

ML - Morris County Fair Housing Council
v. Boonton Township

9-NOV-1979

Deposition of Marshall Frost

Pg. ~~117~~ 117

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MORRIS COUNTY FAIR HOUSING	:	
COUNCIL,	:	
	Plaintiff	DEPOSITION OF:
-vs-	:	
	:	MARSHALL FROST
BOONTON TOWNSHIP, et als,	:	
	Defendants	
	:	

J.
Arrowsmith
11/10/79

T R A N S C R I P T of deposition in the above-entitled matter, taken by and before Elizabeth A. Quagliani, a Certified Shorthand Reporter and Notary Public of the State of New Jersey, on Friday, November 9, 1979, at the Morris Township Municipal Building, 50 Woodlawn Avenue, Morris Township, New Jersey, commencing at 9:30 a.m.

A P P E A R A N C E S:

STANLEY C. VAN NESS, ESQUIRE
Public Advocate of the State of New Jersey
BY: VERICE M. MASON, ESQUIRE and
KEITH A. ONSDORFF, ESQUIRE
On Behalf of the Plaintiff

MESSRS. PENDLETON & LATZER
BY: BERTRAM J. LATZER
On Behalf of the Common Defense

NOV 10 1979
MORRIS COUNTY

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A P P E A R A N C E S: (Cont'd)

MESSRS. SHANLEY & FISHER
BY: ARTHUR R. SCHMAUDER, ESQUIRE
On Behalf of Defendant Harding Township

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I N D E X

Witness

Direct

M. Frost

By Ms. Mason

By Mr. Onsdorff

4, 15

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E X H I B I T S

Number

Description

Ident.

P-1

Subpoena Duces Tecum

6

P-2

File #4a - Bus & Miscellaneous

11

P-3

File #3a - Morris County Auto Costs

11

P-4

File 79-120-4 Morris County

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P-5

File #5a 79-120

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P-6

Report of Frost Associates, dated
September 28, 1979

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P-7

Surface Passenger Transportation
Element Draft

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(Taken by and before Elizabeth A. Quagliani,
a Certified Shorthand Reporter and Notary Public of
the State of New Jersey, at the Morris Township
Municipal Building, 50 Woodlawn Avenue, Morris Town-
ship, New Jersey.)

MR. LATZER: I'd like a statement from the
public advocate in regard to compensation of this
witness, please, before he's sworn.

MS. MASON: It is our understanding that we
will pay the cost of Mr. Frost's deposition here
according to whatever cost he charges the common
defense, the reasonable cost charged to the common
defense.

MR. LATZER: Okay.

MR. SCHMAUDER: Well, I object to that. Are
you going to pay his -- the cost that he has been
charging to the common defense?

MS. MASON: We are going to pay for the cost
of his presence here today, his time here today.

MR. SCHMAUDER: Based upon what he has been
charging the common defense per hour, is that what
you're saying?

MS. MASON: Based upon -- according to the
reasonable cost that he's been charging --

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MR. SCHMAUDER: No, no.

MR. ONSDORFF: Wait. I don't think we need to have a debate.

MR. LATZER: Off the record.

(Whereupon, a brief off-the-record discussion is held.)

MS. MASON: We said "reasonable" because we had no idea exactly right now what he has been charging the common defense.

MR. SCHMAUDER: I understand that. We're going to get into an argument later on as to what the agreement is unless it is specified today.

MS. MASON: My understanding is that this was already discussed with Mr. Clapp. Mr. Latzer asked for a clarification and I was giving him that. He had no problems with that. If you have problems with what I am saying to you, Mr. Bisgair from our office has discussed it with Mr. Clapp and they have agreed that whatever Mr. Frost has been billing as his time, hourly time, to the common defense our office will pay for the cost of that time today.

MR. SCHMAUDER: Fine.

MS. MASON: Can we continue now?

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MR. LATZER: Yes, go ahead.

MS. MASON: Thank you.

M A R S H A L L F R O S T, being duly sworn, testified as follows:

DIRECT-EXAMINATION BY MS. MASON:

Q Mr. Frost, have you ever been deposed before?

A Yes, I have.

Q Then you have some idea that giving testimony under oath means that it will be transcribed by the stenographer and can be possibly used at trial later on.

A Yes.

Q If you don't understand any of the questions, please ask me to explain it or to repeat it and I will have no problems with that.

A Fine.

Q If Mr. Latzer should place an objection or Mr. Schmauder, please wait and do not answer until they have completed their objection for the record.

Now, could you please state your occupation?

A Yes. I'm a licensed engineer in the state of New Jersey and a licensed planner. I have my own engineering firm, Frost Associates. It's a consultant firm which is basically a civil engineering firm which does a large amount

1 of work in traffic and transportation. I am president of
2 that firm.

3 Q What task, if any, do you perform within the
4 corporation?

5 A Well, other than being -- other than having the title
6 of president, it is a small firm and I conduct most of --
7 are in charge of most of the traffic and transportation work
8 that the firm produces.

9 Q Did you receive our subpoena to bring certain
10 documents with you today?

11 A Yes, I did.

12 Q Have you turned those documents over to
13 Mr. Onsdorff?

14 A I brought some of the specific information collected
15 and put together in a series of files during the course of
16 this project. There is a large amount of additional informa-
17 tion within the general files of the firm. Also, there are
18 a large number of traffic counts and so forth that were
19 collected from secondary data sources which I do not have
20 with me, however, I will make them available to either
21 counsel or anyone to take a look at and I would be happy
22 to make copies of those if someone should require them.

23

24 DIRECT-EXAMINATION BY MR. ONSDORFF:

25 Q At this time, I would ask you to identify the

1 folders which you have produced in response to the subpoena
2 today. Just briefly, by the materials that are contained in
3 each individual file and as each one is identified, would you
4 kindly hand it to the court reporter so she can mark it for
5 identification?

6 MR. SCHMAUDER: Before that's done, can we have
7 a mark for the record for what you refer to as a
8 subpoena?

9 MR. ONSDORFF: If you feel that's appropriate.

10
11 (Whereupon, the Reporter complies with the
12 above request and marks P-1 for identification,
13 subpoena duces tecum.)

14
15 MR. SCHMAUDER: Let the record reflect that I
16 object to P-1, because it's being characterized as
17 something that it is not. Specifically, it is not
18 a subpoena, in spite of what it purports to be on
19 its face.

20 MR. LATZER: Do you remember the question?

21 THE WITNESS: I think they want me to
22 identify these in general terms.

23 MR. LATZER: Let me say that what we have here
24 are open files and we can identify them as of now.
25 It doesn't mean that something else may not end up

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in them. You understand that they're not documents,
they're files containing papers.

MR. ONSDORFF: That's correct.

MR. LATZER: Okay.

A One of the files contains general information on bus
routes in the county collected during -- over the past six
or eight months.

Q Does that particular file have a title,
reference?

A It has a label on it, "79-120 Morris County," and
then has the number "4a." Is that satisfactory? It says
"Bus & Miscellaneous" on it.

Q What is your understanding of the materials
contained in the file?

MR. SCHMAUDER: I object. I understood that
Ms. Mason was going to be conducting this deposition.

MS. MASON: Both of us will be conducting the
deposition.

MR. SCHMAUDER: I object to that. It seems
to me, if a deposition is going to be taken, it should
be taken by one lawyer and I think if that procedure
isn't satisfactory, then we'd better proceed to the
courthouse and find out why more than one person
should be asking questions of the same witness.

MR. LATZER: I have no objection. If it's

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1 oppressive, I will object. That's my position repre-
2 senting the common defense committee. I don't find
3 the questions oppressive and I don't care whether
4 one lawyer does it or two. So, I'm prepared to pro-
5 ceed. If you want to go to the courthouse, go to the
6 courthouse.

7 MR. ONSDORFF: Thank you. We plan to continue.

8 MR. SCHMAUDER: Can you give us an idea of
9 what your proposal is, do you propose to just be
10 shifting back and asking questions as you decide
11 how that is appropriate in your own mind?

12 MR. ONSDORFF: To the extent we feel it's
13 appropriate, we will shift back and forth, that's
14 correct.

15 MR. SCHMAUDER: I object to that procedure and
16 I ask that you not do that.

17 MR. ONSDORFF: Thank you. We've noted your
18 objection.

19
20 BY MR. ONSDORFF:

21 Q Please continue

22 A In the -- You're going to have to go back, because I'm
23 not quite sure what you asked.

24 Q My question was, t h e m a t e r i a l s
25 t h a t a r e c o n t a i n e d i n t h a t, i s t h e r e a n y m a n n e r i n

1 w h i c h t h e m a t e r i a l s i n t h a t f i l e a r e l i m i t e d a s t o
2 w h a t g o e s i n t o t h a t f i l e ?

3 M R . S C H M A U D E R : G e n t l e m e n , I t h i n k i t i s
4 i n a p p r o p r i a t e -- a n d l a d i e s . A p a r t y h a s t o b e r e p r e -
5 s e n t e d b y a n a t t o r n e y a n d i t i s d u l y p r o p e r t h a t m o r e
6 t h a n o n e a t t o r n e y b e p r e s e n t . I t ' s d u l y p r o p e r ,
7 c l e a r l y , t h a t i f y o u w i s h t o h a v e c e r t a i n s e g m e n t s
8 o f a p r o c e e d i n g h a n d l e d b y o n e a n d t h e n a n o t h e r
9 s e g m e n t h a n d l e d b y a n o t h e r , I ' m m o r e t h a n h a p p y t o
10 c o o p e r a t e i n a n y w a y t h a t t h a t s e e m s a p p r o p r i a t e t o
11 y o u .

12 B u t I d o n ' t t h i n k i t i s f a i r t o a n y o n e t o h a v e ,
13 a s y o u j u s t m a y d e c i d e f r o m t i m e t o t i m e , e a c h o f
14 y o u p o p p i n g q u e s t i o n s a t a w i t n e s s a n d I t h i n k i f
15 t h a t i s w h a t y o u p r o p o s e , t h a t w e s h o u l d p r o c e e d t o
16 t h e c o u r t h o u s e a n d g e t a r u l i n g .

17 M R . O N S D O R F F : S i r --

18 M R . L A T Z E R : G o a h e a d . I w o u l d l i k e t h e s e
19 d e p o s i t i o n s t o p r o c e e d . Y o u r o b j e c t i o n h a s b e e n
20 n o t e d . I d o n o t f i n d , r e p r e s e n t i n g t h i s p a r t i c u l a r
21 w i t n e s s , t h e p r o c e e d i n g s o p p r e s s i v e . I f y o u d o ,
22 w o u l d y o u p l e a s e g o t o t h e c o u r t h o u s e ?

23 M R . S C H M A U D E R : W i l l y o u c o m e w i t h m e ?

24 M R . L A T Z E R : N o , I w i l l n o t . I w a n t t o g e t
25 o n w i t h t h e d e p o s i t i o n s .

1 MR. SCHMAUDER: What you are forcing me to do,
2 then, is subject my client to the results without
3 having a ruling of the court and I don't think that's
4 fair on your part, either.

5 MR. LATZER: You want to proceed?

6 MR. ONSDORFF: Yes, please. I believe there's
7 a question pending.

8 MR. LATZER: Do you remember what it is?

9 THE WITNESS: I can take a shot.

10 A Generally, was there any limit placed on the informa-
11 tion in the file?

12 Q As to what material by substance that goes
13 into that particular file.

14 A Well, the one of my employees that's been involved in
15 the collection of data and so forth is the one that ends up
16 bringing the information in the various files. So, I can't
17 specifically say that there was a limit placed upon it or --
18 but generally speaking, the intent of this file was to hold
19 certain information, which is -- has a summary on it and I
20 can give you a rough summary of what's in here.

21 The intent of the file was neither to include or
22 exclude anything. I'm not sure that answers the question.

23 Q That's sufficient.

24 MR. ONSDORFF: We'll just mark the file for
25 identification, okay? We're up to P-2, if I'm not

1 mistaken.

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Q The next file, if you could identify it, sir.

8

A Okay. This one says, "Morris County Auto Costs,"

9

has been the number "3a" on it.

10

Q My question is, is the file a fair representa-

11

tion of the types of material to be found in that file?

12

A Yes.

13

Q And that would be true in each case?

14

A Yes.

15

MR. ONSDORFF: We'll just take a second to

16

have the Morris County auto costs marked as P-3,

17

I believe.

18

19

(Whereupon, the Reporter complies with the

20

above request and marks P-3 for identification,

21

file #3a - Morris County auto costs.)

22

23

Q Would you please continue to the next file?

24

A Having said that the titles were representative,

25

the next two don't have titles. So, the next one has the

1 identification of "79-120-4 Morris County." And --

2 Q Excuse me. Having examined those materials,
3 would you be in a position to characterize them as to what
4 that file contains?

5 A The two pieces of information of substance contained
6 within the file relate to some construction cost information
7 and a publication by the Bureau of Labor Statistics on urban
8 family budgets.

9 MR. ONSDORFF: Okay. We'll have that marked
10 as Exhibit P-4.

11
12 (Whereupon, the Reporter complies with the
13 above request and marks P-4 for identification, file
14 79-120-4 Morris County.)

15
16 THE WITNESS: All set?

17 Q Please.

18 A The next one has a label on it. It says "79-120
19 Morris County" and has the number "5a." There is no label
20 as to what it is, but generally characterizing the informa-
21 tion, it relates to rail passenger service in Morris County.

22 MR. ONSDORFF: Thank you. We will mark that
23 as Exhibit P-5, please.

24
25 (Whereupon, the Reporter complies with the

1 above request and marks P-5 for identification,
2 file #5a 79-120.)

3
4 MS. MASON: We'd like to have the report marked
5 in also, in evidence.

6 Q I show you a copy of what purports to be the
7 report that your firm prepared on September 28, 1979. Would
8 you examine that and indicate whether that --

9
10 (Witness is handed document.)

11
12 A Could I ask a question?

13 MS. MASON: Sure.

14 THE WITNESS: I'll give you a copy which has
15 no notes on it which I stipulate is the same thing.
16 But I may need to make use of it. So, can we mark
17 it and I use it from time to time?

18 MR. ONSDORFF: Absolutely.

19
20 (Whereupon, the Reporter marks P-6 for
21 identification, report of Frost Associates dated
22 September 28, 1979.)

23
24 Q Now, directing your attention to P-6, that
25 report is dated September 28, 1979. Do any of the files

1 which have been previously marked as P-2 through P-5 contain
2 any drafts or prior preliminary reports which are reflected
3 by that final report, P-6?

4 A They do not contain any drafts or preliminary reports.
5 There is some summarization, preliminary summarization of
6 information which later ended up in this report.

7 Q Now, in the materials that you've referred to
8 which also pertain to the Morris County litigation that are
9 back in your offices, do any of those files contain any
10 preliminary drafts of P-6 which would be available at a
11 later time?

12 A I frankly don't know if we have any preliminary
13 drafts that were used to generate this in the office.
14 I mean, I don't even know if they were kept. They got typed
15 and retyped. I can't answer the question. If they are,
16 they're there. I just don't know the answer to the question.

17 Q All right. The final document, I think at
18 least for the time being, I'd like marked is a surface trans-
19 portation element draft study done by the New Jersey Depart-
20 ment of Transportation. You want to just take a look at
21 that for a minute?

22
23 (Witness is handed document.)

24
25 MR. LATZER: Well, this is your document?

1 MR. ONSDORFF: Yes. We wanted to provide it
2 in case you have any objection to its being marked
3 for identification.

4 MR. LATZER: You can mark anything you want.

5 MR. ONSDORFF: Okay.

6
7 (Whereupon, the Reporter marks P-7 for
8 identification, surface passenger transportation
9 element draft.)

10
11 MR. ONSDORFF: Having completed a preliminary
12 segment of questioning dealing with the marking of
13 exhibits, at this time I will turn over the question-
14 ing to co-counsel for a segment dealing with substan-
15 tive questions.

16
17 CONTINUED DIRECT-EXAMINATION BY MS. MASON:

18 Q Mr. Frost, what do you consider your area
19 of expertise to be?

20 A Traffic and transportation.

21 Q Are there any particular subareas in that
22 area, the full range, exactly what in particular --

23 MR. SCHMAUDER: I object to the form of the
24 question.

25 Q Could you tell me particularly in what areas

1 of traffic and transportation you feel that you are an ex-
2 pert?

3 A I'm not answering because I don't have the expertise,
4 but I don't know how to answer it. I would anticipate that I
5 consider myself to be expert in trip generation, capacity
6 analysis, bus transportation. I am knowledgeable in rail-
7 road studies. I don't consider myself an expert in the de-
8 sign of railroads. I don't know of an area that pertains
9 to this report and/or this case that I don't consider myself
10 qualified as an expert.

11 Q What in your background do you feel qualifies
12 you as an expert in this regard?

13 A I have an undergraduate degree in civil engineering
14 from Lehigh University and a master's in transportation from
15 Polytechnic Institute of Brooklyn, which is now part of
16 CUNY, changed hands after I left. I had spent time working
17 for the New York City Department of Traffic and then worked
18 for the New Jersey Department of Transportation in the
19 Planning Division and had been involved in the consulting
20 end of the business since 1970, where I spent most of my
21 time working in the way of traffic and transportation facet
22 of that profession.

23 So, I would think, after that number -- with the
24 background I have in the education, yes, I consider myself
25 qualified as an expert in these areas.

1 Q With regard to your previous employment, you
2 did supply us with a resume, but you failed to state the
3 actual terms of employment and exactly where it was. Could
4 you do that for us now?

5 MR. LATZER: Could you be more specific?

6 MS. MASON: Yes. He stated that he's worked
7 with the Department of Transportation, certain
8 organizations within New York. I would just like to
9 have some time frame --

10 A Yes. I spent --

11 MS. MASON: -- as well as the organization.

12 A With the New York City Department of Traffic, I was
13 with them from 1966, started with them in 1966 and left in
14 the fall of '68. I left the New York Department of Trans-
15 portation in January of 1970. I was with the firm called
16 Purcell Associates, it was a consulting firm, from 1970
17 through the fall of 1974, when I started my own firm. I
18 have had my own firm since 1974.

19 Q Have you performed any other transportation
20 studies that are somewhat similar to the kind performed
21 for this litigation?

22 A I consider this to be an overview of transportation,
23 but I think probably the type of thing you might be asking
24 about, when I was with the Department of Transportation,
25 New Jersey Department of Transportation, I was in charge of

1 the analysis end of the Atlantic City urban area transporta-
2 tion study, which was the federally funded transportation
3 study along the lines of Tri-state, but obviously much
4 smaller, required by the Federal Department of Transporta-
5 tion in order to receive federal funds.

6 My involvement in that, I was involved -- I came with
7 the Department of Transportation as the data collection
8 phase was being finished. I was involved with the setting
9 up of the network for analysis, the loading of that network
10 from the existing data and validating the existing data.
11 I was involved with the projection of the socioeconomic
12 data to the study year and then the projection of traffic
13 onto the existing network and various proposed networks,
14 which were analyzed for the study year.

15 I was involved with the analysis of the mass transit
16 system in Atlantic City and it was culminated with a written
17 report on the ACUATS, A-C-U-A-T-S, published by the Depart-
18 ment of Transportation. It was not published until sometime
19 shortly after I left, however. That study, in particular,
20 I think, probably would cover all the various facets which
21 were used in the analysis in Morris County, although to
22 nowhere near the Morris County study for no other reason,
23 time limitations and practical financial limitations, are
24 nowhere near the detail that was conducted on that.

25 Q Have you ever performed any other transportation

1 studies for the Northeast New Jersey area or for the Morris
2 County area?

3 A I was in charge for the Essex County TOPICS Program,
4 Pascack Valley TOPICS Program, Hackensack TOPICS Program,
5 Somerset County TOPICS Program and everything else was south
6 of the northeast.

7 Q What was the nature?

8 A What is "TOPICS"? TOPICS was a federally funded
9 program. It's an acronym, Traffic Operations Program to
10 Increase Capacity and Safety, and it was interested primarily
11 with traffic information, traffic-related improvements, high-
12 way capacity analysis, intersection capacity analysis and
13 mass transit limited, for the most part, to buses and rail
14 transit parking. It was not involved with, directly with,
15 rail transit capacity itself.

16 Q These studies that you spoke of relating to
17 Northeast New Jersey and the Morris County area, were they
18 done in your individual capacity or as Frost Associates?

19 A Actually, they were done for the firm of Purcell
20 Associates prior to my starting my own firm. I was the
21 project engineer on all except for -- project manager on
22 all except for one of them. I was in responsible charge for
23 all of them. Those reports were published and funded by the
24 Department of Transportation. They, in fact, approved me
25 as the individual in responsible charge on those studies.

1 Q Have you ever done any studies regarding mass
2 transportation?

3 A With regard to mass transportation, I was involved
4 in the Atlantic City area study, which was primarily limited
5 to bus and jitneys. Jitney is interesting, but it's not
6 applicable anywhere else in the state. In New York City,
7 I was involved in the 42nd Street inclusive bus lane study,
8 the Fifth Avenue, Madison Avenue inclusive bus lane study,
9 the Staten Island Express bus study and I was involved in
10 the study for an express bus lane in the Long Island Express-
11 way, which has since been implemented.

12 Q So, you have not done any mass transportation
13 studies in the Northeast New Jersey or Morris County area.

14 A Okay. I was employed by the firm of AT&T during
15 1972 to attempt to reduce automobile traffic to their Northern
16 New Jersey sites and that study was involved in the exten-
17 sive review and study of available mass transit and alter-
18 nate forms to single occupant automobile home-to-work trips.
19 That was throughout the Northeast New Jersey section of
20 the state.

21 Q What have you published, do you have any
22 publications?

23 A Yes. We performed, when I was with Purcell Associ-
24 ates, we conducted two studies on -- two studies on park-
25 ride facilities. For the New Jersey Turnpike Authority,

1 one for the Turnpike Mainline -- Actually there were three
2 studies: one for the Turnpike Mainline for the northern part
3 of the state; one which addressed the Lindenwold Line for an
4 interphase with the Lindenwold Line; the third had to do
5 with the Driscoll Expressway, which was never built.

6 Q Are these the actual names of the publications?

7 A I frankly -- I'm getting -- Now, those are not pub-
8 lications, those are studies performed. The result of that
9 was the Turnpike Authority built a number of park-ride
10 facilities which I designed and the result of that was that
11 I have published an article on the design of park-ride
12 facilities. It was published, I think, in American Cities
13 magazine.

14 Q What year is that?

15 A I frankly don't know. I'll say 1974. It was in that
16 area, '73 or '74.

17 Q Are there any other organizations within the
18 Morris County area or the Northeast New Jersey area that
19 you have done transportation analyses for that you have not
20 mentioned?

21 MR. LATZER: You might be including municipali-
22 ties, any clients?

23 MS. MASON: Yes.

24 A We have worked for individual towns and have worked
25 for corporations, both traffic and transportation, and then,

1 frankly, I don't think I can answer the question. Yes, there
2 are, and I'd be hard-pressed to name them all.

3 Q Could you give me some idea of the towns?

4 A East Orange, Hackensack, Union County 701 Transporta-
5 tion Study.

6 Q What was the nature of the transportation study
7 done in East Orange and Hackensack?

8 A In East Orange --

9 MR. LATZER: Excuse me. Do you want him to
10 finish with the question or --

11 MS. MASON: Yes, I do. I just -- While he was
12 going --

13 THE WITNESS: I'm running my memory, frankly.

14 MR. LATZER: Do you have Parsippany-Troy Hills
15 as well?

16 THE WITNESS: That's right. Thank you, Bert.
17 That's correct. We have done -- Well, we've done
18 traffic work for -- and I was thinking of purely
19 studies -- we have done traffic work in Parsippany-
20 Troy Hills, Hanover, Berkeley Heights, Tenafly,
21 Bernards Township, Bernardsville and I frankly don't
22 remember all of them. I mean, there are more towns
23 than that.

24 The nature of the work for East Orange was
25 that they were involved, I guess still are involved,

1 this was back in the middle Seventies, with an urban
2 renewal project in the center of town. I was the
3 consultant to the Parking Authority. The arrangement
4 was the Parking Authority was going to construct the
5 parking facilities for a large office urban renewal
6 complex and one of the long-standing debates was how
7 much parking was needed.

8 Given this was in the Brick Church area, if
9 you're familiar with the Brick Church area, there are
10 two railroad stations and it was an ongoing battle as
11 to how many parking spaces were required because of
12 the availability of mass transit, among many people.

13 I also did a study on the availability of
14 mass transit, the impact of that mass transit, the
15 modal split between automobile usage and rail usage
16 for the home-to-work trip. I think the discussions
17 are still going on in the City of East Orange as to
18 how many spaces will be built.

19 Q With regard to the other municipalities that
20 you worked with, did you do similar studies?

21 A In many cases, yes. In some cases, they were purely
22 related to traffic. In some cases, they did involve mass
23 transit and I would be hard-pressed to go back and say what
24 was in each one.

25 Q Have you ever been involved in prior litigation

1 in terms of testifying?

2 A Yes.

3 Q Could you tell me what cases and for whom did
4 you testify?

5 A I have testified for AT&T in what I think may have
6 been the first public advocate suit in Bernards Township.
7 The public advocate felt that there was a long-standing
8 negative impact on the Passaic River and decided to enjoin
9 AT&T -- if that's the right term, because I'm not a lawyer --
10 against building their access facility and I represented
11 AT&T on that since I designed the facility.

12 I have appeared as a witness in a court case for
13 Berkeley Heights on appearance of traffic-related matter.
14 I think they were being challenged by Burger King, I believe
15 is the fast food operation. I have appeared as a witness,
16 but not solely in the field of traffic, for Bernards Town-
17 ship in what I believe was known as the Austin case, this
18 was a zoning case. And in the Lorenc case, again, it's
19 a zoning case.

20 There is also Sage, S-a-g-e, and there have been,
21 I think, a couple of others that I was involved in. My
22 memory fails me. I have also testified before a number
23 of boards and boards of adjustment, but I'm not sure that's
24 the type of testimony you're asking about.

25 Q Before any of these judicial bodies, did you

1 give the type of testimony that would be relevant to this
2 type of litigation, the same type of detailed mass trans-
3 portation analysis?

4 A No. I would say it was not the same type of testimony
5 that I would talking about today.

6 Q As the basis for your report, what do you
7 perceive the employment projections for Newark as being?

8 A I don't perceive the employment projections for Newark
9 as being -- I don't have a number.

10 Q For Hudson County, do you have any employment
11 projections?

12 A No. There were no employment projections done by my
13 firm or used in this analysis, specific employment projec-
14 tions.

15 Q You also state that you have perceived a
16 region, but that region is different from the public advocate's
17 region and possibly the region of Morris County planners.
18 Could you give me some idea of what you consider that region
19 to be?

20 A Yeah. I suppose I look at the problem from a some-
21 what different viewpoint and I would guess that's obvious
22 in here. It is admittedly very difficult from my stand-
23 point, without extensive evaluation, to fix, physically fix,
24 a line or a cordon line establish that region. If, however,
25 I was going to establish such a region within reasonable

1 expenditures of time and money, I would think, in the case
2 of Morris County, that the region, from a very practical
3 standpoint, represents the county line.

4 There may be specific exceptions, but the exceptions
5 would not be ten-mile exceptions. I could think, from my
6 knowledge of the county and the employment in the northeast,
7 general knowledge in those areas, from the approach which I
8 feel is represented in this report, yes, I would say that
9 the region in Morris County is adequately represented by
10 the county line.

11 Q On what do you base your notion of region?

12 A One of the problems that I have had, personally, with
13 reviewing the various decisions and in the area, least-cost
14 housing, has been a failure, I feel, on the part of the --
15 both sides, or all sides, maybe, including the courts, to
16 recognize what I consider as a real practical problem, that
17 transportation costs are a very real part of the disposable
18 income of any particular family unit. Certainly, or statis-
19 tically, while the income goes up, the money, statistically,
20 spent on transportation also increases.

21 The percentage does not change significantly. Con-
22 sequently, if one perceives, as I do, that economics are
23 as much of a problem as all others in the situation we're
24 addressing, I think it's unrealistic to assume that housing
25 should be provided at a significant distance from the place

1 of employment. Given the lower incomes, the housing for the
2 lower income employees should, in fact, be made available as
3 close as reasonably possible to the place of employment, so
4 that a disproportionate share of the disposable income is not
5 spent on transportation.

6 Most transportation cost is related to the journey to
7 work, certainly a significant portion of it is. That's even
8 more true in the lower income areas and I think it is impor-
9 tant that the housing that's provided be provided in such a
10 manner that the transportation costs for the journey to work
11 is kept to a minimum, reasonable minimum, level.

12 To consider a nine-county area as an employment region
13 for determining the location of housing, I think, is totally
14 unrealistic. Because you can have, if that's followed
15 through, you can have an extremely high portion of disposable
16 income dedicated to transportation. Given the income is
17 limited, that means the remainder of the disposable income
18 is not available for other necessities and, for that matter,
19 luxuries. I think that has not been reflected in past
20 analyses of employment regions and housing regions.

21 Q So, would it be fair to say, then, that your
22 notion of region is, more or less, based upon transportation?

23 MR. SCHMAUDER: Objection to the form of the
24 question.

25 Q Did you consult any type of authorities to

1 determine your notion of region?

2 A I'm sorry, I'm not sure I follow.

3 Q Any type of sources.

4 A Is this somebody else's idea?

5 Q Well, I would like to know if you have consulted
6 other, not necessarily other people, but other publications,
7 if this is your own idea of region. What did you use to come
8 up with this concept of region?

9 A I guess, having thought about -- or having followed
10 the various court decisions and in one way or another being
11 involved either directly or indirectly with the particular
12 problem that region is being used in, a period significantly
13 prior to this suit I have reached that conclusion. I don't
14 know I can claim that it's my idea. I don't remember reading
15 anybody else's analysis along the same lines, but, frankly,
16 when I first read the decision, I don't remember whether it
17 was the Madison Township or Mount Laurel, I was convinced
18 the region was poorly defined because of this transportation
19 cost issue.

20 It is not in the conclusion I reached after I was
21 asked to be an expert for the Morris County suit, it was
22 prior to that.

23 Q In your report, you discuss average family
24 households in terms of the amount of disposable income that
25 they would have available to spend on transportation cost.

1 What do you think the average family household should spend,
2 what percentage of their income do you think they should
3 spend on transportation? From a transportation planning
4 perspective, what do you perceive --

5 A If I define the income as being a lower income group,
6 I'll put that in quotes, and I couldn't give you that exact
7 number. But if I defined that number, and your labor
8 statistics has the number, but, anyway, it should be as
9 little as possible, frankly. The higher the income, the
10 less impact it has. I don't know that I really start to
11 have an opinion. If somebody's making a great deal of money,
12 if they want to spend a large portion of the disposable in-
13 come on transportation, so be it.

14 My problem is that I think it would be totally wrong
15 to encourage a housing construction plan such that the
16 occupants of that housing would then have to spend additional
17 money to get to work. So, if I take the -- and that area,
18 typically, affects the lower income side of the scale. In
19 that case, it should be as little as possible should be
20 spent, have to be spent, on transportation to and from work.

21 Q If we're not necessarily discussing the lower
22 income people, the average household, do you have any con-
23 cept of that?

24 MR. LATZER: Well, I would object to the ques-
25 tion and I would ask you to define the word "average."

1 MS. MASON: All right.

2 MR. SCHNAUDER: I also object to the form of
3 the question.

4 MS. MASON: Mr. Frost has set forth in his
5 particular report what he determines to be the average
6 family household without actually setting forth what
7 that number is. Maybe I should ask him to clarify
8 that. I can refer you to where that is in the report.

9 MR. LATZER: Yes.

10 MS. MASON: All right. This is on the first
11 page, second paragraph, "The cost of transportation
12 for families living in those and many other towns,"
13 on page --

14 MR. LATZER: What page is that?

15 MS. MASON: I'm sorry --

16 THE WITNESS: First page.

17 MR. LATZER: What paragraph?

18 MS. MASON: Second paragraph. Particularly,
19 he discusses transportation cost on page 5.

20 MR. LATZER: All right.

21 MS. MASON: Third paragraph -- Second --
22 Third full paragraph.

23 A I'm sorry, can you paraphrase the question? Where
24 do the numbers come from, is that a fair way to paraphrase
25 the question?

1 Q Yes.

2 A How do I define them?

3 Q Right.

4 A The information that we used for income purposes and
5 commutation costs is taken from a publication produced by the
6 U.S. Department of Labor, Bureau of Labor Statistics. That
7 publication, I believe, breaks income into three groups,
8 lower, middle -- I won't -- I'm not sure the final term was
9 upper. We worked with the lower income group. That publica-
10 tion represented an average for the Northeast New Jersey
11 metropolitan area as of autumn of 1977.

12 As I indicated in the table on -- I'm sorry -- the
13 figure on page 6, that was adjusted to reflect 1979 values.
14 It was a simplified adjustment. A factor of twenty percent
15 was added to all the costs. The reason it was adjusted to
16 1979 is the automobile costs were available in 1979 and we
17 had to be adjusted for current gasoline prices. That pub-
18 lication gave a total income for what they defined as lower
19 as their definition and it also gave percentage dollar
20 expenditures for various budget items, including total
21 transportation cost.

22 It gave that item for people that did not own a
23 car and for people that did own a car. The double column
24 graph on the far left of Figure 3 shows the difference.
25 If it's adjusted for 1979 based upon a twenty percent

1 increase over from '77, the total income represented is
2 13,386. The total disposable income after taxes, gifts and
3 contributions becomes 10,879.

4 Of that approximately eleven thousand dollars, eight
5 hundred and thirty dollars is for transportation if you do
6 not own an automobile, roughly fourteen hundred dollars is
7 for transportation if you do own an automobile. Those
8 statistics come from the Bureau of Labor statistics, adjusted
9 with the twenty percent factor in 1977. Those are the
10 numbers that we used and are referring to in our analysis.

11 Q So, you're really -- you only did that
12 analysis for lower income --

13 A That's correct.

14 Q -- families. I assume that this same analysis
15 had some definition of moderate income families.

16 MR. SCHMAUDER: I object to the form of the
17 question.

18 Q Did this publication have any reference to
19 moderate income families and did you do an analysis of the
20 transportation costs?

21 MR. SCHMAUDER: I object to the form of the
22 question.

23 MR. LATZER: Do you understand the question?

24 THE WITNESS: I think so.

25 MR. LATZER: All right, why don't you answer it.

1 A It had three breakdowns; one was lower, I believe the
2 other may have been referred to as moderate. I do not
3 remember what the term used for the higher level was. We did
4 not run through the same analysis for moderate income. I
5 believe the 1977 figures, although I would have to check it,
6 were in the high twenties for income, high twenty thousands.
7 I don't even remember what the upper or high level income
8 was. We did not run through the same analysis for all three
9 income groups.

10 As income goes up, in my opinion, the problem of
11 definition of the region becomes, I think, less critical,
12 because there is more money available for transportation.
13 As a general statement, the percentage of money which is
14 spent on transportation remains fairly constant percentage-
15 wise regardless of the income involved. So, obviously, more
16 and more money is available in the statistical budget as the
17 income increases.

18 Q You state in your report on page 1 that it has
19 been a long accepted maxim in the transportation field that
20 people will determine the location of their housing based on
21 the location of their job and that, given the choice, they
22 will live in close proximity to their place of employment.
23 Now, I wanted to ask you, upon what source have you relied
24 for that statement?

25 A One of the areas that my profession frequently gets

1 involved in is modeling of transportation. The most common
2 portion of travel that is modeled, because it is the most
3 predictable, is the home-to-work trip. If you know, to
4 oversimplify the question, how many employable people there
5 are and how many jobs there are, it is a fairly well-defined
6 segment of the total transportation that relates to the
7 home-to-work trip, because there statistically is a fairly
8 constant amount of employees who are sick on a day or
9 whatever and they all take place during a specific time
10 during the day.

11 That is the most common segment of the transportation
12 which is analyzed. There are a large number of models avail-
13 able to analyze this particular -- or try to predict this
14 segment of the total transportation picture. There may be
15 one, but I am not aware of one that does not have as a
16 direct input to the transportation model either distance
17 or time from the place where the trip originates to the
18 place where it terminates, the origin and the destination
19 of the trip. The model is usually done in relation to time
20 of travel or, in some cases, distances of travel.

21 Statistically, you will find that an employee will
22 tend to locate closer to his place of employment than further.
23 If you take and use the gravity model, which is, I guess,
24 the old -- I wouldn't say it's the oldest, but one of the
25 more standard -- that relates in general terms to the

1 distribution of trips to the inverse proportion of the
2 square of the time. In other words, the further away you
3 go geometrically, fewer and fewer people will make that trip.

4 There are various probability models which, again, the
5 probability is a decaying geometric function, and it is much
6 more probable that people will, in fact, work closer to their
7 home.

8 Now, these models were developed to represent what
9 occurs in real life and when I talked about Atlantic City,
10 although, frankly, we used a different model down there
11 called a Fratar, F-r-a-t-a-r, model, I believe, when you go
12 through this process, having established all the demographic
13 data and all the employment data, you then attempt to syn-
14 thesize what is currently in the field.

15 You build your model, you run out the results, you
16 distribute the traffic and you look at a link of the net-
17 work that you've established and say, hey, there are twelve
18 thousand cars there and in real life there are eight thousand.
19 You then go back and calibrate the model so that the two
20 match. Then you use the model to project the future.

21 The models that I've talked about, they all have the --
22 the various models that are available all have slight varia-
23 tions on the theme, but all of them input the distance to
24 work as one of the prime variables and all of them can be
25 calibrated -- I shouldn't say all of them -- but those that

1 I am aware of and have worked with or read about can be
2 calibrated with a fair amount of accuracy on the home-to-
3 work trip and all of them demonstrate that fewer -- a lower
4 and lower percentage of people want to live the greater
5 distances from their work.

6 I think it's fairly standardized in the profession
7 that, typically, people want to live in close proximity
8 to their place of employment.

9 Q Would you define what you mean by "in close
10 proximity"?

11 A I can't define it in a definite distance and after
12 a discussion we had prior to starting, obviously, there
13 are exceptions, but we both moved. Most people do not
14 look forward to taking a significant amount of time out
15 of their day to get to and from work. A lot of people are
16 cost conscious about the total cost of transportation and
17 would like to minimize both. I can't say that everybody
18 wants to live two miles away or anything that approaches
19 that and I can't give you a number.

20 There was some work done by, I believe it was, RCA
21 on their employee distribution which, I think, indicated
22 that the mean, I believe it was the mean, distance of
23 travel was seven miles to work. This was a suburban facil-
24 ity. Frankly, I'm not even sure which one or how many of
25 their facilities were analyzed, but RCA did conduct such a

1 study.

2 In the work that we've done for AT&T, I, frankly,
3 have not ever done the specific analysis that you're talking
4 about, but if I was to estimate the distance, I would say
5 that probably the mean is within twenty minutes travel time.
6 That's an estimate.

7 Q What is your opinion as to whether or not
8 housing opportunities should be located near employment
9 centers?

10 A Well, to follow through what I've been saying, I'm
11 saying that they should be located in reasonable proximity,
12 reasonable travel distances, to employment centers. I'm not
13 saying they have to be located a thousand feet away, but they
14 should be within such a distance that the economic cost of
15 getting back and forth to work does not become a burden.
16 That's what, I guess, I'm saying.

17 Q On page 2, the first paragraph, you assert
18 that forty-six percent of the people living in Newark and
19 working in Essex County go to work in cars. Did you per-
20 form a study in this regard?

21 A No. That information was an output of the 1970
22 census data which we obtained from some very large computer
23 printouts from Tri-state, about a hundred of them. Anyhow,
24 that information is the 1970 census data.

25 Q That information has not been updated, then,

1 in any way?

2 A No.

3 Q All right.

4 A We were unable to find anything more recent, put it
5 that way.

6 Q You also assert that it costs less than one
7 dollar a day to go to work for Newark residents within Newark.
8 What is your basis for that information?

9 A Well, I think there was an indication that, again,
10 from the census data, that Newark had -- over fifty percent
11 of the people had zero cars. One of my employees obtained
12 information on the available transit that exists within
13 Newark. While it's not extensive, there is intra-city
14 transit and that was an estimate based upon the fares charged
15 on that system to go back and forth via mass transit.

16 Additionally, there was an assumption that a majority
17 of those individuals, if they did take the car, were parking
18 for nothing. Most of the facilities down there, that I'm
19 aware of, anyhow, especially in other than the white collar
20 areas, do have some available parking and those who were
21 able to drive were not required to pay for the parking.
22 That was an estimate on our part and it was based on that
23 type of analysis.

24 Q Now, just to clarify for me, the people that
25 you say actually spend less than a dollar a day, what actually

1 is their means of getting to work?

2 A Well, in at least fifty-two percent of the cases, it
3 was other than automobile. Because in at least fifty-two
4 percent of the cases, it was other than the automobile, at
5 least their own personal automobile. While we did not go
6 into it, because, frankly, I did not have data specifically
7 relating to Northeast New Jersey. As it indicates, Table 1
8 indicated that fifty-two percent of the people in Newark
9 had no automobiles, thirty-eight percent had one.

10 Generalized data would indicate that, if you then
11 took that information and compared it to income, that the
12 fifty-two percent that do not have automobiles, as a general
13 statement, would fall into the lower income. Obviously,
14 there are always exceptions, but, statistically, vehicle
15 ownership and the numbers of vehicles that a household owns,
16 there is a relationship to the income of the household.
17 I would anticipate that, in the lower income groups, and it
18 would be an opinion, because I do not have specific data
19 for Newark, that better than fifty percent of the -- I'll
20 use the term -- lower income households in Newark do not
21 get to work in their own automobile.

22 Q Upon what is your opinion based?

23 A Well, that's what I'm saying, generally speaking,
24 that lower income groups do not have -- If you take a
25 look at the portion of people that do not own cars, they

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1 will tend to be at the lower income scale as opposed to the
 2 higher income scale, generally speaking. Fifty percent of
 3 the people -- better than fifty percent of the people,
 4 according to the 1970 census, didn't own a car. I would
 5 anticipate that that fifty percent is toward the lower end
 6 of the scale and I would anticipate, based upon a consensus
 7 of the data, that well over fifty percent in Newark, based
 8 upon the data that I have available, would not make use of
 9 their own personal car to get to work.

10 Q Do you have any knowledge as to what percentage
 11 of these particular households who do not have automobiles
 12 are unemployed -- have heads of households unemployed?

13 A No, I don't.

14 Q Do you have any knowledge as to what percentage
 15 of these people would be on welfare?

16 A I don't, except I would expect that, again, you would
 17 tend to find that at the lower end of the income scale,
 18 obviously.

19 Q Do you have any knowledge as to how many
 20 Newark residents work outside of Essex County?

21 A No, I don't.

22 Q Do you have any knowledge as to how many
 23 Morristown residents work in Essex County?

24 A I have some information in the office relating to
 25 that, but it was, frankly, got a little confusing trying to

1 look through it and I couldn't give you the numbers. As I
2 say, the sheets are there if someone would like to take a
3 look at them.

4 MR. LATZER: Do you have David Zimmerman's
5 (phonetic) report, our planner, was that --

6 MS. MASON: No.

7 MR. LATZER: Do you know -- I just wanted
8 to say that I thought these figures were there.
9 I'm not saying you shouldn't ask the question,
10 I'm just mentioning it to you.

11 MS. MASON: All right, thank you.

12 Q You also state in your report that automobile
13 availability, according to the 1970 census, also varied
14 significantly between the region as a whole and the Newark
15 area.

16 A That's correct.

17 Q Now, what region are you referring to?

18 A The statistical region that was used in analysis
19 of the 1970 census data. The 1970 census data was all put
20 on tape and you can regurgitate it, pick out all sorts of
21 information. Frankly, I do not -- I would have to go back
22 and look up exactly what communities, if you would, were
23 included in the statistical region that that information
24 was derived from. Because it includes Northern New Jersey,
25 New York City.

1 The New Jersey portion indicated that twenty percent
2 throughout this region, statistical region, had zero cars
3 versus fifty-two percent in Newark itself.

4 Q I'm just trying to get -- I'm sorry.

5 A All I'm indicating is, frankly, I couldn't list for
6 you all the towns that are included in the New Jersey region.
7 I would have to go back through and somewhere in one of the
8 pieces of paper that we have I'm sure it gives such a list,
9 but it's Northern New Jersey.

10 Q It's Northern New Jersey?

11 A Yes.

12 Q Do you have any knowledge of the cost of
13 commuting from Hudson County into Morris County?

14 A I don't know if we have information that relates
15 to that.

16 Q Do you have the cost of commuting from
17 Union County into Morris County?

18 A That one I could tell you, by mass transit, is almost
19 impossible. The only way to get from Union County, except
20 possibly from Berkeley Heights, New Providence, with the
21 Erie Lackawana service, which is the western, I'd say,
22 western portion of the county, those communities, you
23 could, in fact, go into Summit and then come back out on
24 the main line through Morristown. Union County, you would
25 have to either make use of the Con Rail Jersey Central or

1 Con Rail Penn Central and go into Newark and I don't believe
2 you can make a direct connection to get back to the area.

3 You might be able to get off in Newark, get onto
4 PATH, take that in, come back out on a different line of
5 PATH, get onto the Erie Lackawana and come into Morris County
6 and maybe a bus route, but I don't believe so, that runs
7 into Union County, other than possibly, again, the bus route
8 that serves along the Erie Lackawana corridor through New
9 Providence and Berkeley Heights.

10 I guess what I'm saying is you may be able to do it,
11 but it would be -- certainly the public transportation is
12 not directed between Union County and Morris County.

13 MR. LATZER: Could I just back up? On the
14 last question, with regard to Hudson County, was your
15 question directed to public transportation only or --

16 MS. MASON: It was the cost of commutation.
17 He specifically --

18 THE WITNESS: I'm sorry, I thought you were
19 addressing mass transit.

20 MR. LATZER: I'm sure he can answer the ques-
21 tion as to the cost of automobiles.

22 THE WITNESS: Automobiles, I could work it
23 out for you, given the mileage, and I just assumed
24 you were addressing public transportation.

25 Q Is there any way to commute from -- well, to

1 commute from Passaic County into Morris County on public
2 transportation, are you familiar with the cost?

3 A I, frankly, would have to go back through and sit down
4 and look at the maps. I think you may be able to get from
5 the southern section of Passaic County into some of the
6 northern areas. It is not -- I wouldn't characterize it --
7 if it, in fact, is there, it certainly is good transportation
8 and I don't have available costs. It may be in a file some-
9 where, I just don't have it.

10 Q With regard to Bergen County, is the same
11 thing applicable?

12 A I think it's the same comments. If it's there, it's
13 very cumbersome and can also be somewhat expensive.

14 Q Your graph on page 3, which is Figure 1,
15 appears to explain that there would be a daily commutation
16 cost even if you are traveling zero miles a day of travel.

17 A That's correct.

18 Q Could you kind of explain that for me?

19 A Yeah. We had a long discussion as to how to show
20 that. If you take automobile costs, there's a fixed cost
21 whether the car leaves the garage or not. You have -- either
22 if you want to consider it a purchase cost on an ongoing
23 basis or a depreciation cost, or however you prefer to think
24 of it, that always occurs. You also have insurance costs.
25 There is an assumption that you will drive the car; so,

1 therefore, you have insurance costs. You have registration
2 fees, license fees.

3 And, so, prior to the first mile you ever put on it,
4 there is a fixed cost and that's why the graph starts off
5 in the range it does. Then, as you proceed to drive, there's
6 an incremental cost on top of that. So, there is a fixed
7 cost per day to own a passenger car even if you decide never
8 to use it.

9 Q With regard to your figure on Figure 3, all
10 right, on page 6 --

11 A Um-hum.

12 Q -- we have discussed this somewhat before.
13 This is the figure from the Bureau of Labor statistics,
14 is that correct?

15 A Yes, that's what it's based upon.

16 Q Now, my understanding is that you state
17 certain New Jersey urban areas were selected.

18 A It is defined by the Bureau of Labor Statistics as
19 the New York-Northeast Jersey region. It reflects both
20 New York City, New York and Northern New Jersey.

21 Q And when you added the twenty percent infla-
22 tion factor, what deficiencies was that actually to correct?

23 A All right. The information here is based both upon
24 that publication from the Bureau of Public Roads and the
25 cost of commutation by automobile. The latter is available

1 in 1979, although it was, I believe, a little part of the
2 year, but that was adjusted for current gasoline prices
3 as of September of this year. It would have been unfair
4 to use 1979 transportation costs in 1977 family income.
5 It would have made the percentages much higher, because the
6 total income was lower.

7 So, we felt that it was necessary to make a reason-
8 able representation to adjust the 1977 information for
9 family budgets to the current period. Frankly, we had a
10 fair amount of discussion as to what percentage to use.
11 We had some information that indicated it could be somewhat
12 slightly higher than twenty percent. Because, frankly,
13 we're trying to indicate magnitudes of numbers and not
14 actual dollars. One of the problems in my profession is we
15 end up with a number like 10,879, that's eleven thousand
16 dollars.

17 We used twenty percent. We felt that was a reason-
18 able representation of the adjustment that we should make
19 for inflation since 1977.

20 Q And you estimated the gas prices as being
21 one dollar per gallon?

22 A I believe that was what we ended up using, yes.

23 Q In your report on page 5 in the first para-
24 graph, it is stated that at least one car is needed for
25 transportation in all of Morris County. Could you give me

1 your source for this?

2 A That's a general statement. Obviously, it is possible
3 to get a job and to work without owning an automobile. I
4 would say that that statement is a practical statement. It
5 reflects, in general terms, commuting in a suburban environ-
6 ment. And the source of it, frankly, is based upon doing a
7 large number of traffic studies for corporate clients in the
8 suburban Morris County, Somerset County, Union County area.
9 General reading of general publications. I mean, I don't
10 have the source for it. It's the profession and working
11 in the profession provides the source.

12 Q You state this is somewhat based upon studies
13 performed for corporate clients within the area. Could you
14 give me some idea of who they would be?

15 A Okay. To use a specific, AT&T and the facility in
16 Somerset County, AT&T does, in fact, provide a bus connec-
17 tion, bus service, to the railroad for those employees that
18 would like to do it. I believe when the facility originally
19 opened, they scheduled three buses. I believe they're now
20 down to two. The one which leaves, and this would be based
21 upon about a year and a half ago, but the one that leaves
22 at their normal quitting time is, which I believe now is
23 four-fifty to five-twenty, but I'm not sure, is reasonably
24 full, forty-five-passenger bus.

25 The one that leaves a half-hour after that has very

1 few people in it and there's a facility that employs over
2 three thousand people and yet in the magnitude of fifty
3 or less and certainly less than a hundred are making use
4 of mass transportation. AT&T has had some success with
5 car-pooling. However, in discussions with AT&T -- with
6 One Ninety-five Broadway Corporation, which is the division
7 of AT&T which owns that building, with their personnel,
8 their indications have always been that the car pool system
9 that they have is a rotating car pool system in general.

10 They have, based upon those discussions, but I can't
11 tell you the specific statement, everybody that car pools
12 still has their own vehicle. I think it is unrealistic,
13 based upon the information that I've read about and certainly
14 the studies that I have done, to assume that someone will
15 move to Morris County and will not own a car and I think,
16 in certainly a large majority and I would say in well over
17 ninety percent will make use of their own vehicle, automobile,
18 to get to work and may car pool, but they're still going to
19 own the car.

20 Car-pooling is only -- Car-pooling only works fre-
21 quently if you have a very large employment center to work
22 with. A small office building of, we'll say, thirty thousand
23 square feet, certainly the ones I've looked at, have never
24 had success with car-pooling. There's very little of it
25 that takes place.

1 Q Do you have any knowledge as to how many resi-
2 dents in Morris County do not own cars?

3 A I can't give the number. I'm sure I have it at the
4 office -- I'm not sure I do, I take it back. I think we
5 were unable to get information from Morris County for the
6 1970 census on that number. As I say, I'm not sure, but I
7 think that's what the problem was.

8 Q And have you done any other studies that would
9 impact on your analysis of the need for one car in Morris
10 County?

11 A Well, as I indicated, my analysis, frankly, is based
12 upon, I guess, all the various studies we've done, both in
13 Morris County and similar counties, such as Somerset County,
14 but I have not specifically done a study to try to make that
15 determination as based upon my experience in other studies
16 we've done.

17 Q With regard to your statement in your report,
18 that possibly two cars or more than likely two cars would
19 be necessary for residents in Morris County, do you have a
20 basis for that or is it somewhat the same?

21 A Again, it's general information relating to the
22 transportation field that, along with suburban living,
23 fortunately or unfortunately, comes both, to a certain de-
24 gree in many cases, the need for a second vehicle and beyond
25 that, the statistical probability, if you would, that a

1 second vehicle will be in the household. The type of area
2 that Morris County represents, rightly or wrongly, is depend-
3 ent upon the automobile.

4 Most destinations of a trip in a county like Morris
5 County are of sufficient length that they require some means
6 of transportation other than walking and the most common
7 means is the private automobile. It's unfortunate or as
8 bad as that may be, that's the way we managed to design
9 things.

10
11 (Whereupon, a brief recess is taken.)
12

13 MS. MASON: First of all, I should state that
14 when I ask these questions and I point to a particu-
15 lar section of the report, I'm referring to P-6 in
16 all regards, unless I state otherwise.

17 Q In your report, you state that the jobs are
18 remaining in eastern Essex County. You state this on page 5,
19 fourth paragraph. Could you give me some idea of your
20 source for that and where in eastern Essex County you per-
21 ceive the employment centers as being?

22 MR. LATZER: You're referring to the fourth
23 paragraph?

24 MS. MASON: Yes.

25 MR. LATZER: Could I have a line? I would

1 like to --

2 MS. MASON: Fourth full paragraph.

3 MR. LATZER: Starting with the paragraph,
4 beginning with the paragraph --

5 MS. MASON: "Clearly --"

6 MR. LATZER: Okay.

7 MS. MASON: Fifth line, it's in parentheses.

8 MR. LATZER: Forgive me, I didn't understand
9 the question.

10 MS. MASON: The question is, he states that
11 the jobs are remaining in eastern Essex County.
12 That's my understanding of --

13 MR. LATZER: That's what I'm looking for.

14 MS. MASON: I think you're on the wrong para-
15 graph. Fourth full paragraph. It starts with,
16 "Clearly --"

17 MR. LATZER: I see it.

18 THE WITNESS: Do you have any objection to
19 my answering it?

20 MR. LATZER: Let me just read the paragraph.
21 Would you read the question back? Just tell me
22 what your question is again.

23 MS. MASON: My question is, where does he
24 assert that the job centers are in the eastern
25 Essex County and what is his source for this.

1 MR. LATZER: Would you mind rephrasing the
2 question and could you, because I'm missing something,
3 could you just refer to the specific language and ask
4 him to explain it? Would you mind doing that?

5 MS. MASON: No.

6 MR. LATZER: Thank you very much.

7 Q I refer you to the specific language in para-
8 graph 4 on page 5 of P-6, which is your report, wherein you
9 state that, "while the jobs remain in eastern Essex County."
10 Could you define that for me, please?

11 A Well, I think that the statement you have is in
12 parentheses and the sentence starts out, "Assuming that the
13 transportation network were adequate to handle the change in
14 traffic patterns brought about by the relocation of large
15 numbers of family units from eastern Essex County to Morris
16 County (while the jobs remain in eastern Essex County)."
17 That states purely and simply, assuming that the jobs remain
18 there. I have no reason to believe that the jobs are going
19 to move to Morris County. I have some reason to believe
20 they probably won't, but I am assuming that the jobs are
21 going to remain in eastern Essex County.

22 Q Upon what is that assumption based?

23 A I don't know where else they're going to go.

24 Q Where do you think within eastern Essex County
25 these jobs will remain?

1 A Well, I think, as we indicated, I believe we indicated
2 in the report early on, to simplify the point that we're trying
3 to make, we have talked about Newark as it relates to Morris
4 County. Certainly, that's an oversimplification and I think
5 we indicated that or implied that. If I'm, therefore,
6 addressing myself, to try to simplify this, to Newark, I'm
7 assuming that the jobs in Newark are going to remain in
8 Newark. I would assume Newark is going to hope they're going
9 to increase in Newark.

10 I think, maybe, the crux of the problem is you would
11 like to see, maybe everyone would like to see, every possible
12 employment center addressed both in general terms and in
13 specific terms from a practical limitation of time, plus the
14 cost and the legal fees, which make the lawyers happy. You
15 can't do that type of thing. We had to break it down and
16 try to simplify the approach. To indicate the point that
17 we're trying to make, the transportation cost is a serious
18 consideration in defining a region.

19 I have no reason to believe that the jobs are going
20 to move out of Newark. I have some reason to believe that
21 they are not going to move into Morris County and we are
22 assuming in that statement that the jobs are going to stay
23 where they are, but the people would move.

24 MR. ONSDORFF: What is the basis for your
25 belief that they will not be moving into --

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MR. LATZER: I do object to this procedure.

Are you now going to be questioning for some period of time or is this -- are you only asking a --

MR. ONSDORFF: A follow-up question.

MR. LATZER: I really think I would object to this and would appreciate it if you would put the questions from the one questioner. I don't object to it being segmentalized, but I do object to that.

MR. ONSDORFF: Okay. I feel that you may want to state your objection, because I believe you are changing your position on that and I think that it's not oppressive to the witness. I don't think that in any way has confused him or made it difficult for him to answer. So, if you can just state for the record your objection, I would appreciate it.

MR. LATZER: Right. The segmentalizing of questions were not oppressive and, in my opinion, the questions within the same segment that are alternated between counsel are inherently oppressive and I object.

MR. SCHMAUDER: I likewise object and I made my objections clear at the outset.

MS. MASON: Could you read back for me Mr. Onsdorff's statement?

(Whereupon, the Reporter complies with the
above request and reads back the following:

"MR. ONSDORFF: What is the basis for your belief that they will not be moving into --")

Q What is the basis for your belief that they will not be moving into Morris County?

THE WITNESS: I proceed?

MR. LATZER: Yes, please.

A Simply, certainly the areas where historic growth has taken place over the past few years, and I won't define "few," the ability to get to the place of employment is becoming more and more difficult. The transportation system serving the county is becoming more and more of a problem and it is my opinion that Morris County, which has experienced some significant growth in employment in the past, that growth rate is going to start to deteriorate, frankly, because of the inability to gain access to the employment centers.

Q What do you perceive the employment centers in Morris County as being? I'm not certain I understand that.

A I think the term "employment center" maybe is the wrong term. If I refer to an employment center, I may be -- I'm probably referring to a single office building, a location where an industry or a business or whatever moves in. The people have to be able to get to that building. Obviously,

1 if the tenant of that building or the owner of that building
2 is going to succeed, historically, at least part of the reason
3 for the relocation of offices and whatever in the suburban
4 areas has been both the job market, certainly, but I'm not
5 addressing that, but the ability to get to the site with a
6 relative degree of convenience to the employee.

7 Morris County, among other places, has benefited from
8 reasonable accessibility, except as employment has continued
9 to grow, the ability of the transportation system to serve
10 that employment is rapidly deteriorating and businesses will
11 start to look elsewhere to locate.

12 Q I'm beginning to get a bit confused. In your
13 report in certain areas, I could probably refer you to at
14 least one of them, you speak repeatedly of employment centers
15 and I'm no longer understanding what you mean by that term.
16 On page 1 you have stated, first paragraph, you have discus-
17 sed -- referred to, rather, employment centers of Newark,
18 Hudson and Union Counties. In the second paragraph, you
19 state, located as far from the employment centers as Kinnelon,
20 blah, blah, blah. I'm not understanding what you mean by
21 "employment centers" now.

22 You're talking about one building? I'm trying
23 to determine where you perceive the massive areas of employ-
24 ment.

25 A My latter discussion, I'm physically talking about a

1 building or a complex of buildings as opposed to an employ-
2 ment center of Newark. I'm referring to the decision on the
3 part of a, I'll use the term, developer to build a facility
4 and employ a group of people. Obviously, expansion in em-
5 ployment is not going to come to a complete halt, but the
6 probability, in my mind, of a massive office development in
7 the very high hundreds of thousands of square feet or even
8 in the low hundreds of thousands is becoming less and less
9 probable in Morris County because of the inability to gain
10 access to that development, specific development.

11 Q What do you perceive as those areas within
12 Morris County which has a high level of employment centers?

13 A Well, certainly I pick Parsippany-Troy Hills.
14 Parsippany-Troy Hills has had a tremendous amount of office
15 growth in the last -- I won't define the period of time, but
16 it's still going on. I think anyone who's knowledgeable
17 with Parsippany-Troy Hills realizes that the transportation
18 system serving this nonresidential development is rapidly
19 approaching a saturation point. At such time as it does,
20 a prospective tenant or a prospective developer will start
21 to look elsewhere where to put up his building.

22 So, if you want -- I don't consider Parsippany-Troy
23 Hills as an employment center, but certainly there has been
24 a large amount of construction activity in that area. As
25 an example, there has been a large amount in the Morristown

1 area, as an example, and from a practical standpoint, one of
2 the reasons that these locations were chosen was good access.
3 And if the access isn't there, they won't build there.

4 Q Are there any other hubs similar to the
5 Parsippany-Troy Hills area in Morris County, I mean, hubs
6 of employment?

7 MR. SCHMAUDER: Objection to the form of the
8 question.

9 MR. LATZER: Can you answer it, do you under-
10 stand it?

11 THE WITNESS: I understand the question.

12 A I'm not in a position to sit down and list off every
13 single large office development in the county. I could give
14 examples. Certainly an example historically has been Exxon
15 in Florham Park. It may be a good example because Exxon has
16 now decided, with still a large amount of land available
17 in Florham Park, to make the next large construction project
18 in Clinton where they don't have the access problems.

19 Q Let me ask you a question, then. On page 1,
20 the second paragraph, of your report, the second sentence,
21 "To consider Morris County communities located as far from
22 the employment centers as Kinnelon, Jefferson, Roxbury,
23 Mount Olive or Washington as part of the relocation region
24 does not deal with reality."

25 A In that case, in your original concept of the Newark

1 region as being an employment region and then when I went
2 into the latter discussion, yes, I should have used a differ-
3 ent term. I'm not sure what I would have used, but I should
4 have used a different term.

5 Q I want to make certain, what exactly do you
6 define in this context of this sentence as "employment centers"?
7 I'm trying to understand that.

8 A That as opposed to a site specific, we're now talking
9 about an area where there is a large amount of employment.
10 I'm talking about the Newark area as opposed to site
11 specific in an Exxon building.

12 Q All right. Now, back to the jobs remaining in
13 eastern Essex County. I'm trying to get a handle on where
14 you might mean it. I understand you stated that was an
15 assumption, but I'm not understanding what impact that has
16 on your overall statement.

17 MR. SCHMAUDER: Objection to the form of the
18 question, because it isn't even a question.

19 Q What is meant, if you could further clarify
20 for me, what do you mean on page 5, paragraph 4 by "while
21 the jobs remain in eastern Essex County"? I would like to
22 have some idea of where you are speaking of.

23 A That's a general reference to the Newark area, be-
24 cause we have been addressing the Newark area as an employ-
25 ment center in the larger term.

1 Q Only the Newark area, is that the response?

2 A I'll make the statement that the Newark area is an
3 area using Newark as a name to define it. It has a large
4 amount of employment associated with it and I'm referring to
5 that large employment area.

6 Q The reason I ask is that previously you have
7 discussed other employment centers in your report. Page 1,
8 the first paragraph, you discuss employment centers in
9 Union County and Hudson County, you refer to them. I'm
10 not certain exactly what you mean.

11 A I believe we indicated --

12 MR. SCHMAUDER: I object -- before the answer
13 is given -- I object to the characterization. Are you
14 now repeating? And if you wish to repeat, I suppose
15 that's your prerogative to try, but I do object to
16 it and I also object to attempting to put, I think,
17 words upon what has been said that haven't actually
18 been used.

19 MS. MASON: Thank you. The objection has
20 been noted.

21 Q I am trying to determine --

22 MR. SCHMAUDER: What does that mean, Counsel,
23 my objection has been noted?

24 MS. MASON: For the record.

25 MR. SCHMAUDER: We're all aware that there's

1 a court reporter taking down everything being said --

2 MS. MASON: I am going to try to clarify my
3 question, if you could just wait a second.

4 Q With regard to your answer to this question,
5 previously in your report you have spoken of employment
6 centers, on page 1, first paragraph, in Newark, Hudson and
7 Union Counties. What I'm trying to determine is, are you
8 including those in your concept of the Newark region?

9 A No. The intent is in an effort to try to put things
10 in a more simplified role. We are using the Newark employ-
11 ment area as an example. We did not go through -- we did
12 not then take a look at another employment area, a fourth
13 employment area, we took that employment area for the pur-
14 poses of discussion in this report.

15 Q How large would you characterize that area
16 as being?

17 MR. SCHMAUDER: I object to the form of the
18 question, because it is not clear what you mean by
19 it.

20 Q Does this area comprise more than the City
21 of Newark?

22 A Yes, I would say probably it does.

23 Q Can you possibly tell me what the other areas --

24 A No. We're dealing with a concept. I don't think any-
25 body will deny that there's a large amount of employment in

1 Newark and that the Newark area has at least a reasonable
2 definition of an area where people both live and work and
3 so forth. We're referring to that area. I am not attempting
4 to define a specific number of jobs or specific number of
5 people.

6 Q How many jobs have relocated into Morris
7 County, do you have any knowledge of the number of jobs
8 that have relocated into Morris County since 1950?

9 MR. LATZER: I don't understand the question.
10 I will ask that you rephrase it, please.

11 Q Do you have any knowledge as to the number
12 of commercial enterprizes that have relocated into Morris
13 County since 1950?

14 A (No response.)

15 Q Do you understand the question?

16 A I think I do. No, I don't have a specific number.
17 I don't have knowledge of a specific number.

18 Q Would that be true as to 1960 and '70 also?

19 A That is also correct.

20 Q Do you have any knowledge as to the number
21 of existing commercial enterprizes within Morris County
22 that have expanded?

23 A I do not have a specific number, no.

24 Q Do you think that the concept of car-pooling
25 has had any impact on the transportation system in Morris

1 County?

2 MR. LATZER: Just a point of clarity. You're
3 talking about the concept of car-pooling?

4 MS. MASON: Yes.

5 Q By that, I mean, do you think that or do you
6 have any knowledge as to whether or not there are commercial
7 enterprizes or private enterprizes, whatever, within Morris
8 County that have begun to utilize car-pooling?

9 A That's two different questions. Which one should I
10 answer, or both?

11 Q Answer the latter, please.

12 A Yes, and, by definition of the concept, has an impact.
13 Yes, there are industries which do have car-pooling in Morris
14 County.

15 Q Has this had any impact on the overall trans-
16 portation capabilities within the county?

17 A If you manage to get two people in one car where
18 there used to be two cars, it has an impact. So, it does
19 have an impact.

20 Q Is it an appreciable or significant impact?

21 MR. SCHMAUDER: I object to the form of the
22 question. What do you mean?

23 Q How would you characterize the impact?

24 MR. SCHMAUDER: I object to the form of that
25 question also. It is not clear what you're referring

1 to.

2 Q How would you characterize the impact of car-
3 pooling by various industries within Morris County on the
4 entire total transportation system?

5 MR. SCHMAUDER: I object.

6 Q Transportation capabilities of the county.

7 MR. SCHMAUDER: I object to the form of the
8 question also, because it's not clear what your
9 understanding --

10 Q Do you understand the question? If you don't,
11 I will try and rephrase it.

12 A I think so.

13 MR. LATZER: Well, why don't you answer it
14 as you think it is put? So, you may or may not have
15 the question.

16 A I would characterize the concept of car-pooling as
17 being helpful. Very difficult to define the term "signifi-
18 cant." In my mind, it is more helpful than significant,
19 given the fact that both of those are qualitative terms.

20 Q To try and further clarify, what impact do
21 you feel this would have on the tele-transportation system,
22 do you have an opinion as to the number of companies that
23 may have utilized car-pooling since 1960 in the Morris
24 County area?

25 A I'm not trying to avoid the question, but from a

1 practical matter, most every company at one point or another
2 has probably used car-pooling, unless there's only one person
3 in the company. Because all it means is that two people came
4 in the same car. There has been, both on a state level and
5 a federal level, a policy decision to support, encourage,
6 arm twist, coerce companies to utilize car-pooling. With
7 larger corporations, it has tended to be a much more struc-
8 tured campaign than with smaller companies. Larger companies
9 have, certainly as a general statement, I think, complied with
10 the effort.

11 I can't tell you how many companies do it. I can tell
12 you that, in the case of the ones that I have looked at, it
13 has had some helpful impact, but I haven't felt that it was
14 significant or I couldn't tell you the total number of
15 companies who actively are encouraging car-pooling in Morris
16 County.

17 Q On the bottom of page 5 continuing onto page 7
18 of your report, P-6, you state that there will be the need
19 for increased parking facilities if there is, in fact, an
20 increased employment within the Morris County area. I'd
21 like to know if you feel that there are any alternatives
22 to having to provide additional parking spaces?

23 MR. LATZER: Could I ask that you not para-
24 phrase? Could you just read, if you don't mind?

25 MS. MASON: Certainly.

1 MR. LATZER: It makes it easier for me, anyway.

2 Q The bottom of page 5, you state, "employment
3 locations which, in the past, have relied upon non-automobile
4 commuters for their employees will be faced with the need for
5 increased parking to park the automobiles for those individuals
6 that come to work. Whether these businesses would remain
7 at their current location, provided the parking at significant
8 additional costs, is open to speculation."

9 My question is, do you perceive of any alter-
10 natives to having to provide, these companies having to
11 provide, additional parking spaces?

12 A There are always, in theory, alternatives. If you
13 look at it from a practical standpoint, however, it is my
14 opinion that there would have to be a significant increase
15 in parking at existing employment locations if the people
16 that currently work there continue to work there and now
17 become totally dependent -- and "totally" is qualified --
18 become primarily dependent upon the private automobile.

19 Are there alternatives? In theory, they range from
20 building rail lines to serve them, which I think is an im-
21 practical comment on my part, to the fact that, certainly,
22 if parking is at a premium, you have a practical pressure
23 for people to car pool and whatever. But there is no doubt
24 in my mind that there will have to be an expansion in parking
25 at those locations. The need cannot be eliminated.

1 Q Have you completed your answer?

2 A I think so.

3 Q Do you have any knowledge as to whether or not
4 there has been a reduction in parking spaces or facilities
5 within the City of Newark or, sorry, within your concept of
6 the Newark region since --

7 MR. LATZER: Newark center.

8 A Employment center as I defined it?

9 Q Yes, employment center as you defined it.

10 A I have no knowledge of a general overall reduction in
11 parking as it relates to the existing employment locations in
12 the employment center.

13 Q I'm not trying to be repetitive, but I want to
14 make certain that I understand this particular point. Is it
15 not your testimony previously that you would be unable to
16 define the employment centers -- I mean that in the same type
17 of way that you would mean a Newark employment center --
18 within Morris County?

19 A I don't know whether I'd be unable to, I just have not
20 for the purposes of developing the information in the report.
21 Because I, frankly, don't think it's that important to be
22 able to draw a line around it. We're dealing with a concept
23 in here. I'm not attempting to relate it to a job and a
24 home. All we're trying to get across is the point that if
25 you increase the travel distance for someone and/or require

1 them now to take a different transportation form which costs
2 more money, you are using up more of their disposable income
3 and I think that's wrong. I think it's wrong from a trans-
4 portation standpoint also.

5 Q What is your opinion as to what areas would
6 constitute the employment center areas in the same manner
7 in which you defined your Newark employment center area for
8 Middlesex County?

9 MR. LATZER: If you can answer that question.

10 A I'm not sure I'm going to try to, because I personally
11 don't think of it along the same lines. So, I think I would
12 try not to answer the question or ask not -- or whatever the
13 term is, I'm not going to try.

14 MR. LATZER: Could I just question the rele-
15 vancy of the question, please?

16 MS. MASON: Yes. I'm trying to determine --
17 He has particularly spoken of areas within Morris
18 County and other surrounding counties where he's
19 discussed employment centers. I am trying to look
20 at what are the other employment centers in the other
21 eight county areas set forth in the DCA report that
22 we have determined to be our region. I understand
23 that he has not determined that to be his region,
24 but in terms of our actual overall litigation, I'm
25 trying to understand, you know, I'm trying to put it

1 in the focus of the concept of our region.

2 MR. SCHMAUDER: I object. Because it seems to
3 me, if you wish to do that, you ought to do that
4 through your own experts and this expert has not, as
5 I understand it, been submitted for the purpose of
6 attempting to analyze your report, nor has he been
7 submitted for the purpose of attempting to establish
8 locations of employment centers in Middlesex County.

9 Q Inasmuch as you have discussed many other
10 counties within your report in terms of commutation cost and
11 that type of thing, are you saying that you prefer not to
12 answer that with regard to Middlesex County, Passaic County,
13 Bergen County, any of the --

14 MR. LATZER: Could I ask you, are you able to
15 answer the question?

16 A Yes, I guess I'm not because I don't think of -- I
17 don't think of it as quite along the same lines. But, so,
18 I guess I'm not able to answer it from the standpoint that
19 I'm not sure the two are totally comparable in the way I'm
20 thinking of it.

21 Q How do you make your distinction in trying
22 to determine that?

23 A I go back. The purpose of the report is to demonstrate
24 what I consider to be a legitimate point, that transportation
25 has a very serious impact, the cost of it, also, has a serious

1 Q Let me refer you to your report on page 8, first
2 paragraph, wherein you state, "A review of the existing road
3 network serving Morris County indicates a growing problem in
4 terms of capacity on all major roadways providing access to
5 employment centers in Passaic, Bergen, Hudson, Essex, Union,
6 Middlesex and Somerset Counties." Could you please define
7 for me --

8 A Certainly. To get from those counties into Morris
9 County, you have to cut across the county line. It's
10 immaterial to me whether that employment center is right at
11 the county line or it's at the other end of the adjacent
12 county. There are limited number of arterial roadways and
13 an even greater limit of mass transit systems that provide
14 an intersection between those counties. There is a serious
15 growing problem in Morris County with the available capacity
16 on roads which would typically serve intercounty movement.

17 The report is not intended to be site specific. The
18 report is intended to give a general representation as to
19 the availability of, in this case, capacity of that roadway
20 system. If the system does not have the capacity to take
21 a large number of trips back and forth through these arterial
22 roads, it's incidental in this part of the report -- which
23 is not dealing with the cost of economics, but, frankly,
24 dealing with the capability of that transportation system --
25 it's incidental to me whether they get off two miles into

1 Passaic County or ten miles into Passaic County, but certainly
2 there are cities in those counties or specific development has
3 occurred in those counties which generate employment.

4 The purpose of the report, bottom line of the report,
5 is, from a transportation standpoint and from an economic
6 standpoint dealing with transportation, to encourage or re-
7 quire long distances of travel is wrong. It places a burden,
8 an unnecessary burden, on the transportation system and an
9 unnecessary burden on the people who are now having to make
10 that trip.

11 Q With regard --

12 A I don't care where they go.

13 Q With regard to this same sentence, Mr. Frost,
14 could you indicate for me -- could you state for me what you
15 perceive the major roadways providing access from these employ-
16 ment centers in Passaic, Bergen, Hudson, Essex, Union,
17 Middlesex and Somerset Counties?

18 A Well, I could give you examples. Certainly, from
19 Somerset County 287, 202, 206 are arterial roads. Of the
20 three, 287 has the principal capacity, what's remaining of
21 it. Can't hardly get to Union County, to use a colloquialism.
22 The closest you can come is in through Route 24, which, really,
23 services a limited portion of Union County. Some day in my
24 lifetime I would believe that 78 will be complete, which will
25 assist access to Union County.

1 Essex County, there are a number of east-west arterials
2 which carry high volumes of traffic, 280, 80, to service
3 Essex County, Route 10, Route 46 and you would probably drop
4 down to some of the county level roads, such as Columbia
5 Turnpike. Similar types of road systems are available for
6 Passaic County. But, again, the number of corridors that
7 provide sufficient capacity are relatively limited and if
8 you take a look at the volumes utilizing those roads and
9 compare it to the capacity of the road, the ability of that
10 road to carry traffic in a reasonable manner, you'd find that
11 you're running out of room on the roads.

12 Certainly, it is always possible to make use of local
13 streets and, as a matter of course, as the road operation
14 deteriorates, more and more people will start to make use
15 of those streets. But with that you get an increased
16 transportation cost and, certainly, a sufficient increase in
17 the impact. The purpose of this section is simply to gener-
18 ate that there is a practical limiting capacity on the ability
19 of the road system serving Morris County to handle intercounty
20 traffic.

21 Q Have you performed the study of the capacity
22 capabilities on the roads that you've just mentioned?

23 A Some of them, yes.

24 Q When did you perform this study and what was
25 the nature of the study?

1 A Well, we have looked at them during the course of our
2 engagement in this project. We have also looked at them
3 prior to that time.

4 Q I'm sorry, did you say you have looked at them?

5 A During the course of this project and also prior to
6 that time. I don't want to go into other studies performed.
7 I think the question was, what was the nature of that, is
8 that what you're asking?

9 Q Yes.

10 A Simplified terms, we obtained recent volume informa-
11 tion for the roads, the amount of traffic currently utilizing
12 the road and we also developed it to the area that we had
13 the volume information, a capacity or an operating level of
14 service volume for that road, which gives an indication of
15 how the road is functioning and it also gives an indication
16 of the ability for that road to handle additional traffic
17 in the future.

18 Q You gathered all this information yourself
19 as part of your study?

20 A Traffic volumes are from secondary sources, either
21 the county or the State Department of Transportation or we
22 already have performed a count for some prior study. We
23 did not go out and do field studies particularly for this
24 project.

25 Q Is the information relating to these studies

1 contained in the subpoenaed files?

2 A I'm sorry, say that again.

3 Q Is the information relating to these studies
4 contained in these subpoenaed files?

5 MR. LATZER: I don't want to be highly tech-
6 nical, but I have read your subpoena. Could we just
7 refer to it as that which was requested in P-1?

8 MR. ONSDORFF: That's correct.

9 MR. LATZER: Okay.

10 A That refers to everything I have and the information
11 referred to is contained within everything I have. I do
12 not necessarily have the information here. I don't have
13 all the traffic counts here that we have in our office,
14 nor do I have all the ADT counts provided by the State. I'd
15 be more than happy to make them available. If you have a
16 specific piece of information you want, we'll get it for
17 you or you can have someone take a look at it. That's what
18 we did with the Department of Transportation.

19 MS.MASON: Counsel, could I request that if he
20 does have the background information on his studies
21 in his files in his office, wherever they are, if
22 we might have access to that information?

23 MR. LATZER: Yes, I think we can state that if
24 you would just, you know, call a couple of days in
25 advance, I would see no reason why you wouldn't be

1 welcome to come to the office and examine them. Is
2 that all right?

3 THE WITNESS: Yes. The traffic volumes are in
4 a large three-ring binder. I don't think you want to
5 go through the cost of xeroxing the entire contents.
6 If you want a sheet, fine, or whatever.

7 Q In your report, you mention the Highway Research
8 Board Special Report AD-7, also known as the Highway Capacity
9 Manual. That's a federal document.

10 MR. LATZER: Could I have the page reference?

11 MS. MASON: Page 8, paragraph two.

12 A That's a document which is produced by the National
13 Academy of Sciences and then a couple of levels underneath
14 it which I won't try to recite the names of. I believe
15 that operation receives sufficient federal financing and
16 state financing. It also receives private financing, but
17 it's an entity unto itself. So, it is not a, in my mind,
18 anyway, a state or a federal organization. It is an organ-
19 ization of people in the broad spectrum of science and
20 engineering and one of the subdivisions deals with highway
21 and traffic and transportation people, they produce that
22 report.

23 That is considered to be the standard in the industry
24 for doing this type of analysis.

25 Q From a transportation perspective, what, in

1 your opinion, are the most densely populated areas within
2 Morris County?

3 MR. SCHMAUDER: I object to the form of the
4 question, because I -- it's not clear to me whether
5 you're asking what road areas in Morris County are
6 presently the most heavily trafficked, is that the
7 question?

8 MS. MASON: No. I would like to know --
9 as a transportation planner, I'm sure that he has
10 done some studies of or has knowledge of what areas
11 within Morris County are the most densely populated
12 in terms of people living in those areas.

13 MR. SCHMAUDER: I'm sure you can ask a ques-
14 tion like that if you wish to, but that isn't what
15 you asked.

16 A I'm not, frankly --

17 Q Understanding the question?

18 A Well, I think I understand the question, but I'm not
19 sure I could answer it in anything that was in a complete
20 form without, frankly, sitting down with a map and some
21 demographic information and so forth and so on. I can't
22 tell you, nor, frankly, do I have, off the top of my head,
23 a sheet of paper that says this town has so many people
24 per square mile, which would be one form of density, or
25 housing units per square mile, per acre, whatever form we

1 used. So, any answer I would give would have to be general-
2 ized in nature and I guess I would just as soon say I can't
3 answer the question because I can't do it completely off the
4 top of my head.

5 Q In terms of drafting your report, did you rely
6 on any population studies?

7 A We had population information from both the '70
8 census and some information provided by other experts in this
9 case, although I'm not sure where that leads us.

10 Q Who are those other experts?

11 A Okay, there's Mr. Zimmerman, Dave Zimmerman, Rich
12 Copola, C-o-p-o-l-a, Professor Mills (phonetic) had some
13 information.

14 MR. LATZER: There are -- Whatever reports
15 you have, I mean, they would speak for themselves.

16 Q All of them?

17 A I guess --

18 MR. LATZER: Wait a minute. I don't think
19 that question is material as to what he knows about
20 the other reports.

21 MS. MASON: Well, he has stated my understand-
22 ing of his answer. My question was, what population
23 projections did he rely upon -- population, I'm sorry,
24 population reports did he rely upon in drafting his
25 own report and he stated the 1970 census as well as

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the reports of other experts and I wanted to know which experts.

MR. LATZER: All right. You understand the question then. I didn't think you were responding to that question.

THE WITNESS: Yes, I guess I understand the question and I guess I gave the answer.

Q But are you saying all of the other expert reports that relate to population?

A Am I saying I have looked at all the other reports? Yes, I have looked at the other reports. Part of my problem is I'm not quite sure what the purpose of the question is. If I knew that, maybe I'd be better able to answer it. I don't know if that's a fair statement, Counselor, or not.

MR. LATZER: I guess he doesn't understand the question.

THE WITNESS: I don't know where we're going with the question. I have population information and I have looked at it and that's fine, but --

Q I'm just trying to determine precisely what population information you have reviewed --

A That I answered.

Q -- in terms of drafting your report.

A That I answered.

Q To my satisfaction, I am not clear yet exactly

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1 if you are saying you have relied on all of the reports of
2 the expert witnesses in terms of your population, in terms
3 of determining your population with regard to your report.

4 A I don't think I speak about a population in here.
5 So, that's why I don't understand the question.

6 Q Well, I'm assuming that when you discuss the
7 numbers of people within Morris County in your report that
8 you have some idea --

9 A Where specifically -- would you give me a reference?

10 Q All right, let me look through this.

11
12 (Attorney Mason refers to document.)

13
14 Q Let me ask another question.

15 A Could you specifically indicate to me where in here I
16 made reference --

17 Q I'm withdrawing that question then. Did you
18 rely on any population reports at all, that's my only
19 question?

20 MR. SCHMAUDER: I again object to the form of
21 the question. It seems to me the witness has indi-
22 cated to you his total confusion as to what you mean
23 when you make a statement like that and he's indicated
24 to you he doesn't understand what you're referring to
25 specifically when you speak about the phrase "relying

1 upon population."

2 MS. MASON: Well, I'm a bit confused.

3 Q My first understanding is that you did, in fact,
4 rely on population and then later on you say you did not rely
5 on population in this report.

6 A I don't think I said either one of those. I'm just
7 saying --

8 Q I'm trying to understand.

9 A You asked me what population figures I had available
10 and I indicated 1970 census, plus the information submitted
11 by other experts, which I think one way or another was keyed
12 into the 1970 census and/or updated projections by other
13 agencies of themselves. Certainly, I have knowledge of
14 population in Morris County, but I'd be better able to answer
15 the question if I knew what specifically you were referring
16 to in the report, because I'm not sure how anything in the
17 report specifically relates to any particular population num-
18 ber and that's where, I guess, I'm confused.

19 Q Let me ask you another question. When you are
20 discussing in your report the various capacities of road-
21 ways, what are you using as the basis for your discussion
22 of those capacities of roadways?

23 A The technical capacity of the roadway and the existing
24 volume that is currently utilizing the roadway.

25 Q Could you explain to me the concept of level

of service?

1
2 A Certainly, I'll try. The profession, in the 19 --
3 or in the capacity manual, attempted to deal with the problem
4 of being able to describe to the general public in a quali-
5 tative term how a road operated and then be able to relate
6 that qualitative term back to a quantitative analysis. The
7 concept developed was level of service, which ranks from
8 A through E, with A being the best level of service.

9 Now, those levels of service were also established in
10 such a way that a particular level of service, it has a
11 qualitative description and -- I'll go back to what that
12 qualitative description is -- also reflected a quantitative
13 number that you would use for design purposes which the
14 profession has established through the years as being a
15 reasonable amount of traffic to use a particular type of
16 roadway.

17 Now, the qualitative analysis I indicated was defined
18 in level of service and it is an attempt to reflect to people
19 outside the profession how the roadway is operating in terms
20 which they can most easily understand, which is freedom of
21 movement and convenience to the driver, or lack of congestion,
22 to use a common term.

23 The level of service A, in an oversimplified state-
24 ment, for a highway, because they do vary depending on the
25 types of roads involved, would mean that you would have

1 freedom of movement while driving a car. Neither your speed
2 that you traveled at, nor your ability to change lanes, to
3 enter and exit the roadway would be affected by the volume of
4 traffic on the roadway. That's level of service A.

5 It deteriorates down to level of service E, where you
6 no longer have any freedom of movement. I don't want to say
7 you don't control your car, but your use of the car on that
8 roadway is controlled by the other cars. In other words,
9 you don't have freedom to change lanes, you don't have free-
10 dom to speed up, you are now traveling as part of a large
11 pack moving down the roadway; and, at the same time, level
12 of service E, during at least a significant portion of that
13 time, you're not moving because of the congestion, the stops,
14 the delays involved.

15 Now, you don't design for level of service A, because
16 that type of freedom is not -- at least the profession does
17 not feel it is necessary that people have complete freedom
18 of movement of their vehicles both as to speed and changing
19 lanes. You do not design for a condition where there is
20 severe congestion, stoppages, difficult to get on and off a
21 road, significantly difficult to get on and off a road.
22 You design for something in between, depending upon the type
23 of facility and the area where that facility is located.
24 In Morris County, it would be level of service C.

25 You then talk about a service volume. You then go

1 through a procedure to determine what the volume of traffic
2 is that corresponds to that level of service C. Now, level
3 of service C for a freeway means that you are able to maintain
4 the design speed, or the posted speed limit. You can change
5 lanes, although you would expect, besides some interference
6 of doing so, you don't do it at will. You will not be able
7 to speed up at your own desire, because there are sufficient
8 volumes of traffic on the road.

9 It corresponds, in general terms, to what the Federal
10 Highway Authority -- used to be the Bureau of Public Roads,
11 who publishes the design criteria for roads -- it corresponds
12 to what they feel the design volume for that road should be.
13 In other words, if you project a certain volume of traffic
14 will use the road, you should design a certain type of road.
15 That corresponds to the level of service C, it would be
16 the Morris County area. That is what service volume is.

17 Service volume represents a particular level of
18 service which represents what the road is designed to carry,
19 which, while it does have sufficient numbers of cars on it,
20 has an acceptable level of congestion, inconvenience to the
21 driver.

22 Q With regard to Morris County roads, do you
23 have any knowledge as to by whom they are designed?

24 A I'll answer, yes.

25 Q And who would that be?

1 A That's what I was afraid of. Certain segments of the
2 road system have been designed in-house by the Department of
3 Transportation, although those are fairly limited. The road
4 system is controlled or under the jurisdiction, in the case
5 of certain roads, by the Federal Government and the State,
6 in certain cases by the State alone, there's no state fund-
7 ing involved, in certain cases by the county.

8 Q When you say "control," now, have you left
9 design --

10 A Let me get back to it.

11 Q All right.

12 A Certain cases by the county and in the case of local
13 roads by the municipalities. In each case, those agencies,
14 excepting the Federal Government, may do their own design
15 work. At least in the case of the county and the State,
16 I would have to say that a majority of the work is done by
17 consulting engineering firms, not unlike mine. In the case
18 of local roads, it depends purely on the town, the engineer-
19 ing staff they may have.

20 Q In terms of the roads in Morris County, do you
21 have any knowledge at which actual level of service they
22 were designed, as, I mean, like, C or --

23 A I can indicate I have personal knowledge of the design
24 volumes, for instance, on the Route 24 freeway, which still
25 isn't built, where it was originally set up to be a level

1 of service C. The volume involved was C -- because I was
2 working for the firm that was designing it back in 1971. I
3 don't have personal knowledge, because I didn't do the design
4 of it, but as far as the interstates, again, that would be
5 the volume of criteria that was used for the interstates when
6 they were originally designed. Those are completed.

7 Q Is it possible that some of these roadways
8 may have been designed at a design level of service below C?

9 A It is possible that a segment of a roadway, for some
10 specific reason, was set up knowing that it would be, when
11 the projected volumes were there, that it would operate on
12 the level of service D. That's not -- It's not a common
13 occurrence, but it is not uncommon to have it occur with
14 regard to a specific interchange or some such thing, where
15 there's just no practical way -- there's always an engineer-
16 ing way -- but no practical way to get the right of way for
17 an interchange large enough to have the interchange operate
18 at level C.

19 So, it's quite possible, in my mind probable, that
20 there is a segment of road in Morris County where they
21 recognize that it would not operate at level of service C
22 in such time as it is in operation. I can't swear to it,
23 but I would be very surprised that, if any of the areas
24 that we looked at capacity analysis, those areas were ex-
25 pected to operate at a lower level of service when they were

1 originally designed than C.

2 Q Now, I want to make sure I understand this.

3 Are there other methods of determining capacity on roadways
4 other than the level of service?

5 A Well, understand, there is a difference between
6 capacity and a service volume. The service volume is less
7 than the absolute capacity of the road to move cars.

8 Q Okay.

9 A I would have to answer, technically, there are other
10 methods, but they're not used, generally. I don't know of
11 an instance when they would be used -- when they are used,
12 let me put it that way. I have never run across when they
13 are used.

14 Q Let me ask you this: If a road has been
15 designed at the level of service C, is it possible that the
16 traffic flow would operate so that it will appear as if it
17 were operating at a level of design D, is that --

18 MR. SCHMAUDER: I object to the form of the
19 question.

20 Q Do you understand the question?

21 MR. SCHMAUDER: Possible to whom?

22 Q Is it possible to you, Mr. Frost, as a trans-
23 portation planner.

24 MR. SCHMAUDER: Appear to whom?

25 MS. MASON: Would you read back the question?

1 (Whereupon, the Reporter complies with the
2 above request and reads back the following:

3 "THE QUESTION: Let me ask you this: If a road
4 has been designed at the level of service C, is it
5 possible that the traffic flow would operate so that
6 it will appear as if it were operating at a level of
7 design D, is that --" (Colloquy) "Is it possible to
8 you, Mr. Frost, as a transportation planner?"

9
10 MR. LATZER: Could you rephrase that? Would it
11 be a burden to ask you to rephrase that question?

12 MS. MASON: No.

13 Q If a roadway has been designed at the level of
14 service C, can that roadway withstand increased capacity?

15 MR. SCHMAUDER: I object to the form of the ques-
16 tion again, because I'm not understanding what you mean
17 by "withstand." The witness has told you there are
18 levels of service for qualifying what the road, in
19 actuality, it is designed to do as well as for evalua-
20 ting, in fact, what the road is doing.

21 MR. LATZER: Can you answer the question?

22 THE WITNESS: Yeah.

23 MR. LATZER: Would you try to?

24 A I believe so. To paraphrase the question, can more
25 cars pass through a particular roadway than its level of

1 service volume? The answer is, yes, as long as you accept
2 the fact that the road will not function in as desirable a
3 fashion as the profession has set it up to be and that you
4 will accept congestion. As additional cars go through, you
5 will start to accept more and more congestion, until it
6 becomes quite serious. The Long Island Expressway is not,
7 in the profession's opinion, a desirable road and yet it
8 operates above level of service C.

9 Interestingly enough, it also operates below capacity.
10 Because if you eventually get so many cars on the road, the
11 congestion becomes so severe you can't approach the capacity
12 of a roadway. In simplified terms, capacity is measured in
13 vehicles per hour. You have to measure it over time. If
14 congestion is so severe that no cars move for an hour, the
15 volume using that roadway is zero, regardless of what the
16 capacity is. So, if you get enough congestion, you start to
17 lose the ability of the road to pass cars.

18 Q Would you explain your methodology for deter-
19 mining the peak capacity -- I think you call it peak.

20 A Peak hour.

21 Q -- peak hour capacity with regard to the graph
22 on page 9?

23 MR. SCHMAUDER: Would you point out where on
24 page 9? There is a reference to peak hour capacity --

25 Q The reference is peak volume capacity ratios,

1 that's what I'm trying to determine. What is your methodology
2 for determining volume capacity ratios as you do on page 9?

3 MS. MASON: Do you want me to point out where,
4 which ones, on page 9, Mr. Schmauder? Would you like
5 that?

6 Q I mean I-80, I-280, Route 46, Route 10, South
7 Orange Avenue, which is Route 510, Route 24 and I-287.

8 A I'm going to take it through a generalized explanation
9 and if someone wants me to get out the manual and go through
10 page by page, okay. The procedures are set forward in the
11 highway capacity manual for different types of roadways in-
12 volved. There are a series of technical steps which you go
13 through, both relating to data that you're utilizing, as far
14 as existing volumes that are on the road, and as far as the
15 geometry, or physical configuration of the road or intersec-
16 tion or whatever.

17 You take the information with regard to the existing
18 traffic, you take the information with regard to the design,
19 physical features of the road. You then make use of that
20 through the procedures established in the Highway Capacity
21 Manual and you will end up with a level of service C service
22 volume, because it's one of the choices you have, what volume
23 you are looking for, and the end result are what is listed
24 as peak direction, D-I-R, capacity. That represents the
25 hourly volume which can be handled at level of service C

1 in one direction for the roads that you listed.

2 You also know what the volume was from the secondary
3 data sources I discussed previously. You guide the volume by
4 the capacity. You get a VC ratio, volume of capacity ratio,
5 for level of service C. Assuming it is not a mathematical
6 error, the numbers that are given here represent that ratio.

7 If it is one, that means you are operating at the level
8 of service C service volume. If it is over one, that means
9 that it is -- the roadway is already carrying more vehicles
10 than it was, in theory, designed to handle. If it less than
11 one, there is the ability to add additional vehicles to the
12 travel lanes prior to it reaching the volume that you designed
13 it for. Now, is that a thorough enough explanation?

14
15 (Whereupon, a brief off-the-record discussion
16 is held.)

17
18 Q I have some more questions on that. I'm
19 discussing the actual graph that you had come up with on
20 page 9, but I'm also going back to your methodology for
21 determining this, which is set forth on page 8, paragraph 3.
22 You state that, for freeways, a five-minute interval has been
23 adopted as a standard. Could you explain to me exactly why
24 that was done and what that means?

25 A One of the pieces of information which we use in

1 determining capacity and/or level of service is an item
2 called the peak hour factor. There are set procedures used
3 for determining the peak hour factor. What it does is it
4 takes into account fluctuation in the traffic within the hour.
5 On a particular roadway -- well, I can't say would never
6 happen, but it would certainly be a statistical freak -- you
7 do not have a constant flow of traffic, so many vehicles per
8 minute throughout the entire hour.

9 You have to take into consideration in the utilization
10 of that road the peaks and valleys that occur throughout the
11 hour; otherwise, you will end up with a roadway which is under-
12 designed. An example would be -- which, admittedly, is purely
13 theoretical -- if you happen to have a roadway intersecting
14 a driveway from a building and a thousand cars parked in the
15 parking lot, for an intersection, the standard you base it
16 on is the highest fifteen minutes that occurred within the
17 hour as opposed to the highest five minutes that occurred
18 within the hour.

19 So, you have a signal out there at the intersection.
20 Everybody comes out, gets in their car and goes home at
21 five o'clock, all thousand vehicles, and they all do it
22 right away and those are the only vehicles that leave that
23 parking lot during that hour period. Well, the volume,
24 because you talk about volumes typically in twenty-four
25 hour periods or over a single hour, the volume's a thousand

1 cars in an hour.

2 But if you set the capacity of the signal for a
3 thousand cars and it was exactly a thousand cars, the first
4 guy into his car would get out right away and the last guy
5 into his car would have to wait fifty-nine-plus minutes to
6 get out of the parking lot. You have to take into account
7 that large surge which occurred. I say it's purely theoreti-
8 cal, you don't find that thing, although you find things that
9 approximate it occasionally with office buildings.

10 But if you don't take into account the surges which
11 occur within the hour, you will have a breakdown in the
12 roadway, the functioning of the roadway, because the capacity
13 will be exceeded during that peak and once it's exceeded, it
14 takes a long time for the traffic to stabilize, to get back
15 to a normal operation. So, on a highway, on a freeway, you
16 base this peak hour factor on a five-minute -- take the high-
17 est five minutes times twelve and divide that into the total
18 volume for the hour and that gives you a percentage or a
19 number which is less than one and you use that as a peak
20 hour factor to input into determining the level of service,
21 or the capacity.

22 Now, in fact, in point of fact, if you ever found a
23 peak hour factor level of one, not level of service, of one,
24 chances are you have a capacity restriction downstream which
25 is monitoring the flow. It just doesn't occur statistically.

1 As a general statement, in an area like Morris County, you
2 will find that the peak hour factor is .91. The manual you
3 suggest to use in areas like the previous studies done in the
4 area confirms that that is a reasonable peak hour factor for
5 highways in this area and, so, .91 is used.

6 I think there's a footnote on page 9, Table 2, based
7 upon PHF, which is peak hour factor, of .91.

8 Q This, by the way, is where you do use popula-
9 tion. I finally found it.

10 A Okay, all right.

11 Q I told you it was in here somewhere..

12 A Now we're referring to it in a totally different
13 sense, but the -- Do you want to know why that's the --

14 Q Let me ask you this: This is your methodology
15 for determining capacity. Are there other accepted methods
16 within the profession of determining capacity that you're
17 aware of?

18 A I don't believe -- I don't consider theirs another
19 method which is accepted, that is as rigorous an analysis
20 as this. You can get into some brutal number-type things
21 and headway analysis, but as a general statement, this is
22 the single accepted practice, method, that's used in the
23 profession to determine capacity. This is the rigorous
24 approach.

25 Q Does your methodology for determining capacity

1 demonstrate the fluctuations in time?

2 A I'm sorry.

3 Q When you speak of peak hour capacity, you've
4 taken the peak five minutes. I'm trying to determine, first
5 of all, there have to be other lower times, you've stated that
6 yourself, when it is not at the highest five-minute peak, is
7 that correct?

8 A There are other times when it's not as high as the
9 five-minute peak, but I think maybe there's a misunderstand-
10 ing on the importance of that number. You're still working
11 with the peak hour volume. The purpose of that factor is
12 to allow for this flexibility which occurs within the hour.
13 Now, my hypothetical situation we had, you know, a phenomenal
14 change over the hour, because everybody wanted to get out at
15 once. In real life, that volume change probably has a range
16 of maybe ten to fifteen percent, something in that magnitude.

17 We're not talking about in five minutes we have a
18 hundred cars and five minutes later we have ten cars. We're
19 talking about the highest five minutes is a hundred and the,
20 maybe, the lowest is eighty-five or something like that. It's
21 a fairly well-defined line through the -- you plot up every
22 five minutes what the volume was. So, we're not analyzing
23 the five minutes, we're analyzing the hour. But to take into
24 account there is a variation in the hour, you do input in one
25 item, one of many, that takes into account what happens for

1 a short span of time.

2 Q My question is: Does that five minutes take
3 into account the other fluctuations within the hour?

4 A Yes, it does, by definition, because you multiply the
5 highest five minutes times twelve and you divide that into
6 the total volume over the hour.

7 Q All right, that's what I didn't understand.
8 Have you done any peak capacity studies for the, say, major
9 arterial roadways, as you call them, in the Passaic, Bergen,
10 Essex County, Union County areas to -- I'm referring you
11 specifically to your first sentence of page 8, wherein you
12 state, "A review of the existing road network serving
13 Morris County indicates a growing problem in terms of
14 capacity on all major roadways providing access to employ-
15 ment centers in Passaic, Bergen, Hudson, Essex, Union,
16 Middlesex and Somerset Counties." Have you done any studies
17 of peak capacities at those sites that you've mentioned?

18 A Either I or someone from my firm has at some point
19 in time.

20 Q When were they conducted and what was the
21 nature that they --

22 A If analysis is input to any traffic study that's
23 done and either my firm or employees of my firm have con-
24 ducted studies in all of the counties that are listed and,
25 so, as a normal course of events, you have done a capacity

1 analysis of the major roadways, either municipalities or the
2 road counts or whatever. The answer is, yes, we have done it
3 and we have knowledge of it personally or one of my employees
4 has a personal knowledge of the limitations and the capacities
5 and the analysis procedure and all those counts. I can't
6 state we've analyzed every roadway, but I can say we've done
7 work in every one of the counties.

8 Q Could you name some of these studies that
9 you've done?

10 A Well, the Essex County TOPIC study, which included
11 everything but Newark. We did capacity analyses of every
12 major roadway in every community, except for Newark. Bergen
13 County, we did Pascack Valley and Hackensack and did some
14 work in Tenafly and other towns and go back to the original
15 list.

16 Q Did you name any in Union County in that
17 list?

18 A I think we did the Union 701 Transportation Study.
19 I did that when I was with the other firm.

20 Q Could you clarify for me what studies you
21 did in Middlesex and Somerset Counties with regard to this
22 same question?

23 A All right. Well, I'll clarify it. I have done work
24 in Warren, Bernards Township, Bernardsville. Those studies --

25 MR. LATZER: Excuse me a second. Are you going

1 to repeat the studies that you testified?

2 THE WITNESS: I guess.

3 Q All of them. I'm trying to make certain, not
4 remembering what they were, were they all inclusive with
5 regard to these?

6 A For instance, if I do a study in Bernards Township,
7 I pick up 202, 287 and 78. Having done work in that township,
8 I therefore have knowledge of those three roads. I wasn't
9 studying the roads, but they're part of the township's trans-
10 portation system. If I do work in Bernardsville or down in
11 that area, I have to take into account 202, 287 and 206.

12 In Warren, you have to take into account 202, which
13 certainly is west, but 78 -- because of my business, we're
14 all optimistic, we all assume 78 will be finished. I'm
15 not saying you specifically study a particular road to come
16 to this conclusion, but over the course of the last fifteen
17 years, yeah, I would say that probably any major artery that
18 leads into Morris County, either I or some men of my firm
19 has looked at some point in time.

20 Q These are the studies you have relied upon
21 in making this particular statement?

22 A That's right.

23 Q In the third paragraph, you state, "Generally,
24 the minimum acceptable level of service for highways is
25 C and this operational level is frequently used for urban

1 design practice." Were all of the roads in Morris County
2 constructed in accordance with an urban design practice?

3 A They should have been.

4 Q Do you have any knowledge as to whether they
5 were?

6 A I don't have any knowledge they weren't. I have no
7 reason to believe they weren't, but there may, what I talked
8 about before, there may have been a specific segment of a
9 road where they were not able to attain the capacity they
10 would have liked to. But I have no reason to believe that
11 any of the roads were designed at a level of service -- the
12 roadway itself was designed with level of service D in mind.

13 Q But you have no specific knowledge?

14 A I can't say, because I wasn't involved in the design
15 of every roadway.

16 Q Upon what knowledge do you base your statement
17 on page 8, paragraph 5, that Route 24 through Chatham is ex-
18 tremely poor with the potential for completion of the Route 24
19 freeway, which will extend for the easterly Morris County line
20 at Chatham to the Morristown area, still several years away?
21 My actual question with regard to that statement is: What
22 knowledge do you have with regard to completion plans for
23 Route 24?

24 A I take a personal interest in the road. I have dis-
25 cussed it both with officials of the Department of Transportation

1 the local governing body in Chatham takes an interest in the
2 road and has discussed it. I'm at least peripherally involved
3 because I sit in the planning board down there. I am aware
4 that they can not build the road next year. I am also aware
5 that the road has some significant hurdles to still overcome,
6 in my mind, before the road will ultimately be built. That's
7 a personal opinion. There are those that feel it will never
8 be built.

9 Q What individuals did you particularly gain this
10 information from within the Department of Transportation?

11 A I talked to Ed Date (phonetic), Bill Gwen (phonetic),
12 over the years, Keith Rosser (phonetic), John Obermeyer
13 (phonetic), I don't know. If I'm down there, I usually ask
14 what's going on, because, as I say, it's a problem.

15 Q Do you have any knowledge with regard to what
16 the actual hurdles stopping completion are, or at least
17 delaying completion, as you put it?

18 A The road was actually put in design back in '71. I
19 was in charge of the design of the section of what technically
20 is the Morristown Airport out to Speedwell Avenue. That
21 road was stopped at that time. It was a hundred percent
22 state funds on the road. The road was stopped in '72 or
23 '73, I can't remember which, because they had run out of
24 money, out of the original bond issue, to bill it and now
25 were going to go with federal bonds and the Federal Government

1 required an environmental impact statement performed.

2 Since that time, up and through two months ago, at
3 least, they have been negotiating with firms to conduct the
4 environmental impact statement. I don't know that the con-
5 tract is signed. It was not signed in the summer of this
6 year. An environmental impact statement takes a significant
7 period of time because of the need to principally determine
8 ambient air level, air quality and so forth. It then has
9 to go through a whole series of hearings. After you go through
10 the series of hearings, the road will have to be redesigned,
11 because the design standards have changed.

12 It's now going to be federally funded. It then takes
13 a significant period of time to construct a road like that.
14 That's my personal knowledge of where the road stands.

15 MR. LATZER: It seems like an understatement.

16 THE WITNESS: I would like to be an optimist.

17 I'd like to see the silly thing built.

18 Q Do you have knowledge as to where the capacity
19 limits are exceeding -- Let me ask you this first: My
20 understanding from your testimony is that when the VC ratio
21 exceeds one, the highway has exceeded its capacity, is that
22 correct?

23 A Correct -- No, it's exceeded its service of level C.

24 Q Which is the design capacity.

25 A Which is what you designed it for, correct.

1 Q Do you have knowledge as to what particular
2 areas of the roadway on Route 46 have passed their peak capac-
3 ity, which is the volume capacity?

4 A I'm trying to think of a specific location on Route 46.
5 Can I switch to Route 10 real quickly? Because I think I have
6 one there.

7 Q All right.

8 A The intersection of Route 10 and Ridgedale Avenue,
9 certainly.

10 Q Does this condition exist only during rush
11 hours or are there particular hours that this --

12 A There are particular hours. It doesn't exceed, as
13 a rule, you don't exceed capacity for more than a certain
14 number of hours during the day.

15 Q All right, with regard to Route 46 --

16 A I'm trying to think of one that I have specific
17 knowledge that I can remember as an intersection analysis.
18 I have to say I can't. If you want me to, I'll find one
19 we have done. I can't think of a specific intersection off
20 the top of my head.

21 Q Are there particular areas of I-287 where the
22 capacity limits have been exceeded, design capacity?

23 A In my mind, frankly, once you start approaching
24 Morristown, all the way up north of -- get past Route 80,
25 the road is functioning with volumes that are higher than

1 were anticipated through that area and was originally laid
2 out back in the Fifties, which intended to pick areas where
3 the State had county volume information to relate back to
4 the capacity information. But from a personal knowledge of
5 the roadway, the interchange with 80 and 287 is a real prob-
6 lem. The interchange with 80 and Route 10 is a real problem.

7 Route 287 south of Route 10, especially south of
8 Morristown, the volumes are rapidly approaching the point --
9 not rapidly approaching the point, but congestion is starting
10 to occur on those interstates. Route 287 is a real problem.

11 Q What about Route 24?

12 A Route 24 you can't -- Route 24 is pure stop-and-go
13 traffic with the emphasis on stop at peak hours on the
14 eastern end of the road.

15 Q Do you have an opinion as to how staggered
16 work times would impact on these excess capacity levels on
17 certain roadways?

18 A Do I have --

19 Q The roadways that you've mentioned.

20 MR. LATZER: Could you repeat?

21 Q I said, do you have an opinion as to the
22 impact that staggered work times would have on the excess
23 capacity levels of the roadways that you --

24 MR. SCHMAUDER: I object to the form of the
25 question.

1 Q Do you understand the question?

2 MR. SCHMAUDER: Well, having indicated that
3 you don't understand what I mean, I'll explain it
4 for you. Staggered work times where?

5 Q Do you have an opinion as to whether the exis-
6 tence of staggered work times in commercial areas, areas
7 where there is business activity, whatever, you know, wherever
8 they may be in Morris County, do you have any opinion as to
9 whether staggered work times within those work areas would
10 impact on the excess capacity levels on the highways that
11 you've mentioned?

12 A Yes, I have an opinion. I think the question you're
13 driving at is, can you accommodate more vehicles on the
14 journey-to-work trip by staggering the work hours even given
15 a limited capacity of the roadway.

16 Q Yes, thank you.

17 A All right. It has an impact. The ability of busi-
18 nesses to do it has always been a problem. Some businesses
19 are able to do it better than others. I think, as I character-
20 ized before, car-pooling is helpful. There are certain
21 businesses which I think have been able to accommodate a
22 significant impact on the roadway system. It is, in my
23 opinion -- ends up being more significant on roads which are
24 other than interstates, Route 10's, Route 46's, it tends to
25 have a much more real impact upon the county and local roads,

1 but certainly does have an impact more so than car-pooling,
2 I believe.

3 It, by the very nature of it, has to allow for a
4 greater number of vehicles to make use of the system.

5 However, there is a limit to the ability to stagger and it
6 depends from company to company as to what they feel they can
7 live with, depends upon the type of company. For instance,
8 the company which typically deals with a west coast company
9 typically have had significant problems with staggering.
10 The company which is part of a large corporation where there
11 is interaction between the offices can have large problems
12 with the staggered work hours, especially if the staggering
13 is over a half-hour period.

14 But I can also indicate that there already is, I
15 believe, in Morris County a fair amount of staggering going
16 on. I can't give you percentages, but there are large
17 corporations which are actively involved with it and we
18 already have a problem, in my opinion. So, I would anticipate
19 the same, at least the same, level of staggered work hours
20 would continue and are reflected in the problem we have today
21 and I still stand with the position that there is a severe
22 access problem in Morris County which will start impacting
23 when the people move here, move their businesses here.

24 Q Which of these employers that you spoke of
25 which have these large corporations are currently utilizing

1 staggered work times?

2 A I think it was Prudential. They actually work what
3 they call a "flex time system." I believe Allied is now
4 staggering.

5 Q Where are these located?

6 A Prudential is located in Parsippany-Troy Hills, among
7 others. AT&T is doing staggering and they have office space
8 up in along the 287 corridor in Morris County, in addition
9 to their large facility in Somerset County. I believe Exxon,
10 if they don't stagger, they may have -- I believe, if I
11 remember correctly, that they have buildings that are offset
12 on their facilities in Florham Park.

13 One of the problems with the concept of staggering,
14 and I'm going to stop there, but one of the concepts of staggering
15 is that any business, even if they tell everybody to get
16 there eight o'clock in the morning, staggers. I mean, there
17 are a certain percentage that arrive early and there are a
18 certain percentage that arrive late. Only approximately
19 maybe sixty-seven percent, if you don't have a staggered
20 system, only about sixty-seven percent of the people arrive
21 during the peak hour. The other thirty-three percent of
22 workers are tardy.

23 When you start staggering, you start overlapping
24 these and if you stagger by half-hour, you don't drop every-
25 thing down. You now have an overlap of this staggering,

1 depending on how tardy people are. I think it's prevalent
 2 in suburban facilities, northeastern New Jersey facilities
 3 right now. I would expect it to stay so.

4 Q On page 10, the second paragraph, you state,
 5 "Since the volumes of traffic on many of the arterial high-
 6 ways serving Morris County are already approaching the design
 7 capacity, it can be expected that development in the county
 8 will start to reflect the limited access available." Upon
 9 what information do you rely for this statement?

10 A My personal evaluation of various sites throughout
 11 the county and recommendations to clients who have then
 12 proceeded not to purchase the property.

13 Q Might you name --

14 A I'd rather not. I really would, because --

15 Q Could you give me some idea of the number, then,
 16 that we're speaking of?

17 A Number of times it's happened?

18 Q Yes.

19 A I can think of four times it's happened -- three
 20 times it's happened, fourth time they leased.

21 Q Might you tell me, not wanting to know who
 22 they are, where exactly the location was that they chose
 23 not to move into or you actually advised them not to move
 24 to?

25 MR. LATZER: Well, could it be a general area

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1 rather than -- I don't want somebody to say --

2 MS. MASON: I don't mean exactly.

3 A I don't know how to answer that without being
4 specific.

5 Q Could you answer in terms of towns?

6 A Towns?

7 Q Maybe in terms of towns and roadways.

8 A I'd say I've done it on Route 10, Route 287 and what
9 I'll classify as the Route 4 corridor.

10 Q When you say the "corridor," I assume you
11 don't mean the entire roadway.

12 A All right, no, I don't mean the entire. Well, on
13 Route 27 I haven't suggested to anybody it's a good idea
14 to move to the Morristown area of 27 -- did I say 27? --
15 287. I haven't suggested to anybody that they relocate
16 onto the Route 24 corridor east of Morristown. I don't
17 know how to define the limits on Route 10, but it certainly
18 isn't through the entire length of the county at this
19 point, because I, frankly, haven't been involved with the
20 western end. So, I don't know what I would say if I go
21 down to the western end of Route 10.

22 Q You mentioned Route 287, Route 10 and did you
23 mention --

24 A Route 24.

25 Q Did you also designate within Route 24, I'm

1 sorry, did you?

2 A Route 24 east of Morristown.

3 Q East of Morristown, all right, thank you.

4 With regard to the businesses, not wanting to know their
5 names, are these small businesses, large businesses, com-
6 mercial, retail?

7 A How about I say they're over a hundred thousand square
8 feet of building space, is that an adequate answer for you?

9 Q That doesn't help in terms of employee size.

10 A Well, I think it does. It would be more employees --
11 it would be over three hundred employees in the building or
12 in that magnitude.

13 Q You state in paragraph 3 on page 10, "While
14 it can be expected that nonresidential development will
15 continue throughout the county, and specific locations may
16 continue at a high rate, based upon available transportation,
17 it can be expected that the current high rate of nonresidential
18 development which Morris County is experiencing will start
19 to decline."

20 Now, that's somewhat related to the last
21 question, but could you further elaborate, if you see the
22 need, as to your basis for the statement?

23 A Yeah. Generally, I feel, based upon the work which
24 I have done in this county, that the level of new non-
25 residential development throughout the county will not grow

1 at the same rate that's been experienced, that I have wit-
2 nessed and been involved in and experienced over the last
3 number of years. The first part's a disclaimer, because I
4 could always find some spot in the county where I could
5 recommend to put a building.

6 There will be specific spots, but there have been a
7 large amount of activity going on and I think my major con-
8 cern, frankly -- I'm not sure that it's all that pertinent,
9 but maybe it is -- there has been a large amount of land
10 zoned in Morris County for nonresidential purposes. I think
11 it's unrealistic to assume that land is going to develop
12 to the capacity of the zoning set forth, because you won't
13 be able to get there. People just won't buy the land.

14 The value of the land will decline and it will be
15 used for something else or not be used, although I am
16 convinced that I could find some place in Morris County
17 the ability to locate a large building for -- I probably
18 could find it elsewhere in Morris County, also. But as a
19 general statement, I think Morris County is going to
20 experience a decline in growth because of the inability
21 to get access to the development.

22 Q With regard to the development in the county
23 that you have stated will possibly not come in because of
24 access, transportation access problems, where in the Northeast
25 New Jersey area do you, in your opinion, from a transportation

1 perspective, should these types of places locate?

2 A I don't know that they will be in the Northeast Jersey
3 area.

4 Q Is that based on a transportation analysis?

5 A It's based upon the fact that I don't know where
6 they'll go. I don't know -- I can't answer the question
7 and say, I think they're going to go to Tenafly or they're
8 going to go to Passaic County or they're going to go to
9 Hunterdon County or where. I frankly don't know because I
10 haven't looked into the problem as to where I think I'd put
11 them if I didn't put them here, but I don't think they're
12 going to be here.

13 Q Where do you think, in your opinion as a
14 transportation planner, transportation expert, where would
15 you locate employment in the Northeast New Jersey area such
16 as to minimize transportation problems? I'm talking about
17 large-scale employment.

18 A Would you give me an example of what you're talking
19 about?

20 Q An example of what I'm talking about?

21 A I guess what I have a problem with is that there are
22 a lot of different types of employment.

23 Q Let's say with three hundred -- in excess
24 of three hundred employees.

25 A What are they doing? Because that has a lot to do

1 with it. Is it manufacturing, is it office work?

2 Q Let's say office work.

3 A Office work?

4 MR. LATZER: Could we have the question, then,
5 once again?

6 MS. MASON: My question was: Where from a
7 transportation perspective does he think employment
8 should be located in the Northeast New Jersey areas so
9 that it would minimize transportation problems.

10 MR. SCHMAUDER: Can we have a definition of
11 what Northeast New Jersey areas you include within
12 your phrase?

13 MS. MASON: I'm speaking of the name "North-
14 east New Jersey area" that he has utilized in --

15 MR. SCHMAUDER: Singular area.

16 MS. MASON: Yes, area, I'm sorry.

17 A I personally believe that, given the interstructure
18 of transportation that exists in Newark, at that immediate
19 region, that there should be a continued -- there should be
20 more emphasis placed on the location of employment in that
21 area because of the transportation that serves it. There
22 is reasonable service to Elizabeth, mass transportation.
23 After that, I would, frankly, have to sit down and study
24 the question.

25 But there is a tremendous investment in a lot of areas.

1 But, certainly, in transportation in an area like Newark,
 2 it has the capability, the capacity, that most of the older
 3 central cities have to allow for significant transportation
 4 to and from that city and a large portion of it does not
 5 have to be via the private passenger car. I think it's
 6 unfortunate that there has not been -- I'm thinking of how
 7 to phrase it -- that there has not been extensive redevelop-
 8 ment of that type of business in that area because of the
 9 transportation system available.

10 Q Do you have an opinion as to whether Newark
 11 is more accessible for commuters both by automobile and
 12 by mass transportation?

13 A I was referring specifically to mass transportation.
 14 I think one of the problems we face with the automobile is
 15 not only do we have a limited problem, we have a problem
 16 with capacity in Morris County, we have it throughout the
 17 Northeast New Jersey area. The journey to work is the one
 18 area which I think you can accommodate with mass transit,
 19 because it certainly has the very high peak hour capacity.
 20 So, therefore, my answer to your question is, it has a
 21 definite capability from a transportation standpoint to
 22 provide transportation to and from work for a large number
 23 of employees.

24 Q Does that hold equally true with respect to
 25 automobile commutation?

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1 A No, I don't think it -- it doesn't have. It's a
2 good qualitative term. It has limiting problems with regard
3 to automobile transportation also, although it is served by
4 a number of highways. It tends to be a hub, but those high-
5 ways have capacity problems today. Certainly, Newark has the
6 interstructure to not only -- and I use the city as an example,
7 but I don't mean it to limit it pure and simply to Newark --
8 but it has the capacity not only to allow for transportation
9 to the city, it has an interstructure which allows both the
10 employment and the housing to take place.

11 It has the interstructure for the housing, the utilities,
12 the sewers so forth and so on. It has the ability to both
13 provide a housing and the employment in one location and cut
14 down on the transportation costs, which goes back to the
15 original part of the discussion. I think it's wrong, from a
16 transportation standpoint, to spread the employment and the
17 residences on a fairly uniform basis throughout Northeast
18 New Jersey. It's counterproductive, in my mind.

19 It requires, ultimately, to charge a large expenditure
20 of public funds to try to improve the transportation system
21 and I think there's some very practical limits on how much
22 can be approved. It also requires a large expenditure of
23 public funds -- of private funds then to make the journey
24 to work, because you do have to get relatively lucky to have
25 a development which has a large piece of employment adjacent

1 to all the housing needs.

2 Maybe ultimately in the future you might be able to
3 get the balance, but on a real time basis, it would be un-
4 usual, in my mind, to find that a larger employment business
5 moved in and had the housing in the immediate proximity to
6 serve that business. That's not the case in the central
7 cities.

8 MS. MASON: Although I would love to continue
9 this, I recognize it's one o'clock and we had decided
10 we would stop at that time, with the understanding
11 that we will continue next Friday, November 16, at
12 nine-thirty again and you will be available at that
13 time.

14
15 (Whereupon, the deposition is concluded for
16 the day at 1:00 p.m.)

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C E R T I F I C A T E

I, ELIZABETH A. QUAGLIANI,
a Shorthand Reporter of the State of New Jersey,
do hereby state that the foregoing is a true
and accurate transcript of my stenographic notes
of the within proceedings, to the best of my ability.

Elizabeth A. Quagliani
Certified Shorthand Reporter