | flag [1] 46:20 | gathered [1] 48:19 |
| 65:1 65:18 67:19 | expedient [1] 67:13 | fashion [2] 70:12 | flashing [1] 62:24 | gathering [1] 32:23 |
| 70:1 76:24 89:16 | expense [1] 67:14 | 100:22 | Flat [1] 7:24 | general [6] 2:19 |
| 109:17 | expensive [4] 55:7 | fast [7] 9:24 74:15 | fluid [1] 47:22 | 6:24 33:12 36:12 |
| engineering [15] 40:9 56:18 57:22 | 58:22 61:14 67:12 | 74:16 78:1 87:1 | focus [2] 52:22 | 38:6 53:23 |
| 57:25 58:1 58:3 | experience [1] 49:7 | 91:9 104:10 | 52:24 | General's [1] 2:17 |
| 59:20 89:12 108:13 | experiences [1] 49:8 | faster [2] 49:16 | focused [1] 88:7 | generalizing [1] 91:19 |
| 108:15 108:17 109:4 | expert [2] 6:10 | fatality [2] 18:5 | fog [2] 50:25 72:8 | generally [5] 44:24 |
| 109:7 109:22 110:12 | 26:14 | 24:9 | foliage [16] 11:25 | 57:1 61:3 61:11 |
| engineers [4] 54:15 | expires [2] 116:23 | faults [1] 103:17 | 16:24 20:24 76:5 | 102:19 |
| 56:12 71:4 89:15 | 117:23 | feature [1] 56:11 | 92:14 92:16 92:25 | gentleman [1] 23:20 |
| enter [1] 64:8 | explain [4] 17:18 | February [7] 8:18 | 93:19 93:21 94:15 | gentlemen [1] 8:16 |
| entire [3] 67:4 | 28:19 106:23 107:5 | 8:24 9:1 10:8 | 94:18 95:14 96:25 | geometric [2] 49:5 |
| 78:11 96:18 | explained [2] 52:2 | 10:18 47:16 82:21 | 97:6 97:7 97:10 | 84:2 |
| entitled [2] 19:13 | 72:5 | federal [1] 89:4 | follow [2] 89:5 | given [10] 86:20 |
| 21:7 | explaining [3] 25:9 | fee [6] 7:10 7:15 | 95:24 | 87:13 87:18 98:21 |
| equate [1] 61:15 | 25:11 113:7 | 7:16 7:20 7:22 | following [2] 31:15 | 102:7 104:12 107:21 |
| erecting [1] 58:13 | explanation [1] 107:1 | feeling [2] 50:1 | 31:22 | 112:10 117:8 117:10 |
| erection [1] 114:18 | expose [1] 29:21 | 91:1 | follows [2] 4:4 | giving [2] 20:24 |
| Erie [1] 67:20 | extend [1] 66:4 | feet [40] 59:2 59:5 | 50:9 | 106:13 |
| errant [2] 58:15 | extended [2] 91:13 | 68:25 68:25 68:25 | fool [1] 54:16 | glance [1] 88:14 |
| 59:4 | 92:16 | 69:1 75:11 75:14 | fooled [1] 64:5 | glean [3] 30:1 |
| estimate [1] 74:20 | extent [2] 29:4 | 80:24 81:15 85:16 | foot [1] 82:12 | 30:18 31:5 |
| | 72:1 | 90:19 90:19 90:19 | force [3] 49:14 83:6 | |
| | extra [1] 100:11 | 91:21 93:23 94:17 | 101:15 | |
| | | 95:4 95:14 95:15 | | |

| | | | | |
|--------------------------|-----------------------|-----------------------------------|---------------------------------|-------------------------------------|
| glycerin [1] 84:16 | half-size [1] 21:12 | hillside [1] 59:5 | 65:16 89:19 | interchange [1] 111:7 |
| God [2] 53:23 63:8 | half-sized [1] 28:15 | himself [2] 43:24 | impossible [1] 29:20 | interchanges [2] 111:2 111:3 |
| goes [4] 28:25 71:12 | hand [5] 38:19 49:17 | 43:25 | impression [2] 113:19 | interest [3] 44:9 |
| 89:24 90:1 | 49:24 79:3 117:17 | hip [1] 75:20 | 113:19 | 44:10 44:15 |
| gone [4] 27:24 87:14 | handing [5] 4:18 | hire [1] 112:5 | improve [2] 62:6 | interested [3] 40:23 |
| 92:9 96:12 | 30:10 35:13 41:3 | history [5] 20:15 | 66:12 | 56:25 117:15 |
| good [9] 9:5 67:15 | 110:6 | 22:13 65:22 66:12 | inadequate [1] 101:6 | interfering [1] 97:1 |
| 72:20 84:17 88:19 | handle [2] 54:18 | 70:5 | INC [1] 1:7 | International [1] 30:23 |
| 88:20 91:10 98:10 | 65:4 | hit [2] 97:10 104:9 | inches [1] 107:8 | interoffice [9] 18:5 |
| 104:20 | handled [1] 84:5 | hodge [1] 22:4 | inclement [2] 72:3 | 18:15 20:22 22:11 |
| grade [25] 5:25 | handwritten [3] 17:13 | homicide [1] 103:25 | 72:17 | 22:15 22:21 24:1 |
| 6:1 21:13 21:14 | 23:19 34:9 | honest [1] 42:10 | included [2] 31:14 | 24:8 24:12 |
| 21:15 28:14 28:15 | hang [1] 49:15 | honky [1] 62:18 | 41:21 | interrogatories [3] 15:22 21:5 22:7 |
| 33:2 35:9 40:3 | hanging [3] 49:20 | hopefully [2] 59:17 | inclusive [1] 20:11 | interrupting [1] 26:6 |
| 40:11 40:14 40:16 | 93:19 96:1 | 88:13 | increment [1] 78:17 | intersection [1] 107:15 |
| 45:3 52:8 66:16 | happening [1] 102:4 | horizontal [3] 40:13 | increments [1] 78:15 | intersections [2] 66:13 66:19 |
| 73:9 75:22 90:8 | happy [2] 15:1 | 84:21 106:25 | indicated [1] 30:17 | interstate [2] 25:1 |
| 90:9 94:7 94:8 | 87:20 | horse [1] 87:17 | indicates [1] 74:20 | 109:16 |
| 94:9 105:15 107:14 | hard [1] 9:23 | hot [2] 48:2 48:13 | indicating [7] 17:24 | investigation [5] 9:3 9:4 18:6 |
| grades [2] 107:21 | Harry [1] 18:17 | hour [35] 7:15 7:19 | 79:15 80:4 94:11 | 67:6 76:25 |
| grass [2] 57:11 57:19 | hate [1] 5:9 | 8:1 48:25 49:21 | 95:8 105:13 114:17 | invoice [1] 19:10 |
| Gravel [1] 19:10 | hazard [2] 61:8 | 49:22 50:11 53:2 | indicator [6] 51:11 | involved [9] 6:2 |
| gravitational [1] 101:24 | 61:8 | 55:18 57:18 63:23 | 51:22 83:18 84:5 | 14:1 32:9 51:14 |
| gravity [2] 49:18 | head [2] 7:8 62:5 | 64:6 64:11 73:17 | 84:7 84:18 | 51:17 58:15 67:17 |
| 83:6 | heard [2] 46:8 | 78:4 78:16 78:22 | individual [6] 33:4 | 91:25 109:8 |
| greater [3] 90:25 | 48:8 | 78:24 82:24 84:24 | 35:14 68:23 87:13 | involves [1] 111:10 |
| 93:13 93:17 | heavily [1] 28:17 | 85:2 86:3 86:13 | 90:1 104:14 | involving [1] 24:4 |
| greatest [5] 28:12 | heck [3] 52:20 109:14 | 86:24 98:24 100:11 | industry [3] 89:9 | IOC [1] 24:13 |
| 32:20 33:1 35:7 | 111:22 | 101:10 101:19 101:21 | 89:10 89:12 | issue [1] 76:11 |
| 40:7 | height [2] 91:20 | 102:8 102:18 106:2 | inexpensive [2] 54:19 | items [6] 4:24 |
| green [1] 27:8 | 98:25 | 106:12 113:24 114:11 | 65:17 | 5:1 22:16 33:4 |
| Gregg [1] 2:19 | held [2] 8:13 18:23 | hourly [1] 7:12 | inform [2] 50:22 | 42:12 77:14 |
| gross [1] 84:18 | Hell [1] 85:11 | 8:3 | 59:16 | itself [9] 6:5 17:2 |
| ground [2] 6:20 | help [7] 31:1 36:9 | Howard [2] 109:20 | information [24] 7:3 16:21 17:2 | 31:3 31:8 61:25 |
| 14:6 | 36:15 36:22 37:23 | 110:11 | 7:3 16:21 17:2 | 62:20 91:8 92:17 |
| growth [8] 16:8 | 48:7 108:21 | human [2] 60:3 | 17:4 30:1 30:14 | 94:16 |
| 16:24 39:18 67:11 | helped [1] 36:19 | 99:14 | 30:18 32:23 33:8 | Jack [1] 30:20 |
| 93:13 98:2 98:11 | helpful [1] 39:3 | humidity [2] 48:2 | 33:13 33:15 33:16 | jackknifed [2] 32:7 |
| 101:8 | helps [2] 31:6 32:3 | 48:11 | 36:20 39:9 41:13 | 32:10 |
| guarantee [1] 99:24 | hereby [1] 117:6 | hunch [1] 62:2 | 41:16 43:5 43:9 | jackknifing [1] 34:10 |
| guard [7] 58:12 | herein [2] 1:15 | ice [2] 50:25 72:8 | 73:18 79:9 79:11 | Jackman [51] 1:15 |
| 59:10 59:24 59:25 | hereinafter [1] 4:3 | idea [12] 12:12 23:20 | 80:19 84:2 110:24 | 3:5 3:6 3:7 |
| 60:2 60:6 60:6 | hereunto [1] 117:17 | 37:20 38:7 38:20 | initial [1] 10:7 | 3:8 3:9 3:10 |
| guardrail [2] 58:25 | Hey [5] 59:11 62:7 | 41:13 45:15 46:13 | innocuous [1] 37:25 | 4:1 4:8 4:15 |
| 59:3 | 62:21 62:21 63:6 | 58:7 58:10 86:9 | inside [3] 55:10 | 4:18 4:19 8:5 |
| guardrails [1] 58:13 | hidden [1] 88:6 | 108:2 | 82:16 84:16 | 10:15 14:4 27:20 |
| guess [9] 6:14 | high [3] 44:3 91:21 | ideal [4] 71:8 71:15 | inspected [2] 10:8 | 30:7 30:10 30:11 |
| 9:2 13:6 42:23 | 95:16 | 71:22 71:24 | 13:15 | 39:1 40:25 41:3 |
| 57:22 74:15 81:14 | high-class [1] 62:25 | identification [6] 4:16 30:8 41:1 | inspection [1] 19:25 | 73:7 73:15 77:12 |
| 93:9 114:4 | higher [5] 44:2 | 79:1 80:10 110:4 | inspector's [1] 20:21 | 77:12 77:14 78:25 |
| Guesstimate [1] 6:19 | 49:24 54:12 86:12 | identified [1] 35:25 | install [1] 51:22 | 79:3 80:9 80:17 |
| guest [1] 79:17 | 94:20 | ignorance [1] 62:2 | installed [1] 75:15 | 80:22 81:7 81:12 |
| guide [1] 64:24 | highway [15] 19:24 | ignored [1] 45:14 | instance [8] 15:13 | 91:11 92:13 96:6 |
| Gust [2] 2:13 38:21 | 21:9 26:22 60:8 | impact [7] 33:21 | 29:7 49:25 58:13 | 98:15 101:7 102:5 |
| guy [1] 57:18 | 60:9 60:10 60:11 | 34:20 34:21 35:1 | 65:16 70:3 72:11 | 103:6 105:8 106:14 |
| H [3] 2:19 3:1 | 60:23 61:4 61:18 | 58:14 73:14 102:10 | 111:4 | 107:20 107:24 110:3 |
| 4:25 | 64:10 66:8 71:15 | impacting [1] 34:10 | instead [1] 13:8 | 110:6 112:23 116:7 |
| half [15] 69:17 85:18 | 83:23 109:16 | imperfect [1] 104:15 | instructions [1] 24:22 | 116:13 117:6 |
| 85:22 86:11 86:14 | highways [1] 109:17 | impetus [1] 87:3 | instrument [2] 84:18 | Jackman's [1] 3:10 |
| 86:16 86:17 86:23 | Hilbert [4] 25:16 | implies [1] 103:4 | 84:21 | jagged [1] 58:23 |
| 87:2 87:8 87:9 | 42:23 43:1 43:5 | importance [1] 99:10 | insurance [2] 108:23 | James [1] 26:11 |
| 88:2 88:13 88:14 | hill [4] 62:21 69:16 | important [6] 29:19 | 109:4 | January [2] 8:18 |
| 88:22 | 74:22 78:8 | 30:6 33:6 40:8 | intellectually [1] 49:7 | |
| | | | intend [1] 74:12 | |

| | | | | | | | | | | | | |
|----------------|--------|--------------|--------|---------------|--------|--------|------------------------|--------|--------|-------------------|--------|--------|
| 8:24 | | lawful [1] | 4:2 | 30:15 | 33:2 | 35:8 | Lyn [5] | 10:14 | 10:15 | matter [8] | 38:1 | |
| JASON [1] | 1:4 | Lawrence [3] | 22:7 | 40:3 | 40:11 | 40:13 | 75:19 | 76:1 | 100:4 | 41:8 | 78:22 | 83:16 |
| Jesus [1] | 87:12 | 22:9 | 22:20 | 40:16 | 40:24 | 59:8 | M-a-r-g-i-e-a-n [1] | | | 87:1 | 94:20 | 102:1 |
| job [1] | 57:2 | laws [1] | 91:6 | 59:12 | 66:6 | 70:23 | 26:12 | | | 112:3 | | |
| Joe [1] | 113:11 | lawsuits [1] | 60:21 | 80:23 | 80:24 | 81:13 | M-a-t-a [1] | 23:20 | | maximize [1] | 67:5 | |
| John [1] | 92:3 | lay [2] | 77:19 | 81:21 | 82:3 | 82:10 | Maier [2] | 76:21 | | maximum [5] | 61:2 | |
| Johnnie [1] | 76:21 | lead [1] | 14:15 | 84:10 | 84:12 | 84:12 | 77:3 | | | 96:10 | 98:3 | 105:25 |
| judgement [4] | 60:22 | learned [2] | 49:2 | 94:7 | 94:8 | 94:9 | main [1] | 34:24 | | 106:1 | | |
| 61:3 | 61:7 | 49:6 | | 94:10 | 94:24 | 95:1 | maintain [4] | 51:18 | | may [15] | 11:10 | 17:11 |
| 61:19 | | least [19] | 12:1 | 96:2 | 96:3 | 96:3 | 51:18 | 70:14 | 100:21 | 20:5 | 20:19 | 43:11 |
| July [7] | 9:20 | 13:4 | 16:5 | 100:16 | 100:17 | 105:9 | maintenance [10] | | | 45:6 | 64:4 | 64:5 |
| 26:1 | 38:16 | 26:16 | 26:24 | 105:15 | 106:4 | 106:25 | 20:15 | 42:7 | 56:6 | 65:7 | 65:8 | 68:24 |
| 47:14 | 71:7 | 45:16 | 47:7 | 107:14 | | | 56:16 | 57:10 | 58:4 | 78:14 | 88:11 | 90:15 |
| jumbled [1] | 16:14 | 54:10 | 56:12 | lines [4] | 69:8 | 82:4 | 69:1 | 70:15 | 70:15 | 104:9 | | |
| jump [3] | 20:7 | 64:13 | 67:12 | 82:9 | 106:23 | | 76:24 | | | mayor [1] | 112:4 | |
| 63:8 | | 88:25 | 91:1 | list [5] | 4:23 | 15:21 | major [2] | 110:14 | | McCuskey [2] | 1:20 | |
| justifying [1] | 113:25 | leave [2] | 8:10 | 24:9 | 29:1 | 29:3 | 110:15 | | | 2:11 | | |
| Karm [3] | 1:19 | leaves [1] | 92:9 | 29:5 | | 29:5 | makes [3] | 56:4 | | McDowall [1] | 2:4 | |
| 117:5 | 117:20 | leaving [1] | 29:20 | listening [2] | | 41:11 | 69:5 | 83:10 | | mean [24] | 11:17 | |
| keep [3] | 8:9 | left [18] | 12:9 | 83:22 | | | malarky [1] | 70:1 | | 14:19 | 23:18 | 24:6 |
| 84:12 | | 31:23 | 48:24 | live [2] | 58:18 | 71:23 | man [1] | 46:3 | | 31:23 | 42:25 | 43:12 |
| keeping [1] | 103:8 | 50:12 | 52:14 | LMD [3] | | 85:8 | man-hours [1] | 61:16 | | 43:21 | 47:23 | 49:7 |
| kept [2] | 8:20 | 63:21 | 75:12 | 100:8 | 105:18 | | management [1] | | | 50:15 | 53:25 | 68:6 |
| killed [2] | 63:5 | 75:15 | 78:3 | load [1] | 112:11 | | 42:7 | | | 71:10 | 72:4 | 72:21 |
| 63:6 | | 78:8 | 78:10 | locate [3] | | 33:21 | manner [3] | 31:11 | | 76:2 | 77:16 | 89:16 |
| kind [8] | 10:3 | 105:11 | | 111:1 | 111:2 | | 32:3 | 32:5 | | 95:1 | 95:18 | 103:11 |
| 44:7 | 52:19 | legal [2] | 19:1 | located [2] | | 111:8 | mantra [1] | 104:22 | | 106:25 | 114:15 | |
| 84:8 | 98:20 | legend [1] | 65:7 | 114:3 | | | manual [16] | 25:4 | | meaning [1] | 37:15 | |
| kinds [4] | 13:2 | legs [2] | 77:8 | location [5] | 30:5 | | 42:7 | 50:20 | 51:6 | means [9] | 20:17 | |
| 57:12 | 83:25 | length [2] | 96:18 | 45:2 | 45:8 | 65:23 | 51:7 | 52:3 | 64:22 | 51:13 | 65:6 | 72:12 |
| knew [7] | 35:22 | 99:18 | | 113:25 | | | 64:24 | 64:25 | 65:8 | 83:24 | 87:17 | 88:9 |
| 44:3 | 44:6 | less [3] | 46:19 | locations [1] | 69:21 | | 65:12 | 65:15 | 75:5 | 89:6 | 103:12 | |
| 82:8 | 93:6 | 97:6 | 87:22 | locked [1] | 102:20 | | 85:8 | 105:18 | 114:19 | meant [3] | 81:14 | |
| knock [2] | 92:9 | letter [12] | 21:3 | log [2] | 19:13 | 24:20 | manual's [1] | 65:2 | | 112:25 | 113:9 | |
| 92:10 | | 22:7 | 22:9 | logically [1] | 57:20 | | map [1] | 22:10 | | measure [8] | 10:21 | |
| knocked [1] | 114:24 | 25:6 | 25:8 | longer [4] | 59:9 | | Marginean [1] | 26:11 | | 10:23 | 11:1 | 13:8 |
| knowing [1] | 114:13 | 26:18 | 27:12 | 59:10 | 82:17 | 82:19 | mark [3] | 18:3 | 79:16 | 16:22 | 75:23 | 82:13 |
| knowledge [5] | 28:22 | 42:24 | 76:20 | longhand [1] | 17:10 | | 110:2 | | | 107:22 | | |
| 29:16 | 51:21 | letters [6] | 24:1 | look [22] | 4:23 | 6:4 | marked [15] | 3:4 | | measured [4] | 11:2 | |
| 76:9 | | 27:13 | 27:16 | 6:8 | 13:8 | 32:16 | 4:15 | 4:18 | 30:7 | 11:3 | 11:4 | 11:4 |
| known [1] | 93:6 | 34:17 | 63:6 | 36:6 | 38:4 | 44:22 | 4:15 | 4:18 | 30:7 | measurement [4] | | |
| knows [3] | 91:2 | level [5] | 76:2 | 56:9 | 57:1 | 62:5 | 30:10 | 36:13 | 37:5 | 75:17 | 81:15 | 81:16 |
| 91:3 | 114:21 | 93:24 | 93:25 | 62:16 | 65:16 | 67:3 | 37:13 | 40:25 | 41:3 | 81:19 | | |
| L-y-n [1] | 10:14 | license [1] | 111:21 | 68:23 | 70:17 | 71:4 | 78:25 | 79:3 | 80:9 | measurements [14] | | |
| lacking [1] | 16:21 | licensed [2] | 111:16 | 73:10 | 81:4 | 81:21 | 110:3 | 110:6 | | 10:9 | 10:19 | 11:11 |
| laid [1] | 96:15 | 111:19 | | 92:7 | 103:18 | | Market [1] | 1:21 | | 11:13 | 12:18 | 13:15 |
| land [4] | 66:19 | light [2] | 33:11 | looked [14] | 7:4 | | marking [1] | 24:22 | | 33:19 | 77:18 | 79:24 |
| 67:13 | 77:19 | lights [1] | 62:24 | 14:22 | 19:21 | 28:7 | markings [5] | 38:9 | | 80:23 | 80:25 | 81:2 |
| lane [5] | 35:21 | limbs [3] | 38:4 | 35:12 | 35:15 | 36:16 | 38:10 | 38:14 | 38:15 | 81:9 | 84:1 | |
| 94:14 | 95:11 | 57:11 | 92:8 | 36:17 | 37:8 | 38:7 | 62:25 | | | measuring [2] | 11:12 | |
| 95:11 | | limit [8] | 50:3 | 63:2 | 63:3 | 69:22 | marks [2] | 74:8 | | 82:16 | | |
| lanes [3] | 94:12 | 54:25 | 55:17 | 109:11 | | | 102:13 | | | medicine [1] | 108:18 | |
| 111:6 | | 108:16 | 114:5 | looking [15] | 9:22 | | Massillon/Orrville [1] | | | meet [3] | 60:18 | 67:7 |
| large [9] | 31:7 | limited [8] | 64:16 | 15:2 | 16:9 | 16:10 | 21:16 | | | 67:7 | | |
| 92:15 | 93:13 | 64:19 | 64:20 | 35:17 | 54:24 | 57:13 | Mata [1] | 23:20 | | Melissa [3] | 1:18 | |
| 93:24 | 94:19 | 65:11 | 67:24 | 77:17 | 85:12 | 88:9 | material [7] | 13:17 | | 117:5 | 117:20 | |
| 98:22 | | 98:12 | | 88:12 | 94:8 | 105:16 | 17:20 | 28:16 | 31:18 | memory [1] | 8:21 | |
| laser [1] | 25:13 | | | 106:1 | 110:22 | | 34:15 | 42:9 | 91:18 | mention [2] | 42:16 | |
| last [9] | 20:9 | limiting [2] | 62:19 | looks [3] | 34:9 | 38:2 | materials [22] | 6:4 | | 76:20 | | |
| 59:8 | 80:8 | 63:11 | | 34:9 | 38:2 | | 7:4 | 8:17 | 8:21 | mentioned [4] | 35:10 | |
| 81:11 | 102:7 | limits [2] | 67:5 | lopped [1] | | 95:25 | 8:25 | 9:1 | 10:5 | 42:4 | 42:22 | 50:16 |
| 112:11 | | 67:8 | | lots [2] | 4:24 | 30:17 | 10:8 | 14:16 | 14:22 | met [4] | 10:12 | 47:11 |
| latest [1] | 20:9 | Lincoln [2] | 77:25 | Lou [1] | 23:19 | | 15:2 | 15:5 | 15:12 | 61:8 | 100:16 | |
| latter [1] | 38:16 | 100:2 | | low [1] | 94:16 | | 15:24 | 16:25 | 29:3 | method [4] | 67:13 | |
| law [5] | 2:6 | line [45] | 20:25 | lower [1] | | 93:11 | 29:5 | 29:9 | 31:14 | 83:21 | 83:21 | 83:23 |
| 2:13 | 75:10 | 21:14 | 24:20 | lowering [1] | 54:25 | | 47:21 | 48:19 | 50:16 | methods [2] | 52:2 | |
| | | 28:15 | 28:25 | | | | mathematically [3] | | | 53:4 | | |
| | | | | | | | 51:23 | 52:2 | 82:15 | Michael [1] | 26:13 | |

| | | | | | | | |
|----------------------|-------------|---------------------|---------------|---------------------|-----------------|---------------------|-------------|
| Michigan [1] | 111:16 | 60:24 66:20 | nefarious [1] | 34:4 | 98:4 98:4 99:20 | 18:7 20:3 20:3 | |
| microlevel [1] | 57:13 | month [1] | 9:23 | negligent [1] | 104:10 | 22:9 25:4 38:18 | |
| middle [5] | 79:24 | morning [1] | 113:2 | neither [3] | 42:12 | 40:4 42:10 50:16 | |
| 81:23 82:11 82:13 | | most [11] | 6:21 | 93:15 114:14 | | 50:17 52:17 53:23 | |
| 82:13 | | 24:25 28:16 | 39:3 | neutralized [1] | 49:11 | 54:4 56:10 62:10 | |
| might [7] | 41:22 | 40:8 55:20 | 57:20 | never [11] | 8:20 | 63:10 63:18 64:13 | |
| 57:5 60:1 71:20 | | 67:12 75:21 | 105:2 | 9:8 9:13 29:22 | | 66:1 67:3 67:16 | |
| 71:21 96:2 110:19 | | 109:9 | | 47:10 47:11 63:2 | | 67:18 68:17 69:3 | |
| mile [3] | 78:22 78:24 | motorcycles [1] | | 63:2 74:24 78:2 | | 69:4 75:15 79:25 | |
| 109:23 | | 91:23 | | 109:18 | | 86:7 93:6 103:7 | |
| mile-an-hour [10] | | motoring [1] | 111:1 | new [1] | 65:6 | ODOT's [1] | 53:4 |
| 57:17 72:10 72:13 | | motorist [13] | 55:1 | newly [1] | 45:3 | off [9] | 8:12 8:13 |
| 72:13 78:15 82:12 | | 61:7 63:17 63:19 | | newspaper [1] | 24:5 | 18:22 18:23 21:18 | |
| 86:5 86:6 114:12 | | 64:9 64:18 69:7 | | next [23] | 12:5 13:16 | 58:22 82:14 92:9 | |
| 114:21 | | 69:11 71:16 76:15 | | 13:25 14:25 15:6 | | 92:10 | |
| miles [33] | 48:25 | 76:17 76:19 92:3 | | 15:8 15:17 15:18 | | offense [1] | 113:11 |
| 49:21 49:22 50:11 | | motorists [7] | 52:5 | 17:7 21:2 22:3 | | offer [1] | 107:10 |
| 53:2 55:18 57:18 | | 59:11 59:23 63:14 | | 22:4 23:8 23:25 | | Offhand [1] | 12:4 |
| 59:9 59:13 63:23 | | 63:24 100:14 110:22 | | 24:7 24:15 24:17 | | office [7] | 2:17 |
| 64:6 64:11 73:17 | | mountain [5] | 58:20 | 24:19 25:8 26:2 | | 13:18 14:17 21:8 | |
| 78:4 78:16 82:24 | | 58:21 58:22 58:23 | | 26:4 59:2 59:13 | | 37:20 53:23 117:17 | |
| 84:24 85:2 86:3 | | 69:17 | | nice [1] | 72:7 | officer [1] | 74:19 |
| 86:13 86:24 98:23 | | mountains [1] | 55:7 | nicely [1] | 96:14 | officers [1] | 9:13 |
| 100:11 101:10 101:19 | | move [2] | 84:11 | nine [2] | 112:17 112:17 | offices [1] | 1:20 |
| 101:21 102:8 102:17 | | 96:22 | | nine-page [1] | 79:18 | offset [3] | 105:20 |
| 106:1 106:12 110:17 | | moved [1] | 96:24 | no-passing [1] | 69:4 | 106:2 106:20 | |
| 113:24 114:10 | | moves [1] | 96:19 | Nobody [2] | 96:11 | often [3] | 51:19 54:11 |
| miles-an-hour [6] | | moving [1] | 84:16 | 114:16 | | 108:4 | |
| 52:4 52:13 53:3 | | Mozart [1] | 4:11 | nod [1] | 7:8 | OHI [1] | 9:22 |
| 70:22 78:11 90:18 | | MPH [2] | 64:16 | nominal [1] | 98:21 | Ohio [22] | 1:1 |
| mind [4] | 29:23 64:8 | mud [1] | 70:10 | nominally [2] | 93:23 | 1:2 1:20 1:22 | |
| 76:11 77:9 | | mumble [1] | 101:13 | 96:9 | | 2:7 2:14 2:17 | |
| minimal [2] | 78:23 | must [4] | 58:11 84:11 | noninclement [2] | | 2:20 4:10 72:12 | |
| 96:10 | | 84:13 91:7 | | 72:6 72:16 | | 72:15 75:5 75:9 | |
| minimum [10] | 85:2 | N [2] | 10:14 42:24 | normal [3] | 47:20 | 88:25 89:2 89:11 | |
| 85:5 85:17 85:24 | | name [3] | 4:7 46:3 | 51:1 72:14 | | 89:19 111:16 117:3 | |
| 86:7 90:18 105:24 | | 94:6 | | normally [2] | 72:14 | 117:6 117:17 117:21 | |
| 106:1 106:13 114:2 | | named [1] | 117:6 | 72:15 | | oily [2] | 47:13 71:21 |
| minivan [3] | 34:11 | national [1] | 89:3 | north [3] | 16:18 75:11 | old [5] | 7:15 83:14 |
| 97:15 97:20 | | naturally [2] | 99:3 | 75:14 | | 84:19 84:20 84:20 | |
| minus [2] | 6:22 | 99:6 | | Notary [4] | 1:19 | once [4] | 16:23 26:7 |
| 96:11 | | nature [1] | 48:6 | 116:21 117:5 117:20 | | 77:21 108:9 | |
| minute [4] | 14:6 | naught [1] | 30:3 | noted [1] | 44:1 | oncoming [1] | 67:23 |
| 18:14 112:18 112:19 | | near [2] | 12:2 95:7 | notes [13] | 21:7 | one [67] | 13:6 14:21 |
| mirror [1] | 88:14 | nearest [1] | 78:17 | 26:7 26:7 27:2 | | 14:24 15:2 15:4 | |
| mirrors [2] | 88:10 | necessarily [2] | 29:11 | 27:3 27:20 45:19 | | 16:12 17:13 19:22 | |
| 88:10 | | 66:25 | | 80:2 80:2 80:3 | | 19:22 20:8 20:9 | |
| mischaracterized [1] | | 66:25 | | 80:7 80:14 80:16 | | 20:9 20:23 21:2 | |
| 7:2 | | necessary [11] | 11:16 | nothing [15] | 26:19 | 21:13 21:18 22:7 | |
| miserable [1] | 48:15 | 11:21 41:17 46:21 | | 26:23 38:3 43:12 | | 24:3 24:14 24:25 | |
| misinform [2] | 63:17 | 55:25 56:5 56:21 | | 46:22 61:24 62:9 | | 27:7 31:18 38:9 | |
| 63:18 | | 66:8 66:11 67:2 | | 62:13 64:21 70:6 | | 38:19 39:11 42:8 | |
| misinformed [2] | | 68:20 | | 76:14 91:24 107:12 | | 46:22 51:9 51:17 | |
| 71:16 76:15 | | need [15] | 18:3 | 113:10 117:7 | | 51:21 52:22 56:20 | |
| misleading [3] | 48:20 | 40:14 44:4 57:10 | | notice [1] | 4:19 | 57:5 57:8 57:20 | |
| 48:20 49:1 | | 57:12 57:21 64:9 | | noting [1] | 51:12 | 59:15 60:23 65:11 | |
| misread [1] | 101:12 | 65:4 66:25 67:16 | | November [1] | 117:23 | 71:1 74:25 78:8 | |
| missing [1] | 20:12 | 87:21 87:23 87:24 | | now [41] | 16:25 27:2 | 78:8 78:13 78:13 | |
| mix [1] | 47:22 | 88:16 106:5 | | 33:3 35:7 37:13 | | 78:19 78:19 78:20 | |
| mixture [1] | 45:4 | needed [5] | 16:11 | 40:3 54:6 54:19 | | 78:21 78:21 78:21 | |
| model [1] | 46:25 | 54:8 84:17 102:15 | | 55:14 59:10 61:13 | | 78:24 79:16 79:25 | |
| moderate [3] | 52:5 | 111:6 | | 62:1 63:5 63:6 | | 80:8 81:8 82:5 | |
| 99:3 99:6 | | Needles [2] | 109:20 | 64:10 66:8 78:3 | | 91:7 95:7 96:4 | |
| modify [2] | 41:14 | 110:11 | | 78:6 83:4 84:5 | | 96:12 101:17 104:17 | |
| 45:11 | | needs [6] | 67:7 | 85:5 85:15 86:12 | | 104:25 105:2 108:9 | |
| moment [1] | 77:8 | 67:8 68:24 69:12 | | 86:16 87:19 88:23 | | 114:21 114:23 | |
| money [3] | 59:2 | 90:25 114:1 | | 89:23 95:18 97:12 | | one-hundred [1] | |
| | | | | | | 116:8 | |
| | | | | | | ones [5] | 27:5 35:12 |

| | | | | |
|------------------------------|-------------------------|------------------------------------|-------------------------|------------------------|
| 39:7 39:16 40:8 | 24:25 25:4 26:18 | 67:14 | piece [6] 7:3 17:17 | practical [8] 54:7 |
| Ontario [2] 19:11 | 33:20 34:7 34:18 | payment [1] 113:4 | 17:17 21:7 28:24 | 94:17 98:23 100:22 |
| 19:12 | 42:2 42:22 51:5 | pays [1] 67:16 | 29:19 | 100:23 100:25 101:2 |
| open [4] 55:11 66:18 | 73:1 73:3 73:7 | PC [1] 97:3 | pile [1] 26:8 | 109:1 |
| 108:9 108:12 | 73:15 77:12 79:9 | PE [1] 111:21 | pin [1] 98:5 | practice [5] 58:2 |
| operate [2] 60:13 | 79:14 79:19 80:17 | pencil [1] 15:15 | place [14] 13:23 | 58:6 58:9 109:6 |
| 60:25 | 80:22 81:4 81:11 | Pennsylvania [1] 111:16 | 23:17 39:21 47:24 | 109:19 |
| operating [1] 90:21 | 81:12 81:20 92:13 | people [15] 51:16 | 48:15 48:18 52:16 | precise [2] 84:19 |
| opinion [24] 14:9 | 96:6 98:15 101:7 | 53:6 55:9 55:21 | 52:18 52:18 53:1 | 95:21 |
| 29:10 29:12 29:12 | 102:5 103:6 105:8 | 63:3 63:8 67:23 | 59:22 61:19 114:22 | precisely [2] 16:19 |
| 30:19 31:6 41:22 | 106:14 107:4 | 69:2 70:8 70:14 | 117:12 | 95:19 |
| 42:12 43:1 43:9 | pages [5] 19:25 | 70:16 86:8 88:18 | placed [1] 114:6 | precision [1] 46:19 |
| 52:12 53:1 53:2 | 23:8 77:14 107:4 | 99:17 110:24 | Plaintiffs [4] 1:5 | preferable [1] 83:21 |
| 53:15 65:22 67:24 | 116:9 | per [3] 48:25 85:8 | 1:9 2:3 2:9 | preferred [8] 17:4 |
| 72:19 73:13 73:20 | paid [1] 78:2 | 102:8 | plan [2] 21:12 46:12 | 85:3 85:5 85:19 |
| 73:25 76:22 82:23 | pair [1] 75:15 | percent [7] 75:22 | planes [1] 84:21 | 85:20 86:12 90:19 |
| 93:2 100:22 | panic [1] 87:21 | 90:7 90:8 90:9 | plans [5] 17:1 | 106:13 |
| opinions [12] 28:10 | paper [4] 15:15 | 109:9 109:12 109:13 | 70:2 84:2 84:3 | preliminaries [1] 6:15 |
| 37:11 41:9 41:16 | 21:7 27:8 29:19 | perception/reaction [4] 45:13 74:9 | 111:15 | preliminary [1] 111:6 |
| 41:19 41:20 41:24 | paper-clipped [1] 17:23 | 87:22 90:1 | plate [7] 48:22 48:23 | preparation [4] 28:3 |
| 44:14 48:17 52:10 | papers [1] 27:3 | perfect [1] 72:15 | 48:25 52:4 52:13 | 28:7 43:21 110:16 |
| 73:22 77:13 | paperwork [1] 114:17 | perhaps [3] 7:2 | 53:3 74:22 | prepare [2] 11:16 |
| opposed [4] 7:8 | Paralegal [1] 2:6 | 28:8 52:25 | plates [1] 99:2 | 11:21 |
| 72:7 111:18 114:7 | Pardon [1] 26:6 | period [2] 12:14 | play [1] 90:12 | prepared [8] 16:17 |
| options [2] 60:12 | parked [1] 88:1 | 48:3 | played [5] 6:6 | 17:3 17:6 17:8 |
| 67:9 | part [7] 23:11 34:5 | permanent [1] 58:18 | 6:12 35:5 47:6 | 26:21 28:5 41:7 |
| order [9] 11:15 17:22 | 37:12 38:16 47:7 | permission [2] 66:9 | 103:19 | 54:17 |
| 18:4 18:15 24:2 | 58:1 69:23 | 67:14 | Plaza [1] 2:13 | presence [1] 117:8 |
| 24:6 70:24 81:3 | partially [1] 67:7 | person [4] 84:15 | pliable [1] 47:23 | presented [1] 15:21 |
| 106:17 | particular [15] 6:9 | 99:14 99:15 102:2 | plus [2] 6:22 96:11 | pretty [1] 38:15 |
| orders [5] 18:14 | 17:22 18:4 34:14 | personal [2] 27:20 | podge [1] 22:4 | prevailing [2] 113:17 |
| 24:3 24:5 24:6 | 48:21 51:5 65:4 | 80:2 | point [29] 26:17 | 113:22 |
| 24:18 | 65:7 65:22 65:23 | personnel [2] 18:7 | 27:15 31:5 31:12 | previous [2] 35:23 |
| ordinate [4] 79:24 | 66:16 84:25 89:24 | phenomenon [1] 48:3 | 32:15 41:18 44:23 | 101:4 |
| 81:23 82:2 82:13 | 92:23 113:24 | phone [1] 8:24 | 65:21 68:6 68:6 | prima [2] 72:12 |
| organization [2] 89:3 111:21 | particularly [1] 39:7 | photo [1] 38:19 | 68:8 69:19 71:3 | 91:6 |
| organized [1] 70:12 | parties [1] 56:5 | photograph [1] 38:5 | 73:14 74:5 76:7 | primary [1] 39:8 |
| origin [1] 110:23 | partner [2] 10:12 | photographs [14] 15:14 24:16 28:13 | 91:18 93:10 93:11 | principles [2] 65:2 |
| original [3] 19:2 | 10:13 | 32:16 35:8 35:24 | 95:10 96:25 97:2 | 65:2 |
| 19:4 79:4 | party [2] 84:17 117:15 | 36:2 36:4 37:17 | 97:3 97:4 97:6 | printed [1] 20:20 |
| Orrville [5] 11:6 | pass [3] 60:22 69:5 | 39:3 39:11 39:13 | 97:9 107:14 107:15 | printing [1] 23:4 |
| 23:15 65:24 95:7 | 82:20 | 39:20 93:2 | 107:15 | printout [5] 20:14 |
| otherwise [2] 44:8 | passenger [8] 45:12 | photolog [16] 16:12 | points [2] 14:14 | 22:25 23:1 23:24 |
| 117:15 | 83:5 90:25 92:4 | 18:11 25:13 25:13 | 73:3 | 47:1 |
| ought [1] 56:19 | 93:14 93:21 93:25 | 25:22 25:24 28:13 | police [7] 9:13 | printouts [1] 23:7 |
| ourselves [1] 111:18 | 98:16 | 33:2 35:8 35:22 | 22:20 23:24 31:13 | prints [1] 28:16 |
| outside [1] 49:14 | passing [2] 69:9 | 36:6 39:5 39:6 | 36:13 73:19 74:19 | private [5] 66:9 |
| overhanging [1] 57:11 | 102:10 | 39:13 39:17 39:17 | policies [5] 50:9 | 66:20 67:20 108:25 |
| overhead [2] 94:18 | past [1] 96:25 | photos [13] 33:2 | 50:18 50:19 113:4 | 109:19 |
| 95:23 | pat [2] 18:16 114:4 | 35:10 35:10 35:13 | 113:6 | problem [17] 14:20 |
| owe [1] 63:14 | paths [1] 70:7 | 35:14 36:9 36:13 | policy [2] 8:1 | 14:24 28:21 29:17 |
| own [3] 27:2 42:8 | patrol [2] 19:24 | 36:22 37:19 38:22 | 56:10 | 37:24 45:20 53:11 |
| 92:6 | 26:22 | 39:6 39:8 39:12 | PORTAGE [1] 1:2 | 53:12 62:3 69:23 |
| owner [1] 67:13 | paved [2] 45:3 | physically [4] 51:25 | positioned [1] 83:1 | 71:11 76:16 76:18 |
| owners [2] 66:9 | 70:11 | 104:24 104:24 104:25 | possible [4] 54:7 | 101:5 109:1 114:8 |
| 67:20 | pavement [17] 16:6 | pick [4] 33:17 35:14 | 63:16 103:4 104:22 | 114:9 |
| P [1] 42:2 | 24:22 38:9 38:14 | 64:3 86:2 | possibly [2] 14:22 | procedure [3] 1:18 |
| p.m. [1] 115:3 | 38:15 62:25 71:18 | pickup [1] 92:3 | 101:3 | 6:24 59:7 |
| package [1] 37:5 | 72:19 82:3 82:4 | picture [1] 57:15 | post [4] 54:20 58:16 | procedures [1] 56:6 |
| packet [3] 23:7 | 82:8 91:14 91:14 | pictures [3] 18:11 | 60:6 88:4 | process [8] 6:20 |
| 36:13 37:13 | 94:12 95:16 96:4 | 25:20 25:24 | postaccident [1] 108:19 | 10:5 13:16 14:14 |
| page [36] 4:24 | paving [1] 70:10 | | posted [1] 64:10 | 15:17 17:7 58:2 |
| 21:18 23:24 24:20 | pay [1] 7:21 | | postpavement [1] 38:10 | 58:3 |
| | paying [2] 12:18 | | poured [1] 47:24 | prodded [1] 77:1 |
| | | | | production [2] 15:21 |

Stoll, Peiser & Snider, Inc.

| | | | | | | | | | | | | | |
|---------------|--------|--------|------------------|--------|--------|------------------|--------|------------------|--------|--------|----------------|--------|--------|
| 56:13 | 56:15 | 69:24 | 23:6 | 23:17 | 23:19 | September [1] | 18:12 | 57:24 | 64:8 | 64:9 | 87:21 | 88:19 | 103:13 |
| 70:6 | 70:10 | 70:10 | 26:24 | 37:14 | 42:3 | Sergeant [2] | 26:21 | 64:13 | 64:16 | 64:19 | situations [1] | | 61:12 |
| 70:11 | 70:11 | 70:14 | 43:12 | 50:20 | 64:11 | 44:11 | | 64:20 | 64:23 | 65:11 | six [2] | 48:14 | 112:12 |
| 71:1 | 71:3 | | 64:16 | 64:25 | 78:16 | series [12] | 6:1 | 66:13 | 66:18 | 67:24 | sixth [1] | 34:7 | |
| roadway [39] | 5:22 | | 81:12 | 82:7 | 86:1 | 10:9 | 10:19 | 68:2 | 68:5 | 68:16 | size [1] | 52:18 | |
| 6:5 | 6:8 | 6:9 | 88:25 | 106:20 | 108:5 | 20:5 | 20:7 | 69:8 | 69:10 | 69:12 | sketch [3] | | 80:12 |
| 6:12 | 13:9 | 13:10 | 109:22 | 111:4 | 113:17 | 31:9 | 35:13 | 70:25 | 76:17 | 84:23 | skid [2] | 74:8 | 102:13 |
| 16:17 | 17:1 | 23:13 | scale [8] | 16:17 | 16:20 | 62:14 | 74:14 | 85:5 | 85:16 | 85:19 | sleet [1] | 72:8 | |
| 25:23 | 31:4 | 50:4 | 17:3 | 23:16 | 46:25 | serve [1] | 111:1 | 85:20 | 90:17 | 93:16 | slow [3] | 64:1 | 64:19 |
| 51:19 | 56:22 | 57:22 | 46:25 | 94:25 | 107:8 | serves [1] | | 93:23 | 94:21 | 95:9 | 88:5 | | |
| 57:25 | 58:1 | 58:2 | scenario [1] | | 37:12 | set [15] | 14:6 | 96:7 | 96:17 | 97:14 | slower [1] | | 49:17 |
| 59:20 | 62:20 | 63:12 | scene [14] | | 10:9 | 19:23 | 21:4 | 98:17 | 98:22 | 99:7 | slowly [1] | | 85:23 |
| 68:7 | 68:8 | 68:9 | 10:17 | 13:15 | 14:17 | 39:11 | 39:12 | 100:13 | 101:6 | 101:9 | small [2] | | 17:23 |
| 68:16 | 69:20 | 69:22 | 15:7 | 36:1 | 36:2 | 55:16 | 60:16 | 101:14 | 101:20 | 101:20 | 84:21 | | |
| 77:16 | 77:20 | 84:10 | 37:13 | 37:16 | 39:6 | 70:2 | 73:21 | 102:6 | 102:14 | 103:8 | smart [1] | | 93:10 |
| 92:8 | 92:17 | 93:20 | 73:6 | 73:21 | 76:23 | 117:17 | | 104:8 | 104:11 | 104:12 | Smith [6] | | 22:8 |
| 95:10 | 104:18 | 104:18 | 77:17 | | | setbacks [1] | 93:12 | 105:17 | 105:20 | 105:25 | 26:3 | 53:9 | 53:17 |
| 105:5 | 109:18 | | scenery [1] | | 38:1 | sets [10] | 19:17 | 106:13 | 111:11 | | 53:24 | 64:12 | |
| roadways [1] | 109:21 | | schedule [1] | | 7:15 | 19:19 | 19:20 | sign [45] | 22:22 | 22:23 | 50:21 | | |
| Robert [3] | 2:12 | | seal [1] | 117:17 | | 38:9 | 38:12 | 48:20 | 48:22 | 48:24 | 52:14 | 52:22 | 52:23 |
| 22:8 | 26:3 | | second [8] | 4:24 | | 39:8 | 107:10 | 49:3 | 49:4 | 50:8 | 54:19 | 55:16 | 59:11 |
| role [9] | 6:6 | 6:12 | 13:21 | 13:24 | 67:25 | setting [3] | 73:6 | 50:12 | 50:20 | 50:21 | 62:21 | 62:23 | 63:2 |
| 12:13 | 12:15 | 13:4 | 81:1 | 84:16 | 86:16 | 76:23 | 109:24 | 64:1 | 64:10 | 64:16 | 64:1 | 64:10 | 64:16 |
| 35:5 | 47:4 | 47:6 | 95:5 | | | seven [4] | 19:12 | 64:23 | 65:6 | 65:7 | 65:11 | 65:19 | 67:23 |
| 103:19 | | | seconds [12] | 85:18 | | 48:13 | 81:4 | 65:16 | 72:14 | 74:22 | 69:16 | 72:14 | 74:22 |
| rolled [1] | 47:24 | | 85:22 | 86:11 | 86:15 | seventeen [1] | 116:8 | 74:25 | 78:16 | 78:18 | 74:25 | 78:16 | 78:18 |
| room [1] | 99:17 | | 86:17 | 86:24 | 87:2 | seventh [1] | 79:19 | 88:4 | 88:16 | 90:2 | 88:4 | 88:16 | 90:2 |
| roughly [2] | 81:15 | | 87:5 | 87:5 | 88:2 | several [5] | 19:25 | 90:3 | 106:12 | 114:1 | 90:3 | 106:12 | 114:1 |
| 111:2 | | | 88:13 | 88:20 | | 23:8 | 23:11 | 114:5 | 114:12 | 114:18 | 114:5 | 114:12 | 114:18 |
| rounding [2] | 36:8 | | seconds' [1] | 88:15 | | 53:6 | | 114:21 | | | signage [24] | 11:17 | |
| 55:9 | | | section [11] | 13:9 | | shake [1] | 7:8 | 13:20 | 13:23 | 14:19 | 15:11 | 21:21 | 23:16 |
| route [13] | 16:13 | | 13:9 | 21:9 | 23:13 | shall [1] | 50:21 | 15:11 | 21:21 | 23:16 | 24:18 | 48:17 | 48:21 |
| 21:23 | 22:14 | 22:17 | 23:23 | 50:3 | 51:5 | shave [1] | 58:22 | 52:10 | 52:14 | 53:1 | 52:10 | 52:14 | 53:1 |
| 23:2 | 24:8 | 24:20 | 51:7 | 58:19 | 85:10 | sheet [3] | 22:1 | 54:5 | 55:15 | 57:1 | 54:5 | 55:15 | 57:1 |
| 25:1 | 25:2 | 63:12 | 85:14 | | | 40:23 | | 58:16 | 59:22 | 60:7 | 61:6 | 61:6 | 61:20 |
| 65:23 | 73:16 | 93:7 | sections [1] | 56:22 | | sheets [17] | 19:13 | 75:9 | 76:5 | | 75:9 | 76:5 | |
| Ruegg [14] | 9:6 | | sedan [1] | 83:14 | | 20:3 | 21:13 | signed [2] | 54:12 | | 63:23 | | |
| 9:24 | 19:5 | 19:14 | see [37] | 11:10 | 16:22 | 27:4 | 27:7 | significance [1] | | | 34:14 | | |
| 44:2 | 44:4 | 47:10 | 20:5 | 20:19 | 36:3 | 27:11 | 27:17 | significant [1] | 35:4 | | signs [12] | 48:20 | |
| 73:16 | 96:7 | 97:15 | 36:7 | 36:8 | 47:17 | 28:14 | 35:9 | 54:20 | 54:20 | 59:11 | 54:20 | 54:20 | 59:11 |
| 103:17 | | | 55:2 | 55:10 | 55:12 | 28:14 | 35:9 | 61:15 | 64:14 | 64:24 | 61:15 | 64:14 | 64:24 |
| Ruegg's [3] | 83:13 | | 55:13 | 63:3 | 67:4 | 40:12 | 40:16 | 65:11 | 72:10 | 75:16 | 65:11 | 72:10 | 75:16 |
| 102:6 | 103:21 | | 67:23 | 68:13 | 71:12 | 105:15 | | 78:15 | 113:15 | | 78:15 | 113:15 | |
| rules [4] | 1:17 | 6:20 | 76:12 | 78:14 | 81:21 | shelf [1] | 65:8 | similar [2] | 70:2 | | 80:25 | | |
| 6:23 | 14:6 | | 88:16 | 88:16 | 92:8 | short [2] | 99:25 | simple [1] | 96:20 | | simple [1] | 96:20 | |
| run [2] | 68:9 | 82:12 | 92:19 | 92:23 | 93:11 | shortcomings [3] | | simplistic [2] | 67:11 | | 81:22 | | |
| running [4] | 85:17 | | 96:19 | 96:21 | 96:22 | 84:6 | 91:2 | simply [1] | 82:23 | | simulation [1] | 46:24 | |
| 85:25 | 86:1 | 86:7 | 96:24 | 97:12 | 99:21 | shorter [1] | 48:3 | single [1] | 10:14 | | single [1] | 10:14 | |
| rural [1] | 94:23 | | 106:5 | 106:10 | 106:17 | Shortly [1] | 10:7 | sit [3] | 15:15 | 28:23 | 15:15 | 15:15 | 28:23 |
| S [1] | 3:1 | | 108:20 | 113:21 | | shoulder [1] | 59:7 | 70:1 | | | 70:1 | | |
| S-m-i-t-h [1] | 26:3 | | seeing [1] | 18:1 | | show [12] | 21:14 | site [2] | 37:16 | 38:8 | 37:16 | 37:16 | 38:8 |
| safe [9] | 50:22 | 55:24 | seem [1] | 71:19 | | 29:18 | 39:16 | sitting [6] | 2:6 | | 44:2 | 44:4 | 49:12 |
| 63:16 | 63:22 | 69:5 | segments [1] | 78:12 | | 66:17 | 81:6 | 44:2 | 44:4 | 49:12 | 44:2 | 44:4 | 49:12 |
| 69:8 | 82:14 | 88:8 | selected [1] | 18:10 | | 81:11 | 81:15 | 49:23 | 97:15 | | 49:23 | 97:15 | |
| 100:22 | | | self-serving [1] | 43:11 | | 95:3 | 111:22 | situation [10] | 55:3 | | 59:17 | 60:1 | 62:6 |
| safely [1] | 101:21 | | semi-tractor [1] | | | showed [2] | 40:23 | 65:3 | 65:5 | 68:23 | 65:3 | 65:5 | 68:23 |
| safer [2] | 59:17 | 69:9 | 90:4 | | | 46:17 | | | | | | | |
| safety [2] | 66:21 | | Send [1] | 108:5 | | showing [1] | 23:16 | | | | | | |
| 67:5 | | | sending [1] | 108:6 | | shows [1] | 21:13 | | | | | | |
| salt [1] | 65:18 | | sense [2] | 102:3 | | side [3] | 12:2 | | | | | | |
| salvage [1] | 37:5 | | 102:4 | | | 91:15 | | | | | | | |
| Sand [1] | 19:10 | | senses [1] | 99:15 | | side-view [1] | 88:10 | | | | | | |
| saw [5] | 74:16 | 90:7 | sent [7] | 14:23 | 15:6 | sight [66] | 16:23 | | | | | | |
| 90:11 | 97:20 | 108:13 | 15:12 | 29:2 | 42:10 | 25:5 | 53:10 | | | | | | |
| says [26] | 19:6 | 22:1 | 43:2 | 85:11 | | 54:8 | 54:9 | | | | | | |
| 22:1 | 22:5 | 23:2 | separate [1] | 26:8 | | 55:1 | 55:18 | | | | | | |
| | | | separated [1] | 38:8 | | 56:9 | 56:11 | | | | | | |

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speaking [2] 54:20 96:16 | standard-setting [1] 88:23 | 85:20 90:17 93:16 93:23 96:7 96:17 97:14 98:17 98:21 101:6 101:14 101:20 105:17 105:25 111:10 | suppose [2] 23:18 73:10 | 29:15 29:16 117:7 |
| specific [12] 6:7 16:15 28:2 31:1 36:3 36:4 38:5 45:2 45:22 61:13 62:12 87:2 | standards [4] 52:15 70:13 70:18 89:5 stapled [1] 22:4 Stark [2] 19:7 66:12 | straight [5] 14:4 97:5 97:12 100:16 106:4 | surface [5] 47:14 47:25 71:18 72:22 111:8 | testimony [13] 7:20 7:22 26:3 26:5 26:10 26:11 26:13 53:5 53:9 64:12 93:4 117:8 117:10 |
| specifically [8] 25:23 28:10 29:18 35:24 36:17 40:10 65:25 110:14 | start [3] 75:12 75:13 75:14 | straightaway [1] 98:14 | surgery [3] 75:20 112:11 112:13 | Thank [4] 20:10 63:8 89:22 114:25 |
| specified [1] 117:12 | started [5] 41:12 70:10 71:4 109:6 112:23 | Street [6] 2:19 11:6 23:15 65:24 95:8 95:9 | surprise [1] 47:15 survey [1] 20:22 surveying [2] 75:25 76:1 | themselves [2] 56:18 92:2 |
| speech [1] 30:3 | state [42] 1:20 2:19 4:7 9:13 16:12 19:24 21:23 22:14 22:16 23:2 25:2 26:22 49:4 49:4 50:8 51:20 60:8 60:10 63:9 63:11 65:23 72:11 73:16 75:9 76:20 88:25 89:2 89:11 89:19 91:20 91:25 94:16 95:18 98:6 98:20 106:6 109:15 113:5 113:6 117:3 117:6 117:21 | streets [1] 111:8 | sworn [3] 4:3 116:16 117:7 | therefore [2] 29:14 49:11 |
| speed [104] 11:15 11:19 13:18 13:22 14:18 15:9 40:15 40:17 40:21 48:22 48:23 48:24 49:3 49:8 49:9 49:10 49:13 49:18 49:21 49:24 50:2 50:3 50:7 50:10 50:21 50:23 51:8 51:17 51:18 52:4 52:5 52:12 52:23 54:10 54:11 54:12 54:25 54:25 55:17 55:25 62:22 63:22 63:22 64:3 64:6 64:14 68:15 70:22 71:16 72:11 72:12 73:17 73:23 74:18 74:19 74:22 74:24 76:15 76:18 78:3 79:12 79:14 79:22 80:16 80:21 82:24 82:25 83:4 84:13 84:14 84:24 85:17 85:21 85:25 86:1 86:5 86:6 86:7 86:8 86:13 90:13 90:18 90:20 90:21 91:6 98:16 98:23 99:2 101:9 101:10 101:14 101:15 101:19 102:8 102:14 102:15 106:12 111:11 113:17 113:21 113:23 114:5 114:5 | statements [3] 30:4 33:22 74:1 | stretch [6] 31:4 35:23 63:11 65:23 77:7 112:18 | Thereupon [12] 4:15 8:13 18:23 27:18 30:7 40:25 77:10 78:25 80:9 110:3 112:21 115:2 | |
| speeds [3] 51:12 51:14 88:17 | states [2] 18:19 53:9 | string [1] 48:13 | T [9] 1:15 3:1 4:1 4:8 116:7 116:13 117:1 117:1 117:6 | thinking [2] 50:6 91:4 |
| spent [2] 66:20 | station [2] 95:2 95:4 | stripe [1] 91:15 | table [4] 99:17 100:8 100:9 113:24 | third [1] 11:20 |
| sports [1] 90:5 | stay [1] 27:22 | striking [4] 39:7 39:12 39:17 39:20 | takes [1] 83:19 | third-party [7] 1:9 1:12 1:16 2:9 2:16 18:21 18:25 |
| SS [1] 117:3 | steering [2] 49:15 49:20 | studies [2] 113:20 113:21 | taking [2] 11:12 77:18 | thought [4] 46:8 61:12 72:5 89:14 |
| stack [3] 23:25 24:7 24:15 | stenographic [2] 1:19 117:20 | study [7] 99:13 110:23 110:23 113:18 114:19 114:19 114:20 | Talkington [1] 2:6 | three [15] 22:5 37:17 73:10 87:5 87:20 87:20 88:20 104:17 104:19 104:22 104:23 104:23 104:25 105:3 |
| stacks [1] 17:23 | stenotype [1] 117:8 | stuff [12] 17:19 17:19 29:10 38:18 50:25 54:21 63:1 87:13 94:16 95:23 96:12 111:15 | Tammen [2] 109:20 110:11 | through [29] 4:25 6:1 6:22 10:6 15:3 17:16 17:17 17:25 27:25 30:15 30:22 32:21 42:2 47:14 50:3 65:14 70:7 77:14 79:16 82:20 84:7 85:23 92:19 92:23 106:5 106:10 106:17 107:25 113:3 |
| stand [2] 26:23 82:11 | step [11] 13:21 13:25 14:1 14:21 15:2 15:3 15:4 15:4 15:17 15:18 17:7 steps [5] 14:2 14:3 14:13 14:19 14:24 | subject [2] 22:13 27:23 | tangent [3] 97:5 97:9 107:15 | throughout [1] 7:16 |
| standard [26] 50:14 50:14 58:2 58:6 58:8 58:8 59:20 60:17 60:18 60:19 61:9 63:11 69:23 75:8 86:18 87:8 87:18 89:2 89:7 90:23 90:24 92:22 99:12 100:18 100:19 100:20 | Steven [1] 42:23 | submissions [1] 16:13 | tangents [1] 107:10 | throwing [1] 49:14 |
| stands [1] 17:23 | still [6] 66:19 96:22 97:11 98:13 101:15 109:6 | subpoena [1] 113:8 | tape [2] 82:12 82:13 | tie [1] 32:17 |
| stand [2] 26:23 | stone [3] 19:11 19:12 70:10 | Subscribed [1] 116:16 | taught [2] 111:14 111:15 | times [5] 6:18 6:22 38:11 112:15 112:17 |
| standard [26] 50:14 50:14 58:2 58:6 58:8 58:8 59:20 60:17 60:18 60:19 61:9 63:11 69:23 75:8 86:18 87:8 87:18 89:2 89:7 90:23 90:24 92:22 99:12 100:18 100:19 100:20 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subsequent [1] 93:4 | teaching [1] 111:14 | title [4] 20:18 23:1 26:18 110:19 |
| stopped [5] 5:25 31:9 73:8 74:6 102:10 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substance [2] 47:13 71:21 | team [1] 56:20 | today [3] 5:1 70:3 72:15 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substantiated [4] 53:5 53:8 53:15 93:4 | tearing [1] 55:7 | together [3] 17:24 20:21 22:4 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | such [9] 47:17 48:11 50:21 57:20 60:1 63:21 66:1 74:12 84:23 | technical [1] 50:14 | too [10] 26:7 32:13 58:23 59:1 83:19 83:20 89:12 98:2 101:13 104:10 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | sudden [3] 55:4 63:8 88:18 | techniques [1] 59:16 | took [8] 10:9 10:19 11:11 13:14 14:21 45:4 62:4 94:23 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subject [2] 22:13 27:23 | tecum [2] 3:5 4:20 | top [3] 24:13 58:22 80:23 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | submissions [1] 16:13 | tells [4] 50:15 53:24 88:4 88:5 | tour [1] 94:23 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subpoena [1] 113:8 | temperature [2] 48:1 48:11 | toward [2] 10:8 95:9 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | Subscribed [1] 116:16 | temporary [3] 39:20 58:17 59:9 | Town [2] 77:25 100:2 |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subsequent [1] 93:4 | tend [1] 64:3 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substance [2] 47:13 71:21 | term [3] 9:3 33:5 108:14 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substantiated [4] 53:5 53:8 53:15 93:4 | terminated [2] 112:1 112:3 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | such [9] 47:17 48:11 50:21 57:20 60:1 63:21 66:1 74:12 84:23 | terminology [1] 32:25 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | sudden [3] 55:4 63:8 88:18 | terms [6] 30:16 39:3 57:22 57:25 66:4 89:23 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subject [2] 22:13 27:23 | terrible [2] 23:4 43:11 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | submissions [1] 16:13 | testified [3] 4:3 79:12 112:15 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subpoena [1] 113:8 | testify [4] 7:18 | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | Subscribed [1] 116:16 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subsequent [1] 93:4 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substance [2] 47:13 71:21 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substantiated [4] 53:5 53:8 53:15 93:4 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | such [9] 47:17 48:11 50:21 57:20 60:1 63:21 66:1 74:12 84:23 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | sudden [3] 55:4 63:8 88:18 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subject [2] 22:13 27:23 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | submissions [1] 16:13 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subpoena [1] 113:8 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | Subscribed [1] 116:16 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subsequent [1] 93:4 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substance [2] 47:13 71:21 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | substantiated [4] 53:5 53:8 53:15 93:4 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | such [9] 47:17 48:11 50:21 57:20 60:1 63:21 66:1 74:12 84:23 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | sudden [3] 55:4 63:8 88:18 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68:5 69:8 69:10 69:12 72:20 76:17 85:5 85:16 85:19 | stop [17] 6:1 19:15 31:10 32:7 32:10 55:3 55:4 55:5 55:24 67:23 71:13 90:25 99:23 102:9 102:17 104:11 113:25 | subject [2] 22:13 27:23 | | |
| stopping [28] 25:5 53:10 56:21 57:24 68: | | | | |

| | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| township [4] 22:8 22:9 22:20 31:13 track [1] 8:20 tracks [12] 11:6 12:2 16:18 22:22 22:23 24:4 65:24 65:25 78:9 95:6 95:7 97:10 tractor/trailer [2] 35:2 83:13 traffic [27] 11:18 51:14 54:13 54:15 56:1 56:3 56:4 56:7 56:25 57:1 57:3 57:15 58:4 64:25 65:3 65:18 67:7 67:8 67:19 67:23 75:6 87:24 109:7 109:17 109:22 109:24 110:12 traffic-related [1] 22:16 train [2] 31:10 102:10 training [2] 54:3 57:6 trains [1] 82:20 transcribed [1] 117:9 transcript [1] 116:8 transcription [2] 117:9 117:10 transit [1] 76:2 translate [1] 80:16 transmittal [1] 26:18 transmitting [2] 21:4 25:10 transpires [1] 55:23 transportation [1] 89:15 traverse [1] 59:18 traverses [1] 58:19 tree [2] 38:4 92:7 trees [16] 55:8 56:3 58:21 61:5 61:13 61:16 61:20 67:1 67:21 67:22 70:22 71:10 92:6 97:12 98:7 100:23 trial [4] 7:18 46:12 46:20 46:21 trick [1] 92:3 trim [5] 20:24 66:1 103:7 106:7 106:14 trip [1] 110:25 trooper [1] 31:13 troopers [2] 9:14 31:12 truck [18] 5:25 30:24 31:7 31:15 31:22 31:23 34:10 44:7 45:12 83:5 90:5 90:24 91:2 92:15 93:13 93:17 99:1 103:23 Trucking [2] 1:7 19:5 trucks [13] 91:22 | 92:6 92:7 92:9 92:11 93:7 93:24 94:19 95:16 95:24 96:2 98:16 98:22 true [2] 74:15 117:9 truly [1] 27:14 Trustee [1] 22:9 Trustees [1] 22:8 truth [4] 16:14 117:7 117:7 117:7 try [5] 14:4 31:1 65:21 98:5 110:25 trying [6] 14:12 16:1 16:3 32:25 77:18 78:20 tumbling [1] 59:4 turn [1] 34:7 two [42] 11:3 13:19 14:24 16:10 16:13 17:23 19:17 19:19 21:12 25:22 28:14 38:8 38:8 38:22 39:8 42:16 51:9 51:16 58:12 67:9 81:21 85:18 85:21 86:10 86:14 86:16 86:17 86:23 87:1 87:2 87:8 87:9 88:2 88:13 88:14 88:22 94:12 101:16 104:18 104:25 105:3 107:4 type [5] 77:22 83:4 89:8 90:22 102:1 types [2] 32:21 58:14 typewritten [1] 17:14 typical [3] 55:1 64:8 87:23 ultimately [1] 30:19 umpteen [2] 59:9 59:13 unable [1] 6:1 unclear [2] 26:16 52:16 uncomfortable [2] 50:1 64:4 undated [1] 22:1 under [9] 7:15 23:9 28:25 33:9 60:16 86:8 113:8 113:18 113:19 underlined [1] 113:18 underneath [4] 23:6 27:10 67:22 106:25 undersigned [1] 1:18 understand [14] 5:13 6:25 10:24 14:7 14:8 15:20 26:9 30:16 41:11 54:14 71:11 72:1 113:5 113:6 undertake [1] 76:24 uneven [1] 22:22 uniform [6] 75:5 95:13 95:18 96:14 | 96:20 97:8 unique [1] 92:1 United [2] 1:21 2:13 Unless [1] 71:1 unreasonable [1] 103:1 unsigned [1] 25:6 unusual [1] 48:5 up [49] 7:25 14:15 16:14 21:15 33:17 36:4 47:25 49:19 50:2 50:21 52:14 52:20 54:19 54:25 55:16 56:7 57:21 58:25 59:3 59:4 59:11 61:6 62:21 62:22 64:3 64:14 64:15 65:19 66:18 73:10 74:8 77:20 77:21 78:16 91:21 94:18 95:14 95:17 96:15 99:24 101:22 102:20 108:5 109:24 113:2 114:12 114:16 114:17 114:21 used [30] 15:12 15:14 27:5 28:10 31:12 33:4 33:7 33:13 34:19 34:20 34:24 36:11 36:20 40:3 40:10 40:20 45:5 46:20 47:21 64:24 70:8 75:1 79:21 80:19 82:2 82:5 87:3 93:1 94:3 104:5 uses [1] 83:24 using [10] 11:4 38:6 51:10 90:20 90:21 105:12 107:10 110:24 113:24 117:9 usual [1] 48:5 utilize [1] 108:18 utilized [1] 67:20 V-e-p-p-e-r-t [1] 26:22 valid [2] 43:8 43:8 valley [1] 59:2 value [7] 43:13 43:20 43:21 44:8 44:13 45:2 45:7 van [5] 32:8 32:11 37:13 92:4 98:12 vandalized [1] 114:23 variable [1] 91:19 varied [1] 35:21 varies [1] 112:8 various [10] 11:14 15:10 18:17 22:16 23:9 51:12 51:13 51:14 70:8 93:12 vary [3] 92:12 95:22 112:14 vegetation [20] 35:16 35:19 35:20 36:10 36:16 36:21 37:23 39:4 39:14 55:9 | 65:18 65:20 66:1 66:2 66:5 71:11 71:14 74:2 103:7 106:8 vegetative [5] 16:8 16:24 67:11 93:12 98:2 vehicle [26] 19:24 44:2 49:10 49:12 58:15 59:4 73:23 77:22 83:4 83:5 89:24 90:2 90:22 91:2 91:3 91:8 93:25 101:23 102:1 102:9 102:17 102:19 102:19 102:20 104:19 104:24 vehicles [12] 5:24 31:9 32:9 37:5 73:8 73:12 74:6 74:16 83:11 92:1 98:17 102:9 vehicular [2] 103:24 108:16 Veppert [3] 26:21 42:17 44:11 Verbal [1] 5:11 verbally [1] 7:7 verify [1] 116:7 versus [2] 13:9 114:2 vertical [1] 40:14 view [7] 62:19 63:11 67:22 88:15 92:14 97:1 97:7 viewed [1] 88:11 virtual [1] 88:21 volume [1] 111:7 vs [2] 1:6 1:10 W-143 [1] 74:22 wait [2] 14:6 18:14 waiting [2] 15:18 31:10 walking [1] 75:21 wall [1] 96:14 wants [1] 114:4 warn [4] 52:5 59:11 59:22 61:7 warned [1] 62:21 warning [11] 11:17 58:16 60:2 76:12 76:12 76:13 76:14 109:24 113:15 114:1 114:6 Watch [1] 54:22 water [1] 47:23 waving [1] 46:20 ways [3] 51:9 58:12 107:9 wears [1] 114:23 weather [12] 48:2 48:4 48:15 50:24 71:25 72:2 72:3 72:4 72:6 72:7 72:16 72:17 Wednesday [1] 1:22 | week [1] 8:22 weekly [1] 18:18 weeks [1] 48:14 weigh [1] 32:24 weight [9] 28:12 32:20 32:22 33:1 33:3 33:4 35:7 40:7 84:16 west [4] 12:2 16:5 81:13 81:21 Westlake [1] 4:10 wheel [3] 49:16 49:20 75:24 WHEREOF [1] 117:17 wherever [1] 96:25 white [7] 18:10 27:5 27:10 27:11 96:1 96:3 96:3 whole [3] 18:15 38:7 117:7 William [6] 1:15 4:1 4:8 116:7 116:13 117:6 wisdom [2] 88:21 104:9 withdraw [1] 75:12 within [7] 8:22 67:5 69:12 69:14 69:15 88:14 117:6 without [3] 29:20 45:18 117:13 witness [17] 1:15 4:2 9:17 9:20 18:25 30:22 37:1 45:1 61:11 61:23 77:9 85:2 104:2 112:3 117:6 117:8 117:17 witnesses' [1] 33:22 WOLGAMOTT [1] 1:4 Wolgammott's [1] 19:4 word [2] 47:22 72:6 words [10] 17:11 49:5 75:3 86:13 87:7 98:20 101:18 106:3 106:6 106:7 worked [2] 109:19 109:20 works [3] 68:7 69:1 112:9 worksheet [1] 80:20 worksheets [1] 21:20 worry [3] 57:16 57:17 107:6 worth [3] 61:15 61:16 65:18 write [3] 17:10 28:23 29:11 writing [1] 81:25 written [5] 14:9 19:21 41:24 93:3 107:1 wrong [6] 39:1 63:10 64:2 64:5 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | | | | |
|------------------------|--|--|--|--|
| 68:15 72:18 | | | | |
| X [2] 3:1 60:24 | | | | |
| Xerox [1] 24:16 | | | | |
| xeroxed [2] 27:16 | | | | |
| 27:21 | | | | |
| Y [1] 60:25 | | | | |
| Y-o-u-n-g [1] 26:13 | | | | |
| yardstick [1] 95:19 | | | | |
| year [9] 8:18 8:19 | | | | |
| 39:18 39:18 109:9 | | | | |
| 112:7 112:10 112:11 | | | | |
| 112:12 | | | | |
| years [3] 108:8 108:10 | | | | |
| 109:11 | | | | |
| yellow [5] 27:4 | | | | |
| 27:6 27:7 27:17 | | | | |
| 69:8 | | | | |
| yet [4] 29:6 46:15 | | | | |
| 46:16 63:7 | | | | |
| yield [1] 84:4 | | | | |
| Young [3] 2:4 | | | | |
| 2:6 26:13 | | | | |
| yourself [2] 40:18 | | | | |
| 107:6 | | | | |
| Ziegler [1] 18:16 | | | | |
| zone [1] 69:4 | | | | |