

CN - Origo Farms v. Two Colts Neck

8/21/80

Transcript of proceedings: witnesses:

- William Whipple
- Richard Moser
- Glenn Gerkin
- Donald Krefer
- Henry Ney

P 241

CN 000 016 5

I N D E X

2	<u>Names of Witnesses</u>	<u>Direct</u>	<u>Cross</u>
3	WILLIAM WHIPPLE, JR.		
4	By Mr. Marks	3	
5	By Mr. Frizell		65
6	RICHARD MOSER		
7	By Mr. Sagotsky	109	
8	By Mr. Frizell		117
9	GLENN GERKIN		
10	By Mr. Frizell	149	
11	DONALD E. KIEFER		
12	By Mr. Frizell	159	
13	By Mr. Marks		190
14	By Mr. Herman		196
15	HENRY NEY		199
16	By Mr. Frizell	207	
17			
18			
19			
20			
21			
22			
23			
24			
25			



1

2

3

EXHIBITS MARKED FOR IDENTIFICATION

4

NumberDescriptionPage No.

5

PB-10

Resume of General Whipple's
Qualifications

6

6

A-53

Copy of Regional Development Guide

82

7

PB-11

State Development Guide Plan
Revised Draft

124

8

9

PB-13

Report

136

10

A-56

Copy of Report

161

11

A-57

Major Subdivision Approval

162

12

A-58

Master Plan - Tinton Falls

224

13

14

15

16

17

18

19

20

21

22

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THE CHAIRMAN: You may proceed,
Mr. Marks.

MR. MARKS: General, could I
ask for the benefit of everybody in the
audience, if you could turn your chair a
little bit around, and I'll just move back.
If you can try to keep your voice up, we
will appreciate it.

W I L L I A M W H I P P L E, J R., Sworn.

DIRECT EXAMINATION BY MR. MARKS:

Q General Whipple, can you tell me what your
occupation is and your present capacity? Could you give
us a little bit of history as to why I refer to you as
General?

A I am a Research Professor at Rutgers University.
From the first of my time and the balance of my time,
I am a Consultant for the Delaware Raritan Canal Commission
engaged in the handling of storm water management analysis
for that Commission in four counties of New Jersey.

Q I'm sorry. You are in charge of what?

A Storm water management.

You refer to me as General, because I had thirty
years in the Corps of Engineers in the Army. I retired
with the rank of Brigadier General. For the last fifteen



Whipple - direct

1 years I have been continuously with Rutgers University,
2 head of the Water Resources Institute until last July.

3 Q Were you Director of the Water Resources
4 Institute at Rutgers for a period of close to fifteen
5 years?

6 A Fifteen years, yes.

7 Q Did you not serve as the Chief Engineer
8 for the New York World Fair Corporation?

9 A Yes, I did.

10 Q That was for the construction period?

11 A Yes.

12 MR. BRENNAN: May I ask which World
13 Fair?


14 MR. MARKS: Certainly, I'm sorry.

15 THE WITNESS: '64, '65.

16 BY MR. MARKS:

17 Q And during 1930 to 1960, you served in the
18 Army as a Brigadier General. Could you explain for the
19 Board what some of your functions were?

20 A In peace time I was engaged in civil work with the
21 Corps of Engineers involved in planning and construction
22 and administration of flood control. Hydroelectric power
23 which is usually civil work in the Corps of Engineers.
24 Most of this was in the West of the United States. I
25 had service in Washington, D.C. as well. The Chief



Whipple - direct

1 Engineer's Office, District Engineer Division, Division
2 Engineer and Board of Engineers for all of the usual
3 assignments that the Corps of Engineers Office gets into
4 in peacetime.

5 Q Turning your attention to the years 1974
6 on forward, did you serve as a Chairman of the University
7 Council on Water Resources?

8 A Yes.

9 Q Did you serve as Chairman of the Flood
10 Control Committee of Princeton Township?

11 A Yes, I still am.

12 Q Have you published at all?

13 A Yes, I published over a hundred articles since I
14 have been at Rutgers in various journals. I am the
15 editor of a total of five books in monographs. One
16 book wholly published in monographs and three in which
17 I was the Chairman of a conference and also the Editor
18 of the Publication Conference.

19 Q Have you ever testified before Congressional
20 Committees?

21 A Many times.

22 Q Could you describe in what respect you
23 testified?

24 A I testified when I was with the Corps of
25 Engineers on behalf of the authorization and appropriation



Whipple - direct

1 for various civil works of the Corps of Engineers,
2 authorization and appropriation committees.

3 I have testified about seven or eight times on
4 proposals for research functions in water resources.
5 This is within more recent years. It was in support of
6 appropriations for research and water resources.

7 MR. MARKS: I have a resume of
8 General Whipple's qualifications, which I
9 ask the Board's indulgence that we have
10 marked. We can get copies of it a little
11 later on.

12 Mr. Sagotsky, I think we may be
13 up to PB-10 or 11.

14 MR. SAGOTSKY: It will be PB-10.

15 (Whereupon, a resume of General
16 Whipple's Qualifications is received and
17 marked PB-10 for identification.)

18 BY MR. MARKS:

19 Q General Whipple, you are obviously familiar
20 with the surface water level runoff; is that correct?

21 A Yes, I am.

22 Q Are you familiar with the effects that
23 developments will have on surface water runoff?

24 A Yes.

25 Q Could you tell us generally what the effects



Whipple - direct

1 of the development would be?

2 A There is some pollution that comes from all land,
3 from undeveloped land. It comes in the form of erosion.
4 When land is developed for agricultural, there are
5 nutrients that come from fertilizer, and, of course,
6 additionally, erosion depends on how well the land is
7 handled.

8 When development comes in, housing developments
9 have additional effects, depending on the density, and
10 then, of course, commercial and industrial development
11 may have a great deal of pollution entirely. We are
12 concerned here tonight with the development that comes
13 from housing.


14 Q May I interrupt you at this second and go
15 back to that line of questioning.

16 I'd like you to address the question in terms
17 of the degree and amount of surface water runoff that
18 occurred from the development as opposed to non-development
19 in high density versus single family density?

20 A You are concerned with the quantity?

21 Q The quantity, yes.

22 A The quantity of runoff depends very largely on the
23 impervious surface. Of course, you have infiltration
24 depending upon the nature of the land, but all
25 developments bring impervious surfaces. Also, a great



1 deal of the land gets rolled, and graded and lawns get
2 substituted for forests, and so you have a decreased
3 infiltration.

4 So that with a lot of development you get more
5 runoff.

6 I made a little computation here using the soil
7 conservation service publication for soils of the type
8 that you have here. I took several different types of
9 housing. That is open land that is completely undeveloped
10 and contrasted that with one acre zoned land and a quarter
11 acre zoned land. I took a 1.8 inch rainfall, a good
12 heavy rainfall falling over a 24 hour period.

13 Q Excuse me, is that defined as a class two
14 storm by the Agricultural Service?

15 A Yes, it is defined exactly as a class two storm,
16 meaning a storm that has a slow rain with a very heavy peak
17 in the middle of it. What we get from that housing is
18 that the open wooded area that was completely
19 undeveloped, would have four one hundredths of an
20 inch of runoff. For one acre zoning would have fifteen
21 one hundredths, and a quarter acre zoning would have .29
22 one hundredths or seven times as much as the completely
23 undeveloped land, or almost twice as much as the one
24 acre zoning.

25 More dense development, of course, has greater



Whipple - direct

1 impervious surfaces and greater runoff. Now, of course,
2 you get different results if you have larger or smaller
3 storms than that. With smaller storms the difference is
4 greater. What it amounts to, is densely developed
5 land has much more runoff than land that is not so densely
6 developed.

7 Q Thank you, General.

8 I would just like to ask you one further question
9 for mathematics.

10 If the parcel were developed on the basis of six
11 units per acre, as opposed to single family residency
12 developments, would the runoff factor as it is, be
13 increased roughly three times?

14 A Yes, it would be about three times as much as one
15 acre zoning.

16 Q Let me enter into another area.

17 This is a relatively newer area of environmental
18 inquiry, which is a non-point source pollution.

19 Could you explain to the Zoning Board what that is and
20 how you happened to become acquainted with it?

21 A Non-point source pollution is the pollution that
22 occurs not from waste treatment plants or big industries,
23 but directly from the land, from the houses, and the
24 many minor leaks and sources in an urbanized area.

25 I became familiar with this research which I conducted



Whipple - direct

1 through Rutgers.

2 MR. SAGOTSKY: May I interrupt,
3 please, for a moment. May I suggest if it
4 meets with your approval, that you call the
5 roll. One of our members has just come in.

6 THE CHAIRMAN: Excuse us, Mr.
7 Whipple.

8 Would you call the roll, please.

9 THE CLERK: Mr. Schrumph.

10 MR. SCHRUMPH: Here.

11 THE CLERK: Mr. Larkin.

12 MR. LARKIN: Here.

13 THE CLERK: Mr. Brennan.

14 MR. BRENNAN: Here.

15 THE CLERK: Mr. Tischendorf.

16 MR. TISCHENDORF: Here.

17 THE CLERK: Mr. Nieman.

18 MR. NIEMAN: Here.

19 THE CLERK: Mr. Dahlbom.

20 MR. DALHBOM: Here.

21 THE CLERK: Mr. Ferer.

22 THE CHAIRMAN: Would you proceed.

23 BY MR. MARKS:

24 Q Had you finished your dissertation on what
25 the runoff and pollution and what the amount would be?




Whipple - direct

1 A No, I had not. We found out really by accident
2 because we were looking at something else. We discovered
3 three rivers, which were the Millstone River, the upper
4 Passaic and the upper Raritan. All had at least three
5 times as much pollution in them as we could account as
6 coming from the industries and waste treatment plants that
7 were State records.

8 This was a very astonishing finding which nobody
9 at that time had anticipated. This goes back to 1970.
10 The first time the officials in the State were very
11 reluctant to admit this was the case, but this has long
12 since ceased to be. It is now recognized both in the
13 State of New Jersey and at Federal level, that this
14 miscellaneous or diffuse sources of pollution are very
15 important. That a great deal of pollution comes from
16 them and waste treatment plants having been sponsored and
17 funded by the EPA and State DEP did nothing to take care
18 of the non-point source pollution that is doing a great
19 deal of harm. Prior to ten years ago, it was
20 virtually unknown.

21 Q Would this be a fair question to ask that
22 in New Jersey, in small stream areas such as you find
23 in the Colts Neck area and, et cetera, do you feel the
24 non-point source pollution or runoff pollution is at
25 least as great a threat to the environment as direct



1 pollution?

2 A On small streams in New Jersey it is a great
3 threat because there are streams in New Jersey which vary
4 from unpolluted to extremely polluted, and have no point
5 sources at all.

6 I can give two cases which were extremely polluted
7 and those are Mile Run, in New Brunswick and the West
8 Branch Shadow Company in Trenton, which had no point
9 source, and they are extremely polluted streams. Many
10 other streams that are densely occupied and left
11 polluted, but on those small streams, the extent of
12 the pollution and environmental degradation is dependent
13 almost entirely upon the occupation and type of occupation
14 in the streams.

15 Q Did you have an occasion in any of your
16 research to examine the Twin Rivers project in Hightstown?

17 A Yes, I did. We made a special study of the Twin
18 Rivers project.

19 Q Could you describe to the Board some of your
20 findings that you determined from that study?

21 A Well --

22 MR. FRIZELL: I object to this.
23 It seems to me the validity of whatever
24 may have been done were not found in Twin
25 Rivers has nothing to do with these




1 proceedings. Unless we can go forward from
2 that. I really don't know what that has to
3 do with the proceedings, what Twin Rivers
4 is doing.

5 MR. MARKS: The Twin Rivers
6 study will indicate whether various types
7 of pollution that was generated from
8 especially high density residential development.
9 I think it is the closest we have within
10 the surrounding area to draw some sort of
11 conclusion or comparison to the project that
12 you are contemplating. I think it will also
13 give us an idea of the nature of the pollutants
14 in dealing with the non-point source
15 pollution. To that extent, I think the
16 question is relevant.

17 THE CHAIRMAN: If you can directly
18 relate the Twin Rivers as being similar
19 to that being proposed here, we will
20 entertain that line of testimony.

21 MR. FRIZELL: Mr. Schrumph, that is
22 the source of my objection. Mr. Kovacs is
23 here and he is familiar with Twin Rivers.
24 He testified that the design of this project
25 is very much different from Twin Rivers. I




1 suggest that the Twin Rivers study really
2 is not very relevant. An engineer who
3 designed the project, it seems to me, if Mr.
4 Marks had intended to show some similarity
5 between the two projects in terms of design,
6 that was the appropriate point to do it.

7 I don't think General Whipple
8 is in a position to compare the two. I
9 don't know how Mr. Marks would even begin to
10 make that comparison. We have had extensive
11 testimony from the engineer. In fact, the
12 Twin Rivers comparison has come up many
13 times. Engineers have told us time and time
14 again about Twin Rivers, and this is not
15 Twin Rivers. The design is quite different
16 and there is a lot of technology in the
17 buildings that were not built into the
18 Twin Rivers design.

19 THE CHAIRMAN: With what
20 respect in density? I would entertain on
21 density alone, not the design.

22 MR. MARKS: Absolutely.

23 MR. FRIZELL: The design is
24 everything, Mr. Schrumph. We have had
25 testimony on the design.




1 MR. MARKS: I think we are going
2 to address some part of the engineering
3 design a little bit later. I'm sure we
4 will get a chance to get into that. I
5 think you might be interested with the
6 problems of design.

7 MR. FRIZELL: The point before
8 the Board at the moment is whether or not
9 there is any probative value in knowing
10 what General Whipple's discovery was at
11 Twin Rivers. I suggest there is none.

12 MR. SAGOTSKY: I suggest that
13 the Board make its ruling and go on with it.
14 You can't satisfy all parties, Mr.
15 Chairman.

16 MR. BRENNAN: The density is
17 equal, the topography equal, the soil
18 conditions equal, generally, and if the
19 General can distinguish between that
20 project and the Colts Neck individually,
21 we can first draw those facts out and then
22 it might be worth while to pursue that line
23 of questioning. I think it has been
24 alleged in testimony there are design
25 differences here. You have to know what the



1 comparisons are and what the differentials
2 are.

3 MR. MARKS: Mr. Brennan, we are
4 really not addressing ourselves to design
5 versus design. In other words, design of the
6 surface water management program in the
7 Twin Rivers versus what is proposed here.
8 We are talking about higher density zoning
9 and the effect that the surface water has
10 when it passes over this higher density in
11 terms of picking up contaminants and pollutants.
12 That's what we're talking about.

13 MR. BRENNAN: With respect to
14 counsel for the Applicant, it could be
15 stipulated that because it follows so logically
16 the higher density, the greater the impervious
17 surface and the greater runoff you're going
18 to have. So the question really that we are
19 talking about is something cut in the side
20 of the mountain such as in Hong Kong, and
21 you're talking about gradual rolling areas
22 such as Orgo Farms, and it's critical.

23 MR. FRIZELL: I think perhaps we
24 ought to ask the General whether or not the
25 design of the project and storm water




1 management system plant, isn't the key
2 element there. He is a witness here. Is it
3 a key element as opposed to trying to compare
4 them simply on the basis of the density?

5 MR. MARKS: You keep wanting to
6 compare storm water management system.
7 We're not presenting the General here to
8 discuss that at all. We are talking about
9 the generation of pollution and the nature
10 of the pollution which is generated from
11 denser type of developments.

12 THE CHAIRMAN: I think the
13 objection has some validity that the control
14 is an important factor, but I also think it
15 is quite important for us to know the
16 degree of runoff because of the higher
17 density. If you continue your line of
18 questioning, then discuss the control, can
19 it handle it, I think you have the problem
20 licked.

21 MR. MARKS: I'd like the General
22 to answer Mr. Frizell's question directly.

23 THE CHAIRMAN: He will directly,
24 and maybe we can overcome the objection and
25 proceed.



1 BY MR. MARKS:

2 A Yes, there are two entirely different elements and
3 either one could be controlling. One is the gross amount
4 of pollution generated from the housing, which involves
5 the immediate parking, its pets, its garbage cans and its
6 children. The other is what you are going to control it
7 with. The means of control as regards the first case,
8 there is no doubt that multi-family housing generates more
9 pollution. Not only because, as you say, generates more
10 runoff, but because that runoff has a high proportion of
11 automobiles, a higher proportion of pets, and a greater
12 concentration of garbage cans. These are evidenced in the
13 higher concentration of pollutants that we get from the
14 multi-family housing.

15 When you come down to compare the controls of the
16 two, the study that we made of the Twin Rivers project
17 didn't go to the amount of pollution that was retained in
18 those retention basins.

19 I am prepared to comment what is proposed here.
20 I can compare the two if that is required.

21 MR. FRIZELL: Let me ask you
22 one other question. Mr. Marks, are you
23 proposing that the Twin River study which
24 I understand was a single project study,
25 it was such a comprehensive project, one can



Whipple - direct

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draw a conclusion that that is some kind of standard that could be applied in all cases to projects of similar density.

MR. MARKS: The answer to that is no, not to belabor your question.

MR. FRIZELL: So what is the point of Twin Rivers?

MR. MARKS: The point of Twin Rivers is that you have a denser type of development which is going to generate, and I will continue along this line of questioning, certain types of pollutants because admittedly, what I believe you're accepting is that multi-family housing produces greater runoff pollution. You want to discuss what type of pollution is generated and see if your studies in essence address each one of the pollutants that might be generated. We are talking about your particular study, and we are not talking about Twin Rivers. That is by way of introduction.

THE CHAIRMAN: You can pursue it on that line on the basis of the Applicant study on the handling of runoff. You can



Whipple - direct

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proceed.

BY MR. MARKS:

Q General, presented by the Applicant in this case was an environmental impact statement prepared by Mr. Thomas Krakow, of the firm of Abbington Ney Associates.

Did I furnish you with a copy of that?

A Yes, you did.

Q Did you read it?

A Yes.

Q Now, contrasting that, there was some engineering data that was submitted; was there not?

A Yes.

Q That engineering data was submitted by Mr. James Kovacs, also of the same firm?

A Yes, in the plans.

Q Okay. Holding that in abeyance for a second, General, returning to Mr. Krakow's environmental impact statement. Did Mr. Krakow not address or recognize the problems involved in runoff pollution?

A Yes.

Q Did he discuss merely one element of that meaning the BOD pollutants?

A No, he discussed several of them. He discussed the BOD. He discussed soluble phosphates and one or two others.



1 Q Did he discuss lead and other heavy metals?

2 A No.

3 Q Did he discuss nutrients?

4 A Well, he did, because he discussed soluble
5 phosphates.

6 Q How about petro chemical hydro-carbons?

7 A He didn't.

8 Q How about chloroform bacteria?

9 A He did not.

10 Q The lead and other heavy metals, petro
11 chemicals and hydro-carbons and chloroform bacteria;
12 are these generated by developments of any type?

13 A Yes, they are. They are the principal evidences.
14 They are the three of the four principal evidences which
15 form the pollutant characteristic of development in New
16 Jersey. The BOD is the one that is usually referred to
17 in the original standards of the State, but actually, the
18 most dangerous pollutant in urban runoff is probably
19 hydro-carbons. It is frequently lead and also you have
20 a very high bacterial contamination from all urban
21 runoff.

22 MR. LAPKIN: Could you tell us what
23 the sources of that lead pollution is?

24 THE WITNESS: We can't always
25 tell, but lots of it comes from the leaded



1 gasoline.

2 MR. LARKIN: You mean from leakage
3 from the tank; is that what you imply?
4

5 THE WITNESS: It's mostly a bulls-
6 eye that comes out of the exhaust. The lead
7 I think is blown out of the exhaust.

8 MR. LARKIN: You mean even with
9 the emission controls we have on cars today?

10 THE WITNESS: The new cars won't
11 have it, that's true. So we should have
12 a decreasing quantity of lead in the future.
13 That will be a very serious problem, and it
14 is a problem that will decrease in the
15 future and become much more important.

16 There are other sources of lead.
17 Of course, the principal one is probably
18 automobiles.

19 BY MR. MARKS:

20 Q How about petro chemical hydro-carbons?

21 A They come mostly from automobiles and then, of
22 course, there are commercial sources such as car wash
23 establishments, garages, people who dispose and change
24 their own oil and throw the oil in the garbage or down
25 the manhole. That is, of course, a considerable source
of them. The automobiles are a very considerable source of



Whipple - direct

1 hydro-carbons, and, again, thrown up from the engine or
2 else they leak down from the engine.

3 We have checked and we have done analyses of
4 different hydro-carbons in urban runoff and found they
5 resemble used crank case oil more than the oil or crude
6 oil on any of the sources that we can identify. Apparently,
7 the crank case oil of automobiles is apparently the
8 principal source of hydro-carbons in urban runoff.

9 Q Do you have any opinion as to the amount
10 that petro chemical hydro-carbon runoff pollution would
11 be increased in terms of single family dwellings on this
12 Orgo site versus what the proposed --


13 MR. FRIZELL: What is the basis
14 for this question?

15 MR. MARKS: I believe there is
16 basis. We have been discussing what type
17 of materials emanate from this project,
18 and we just got through a long dissertation
19 on petro chemicals and hydro-carbons.

20 MR. FRIZELL: I don't doubt that.

21 MR. MARKS: Let the General
22 answer the question.

23 MR. FRIZELL: Wait a minute.
24 What I want to know is on what basis a
25 discussion of the differences that is, I assume



1 that they are more. For instance, than the
2 single dwelling Twin River study. For
3 instance, I would assume to answer that question
4 one would need a background of information
5 upon which you could draw a reasonable
6 conclusion that this is the case and true
7 in all cases. That is, you also get this
8 percentage of difference between single
9 family residential development and
10 residential development at five and a half
11 or six per acre.


12 BY MR. MARKS:

13 Q General, do you feel you can answer that?

14 A Yes, I can answer the question.

15 There hasn't been too much data obtained on
16 hydro-carbons in urban runoff. What there is available
17 has mostly been obtained by me and my associates. We
18 have found that the concentration in urban runoff varies
19 from about one part million, which is single family
20 housing, up to about five parts per multi-family housing,
21 with commercial and some industrial facilities in them.

22 I have no hesitation at all as giving it my
23 professional opinion based upon the evidence of the
24 research I have done, along with my associates'
25 concentrations of hydro-carbons and high density housing,



Whipple - direct


1 will be materially greater than the concentration in the
2 low density housing. In addition, to the fact that you
3 have considerably more runoff to deal with. There is
4 no question in my mind at all that you have several times
5 the quantity of hydro-carbons comes from a given area
6 of multi-family housing, as against single family. More
7 than the proportionate to the number of housing units
8 involved.

9
10 MR. LARKIN: May I ask what
11 relevance five parts per million is? How
12 much is that in terms of one part per million,
13 and what does that mean? Is five parts per
14 million a lot?

15 THE WITNESS: Five parts per
16 million is a lot.

17 MR. LARKIN: How about one part
18 a million; is that a lot?

19 THE WITNESS: I can tell you one
20 part per million is sufficient enough to
21 kill -- not to kill, it doesn't kill it
22 outright, but it is detrimental to the
23 development of certain biological species.
24 We have tested that and we have found
25 that the oyster is adversely affected by
one part per million, and we haven't tested




1 out all the rest. Five parts per million
2 is a lot of pollution.

3 If I could give it to you in
4 pounds, as a matter of fact, I think I
5 did in my testimony in the court case.
6 I didn't come prepared with a quantitative
7 estimate, but I could in a very few minutes.

8 The runoff capacity of say a
9 hundred cubic feet per second, you would
10 have to take five parts per million of that
11 to indicate what that would be in pounds or
12 per second, or for hour or whatever the
13 thing lasted. It amounts to a great deal
14 of pollution, yes.

15 THE CHAIRMAN: I think if Mr.
16 Larkin will permit me, he is trying to find
17 out if there is any safety standard. Is it
18 three parts per mil or two parts per mil,
19 and has one ever been established?

20 THE WITNESS: The State has set
21 a standard for hydro-carbons. The State
22 establishes the standards for lead in multi-
23 family housing. As far as our experience,
24 it exceeds that standard. As you find out,
25 the lead is something that reduces. The



Whipple - direct

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hydro-carbons are a major menace here and there is no safety standard for hydro-carbons.

The only thing we can say is that areas that have a lot of hydro-carbons and a lot of development have extremely polluted conditions in them, and we have proof that the hydro-carbons are responsible and you can't prove the lead is responsible. That this pollution did come from the developments and it is sufficient to mess the streams up.

MR. LARKIN: Is this type of pollution coming regardless of the type of water management?

THE WITNESS: No, it is not regardless. The water management can reduce this pollution. That is the issue. I am now talking about what is generated within the development. What management can do to reduce the pollution.

THE CHAIRMAN: Mr. Marks.

BY MR. MARKS:

Q Getting to the issue of water management. Did the Applicant in their testimony attempt to



1 handle this screening process to settle out these
2 pollutants? Is that the theory of the environmental report?

3 A Yes, the environmental report speaks of best
4 management practices which, of course, is the term used
5 by the Environmental Protection Agency in the area of
6 planning.

7 Q Is that a definite term?

8 A Well, it is a definite term. It has no legal
9 significance here. The best management practice is
10 simply a practice that has been adopted as the best for
11 that particular situation. There is legally no best
12 management practice in storm water management as far as
13 I know in this part of New Jersey. There is certainly one
14 state-wide. I never heard of any being available here.

15 Q The Applicant's environmental study, that
16 sought to cleanse the storm waters of the pollutants, the
17 lead, and the other particulates?

18 A It didn't mention the lead.

19 Q We realize that's an omission in their study.
20 Let's say the BOD, phosphorous substances?

21 A Yes, there was an indication that detention can
22 for a prolonged period of time remove the particulates.

23 Q Isn't that an area where the environmental
24 study differs from the actual engineering plans?

25 A Yes, that is correct. There is a difference.



Whipple - direct

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Q Now, let me ask you something general.

2

In order to effectuate this cleansing or purification effect, do you not need retention facilities?

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A Yes, you do.

5

Q Does the environmental report refer to retention facilities?

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A Yes, it does.

8

Q But the engineering report or the engineering plans, per se?

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A The engineering plans refer to detention basins and the point of fact the outlets that are provided on these detention basins appear to be those normally for detention basins and not to be those that are sufficiently confined to provide the retention that they're talking about in the ERS.

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Q General, did I give you a set of plans submitted by the engineer to examine?

17

18

A Yes.

19

Q And, General, if counsel will assist me.

20

I don't know which one of Plaintiff's exhibit these are.

21

These are the plans submitted by Mr. Kovacs.

22

MR. SAGOTSKY: Does it consist

23

of 68 pages?

24

MR. MARKS: Yes, a total of 68

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pages, yes, sir.



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MR. SAGOTSKY: It was testified to by Mr. Kovacs the other evening and it is marked as A, whatever the mark is on the map.

BY MR. MARKS:

Q General, I wonder if you would step up to the table and examine the plans from the point of where the retention facilities were recommended by the environmental report, but, in fact, the detention facilities were implemented by the engineer.

MR. SAGOTSKY: Would you please refer to the identificaton mark. It should be on the first page.

MR.LARKIN: Mr. Marks, maybe you can help me out. Would someone at least define the difference between detention and retention?

MR. MARKS: Certainly, I think the General is best qualified to do that.

MR. WHIPPLE: Detention is the term that has been used much more and retention is specifically used for a prolonged period, which is long enough to allow the material to settle out or if it is retained for some other period for a recharge basin. So that the difference



1 between detention and retention is one of
2 timing. The detention is normally done
3 formally for flood control only. Retention is
4 a newer technique which can be done for other
5 purposes, including allowing the sediment
6 and pollutants to settle out.

7 MR. MARKS: Does the retention
8 facilities permit water to be held for a
9 period of, let's say, eighteen to thirty-
10 six hours or even longer?

11 THE WITNESS: It's not essential
12 they be a definite hour.

13 THE CHAIRMAN: If you're answering
14 Mr.Larkin's question, fine. If not, I'll
15 entertain --

16 MR. PRIZELL: That is fundamental
17 to my question, I think. He is asking my
18 question.

19 Generally, is there a precise
20 point of how long the water has to be held
21 in order for any engineer or environmental
22 consultant to characterize time in the
23 retention pond versus the detention?

24 THE WITNESS: No, there is no
25 specific time.



Whipple - direct

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MR. FRIZELL: Then can we --

MR. MARKS: I would prefer this
be saved for cross-examination.

MR. FRIZELL: Okay. We'll save it.
Thank you.

THE CHAIRMAN: Did you get your
question answered, Mr. Larkin?

MR. LARKIN: Yes.

BY MR. MARKS:

Q General, could you show us where the
detention basins are?

A The first three detention basins are shown on page
5. If I call them detention basins, they are detention
ponds.

MR. SAGOTSKY: You are speaking
of what has been placed in for identification
without any reference to it.

MR. MARKS: This is page 2 of
68 of A37.

MR. SAGOTSKY: It has been
marked, but just refer to each page, please.
Refer to it by number, exhibit and page
so we can identify it first. It is A,
repeat, A what?

THE WITNESS: I don't know what



Whipple - direct

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the exhibit number is.

MR. SAGOTSKY: Would you look,
please?

BY MR. MARKS:

Q It is A-37 and we are now looking at page 2.

A Page 2 is a pond that would probably be effective for retention. It is a wet pond and although it has a fairly large outlet which I can't find on the drawings, but it is referred to being 18 inches. This particular one B, would, in fact, be effective in the holding out of the particulates.

MR. LARKIN: You say this would be effective for retention?

THE WITNESS: Would be effective.

MR. LARKIN: For retention?

MR. WHIPPLE: For retention.

BY MR. MARKS:

Q Are there not, in fact, two other ponds?

A I am just trying to find the right number. The third one would act in the capacity, even with an outlet and even with an eighteen inch outlet, I can't tell exactly, but it would be reasonably effective settling out because of the fact that it is a wet pond. It has a volume that is substantial.

Q The other reference should be page 5 of 68.



1 Now, we are on page 8 of page 68.

2 MR. SAGOTSKY: You are still on
3 A-37?

4 THE WITNESS: Yes, we are still
5 on A-37.

6 This shows the detention pond C.
7 It has an outlet of 29 by 45
8 inches, which is a very large outlet, and
9 this pond, although it has a very small wet
10 basin pond, will not be effective in
11 retention.

12 MR. LARKIN: I'm sorry, maybe
13 you could stop again. I don't mean to keep
14 stopping you, but when you say a wet pond,
15 does that mean a pond where water would
16 normally be there all the time?

17 THE WITNESS: Yes.

18 MR. LARKIN: As opposed to when
19 it would be only wet when there is a storm?

20 THE WITNESS: That's right.

21 Now, when I say it would not
22 be suitable in retention, what I mean,
23 is this would not hold water long enough to
24 allow the pollutants to settle out in it.

25 That is my opinion based on the



Whipple - direct

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research that I have done on the settle ability of pollutants which has not yet been published. I do have a report on it which I can put in evidence if anyone is interested in it.

MR. LARKIN: Is that because of the size of the outlet?

THE WITNESS: Yes, it is a pond, apparently, designed for flood control. I haven't checked its effectiveness for flood control. It has too large an outlet to retain the waters from the time it is required for the sediment of particulates.

MR. BRENNAN: Could the problem be corrected by changing the size of the outlet or placing the outlet higher or building it up the bank?

THE WITNESS: It would have to be redesigned whether it would have the capacity or not, I can't tell.

MR. BRENNAN: If you redesigned it for detention purposes, could that create a problem for flood control purposes?

THE WITNESS: If not properly



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done, it could.

MR. BRENNAN: So then the problem relative to pond C, I believe you said was solvable with redesigning techniques?

THE WITNESS: Probably, yes.

The detention pond, which is called detention pond A, is sheet 9 of 68.

Again, it has an outlet that is 30 by 24 inches in diameter and it is far too large to be effective in settling out pollutants.

MR. BRENNAN: The pond or the outlet?

THE WITNESS: The outlet, because I didn't check the size of the ponds. I have to assume they are correct. So the conclusion I got is that the design of these ponds are not sufficient to settle out the particulates and do the job that is suggested in the Environmental Impact Statement, because they are not designed for that purpose. They are designed for conventional and for flood control and one of them --

MR. MARKS: Excuse me, Mr. Ney, if you would like to have a discussion, just



Whipple - direct

1 go over there because you are distracting
2 from the testimony.

3 Mr. Chairman, I would like my
4 witness to have the full cooperation of the
5 Board without any diversion.

6 THE CHAIRMAN: Mr. Frizell,
7 would you step back a little bit?

8 MR. SAGOTSKY: We can offer him
9 our private room.


10 THE CHAIRMAN: You can have the
11 office there if you like.

12 MR. FRIZELL: Did we distract
13 you, General?

14 THE WITNESS: Yes, I was
15 distracted.

16 MR. FRIZELL: I'm sorry.

17 THE WITNESS: The conclusions I
18 draw that three ponds are designed the way
19 a flood control detention pond would be
20 designed. I see no indication that they
21 were designed for the purposes of retaining
22 particulates. There are special ways of
23 designing which require a somewhat larger
24 basin and a completely different outlet
25 design and they were apparently not designed



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for that purpose.

One of them would serve for detention and only because of the fact that there is a pond there that would retain particulates because of the volume of water. Even though you do have a fairly large outlet, of course, its outlet is not as great as the other outlets.

THE CHAIRMAN: Would this disturb your testimony too much if we at this point you concluded and we resumed our regular meeting, Mr. Marks?

MR. MARKS: I think I can finish up in about five minutes, less than five.

THE CHAIRMAN: Let us try to do it and we will postpone the regular meeting. Do you feel you can do it?

MR. MARKS: Yes.

THE CHAIRMAN: We will reserve the cross-examination for later. Is that all right with you, Mr. Frizell?

MR. FRIZELL: Yes, sir.

THE CHAIRMAN: I have a question to ask, then perhaps the terminology, General, should be on the latter two, not



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detention, but retention.

THE WITNESS: Well, I really don't care what the terminology is because lots of times I use the term detention basin myself. I call it a dual purpose detention basin. It is intended to retain the particulates. What is important is not the terminology, but it is the fact of whether these engineering plans will actually carry out the functions that would have to be carried out. That I am convinced they will not do.

THE CHAIRMAN: I agree with what you're saying if they're not carrying out the function that they were intended to do, they are not entitled to be called detention ponds. That's the point I was getting at.

THE WITNESS: I think that you are technically correct, in that you are correct in that.

Although I think there is a good deal of latitude that has to be given because they are terms that are not completely, very widely understood, and they are often misused.

THE CHAIRMAN: We will consider



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that nebulous for the time being.

BY MR. MARKS:

Q Despite the terminology on B and A, I believe are the ponds in question, they would not act to settle out the pollutants; is that correct?

A No, C and A are the ones.

Q C and A, General?

THE CHAIRMAN: I am a little bit caught up here. Are they pollutants or particulates or are they interchangeable?

THE WITNESS: All pollutants settle out particulates. There are other pollutants that are soluble that are not settled out. Of course, some of the particulates are not pollutants.

BY MR. MARKS:

Q General, are you aware of the location of the Orgo parcel and the Swimming River Reservoir and surrounding streams?

A Yes.

Q You have told us that higher density development generates greater runoff, and higher density generates greater quantities of pollutants, and that the environmental study submitted by the Applicant did not mention some of the pollutants. Do you have an opinion



Whipple - direct

1 as to whether the system as designed will prevent these
2 pollutants from entering the streams, which I believe is
3 Slope Brook, among others, and finally enter into the
4 reservoir?

5 A No, they would not completely prevent these
6 pollutants. They have some effect, but unquestionably
7 there would be more pollutants, more hydro-carbons, and
8 particularly, more lead and bacterial contamination
9 generated and the provisions here would not be sufficient
10 to prevent it.

11 You would have more pollution resulting from the
12 multi-family housing that would go downstream from this
13 development.

14 MR. LARKIN: Even if pond C and
15 A, if I am correct and they are the ones
16 they are, the outlets were too big, or
17 if they were redesigned and became closer
18 to pond B, and if the other two ponds were
19 redesigned and the outlets were made smaller
20 and so forth, would you find your comments
21 would be still the same?

22 THE WITNESS: The general comment
23 would still be the same. Maximum you can
24 expect from a retention condition, and you
25 mind it is not precise at this stage of the



1 game, because it certainly hasn't been
2 finished yet, but the maximum you can
3 expect is somewhere around fifty to sixty
4 per cent reduction in particulates from
5 properly designed and functioning basins
6 that are equipped for retention period.

7 That is a 36 hour retention,
8 which is what we have been specifying for
9 basins of this type. If that were in effect,
10 you could expect fifty to sixty per cent
11 of the total amount of pollution. Even when
12 you put that in, that would still leave a
13 substantial increase in the net pollution
14 remaining to be carried downstream
15 because the increase would be much more
16 than that.

17 MR. LARKIN: You are saying even
18 with a perfectly designed basin?

19 THE WITNESS: Yes.

20 MR. LARKIN: Your testimony that
21 the two ponds at this point are not perfectly
22 designed for that?

23 THE WITNESS: That is true, but
24 the ratio would be less.

25 MR. MARKS: I have no further



1 questions, Mr. Chairman.

2 MR. NIEMAN: I have just one
3 question.

4 THE CHAIRMAN: Surely, go ahead.

5 MR. NIEMAN: Assuming that this
6 project is constructed, in terms of the
7 density as proposed, and assuming the types
8 of pollutants which would normally be
9 characteristic to this type of development,
10 and assuming that the Applicant was to make
11 the revisions to these retention ponds as
12 you have suggested or has been discussed;
13 do you have an opinion as to the degree of
14 pollution which would result in the
15 surrounding waterways, and would you
16 characterize it as being minimal, significant
17 or highly dangerous or extreme?

18 THE WITNESS: Well, that requires --
19 pardon me saying, that is a good question.
20 I would say it would be significant.

21 MR. NIEMAN: And in terms of when
22 you say significant, can you translate to
23 someone like me who does not understand
24 engineering, or figures and percentage?
25 Would it be perhaps one per cent, or would




1 it be fifty per cent over and above a
2 traditional development, say, as presented
3 and zoned two acres, or would it be really
4 not that bad?

5 THE WITNESS: You have got to have
6 some. You are going to have twice as much
7 runoff.

8 MR. NIEMAN: Over a traditional?

9 THE WITNESS: Over a traditional
10 development. Probably, three times. I
11 would say probably, two to three times as
12 much runoff as a traditional development
13 and you have to say that the increase in
14 pollution is more than that. Somewhat more,
15 I can't tell you. There are different
16 pollutants, so you would probably get
17 between three and four times the amount of
18 gross pollutants, which will then be
19 reduced, say, fifty per cent by retention
20 basins. So you would probably end up
21 somewhere close to twice as much remaining
22 pollution in the streams coming from the
23 multi-family development with the basins,
24 as you would have from a single-family
25 development without the basins.



Whipple

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MR. NIEMAN: And of the type of pollutants you have described basically, what do they affect in terms of the ecological system?

THE WITNESS: Hydro-carbons are probably bad for all the living.

MR. NIEMAN: How would it affect us?

THE WITNESS: Let me explain. In the first place, the bacterial contamination, which is very high, and actually, the retention basin is more effective against bacterial contamination, fifty or sixty per cent. You could probably knock off ninety per cent of bacterial contamination and they are surprisingly effective against bacteria on the limited data that we have.

Hydro-carbons not only affect the biota directly, but also in portions of them that are not settled out, get down into a water supply treatment plant and they get chlorinated. Now, there is a certain amount of hydro-carbons that are soluble, about ten per cent, eight to ten per cent are soluble and those soluble hydro-carbons




1 when they get down and get chlorinated,
2 the chemistry is very little known about this.
3 We do know that some toxic carcinogenic
4 compounds are formed by the chlorination of
5 the hydro-carbons. So it is a dangerous
6 thing to bring hydro-carbons into the well
7 supply intake and it complicates the problem
8 of treating so that it won't be there.

9 The lead, of course, is toxic in
10 itself. The standards of the State of New
11 Jersey for streams are about one-twentieth
12 of a five millionth [^]led. Of course, at
13 the present time you will get more than that,
14 something of this sort. All, of course, would
15 be reduced in the future.

16 There are other things that come
17 down there. Copper, which is a good deal
18 of soluble. Copper can be detrimental to
19 fish and humans. Although, I don't think
20 that's a terribly important thing here.
21 I think enough of the copper would be
22 reduced by that. The hydro-carbons and the
23 bacteria probably are the greatest threat.

24 MR. NIEMAN: Would that threat
25 as you described reasonably confront Colts Neck



1 if those runoffs were to enter the reservoir
2 and the water systems?

3 THE WITNESS: Yes, I don't believe
4 there is any question there will be some
5 degree of deterioration of the water quality
6 downstream if you go to this development
7 instead of single-family housing.

8 MR. NIEMAN: Slight, reasonable
9 or significant?

10 THE WITNESS: Significant, like
11 double.

12 THE CHAIRMAN: This special
13 meeting will be in recess and will resume after
14 the regular meeting and questions will be
15 entertained for members of the Board and
16 anyone from the audience. General Whipple
17 will still be here testifying, in case you
18 have any questions.

19 We will take a five minute
20 recess and have the regular meeting of the
21 Board of Adjustment.

22 (Whereupon, a brief recess was
23 declared.)

24 (Whereupon, the special meeting of
25 the Board of Adjustment reconvened.)



1 THE CHAIRMAN: We will resume
2 with the special meeting. We will now resume
3 with General Whipple.

4 You have no further questions, Mr.
5 Marks?

6 MR. MARKS: No.

7 THE CHAIRMAN: Are there any questions
8 from any members of the Board at this time
9 before Mr. Frizell crosses?

10 MR. LARKIN: I have a question.

11 General, you mentioned soluble.
12 I am not sure what you call particulates.
13 In other words, there are certain forms of
14 pollution that are soluble in the water
15 as opposed to ones that would drain out and
16 remain in the retention or detention ponds.
17 What happens to those soluble pollutants?
18 Do they enter the streams?

19 THE WITNESS: They enter the
20 stream, downstream, that's right.

21 MR. LARKIN: They don't enter the
22 underground water system? In other words,
23 how do they get there if they're soluble
24 from these ponds? Assuming they're doing
25 their job either downstream or wherever else



1 they may go.


2 THE WITNESS: Depends where the
3 water goes. If there is percolation downward
4 from the pond, of course, soluble constituents
5 go with it.

6 MR. LARKIN: Then would they enter
7 into possibly, one of these various reservoirs
8 we've heard of underneath the ground and
9 eventually could reach there?

10 THE WITNESS: It could reach
11 the underground water; that's right. Most
12 of it from storm water runs out of the
13 reservoir that goes downstream.

14 MR. LARKIN: What percentage was
15 soluble of the pollutants that you mentioned?
16 You said eight to ten per cent.

17 THE WITNESS: Eight to ten per cent
18 of the hydro-carbons in urban runoff are
19 soluble. Phosphates is something around --
20 and it's quite variable, it is somewhere from
21 40 to 50 per cent is soluble. Of course,
22 that depends whether it is off the land,
23 which is mostly insoluble or something
24 related to sewerage, which always is entirely
25 soluble. So that's quite variable. Copper



1 is something like 40 per cent soluble.

2 The lead is something like less than 10 per
3 cent soluble.

4 MR. LARKIN: Let me ask a quick
5 question which I am not sure.

6 Is there any other place that
7 the solubles can go either into the streams
8 and, therefore, the reservoirs are somewhere
9 else in the stream or to the underground?

10 THE WITNESS: Some of them can
11 evaporate. Some of them are organic.
12 Particularly, some of the light hydro-carbons
13 can evaporate.

14 MR. LARKIN: I have just one
15 other question and that is in terms of these
16 ponds. What would be your opinion based
17 on, I'm assuming now, it's an assumption,
18 which I'll ask you, have you studied the
19 size of this complex and so forth in terms
20 of the amount of runoff and water runoff that
21 would be generated?

22 THE WITNESS: No, I did not check
23 that.

24 MR. LARKIN: So then you couldn't
25 possibly answer my question, thank you.



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THE CHAIRMAN: Mr. Brennan.

MR. BRENNAN: General, is it a fair statement to say that you and others in your profession are of the opinion all the things being equal, the greater the density, the greater the water flow, and the greater amount of pollutants would be introduced into the ecological system, or something?

THE WITNESS: Yes.

MR. BRENNAN: Is it also your opinion that certain design techniques can be employed which will minimize, not eliminate, the increased problems created by water flow and pollutants?

THE WITNESS: Yes.

MR. BRENNAN: Is it possible, giving the state of the art, for you to furnish us with some ratio that would indicate the relative amounts of increased water flow in pollution that would be caused by a home on a two-acre lot, or let me call a density, of .5 per acre, as opposed to a density of 4 per acre or six per acre or eighteen per acre?



1 THE WITNESS: Yes, I cannot give
2 you eighteen because my observations don't
3 go up that high, but up to ten or twelve
4 per acre, yes. I have made estimates.

5 MR. BRENNAN: Could you recall
6 those numbers for us?

7 THE WITNESS: No, I can't recall.
8 I have testified to numbers like that based
9 upon several on all of the information
10 available to me at that time, and I testified
11 to numbers at the time with this same case.
12 I don't have those numbers with me.

13 MR. BRENNAN: Mr. Marks, can you
14 arrange for us to receive those numbers
15 as to the relative increase of the
16 pollutants introduced into the systems based
17 upon different densities per acre?

18 MR. MARKS: General, could you be
19 good enough to work up a study?

20 THE WITNESS: I have testified
21 to it before. It is in the testimony that
22 you have.

23 MR. BRENNAN: I seem to recall that
24 it was.

25 If we already have these facts



1 developed, you can let the Board know where
2 it was or if we don't have them, provide us
3 with the information.

4 MR. FRIZELL: I'll show you my
5 transcript.

6 MR. BRENNAN: General, one other
7 question which you did not directly address
8 in your testimony, but just to give you
9 some background.

10 Witnesses for the Applicant as
11 well as for the Planning Board in my mind
12 agreed on one point, and that is there would
13 be a deterioration in the traffic flow of
14 the intersection of Route 34 and Route 537.

15 The various witnesses disagreed
16 as to just how badly the flow of traffic
17 would be at the intersection.

18 Is there any way that you could
19 quantify the impact of air pollution
20 coming from additional queuing at the
21 intersection caused by the inability of
22 traffic to proceed through an intersection
23 but rather have to wait for a second
24 cycle of the light?

25 THE WITNESS: I had no such



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information. I can't make that estimate.

MR. BRENNAN: Now, notwithstanding the above, let's assume that the Court in its wisdom has said that regardless of the ravaging that may be inflicted on various species of life in the Township of Colts Neck, must be provided a wider variety of housing selection.

In your opinion, and again limiting yourself to your range of testimony which was water flow and pollutants; do you know of any other area in the Township in which the Township could meet the mandate of the Court (subject to appeal), that we could meet the mandate in offering a wider selection of housing in the Township; which would in necessity require increased density, giving the economics of the feasibility of home construction, but do it in that location where it would be less damaging to the overall ecological system than the Orgo Farms site?

Now, before you answer, let me apologize for asking a question that was as drawn out as that one. I would hate to go



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back and try and punctuate it.

MR. FRIZELL: I just want to know if General Whipple has enough information to answer the question in terms of the Township of Colts Neck?

MR. WHIPPLE: I can answer the question. The answer in regard to detail, of course, I'm not sufficiently familiar with Colts Neck to have no opinion at all on specific sites. I can only say that there would be obviously, an undesirable impact if the runoff would go into some other place than into the Swimming River Reservoir.

I understand there are streams that are available that do not flow into the Swimming River Reservoir or drinking water. Consequently, certain impacts could not exist for those streams.

MR. BRENNAN: I have no further questions.

MR. MARKS: Excuse me, Mr. Brennan, I would like to show General Whipple a portion of his testimony. I think he can answer the question that you



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requested.

THE WITNESS: Yes, I do have a table which I prepared at the time of that testimony.

MR. SAGOTSKY: What page are you referring to?

THE WITNESS: It was apparently not introduced in testimony. I thought it was. I do have this information. It is an estimate of the total amounts of phosphorous, lead and hydro-carbons from larger lots in single-family housing, small lots, single-family housing, and multi-family ten per acre and commercial. Those have not been brought up to date. They still represent some experience in the last year or so that has gone into that. This is still the best estimate that I have of the figures that you asked me for.

MR. BRENNAN: The first one was single-family per one acre.

THE WITNESS: It is large lots, single-family.

MR. BRENNAN: Define large lots.

THE WITNESS: Two or more acres.



1 Small lots is single-family.

2 MR. SAGOTSKY: One acre, would
3 you say or pending sites?

4 THE WITNESS: The figures were
5 derived for approximately two acres, of course,
6 one acre would be somewhat different.


7 MR. SAGOTSKY: You left that
8 category and came to your next category from
9 a large lot to a small lot. Did you say a
10 small lot single-family?

11 THE WITNESS: One acre, approxi-
12 mately, a quarter acre.

13 MR. SAGOTSKY: Thank you.

14 THE WITNESS: In multiple family
15 it is ten development units per acre,
16 and the figures that were given were the BOD
17 were respectively eight, twenty-seven and
18 seventy-four. For phosphorous, six-tenths
19 of a pound, 1.9 pounds and 5 pounds, and
20 for lead, .14 pounds, .34 pounds and 1 pound,
21 and for hydro-carbons, it was 1.2, 11 and 33.

22 MR. BRENNAN: Then would it be
23 fair to say, using the proper designs and
24 techniques, just going back to your
25 multi-family of 10 units per acre, that with




1 proper detention and retention, you can cut
2 that 74 to roughly 37?

3 THE WITNESS: Yes, it would be
4 somewhat less. Fifty to 60 per cent I would
5 estimate. Now, that would vary for the
6 different pollutants. Some are more
7 effective than others. For example, copper
8 and zinc are less effective than hydro-carbons
9 and lead, and the BOD is the intermediate
10 because it is the same as for all pollutants.

11 MR. DAHLBOM: Could you define
12 BOD again?

13 THE WITNESS: Biochemical Oxygen
14 Demand. It is the measurement of organic
15 matter by degradable organic material in
16 there.

17 Now, these estimates, of course,
18 were based on what information I had at
19 that time. One of the basis for the estimate
20 was the Twin River project, but also the way
21 it was given to data from other states,
22 because the Twin River project is only one
23 project, and the data from other states
24 is considered considerably different.
25 I had to average them in making an estimate



1 on all of these. The estimates were based on
2 information from a variety of sources I was
3 able to obtain at that time.

4 THE CHAIRMAN: Any other questions
5 from members of the Board?

6 MR. DAHLBOM: All these figures
7 for phosphorus, lead and hydro-carbons, are
8 they pounds?

9 THE WITNESS: Yes, they average
10 over a year. They are pounds per square mile
11 of the development, per day.


12 MR. NIEMAN: How many people get
13 their drinking water from the reservoir?
14 The total number of people; do you have any
15 idea?

16 MR. SAGOTSKY: I have evidence of
17 that.

18 THE WITNESS: Swimming River,
19 I think there is a better witness than I to
20 testify to that.

21 THE CHAIRMAN: There will be a wit-
22 ness later probably, to cover that.

23 MR. SAGOTSKY: If we can stipulate
24 what he will be saying, we might take that
25 into consideration later on.



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Would it be 250,000?

MR. MOSER: People.

MR. SAGOTSKY: Two hundred and fifty thousand people subject to your checking on it later. That comes from Mr. Moser.

We may stipulate that they serve approximately 250,000 people.

THE CHAIRMAN: I think that was brought out earlier in these hearings, two fifty also.

MR. LARKIN: I have one question.

Do you have any experience in terms of the retention or detention as ponds in terms of the build-up that occurs over a year, two years, three years? My question really is how often do these in general, not a specific year, but in general, what type of dredging or removal is necessary?

THE WITNESS: There isn't enough experience. They are just beginning to build these things. There really isn't any experience to answer that question. Although, you know there will be some greater build-up than there is in normal retention ponds. Most people let them go for at least ten years



1 before doing anything about it, and they
2 will require somewhat more maintenance than
3 the retention pond and the detention pond.
4 There is no question about it. I can't
5 give you an estimate on how often it will have
6 to be dredged out.

7 THE CHAIRMAN: Who would exercise
8 the dredging over these ponds, or if they
9 had to be, and so forth?

10 THE WITNESS: What is being done
11 in Somerset County, the County takes
12 responsibility for the maintenance of the
13 larger ponds that are built.

14 THE CHAIRMAN: Do you know whether
15 it is County land or private land?

16 THE WITNESS: Private or
17 otherwise. They take them all. If they
18 approve the plans, they will take the
19 responsibility for maintenance, and they are
20 the only public body I know that does this.

21 In other cases the municipality
22 takes the lead in detention ponds in
23 requiring them and they do not assume the
24 maintenance. They require the maintenance
25 to be done by the owner, they are beginning



1 to require a Deed to be imposed that passes
2 with the land an obligation that passes by
3 Deed with the land, a recorded Deed. It
4 requires the owner to be responsible and
5 to contribute to the maintenance.

6 It leavesome homeowners'
7 association that exercise the responsibility
8 where the lots are sold. That is the best
9 practice that is becoming customary in the
10 areas that are requiring these ponds to
11 be built.

12 MR. LARKIN: Could I ask Mr.
13 Frizell a question? Does this apply in the
14 plans to the homeowners and does this occur
15 in the homeowners?

16 MR. FRIZELL: I'm not sure, Mr.
17 Larkin. There would be no problem to putting
18 it in. Yes, I can tell you that the
19 Homeowners' Association does have the
20 responsibility for maintenance of the
21 pond. Whether or not I recall the
22 specifics --

23 MR. LARKIN: I didn't see anything
24 in there and that's why I asked.

25 MR. FRIZELL: You mean in terms of



1 specific requirements that they dredge it?

2 MR. LARKIN: On the maintenance.

3 MR. FRIZELL: Yes, maintenance.

4 MR. LARKIN: I assume that the
5 dredging -- although I am not sure it's
6 specified in there.

7 MR. FRIZELL: That will be no
8 problem. I am not aware of the standards.
9 The maintenance requirements is there for
10 homeowners, yes. That is part of the
11 commentary which you heard from the General.
12 If you look at the Homeowner's Association,
13 I think it calls for a description which is
14 not attached. That will have to be included
15 in the pond.

16 MR. SAGOTSKY: It would call for
17 every living existence of the pond instead
18 of the ultimate ecological death of all ponds;
19 is that putting it accurately? Every pond
20 is supposed to suffer ecological death in
21 time?

22 MR. WHIPPLE: If not maintained.

23 MR. SAGOTSKY: If not maintained.

24 Though the object of this sort of a
25 restriction is to continue the everlasting



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life in effect.

THE WITNESS: That's true.

MR. TISCHENDORF: Generally, you are aware the property fronts on 537; are you familiar with that?

THE WITNESS: I know that it does, yes.

MR. TISCHENDORF: There are houses across the street and I would say some are a little bit lower than the topography of the subject property.

Could you estimate, or would you have an opinion as to whether any of this added pollution would be a threat to shallow wells and let's take 35 feet as a definition of a shallow well.

THE WITNESS: I haven't really made any study of the soils or the ground water. I would expect a great deal of this would run off with the storm water, because you have the large impervious surfaces and a lot of the pollution occurs on the impervious surfaces. I am not familiar with the ground water having been polluted. I wouldn't say it won't, because I don't know enough



Whipple

1 about it.

2
3 MR. TISCHENDORF: We have one or
4 two citizens who asked if I would ask about
5 that. The consequence of construction and
6 I guess the consequences after that on
7 shallow wells.

8 That was the reason for my question.

9 THE WITNESS: I believe one of
10 the detention basins is quite close to 537.
11 It might be that it would accumulate some
12 material that would get into the ground water,
13 but 35 feet is an awfully shallow well.

14 MR. TISCHENDORF: Thank you.

15 THE CHAIRMAN: Any other questions?

16 Mr. Frizell.

17
18 CROSS-EXAMINATION BY MR. FRIZELL:

19 Q General Whipple, if I wanted to determine,
20 for instance, what the effect on the reservoir would be
21 of a cup of a different pollutant -- if I dumped it into
22 a storm sewer at the Colts Neck Inn where we had supper,
23 if I were attempting to determine that, I would need a
24 lot of information; would I not?

25 A A specific cup of pollutant?

Q Yes.



Whipple - cross

1 A Well, that would be an impossible task.

2 Q All right. If I increase the volume in any
3 event, my question is, wouldn't you want to know, for
4 instance, the size of the reservoir?

5 A Of course.

6 Q Wouldn't you want to know the size of the
7 water shed which the reservoir serves?

8 A To make a quantitative estimate, well, probably,
9 because that would govern the amount of storm water
10 coming in.

11 Q Would you also want to know the
12 characteristics of the streams through which the
13 pollutants would have to flow in order to go to the
14 reservoir?

15 A That might have some effect.

16 Q What about the distance between the point
17 in which I put it in and the point it would be taken out?

18 A It might have some effect, not much, I would think.

19 Q But the size the reservoir, I take it,
20 would be --

21 A The size of the reservoir and the amount of
22 water coming in from various sources would, of course,
23 be a primary consideration, I think.

24 Q Now, besides detention and retention, what-
25 ever the term, whatever terms you use here, what other



1 practices would you recommend to be implemented in a
2 development of this type?

3 A There are a lot of things that can be done, but
4 you get considerable restraint, for example, from a
5 development it's very useful to use over land flow swales
6 rather than curbs and gutters.

7 Q Anything else?

8 A It's very useful if you can have down spouts running
9 into the dry well. If you are really very concerned about
10 the pollution, there are things that you can do. For
11 example, put in covered garages, rather than open parking,
12 which reduces the amount of hydro-carbons washed off.

13 If garbage is handled in covered entryways rather
14 than the cans being placed outside, that has an influence.
15 It has an influence, a considerable influence, you
16 prohibit pets and you don't have any dogs running around.

17 Q How about a pooper scooper law?

18 A Of course that would be if you are going to have
19 a pet, the pooper scooper law would be useful. Also,
20 if you eliminate children that would help.

21 (Laughter from the Board Members
22 and audience.)

23 Q In the design of this project, I realize
24 in looking at the plans you can't determine whether
25 pets are prohibited or children are eliminated. In the



Whipple - cross

1 design of the project I am sure you have noticed that
2 the extensive use of the over land flow has been designed
3 to swales as you have been referring to, and have
4 referenced in terms of the road signs as opposed to
5 curbs?

6 A Yes, that's helpful.

7 Q In the projects that were analyzed to support
8 your data about urban runoff, do I understand those
9 projects by and large were developed prior to your
10 research in urban runoff according to the standard
11 development practices?

12 A Yes, they were developed, yes.

13 Q So they had channelized the flow by and large
14 as opposed to swales?

15 A They had the curbs and gutters; that's right.

16 Q They did have a, for instance, particularly,
17 effective garbage maintenance program?

18 A Well, I don't know about the one in Virginia.
19 I think it did. I don't have complete information on it.
20 It had a much lower amount of pollution. I suspect that
21 it had some of the features that I mentioned.

22 Q It was much lower than the Twin Rivers?

23 A I assumed this. It had a considerably lower
24 amount of pollutants.

25 Q Lower than Twin Rivers?



1 A Yes.

2 Q If you averaged the two, it was lower than
3 the figures that you gave the Board a minute or two ago?

4 A I don't remember exactly where I got it. Now,
5 exactly where the figures were structured. I don't remember
6 how many different units I had. I know I had at least
7 those two.

8 Q Your research indicates, doesn't it,
9 General Whipple, that a two acre single-family lot
10 generates on a per unit basis, twice as much pollution
11 as a multi-family unit?

12 A Well, I can't say that I have obtained this
13 figure. I have assumed this.

14 Q You mean from other sources?

15 A I haven't researched this. No, I have assumed
16 this because I am sure it is only fair to assume,
17 that a single-family home ordinarily has a more active
18 surrounding than an apartment, and so I made those
19 assumptions.

20 Q The figures that you gave the Board would
21 demonstrate that by and large, except for hydro-carbons?

22 A There was an assumption made.

23 Q Do I understand the figure that you gave the
24 Board, were they assumptions?

25 A They were based on certain assumptions, yes, because



Whipple - cross

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I was taking a lot of data and I had to relate this data together and interpret it. One of the interpretations or assumptions that I made was that single-family homes were larger homes and they generated more pollution.

Q The basis of that assumption was that people that occupied these homes have more money, have more automobiles, more pets, buy more food and bring out more garbage and, et cetera?

A Yes, the words sound rather familiar.

Q I thought they would, General.

A I am not sure they have more children.

Q Now, with two acre single-family homes, they have twice the pollutants as multi-family units, and then you take the multi-family units and reduce the pollution by --

As I understand it, and let me get a few of these numbers. Certain pollutants such as phosphates, and I think, nitrates, could be reduced 90 per cent by using sheet flow over vegetation as opposed to using channelized flow; is that accurate?

A Certain research, that can be done. Other people since then have somewhat optimistic figures.

Q What is your current analysis, because I know those are the figures you used last year? Do you still stand by the 90 per cent?



1 A No, I don't stand by the 90 per cent because I
2 recently had some figures that would cause me to modify
3 that.

4 Q To what?

5 A I can't give you the exact figure. I didn't
6 come here to give a completely new estimate of this
7 pollution. I gave you something that was the best
8 estimate at the time I gave it about two years ago.

9 A good many things have happened since that
10 time. If you need more information, I will do it all
11 over, and again, I will come to give answers, depending
12 on the amount of information.

13 You asked me about the 90 per cent. I can give you
14 some good research data backing up the 90 per cent, and
15 since then I have accumulated other research data that
16 indicates it might be somewhat lower than that. I haven't
17 had an occasion to decide and to take a stand on that
18 particular figure.

19 Q Whatever the figure is on those pollutants,
20 as I understand it, many other pollutants can be
21 reduced by and large somewhere between 50 and 60 per cent,
22 some higher, some lower, by the use of retention and
23 detention facilities?

24 A Yes, that's a fair estimate.

25 Q Now, your research in the detention, retention



Whipple - cross

1 field is relatively recent; is it not?

2 A That's correct.

3 Q In fact it is probably, within the past
4 18 months, as I understand it?

5 A Yes, that's about right.

6 Q In fact, that material hasn't even been
7 published?

8 A That hasn't been published, but it's publicly
9 available. It's been published by the Institute. I have
10 a report on it. It hasn't been published because the
11 publication would take too long to get it out to the
12 printer. I do have research information on the sal-
13 ability which can be produced, if necessary.


14 It is not the only information available because
15 there is nothing that has been published on this matter
16 except very, very fragmentary estimates over a period
17 of years.

18 Q As I understand it, it was this research
19 that you just recently did that led you to the conclusion
20 when you looked at the ponds A and C you came to a
21 conclusion they weren't holding water long enough?

22 A Yes.

23 Q That was based on that research?

24 MR. SAGOTSKY: Thirty-six hours
25 you said would make a proper detention time?



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THE WITNESS: If you evacuate,

yes, almost if you get it empty in 36 hours
that would do.

Q Just to put this in proper framework, when
Mr. Krakow referred to their facilities as having potential
for settling out some of the pollutants, he obviously, he
had to make that conclusion based on available data as
opposed to what you made recently available?

A Yes.

Q So I take it then you really don't fault
him for that, but you would suggest a modification based
on your most recent research?

A This is based on my most recent research.
Also he might have taken cognizance of the DNR regulations,
which are very widely disseminated which have specified
design criteria for this and are being applied in four
counties. I think he might reasonably, have known about
those, even though he might not reasonably have known about
the research about them.

Q If I understand that, in other words,
designers could have in your view used DNR standards
for the detention ponds because he did testify he used
them for swales. That the analyst, the environmental
analyst, in reaching a conclusion that these ponds would
have an effect to settle out pollutants, was using



Whipple - cross

1 what data was available to him.

2 A I don't want to criticize anybody. I realize
3 it is a developing area. I'm merely testifying that it
4 wouldn't be effective the way it is today.

5 Q Would they have any effect at all?

6 A Yes, they would have an effect. Pond B would be
7 reasonably effective.

8 Q I understand that. I'm talking about A and
9 C.

10 A They wouldn't that much. They would have some.

11 Q That's based on your most recent research?

12 A Yes, you get a certain amount of settlement in two
13 hours, and a certain amount in four hours, and then it
14 builds up. Of course, you have a part of the water
15 that runs off almost immediately. You have a large outlet
16 there and a lot of it comes in and goes out, and a good
17 deal more stays in for longer periods of time. Of
18 course, it stays more.

19 Q As I recall his report, he used the
20 terms detention and retention almost interchangeably
21 throughout the report. Sometimes he referred to them as
22 detention ponds, and on the plans they are all referred to
23 as detention ponds. In some places they are referred to
24 as retention ponds.

25 I wonder if you find any evidence that the use of the



Whipple - cross

1 term retention, other than the fact you would not,
2 based on your research, characterize it as a retention
3 pond, and that the use of the term is improper in any way?

4 A Well, technically speaking, they should be
5 described as detention, if that's what they are. Retention
6 is a prolonged period of retaining water. It doesn't
7 really matter what you call them. What matters is whether
8 they work or not.

9 Q Now, you indicated that the middle pond
10 was wet. Are you saying that based on what you see, A and
11 C would not be wet ponds? One of them would have a
12 small wet pond in it. Which one, the one on the south
13 or the north?

14 A The one--

15 MR. SAGOTSKY: Tell us which one?

16 MR. FRIZELL: A is north, C is
17 south.

18 MR. SAGOTSKY: Then B would be
19 the wet pond.

20 Yes, C is south
21 and A is north.

22 THE WITNESS: The one that
23 has the wet pond is the one that is
24 furthest from 535.

25 BY MR. FRIZELL:



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Q Were you given an opportunity to review the testimony of Mr. Kovacs, the engineer who designed the facilities?

A Yes.

Q Do you recall Mr. Kovacs' testimony that he said that these were preliminary designs and he hoped that pond A, and that he expected that pond A, when finally designed, would maintain four feet of water in the pond at all times?

A No, I do not recall that.

Q You don't recall that testimony.

MR. MARKS: Excuse me, one second. I don't believe I furnished you with Mr. Kovacs' testimony.

MR. SAGOTSKY: The question says four feet of water in what pond?

MR. FRIZELL: Pond A. That was the pond where there was a discussion about the fence around the pond.

THE WITNESS: I have Mr. Krakow's testimony.

MR. FRIZELL: That is not the testimony I'm referring to. I'm referring to the engineers.

MR. SAGOTSKY: That was the 68



1 page map you are talking about; aren't you,
2 Mr. Frizell?


3 MR. FRIZELL: Well, Mr. Kovacs
4 described what was on that 68 page map.

5 MR. SAGOTSKY: He went through
6 page by page?

7 MR. FRIZELL: There was a
8 discussion, if anybody is looking for the
9 transcript about the fencing of that pond
10 because he testified there is going to be
11 water in it at all times.

12 I understand, General Whipple,
13 you are disputing how big the outlet pipe is?
14 If that is your objective, and you think
15 that pipe is too big in order to maintain
16 water in that pond?

17 THE WITNESS: Well, it is
18 too big. If you want to have a pond that
19 does not have a large permanent pool there.
20 If you have a large permanent pool there,
21 that is several times the volume of the small
22 storm, it will absorb water from the small
23 storm no matter how large. So if you have
24 a large enough wet pool it will be
25 effective. There is no large pool shown there.



Whipple - cross

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Now, if you are going to change it and put in a large pool to that extent, it will have some effect. There is no question about it.

BY MR. FRIZELL:

Q When you responded to Mr. Nieman's question, he asked you about the relative impact of these pollutants downstream, and you said, that you thought it would be significant, at least twice?

A At least twice as much.

Q That is to say it is significant because it would be twice as much as if it were developed according to the zoning ordinance of two acre lots; is that my understanding?

MR. SAGOTSKY: He said it would be as much as the runoff or even three times.

MR. FRIZELL: Well, let's let General Whipple answer that. I recall his testimony.

THE WITNESS: Yes, the runoff I said would be two to three times.

The question, as I understand you're asking, is the amount of pollution that would be left after you have an efficient system of retention basins?

Q Yes.



1 A I said, that would be at least twice, twice as
2 much, and to be three if you have this one acre housing.

3 Q Or in this case, two acre housing?

4 A Or two acre, yes.

5 Q Now, when you refer to the two acre housing,
6 are you factoring in any pollution that is caused by
7 on-site septic systems?

8 A I'm not considering anything. I was assuming that
9 they would be entering into that realm.

10 Q On-site septic systems are potentially
11 dangerous sources of pollution to water supply; are
12 they not?

13 A If they are improperly installed, yes.

14 Q Were you assuming that the one-acre housing
15 was all channelized, that is, all curbs?

16 A No, I must have when I gave that estimate. I didn't
17 qualify all of the --

18 Q I understood it to mean all the things
19 being equal, the density would change that result. That
20 is why I'm asking you the question.

21 A I thought I was giving you a conservative estimate.
22 I'm giving you at least that much.

23 Q You didn't assume any difference of any
24 increase in pollution from the large lot subdivision as a
25 result of the fact that one would be a channelized flow



Whipple - cross

1 as opposed to utilizing an over land flow, vegetative
2 swales, and detention facilities, and any other practices
3 that could be utilized?

4 A Well, in my experience the curbs and gutters are
5 more apt to be used in multi-family housing than for
6 single-family housing. When you get to one acre large
7 lots, in most cases they did away with those.

8 Q I understand that. That may be the
9 general indication, general, but here in Colts Neck
10 it's precisely the opposite.

11 Now, were you given a copy of the Colts Neck
12 Township Zoning Development Regulation Ordinance to look at?

13 A Not at this time, I may have looked at it on
14 previous occasions, but not this time.

15 Q Do you have any knowledge of any requirements
16 in the site design standards or subdivision standards on
17 detention and retention facilities?

18 A No.

19 Q All right. Does that mean you are aware they
20 have none?

21 A I assumed they had none. I haven't heard about
22 them. Most communities that haven't been developed don't
23 have those standards, and I had the impression they
24 were not required yet.

25 Q Now, were you aware of what percentage of the



1 tract did you attempt to estimate, even roughly, what
2 percentage of that tract was draining into pond B as
3 you described it, the largest of the tracts, as opposed to
4 pond C?

5 A No.

6 Q I take it, and it wouldn't surprise you to
7 learn, that a substantial portion of the tract there are
8 different sized ponds?

9 A It is the larger. The largest, no question about
10 that.

11 Q In a regional context, General Whipple,
12 can you put this principle of development in water sheds,
13 in a regional context in terms of the northeastern
14 New Jersey area?

15 Maybe I should be more specific. Do you know how
16 much of the northeastern New Jersey area is occupied by
17 reservoirs or reservoir feeder area intakes?

18 A Occupied by reservoirs and reservoir intakes?

19 Q Or reservoir feeder areas, yes.

20 A I don't know what you mean by reservoir feeder
21 areas.

22 Q Well, drainage into reservoirs.

23 A You mean water sheds that drain into reservoirs?

24 Q Yes, sir.

25 A A great deal of northern New Jersey, I would say more



1 than half of it serves water supply.

2 Q Can we mark this for identification? This
3 is a copy of the Regional Development Guide of the Tri-State
4 Planning Commission.

5 (Whereupon, a copy of the Regional
6 Development Guide of the Tri-State Planning
7 Commission is marked A-53 for identification.)

8 BY MR. FRIZELL:

9 Q General Whipple, referring to page 16, I
10 think simply confirms what you just said. They use the
11 term, "catching area", and it is a map of the Tri-State
12 Region, which is northeastern New Jersey, including Monmouth
13 County, Middlesex County, Somerset County, Morris County,
14 Union County, Passaic County and Essex County.

15 I just wonder if you could confirm probably, more
16 than 50 per cent of those counties and most probably 90
17 per cent of undeveloped areas as shown on that document
18 are in reservoir catching areas.

19 A That's true in that general area, but that is
20 mark less of development and mark less amount of water
21 catching areas down in this particular vicinity.

22 Q You mean in the Monmouth County area?

23 A Yes.

24 Q Could you estimate the undeveloped
25 portion shown on the map of Monmouth County; is it something



1 like forty or fifty per cent? I would guess sixty per cent
2 by the time you consider it?

3 A It looks like roughly, half.

4 Q All right, now, General, do you know, or
5 have you made an analysis of what the volume of water was
6 in the Swimming River Reservoir?

7 A No.

8 Q Have you made any analysis in giving all
9 of these practices that you have recommended to the
10 Board or to the Applicant, how in any kind of precise
11 terms, how much pollution would be generated by this
12 development if it is approved?

13 A Well, I have given data which can be readily
14 estimated. I can't make it off the top of my head.

15 Q You mean you'd have to use your standard
16 figures and have to start subtracting for the use of
17 different facilities; based on what different percentages?

18 A I would have to consider where this particular
19 tract stands with respect to its density, and other
20 features that develop with reference to other figures.
21 Then consider the area of it, the amount that is developed,
22 the amount that is undeveloped, and make an estimate.

23 Q You mean the amount of impervious surfaces?

24 A No, the amount in question of housing against any
25 amount to the conservation easement or anything of that sort



Whipple - cross

1 of open space.

2 Q I take it you haven't done that?

3 A No.

4 Q You haven't been asked to do that?

5 A No.

6 Q Then although you may feel, based on your
7 general knowledge in the area, that the difference between
8 the proposed development and a two-acre lot development,
9 would be significant.

10 Do I understand then you are not in a position to
11 tell us because you don't know the size of the reservoir?
12 You don't know the particulars of the development, and the
13 nature of the impact on the reservoir itself?

14 A Well, I really am. I really do know that the
15 difference between the large lot development and this
16 development, in spite of all the measures that you have
17 taken, I said that it would result in more than twice
18 as much net pollution remaining in the streams.

19 I feel that is a conservative estimate.

20 Now, that I've had a chance to check these more
21 specific figures, I can see that it would be several times
22 more and really twice as much.

23 In the case of hydro-carbons particularly, if you
24 are interested, and even if you assume there is a 60 per
25 cent reduction on account of pollution, you will still have



1 approximately ten times the hydro-carbons coming out of
2 this development.

3 Q You are using data on a ten unit per acre
4 development; are you not?

5 A Yes.

6 Q So you have to reduce it by 40 per cent?

7 A This would be several times as much pollution
8 remaining even after the retention basins from the multi-
9 family development.

10 Q I understand that. I don't think you really
11 answered my question.

12 My question was, given the actual project and
13 understanding you haven't analyzed actually the details of
14 the project, and you haven't been asked to, in fairness,
15 and given the fact you don't know the size of the
16 reservoir, and you don't know the characteristics
17 of the streams; would you indicate to us, where necessary,
18 in order to make a judgment --

19 A I'm sorry. I didn't give you that information
20 for that purpose.

21 Q I'm not arguing --

22 A No, I didn't say --

23 Q I'm not suggesting that you haven't said
24 there would be a difference between the two. What I want
25 to know is whether or not, since you said that you have



1 to know the volume of the reservoir --

2 A No, I said I had to give you the volume of the
3 reservoir to know what the volume of the environmental
4 impact was. That's entirely different from knowing how
5 much pollution is generated.

6 I can tell you that several times more pollution
7 would come into the reservoirs, specific types. The thing
8 I have to know on the reservoir, simply, what the
9 environmental impact would be.

10 Q That's exactly my point. I don't want to
11 misconstrue your testimony. That's exactly what I meant
12 to suggest to you that the impact on the reservoir itself
13 would be twice as much pollution or whatever it is, could
14 have an impact on the reservoir itself is what you cannot
15 determine without more information.

16 A I haven't testified it is an impact on the
17 reservoir.

18 Q That's what I thought.

19 General, you have been described, maybe not
20 tonight, but elsewhere, as a pioneer in the
21 environmental field, and that your research, together
22 with a few other sources, are the only people doing
23 work in this field, and even what you are doing is
24 relatively recent; is that accurate?

25 A I don't think that's quite accurate. There is a lot



1 of people working in the EPA which have a thirty million
2 dollar program testing out multi-purpose detention
3 basins and that has been going on for two years. It is
4 a big program and there are many, many people involved
5 in it. A tremendous amount of money has been spent on it.
6 A number of people at Washington levels become interested
7 in it.

8 I was a pioneer in the early days. Those early
9 days have passed.

10 Q Well, in terms of ongoing research in this
11 field of the impact of the urban runoff, we previously
12 had a witness testify, not here, but elsewhere, the
13 impact of those pollutants -- there still is a lot of
14 research to be done and there is a lot of information to
15 be obtained. Notwithstanding the fact, that you have
16 received some earlier conclusions based on your own
17 research; would you agree with that general statement?

18 A I certainly agree that the details as to the
19 effect do need a tremendous amount of research, and a lot
20 of it is unknown. The only thing I do know, where you have
21 intense development, you have an extremely environmental
22 impact on the streams. The details why they are impacted
23 and what is going to be the damage, there is a lot to be
24 known.

25 Q The areas that you are referring to, which is



1 the Passaic River basin. For instance, Mr. Dahlbom asked
2 you a question before about your data of pounds per square
3 mile. The data is gathered in that way and given, in which
4 anything submitted by your studies, necessarily, deals with
5 water sheds that are heavily urbanized?

6 A Not always. We take them from a number of different
7 water sheds. We do try to get water sheds that have
8 some specific land use. We have worked in the urbanizing
9 areas, that's true.

10 Q Well, when you said, "that's true", I'm not
11 sure what you meant?

12 A Working in land and urbanizing areas we have data
13 from development areas for comparison.

14 Q Was that steady in an undeveloped area?

15 A No, that was developed. I have gone out and taken
16 water data from all isolated areas in northern New Jersey
17 to get my comparison to see what the background levels
18 of such things as lead are. It shows what nobody developed
19 at all. There are some pollutants even in the so-called
20 purest head walls in streams and they are material mounts
21 of all kinds of pollutants.

22 Q Is there any information that you can give
23 the Board about the potential pollutants from the horse
24 breeding industry?

25 A No, I haven't done any work in the horse breeding



1 industry. There are cattle feed lots, and the particular
2 ones crowd a number of cattle in a confined space.
3 They are notorious pollutants. I haven't any information
4 or heard of any particular study.

5 Q So that cattle feed lots in some
6 agricultural uses, there is some work in there in terms
7 of pollution?

8 A Yes, there has been very much study because
9 they are great sources of pollution. Chicken farms is
10 a great source of pollution. Duck farms are terrible.

11 Q Have you ever been on the property that
12 we are talking about in this project?

13 A No.

14 Q Have you been asked to analyze the current
15 pollution effect of the agricultural uses?

16 A No, I have not.

17 MR. FRIZELL: I have no further
18 questions.

19 THE CHAIRMAN: Does anyone from
20 the audience like to ask a question of
21 General Whipple before we dismiss him?

22 MR. RAWLEY: Around Colts Neck
23 as we develop housing instead of farm land,
24 people put in grass and many of the yards have
25 green stripes of different colors where it




1 tends to be fertilized and not fertilized.
2 Fertilizer doesn't move that far to cover
3 a mist. How does it get into the streams?

4 THE WITNESS: If fertilizer is put
5 on in moderate amounts and in the right season
6 of the year, very little can get into the
7 streams. It shouldn't, anyway. The phosphates,
8 particularly, and the fertilizer, unless they
9 wash off before they soak in, they don't go
10 into the streams at all unless the soil
11 erodes.

12 Now, if you have an area in which
13 you run fertilizer across the pavement, then
14 it rains a lot, that goes straight into the
15 streams. Once you get a combination of soil
16 and phosphates, they will sink in, the
17 phosphates go down in the soil in springtime
18 when you get the very heavy rains, goes down
19 into the ground water or leeches off.

20 Therefore, the nitrates, unless it
21 is used up in the growing season, if you put
22 too much of the phosphates on, generally
23 some of it will run off. If you have good
24 conservation practices, you will have very
25 little phosphates.



Whipple

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MR. RAWLEY: Many of the
comments are applicable to farming also?


THE WITNESS: They are indeed.

THE CHAIRMAN: Yes, sir.

MR. FRANTZ: My name is Bob
Frantz.

I have a question in regard to
retention ponds. If they are constructed
right and they do the job correctly and
hold these pollutants so they settle out;
I take it, where do they go from there?
Did they go down in the water into our
shallow wells?

THE WITNESS: They shouldn't
to any extent. The particulate
pollutants and those hydro-carbons are
by degree. They are slowly, by degree.
It takes weeks and months to do it. The
lead and phosphates shouldn't remain there
where they are. The retention ponds won't
hold any of the nitrates and, therefore,
won't stay in the ponds. The amount of
sediment that settles out is such you don't
think the sediment should be extremely
detrimental. Although, if you have a heavy



1 development such as a multi-family housing
2 such as you have in Twin Rivers, the fish
3 in the Twin River pond, as in corresponding
4 developments, they are not dead. They are
5 not healthy either. The best development
6 is to dredge the pond and start over again.
7 A lot of this, obviously, accumulates the
8 problem.

9 MR. RAWLEY: I have a question that
10 reminds me of another one.

11 The question deals with the control
12 of salt from melting of ice, you know, in the
13 winter. What happens to that in a high
14 density development?

15 THE WITNESS: Well, of course,
16 you have to have snow put on the roads, whether
17 you have housing or not. I don't think the
18 runoff would be the same in detention ponds
19 to any extent. Of course, the wet ponds
20 can keep a certain amount, if the salt is
21 completely soluble won't settle out of the
22 pond, but it would go out in the water.

23 THE CHAIRMAN: Any other
24 questions?

25 MR. NIEMAN: Assuming the



1 construction of the Colts Neck Village, with
2 all of the adequate and assuming to be the
3 necessary detention or retention basins,
4 what would be the environmental impact
5 upon the Swimming River Reservoir?

6 MR. FRIZELL: Mr. Nieman,
7 I don't doubt that the Professor might be
8 able to analyze that, but I asked him a few
9 minutes ago, General Whipple, you have not
10 analyzed it or you have been asked to
11 analyze it.

12 MR. NIEMAN: I'm sorry.

13 MR. WHIPPLE: I said only what
14 can go down in there. I haven't said what
15 the impact was. I haven't studied that, no.

16 MR. MARKS: I would like to pick up
17 on that question.

18 There are two lines here, one is --

19 MR. FRIZELL: Wait --

20 MR. MARKS: Let me finish.

21 THE CHAIRMAN: Before you
22 finish, see if it is a valid objection.

23 MR. FRIZELL: It is not an
24 objection. Mr. Marks is about to engage in
25 a speech. Let's proceed with Mr. Whipple's



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testimony.

MR. SAGOTSKY: Mr. Frizell,
please be a little more patient.

MR. FRIZELL: I shouldn't throw
rocks at glass houses.

THE CHAIRMAN: In your cross
tonight, I spotted a few speeches interjected
very neatly, but no one said anything.
Let's give Mr. Marks a short chance here.

MR. FRIZELL: I could sit here
and characterize any of the witness'
testimony for you. I thought we could do
that later or in writing.

THE CHAIRMAN: What is the thrust
of your statement?

MR. FRIZELL: Does he have a
question of General Whipple? I have
no objection if he's going to ask a question.

MR. MARKS: I would like to
question him. That is what Mr. Frizell would
like me to say. Fortunately, I didn't.

General, you testified
previously that even if these detention
facilities were properly designed, which
they are not, that I believe 50 per cent on



1 the average of pollutants, would nevertheless
2 go into the reservoir.

3 THE WITNESS: Forty or fifty
4 per cent.

5 THE CHAIRMAN: Let's call that
6 a reiteration.

7 Any other questions?

8 General Whipple, thank you, very
9 much.

10 MR. FRIZELL: Can I ask one other
11 question?

12 THE CHAIRMAN: Yes, Mr. Frizell.

13 MR. FRIZELL: When Mr. Marks just
14 asked you that question about detention
15 ponds, as I understand your testimony, 50
16 to 60 per cent would be removed by detention
17 ponds themselves. There could be additional
18 removal of certain pollutants by virtue of
19 other design techniques such as swales and,
20 et cetera; is that accurate?

21 THE WITNESS: Detention ponds,
22 what I said, would remove generally the
23 different pollutants. About 50 to 60
24 per cent of the material is all that is
25 expected to be removed under detention.



1 That is what reaches them. Now, the swales
2 affect, of course, what reaches the
3 detention. It doesn't add to 50 or 60 per
4 cent. So, there is some effect of swales,
5 but the detention ponds reduction to 50 to
6 60 per cent, you are giving full credit
7 of the state of the art. That is the maximum
8 that you can expect.

9 I'm an optimist and protagonist
10 of these ponds. I usually tell people
11 fifty when they want to know.

12 THE CHAIRMAN: I have a question
13 in the back.

14 MR. HUBERG: If I understood
15 an earlier question to be answered that
16 the normal use of the soil, agricultural
17 or livestock could result in a leeching
18 level.

19 Is it possible and is it
20 possible to determine whether or not
21 additional leeching such as through a
22 retention pond would reach a critical level
23 that could affect the reservoir or a
24 shallow well?

25 THE CHAIRMAN: Do you care to



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tackle that one, General?

THE WITNESS: I don't believe I know enough about ground level in this area to be able to answer that question properly. The detention ponds have to retain material or else they wouldn't work. Exactly, how they would affect the ground water -- the soil must be impervious if you have 35 feet wells right around here. I haven't studied any. I really can't answer if that would affect it.

MR. HUBERG: Has it been discussed or has there been an attempt made to determine to what extent the soil is being used by the current topography functions and whether horse farms or agricultural -- in other words, is it possible that the addition of a retention pond can lead to a saturation condition as it would affect a shallow well?

THE WITNESS: It won't increase the amount of water available to ground water, that's true. Particularly, with the water being retained somewhat contributes to the ground water. I don't really expect



1 that it would be harmful because the
2 pollutants retained are all particulates
3 and they should stay in the reservoir.

4 I don't think anything that is
5 in the water, of course, will in effect get
6 into the ground if it's soluble.

7 Particulates, most of these that I'm
8 talking, are particulates that should not
9 get into the ground.

10 THE CHAIRMAN: Mr. Rawley.

11 MR. RAWLEY: That reminds me
12 of a question I asked at an earlier meeting
13 about the disposal of the dredging from
14 these ponds.

15 MR. WHIPPLE: There would have
16 to be a road.

17 MR. RAWLEY: Leading to it?

18 THE WITNESS: Usually fill in
19 some place since this is not an industrial
20 facility. I do not expect the pollutant
21 level to be enough of a problem. So, I
22 think it could be put in a landfill without
23 any problem.

24 MR. RAWLEY: But not on topsoil.

25 THE WITNESS: Well, you might be able



1 to use the topsoil. I try and experiment
2 on it first. I'm not sure it wouldn't
3 work.

4 THE CHAIRMAN: It would be
5 obvious in that answer, Mr. Marks, you have
6 not informed the General of the entire
7 scope of the project since there was no
8 industrial possibilities of the development.

9 MR. MARKS: We haven't concentrated
10 on that. We concentrated just on the
11 drainage from the residential portion into
12 the reservoir.

13 THE CHAIRMAN: You narrowed and
14 confined yourself.


15 Any other questions?

16 Thank you, General.

17 MR. SAGOTSKY: Mr. Chairman, if
18 you can give a break, possibly, to the
19 gentleman who is representing the State
20 Shorthand Reporting Service.

21 THE CHAIRMAN: We will take a
22 five minute break right now to restore
23 some subtleness to your fingers.

24 (Whereupon, a five minute
25 recess was declared.)



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(Whereupon, the hearing reconvened.)

THE CHAIRMAN: I think perhaps, it should be on the record, as I don't have it yet. It does involve the Planning Board. The letter you did receive, a copy of which I have not seen, but I had read to me, perhaps contains some inaccuracies and attributes something to the Planning Board that is not true.

So, Mr. Marks, the attorney for the Planning Board, would you like to explain those inaccuracies and just where the Planning Board stands on this issue? I think that should be part of the record.

MR. MARKS: I think some of the conversation that transpired to this going on the record was an inquiry by you, Mr. Chairman, as to the swelling in the size of the audience from its usual size.

THE CHAIRMAN: I did ask that question and wondered why we had so many people.

MR. MARKS: There was a gentleman,



1 and I forgot your name?

2 MR. SMERTZ: Smertz (phonetic).

3 MR. MARKS: Mr. Smertz, who
4 responded to that and said he received a
5 letter from Mr. Bonelli, which I then
6 characterized as being complete with
7 inaccuracies.

8 First of all, the Planning
9 Board does not accept the concept that this
10 Applicant is proposing, approximately, a
11 density of six units per acre. We will
12 present later on our recommendations which
13 will tell you why we think this entire
14 project is not proper, and does not
15 constitute special reasons and will adversely
16 affect the Township as a whole.

17 The Applicant has drawn you out
18 under somewhat false circumstances, and to
19 that extent, you were brought out and for
20 that, I'm sorry. I have no control over it.
21 That is the Applicant's fault. However,
22 the Planning Board is here to evaluate
23 this project, this alone and under this
24 application and it has not rendered any
25 opinion that this project be picked up and



1 can't render that you use the plan
2 closer to wherever else presumably you live.

3 MR. SAGOTSKY: Lakeside Avenue
4 was mentioned.

5 MR. FRIZELL: Mrs. O'Connor, do
6 you have PB-8?

7 THE CHAIRMAN: I think we had
8 a question first for Mr. Marks.

9 A VOICE: Under Judge Lane's
10 mandate, I understand the Township is
11 mandated to come up with some new zoning.
12 The key question is to the Planning Board,
13 is this zoning being considered at our end
14 of the Township?

15 Is that one of the inaccuracies?

16 MR. MARKS: I can't answer that
17 because I'm not a party of record.

18 A VOICE: I'll direct it to Mr.
19 Schrumph or whoever.

20 MR. MARKS: He can't answer it
21 either because Mr. Schrumph is a member
22 of the Zoning Board. That matter is under
23 litigation and it involves the Township
24 Committee and this Applicant which sued.

25 I may point out that case is not concluded and




1 the Township is still vigorously fighting
2 that decision. Also, Judge Lane's decision,
3 the way I have examined it, does not call
4 for a project of this magnitude. It calls
5 for, even if it is to be implemented, a
6 project that would call for mixed residential
7 type of housing, which is patio homes,
8 townhouses and possibly apartments.

9 The Planning Board feels to a
10 certain extent that these should disburse
11 around the Township. There has been some
12 inclination and some testimony very
13 definitely, that the eastern edge of the
14 Township might have a preference.

15 However, there is absolutely no
16 recommendation by the Planning Board to take
17 this project and plan it right in the
18 opposite direction.

19 A VOICE: That wasn't my question
20 at all. In other words, I've got an ordinance
21 and you're not ready to say -- is any
22 consideration to be given to low density or
23 high density housing?

24 MR. MARKS: If the Court's
25 decision is ultimately upheld by the



1 highest court in the State, obviously,
2 we will, and I believe there is some
3 consideration being given to that. I am
4 not a part of that.

5 MR. HERMAN: Just for the record
6 on Mr. Marks last question so that you in the
7 audience understand, when he said, if the
8 highest court ultimately requires Colts
9 Neck to resume, consideration will be given
10 doesn't necessarily mean that it will be at
11 your end of town or next to your tract or
12 whatever else. You should understand this
13 forum here is the Board of Adjustment and really
14 has no part in recommending that any particular
15 thing goes anywhere.

16 Their role is simply to re-evaluate
17 the application that is before them.

18 The question I was going to ask Mr.
19 Frizell is some of us haven't seen that
20 letter and I wonder if you could make a copy
21 available?

22 MR. FRIZELL: I don't know if I have
23 it. I would like to have one minute, Mr.
24 Schrumph, and I mean literally, one minute.
25 The transcripts are available to you. I



1 suggest you read them and William Quill's
2 (phonetic) testimony. He's the County Planner.
3 He recommended that Judge Lane's Order be
4 implemented at your end of town.

5 This is PB-8. If anybody
6 recognizes it, this is an exhibit prepared
7 by Mr. Walker, also a Planning Board lay
8 consultant who recommended that these projects
9 were appropriate. You want to look at
10 PB-8, I think this is 537 here, and I take
11 it your subdivision is there.

12 A VOICE: It is somewhere here.
13 So where are we?

14 THE CHAIRMAN: Welcome to the
15 rest of the hearing tonight. We're glad to
16 have you. I want to make it clear that there
17 is no consideration by this Board on this
18 Application for anything in the eastern end
19 of town whatsoever. We're considering the
20 Orgo site and Applicant's Application. That's
21 all.

22 MR. LARKIN: I think I want to
23 make it clear. If there was going to be
24 rezoning to take place, there would be
25 hearings and so forth. There would be an



1 opportunity, and I believe Mr. Marks, if
2 that's correct, by the Township Committee,
3 so at that point the public would have that
4 opportunity. We have nothing to do with
5 the procedures at all.

6 MR. MARKS: I can tell you that
7 the Planning Board is recommending that any
8 project of this magnitude and size should
9 certainly be the decision of the Township
10 Committee. It is too large to come before
11 this Board and must go through the normal
12 legislative processes which involve your
13 Township Committee, to which you all have an
14 input. It is not up to the Planning Board.
15 It is not up to the Zoning Board. It is
16 ultimately, up to the Township Committee
17 where you have an input.

18 What we do here has virtually,
19 no effect. I would believe has no effect
20 at all on anything that might be done in the
21 future with that other suit.

22 MR. FRIZELL: I have one more
23 point so you understand why Mr. Borelli's
24 presence was necessary here.

25 Part of our own proofs is to




1 demonstrate that this site is suitable for
2 this type of a development. Part of the
3 defense by the Planning Board was, and still
4 is, that there is another area of the
5 community where this would be compatible
6 to the existing use.

7 MR. MARKS: Why don't you mention
8 the western end of the Township also?
9 The Planning Board experts and also about
10 the Monmouth County Director of Planning
11 discuss the development on the eastern and
12 western sections. So there is a twisting
13 here of words and facts and thereby, it's
14 your own judgment.

15 MR. FRIZELL: I'm not going to
16 twist the eastern end. Time after time,
17 after time, witnesses have come in here and
18 said, and General Whipple said there is
19 nothing that will go over in the reservoirs
20 over in the eastern end of town, and
21 that's what the question is about here.

22 MR. BRENNAN: Mr. Frizell, he
23 didn't say that. I asked that question and
24 his answer was, when I asked, would that be
25 the best location, and his answer was yes.



1 It would be better if it did not lead into
2 the reservoir.

3 MR. FRIZELL: I don't understand.
4 Therefore, a very large area land mass of
5 Colts Neck --

6 THE CHAIRMAN: You are not going
7 to finish.

8 MR. FRIZELL: -- and the inquiry
9 is done further --


10 THE CHAIRMAN: You are not
11 going to finish.

12 MR. FRIZELL: I want to.

13 THE CHAIRMAN: You are not going
14 to, Jim. This is a rather unrelated
15 situation. We are going to confine
16 ourselves to consider a certain project on
17 a certain tract. We will continue in that
18 vein.

19 If you have any facts in that
20 letter, Mr. Frizell, and I certainly
21 consider it a serious violation in the
22 cannon of ethics of sending it and not
23 notifying the Board.

24 Mr. Sagotsky, call the next
25 witness.



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MR. SAGOTSKY: Mr. Moser.

MR. FRIZELL: Mr. Schrumph, kindly retract that statement. Any information that I had anything to do with that letter and what Mr. Bonelli does in favor of his own project is his own business and not mine and not yours. I will thank you for your apology.

THE CHAIRMAN: I will retract the statement if you disallow any part of the letter.

MR. FRIZELL: It is not a responsibility to disallow it, Mr. Schrumph, you don't make unsolicited reckless statements of that kind on the record.

THE CHAIRMAN: I never read the letter.

R I C H A R D M O S E R, Sworn.

DIRECT EXAMINATION BY MR. SAGOTSKY:

Q Mr. Moser, by whom are you employed?

A American Water Works Service Company, Incorporated.

Q What is the relationship to the Twin River Reservoir?

A American Water Works Service Company is a subsidiary



1 of the American Water Works Company, who is the parent
2 company of Nonmouth Consolidated Water Company.

3 Q And just the general consideration as to
4 your background. You have a degree; a college degree?

5 A I have a Bachelor of Science in Chemistry, yes.

6 Q Now, I want to show you A-54, and therein
7 is an exhibit entitled Colts Neck Township Planning Board,
8 which is the land use plan. I just want to show it
9 to you for the purpose of showing the location of the
10 Orgo Farms, which has been delineated in red by Mr.
11 Frizell as the location of that area.

12 I'm pointing to Mr. Frizell's handwriting on
13 Orgo Farms. You will note a portion of it is
14 south of Route 18. That's about 24 acres that has
15 been testified to, and it is in that location that the
16 water and sewer works will be located, if and when
17 approved, and can be taken up as of its approval at
18 a later time, but now, that is the proposed project.

19 Now, in that area, without going into all
20 the details, at this point there is proposed 1,170 homes
21 or dwelling units. An approximate increase in
22 population of about 2,500 people. Now, it consists of
23 different types of units in that area. You are
24 acquainted with that area as shown to you on the map.

25 A Yes, sir.



Moser - direct

1 Q You also are acquainted with the location
2 of the Swimming River area?

3 A Yes.

4 Q And you have had a chance to go over the
5 Swimming River area, and you have heard the testimony
6 this evening of General Whipple; is that correct?

7 A Yes, I have.

8 Q Without going into all the details at this
9 time because of the hour, I would ask you if you do
10 confirm what General Whipple has said with reference to
11 the effect that this development will have upon the
12 reservoir?

13 A I can summarize briefly our position.

14 Q I think the Board would like to hear that.

15 A With emphasis on brief, I presume General Whipple's
16 statements concerning the character of the wastes that
17 run off of a development such as this, have us as the
18 water pervayor concerned because we know that waste
19 characteristics in this reservoir, particularly a
20 reservoir, have adverse effects on the quality of water.

21 That is our prime source of drinking water for the
22 250,000 people in this vicinity. We are concerned that
23 the water quality will degrade. We are certain that
24 degradation will be met with increased cost on our part
25 to make the water drinkable, and we are unsure as to



1 exactly where the final water quality degradation will
2 fall.

3 So that is our concern with respect to the types
4 of wastes that General Whipple has said will run off
5 this type of development.

6 Q You couldn't confirm from your own
7 experience, you couldn't confirm his opinion?

8 A Oh, yes.

9 MR. FRIZELL: Objection, I'm
10 not sure what General Whipple's opinion was.
11 He didn't say what the impact of the reservoir
12 was. He didn't analyze it. I don't know
13 what opinion he's confirming.

14 MR. SAGOTSKY: He did say there
15 would be a deteriorating effect upon the
16 quality of the water in the reservoir. He
17 specifically made that statement.

18 I believe it is to everyone's
19 recollection, so we don't get into a hassle
20 over that. It is my recollection what he
21 said. I ask you, Mr. Moser, if that is your
22 opinion?

23 THE CHAIRMAN: We will uphold
24 your objection if you narrow and confine
25 them to General Whipple's testimony and



1 have it confirm that. Does that satisfy you?

2 MR. FRIZELL: I accept that.

3 BY MR. SAGOTSKY:

4 Q General Whipple alleged there will be a
5 deteriorating effect upon the water quality of the
6 reservoir by this development, Orgo Farms. My question
7 is, do you confirm that?


8 A My opinion is there is no question about that.

9 MR. SAGOTSKY: I have nothing
10 further. I can develop the commercial
11 aspects, the industrial aspects and the
12 different types of units, and how much would
13 be devoted, approximately, to housing and
14 each type. I can go into all the background
15 for a more elaborate foundation, but because
16 of the hour and what has been said, I am
17 withholding that.

18 Now, I would say that at this
19 juncture of the case, I have nothing further
20 to ask Mr. Moser.

21 THE CHAIRMAN: Any member of the
22 Board have a question?

23 MR. BRENNAN: If you have increased
24 pollution being introduced into the reservoir
25 and dissipating the capability of the reservoir,



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this could be cured by putting in additional equipment on it?

THE WITNESS: More than likely, it could, yes.

The problem that can occur when you have contaminants getting into a reservoir, which many times it is not a flowing stream. It is just like a stagnant pond. When you add nutrients into the pond it can promote biological activity and in part weird tastes and odors and this water makes it difficult to satisfy the customer's palate, as well as some of the other more subtle organic contaminants that everybody is concerned about.

MR. BRENNAN: If your costs increase, it would go into your rate basis and basically, what you're saying the people downstream will pay more for their water for the privilege of having the Colts Neck Village?

THE WITNESS: Every one of our customers pay for that cost, yes.

MR. FRIZELL: I'll object to this. There is nothing I am aware of in this



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report in which Mr. Moser comes to any kind of conclusion that a single piece of equipment would be required; and I suggest to you they are not correct.

MR. SAGOTSKY: Well, you know about the carbon filler method facility it takes to treat for pollutants. I know you know all about that.

MR. FRIZELL: I know about that.

MR. SAGOTSKY: I haven't gone into that with great specificity because of the hour.

MR. FRIZELL: I understand, Mr. Sagotsky.

THE CHAIRMAN: Mr. Moser, you reconfirm the number of customers served by Monmouth Consolidated Water?

THE WITNESS: Approximately, 250,000 people.

MR. LARKIN: Maybe you can clear up some question that was raised earlier in the testimony. I don't think you were here.

As to the availability of hook-ups for water customers at your facilities,



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wherever they end, and I don't know exactly where they would end; how easy would it be to hook up additional customers to your existing network?

THE WITNESS: I'm sorry. I can't answer that question because I'm not familiar with the distribution system of Monmouth County. My expertise lies in water quality and water treatment, not in the other.

MR. LARKIN: Okay. Thank you.

THE CHAIRMAN: Are there any other questions? Is there anyone from the audience who would like to ask a question before Mr. Frizell cross-examines?

MRS. THOMAS: My name is Barbara Thomas and I am from the Environmental Commission. This project anticipates using quite a volume of water daily. I think the figure was something like 320,000 gallons per day. Does that involve the municipality's water coming into the reservoir?

THE WITNESS: The reservoir is fed by streams, rainfall and runoff. The Raritan is very deep and ground water sources



1 have no relationship to the water system.

2 MRS. THOMAS: Would that have any
3 adverse effect?

4 THE WITNESS: No.

5 THE CHAIRMAN: Anyone else have
6 a question? Mr. Frizell.

7

8 CROSS-EXAMINATION BY MR. FRIZELL:

9 Q Mr. Moser, how big is the reservoir?

10 A 2.622 billion gallons.

11 MR. LARKIN: Billion?

12 THE WITNESS: Billion.

13 BY MR. FRIZELL:

14 Q Do you know what that is in acre feet?

15 A No.

16 Q What is the size of the reservoir in
17 area?

18 A I think I have that number in my folder.

19 Q Also the water shed.

20 MR. SAGOTSKY: I think 12,000
21 acres, in that area.

22 THE WITNESS: I show the reservoir
23 as approximately 900 acres. The drainage
24 basin as approximately 48 1/2 square
25 miles.



1 BY MR. PRIZELL:

2 Q Did you calculate the percentage of the
3 water shed that this proposal occupies?

4 A No, I haven't. I'm sure we can come up with it.

5 Q Something less than one per cent?

6 A What's the total acreage?

7 Q The water shed, you said was 48 square miles.
8 This would be roughly 30,000 acres.

9 A (No response.)

10 Q Let me continue with the question.

11 It is a matter of mathematics.

12 Mr. Moser, is the water company concerned with the
13 suburbanization of Colts Neck with on-site septic systems?

14 A As General Whipple pointed out, and I concur,
15 septic systems are necessarily contributory to degradation
16 of a reservoir.

17 Q I understand that.

18 A It depends upon what is leeching or running directly
19 into the reservoir.

20 Q In your experience, did you have an occasion
21 to experience a chloroform count which you attributed
22 to the septic system immediately in the vicinity of the
23 reservoir?

24 A I didn't attribute a chloroform count in
25 increased use of the septic system surrounding the



1 reservoir, but certainly an increased chloroform count
2 would be of concern.

3 Q Has the water company observed an increase
4 in the chloroform count with the reservoir?

5 A I'm not sure. I know the trend of the chloroform
6 count per se. Let's see if I have a record of that here.
7 I don't know whether the chloroform count trends for an
8 increase.

9 Q You can concur, I take it also, with
10 General Whipple's testimony that the agricultural uses
11 are a significant source of pollution to ground water
12 surfaces?

13 A I think potentially it's there, yes.

14 Q And that includes not only crop farming,
15 but also livestock farming?

16 A Yes.

17 Q Have you attempted to analyze the effect
18 of the septic systems in the vicinity of the reservoir
19 or other reservoirs?

20 A I believe that is not relevant to this inquiry.

21 THE CHAIRMAN: There are hundreds
22 of septic systems and we heard the septic
23 work. There is no problem.

24 MR. PRIZELL: I still object.
25 It's important, and my only question is



1 whether or not Mr. Moser has made an
2 attempt to find out if they do work.

3 THE WITNESS: This doesn't have
4 anything to do with it.

5 THE CHAIRMAN: If he has
6 knowledge of that, then he can answer it.

7 THE WITNESS: No, I don't know.

8 BY MR. FRIZELL:

9 Q Did you have any difficulty with the
10 assumptions made by General Whipple, that on a per
11 unit basis that large single family housing generates
12 twice as much pollution, not counting the septic
13 systems in urban runoff pollution as clustered or
14 multi-family type of developments?

15 A No, I yield to his expertise on that matter.

16 Q Have you made any attempt to discover what
17 the potential costs would be to your company in terms of
18 the additional equipment that Mr. Sagotsky referred to
19 and the carbon fillers?

20 A I entered into the record last year when we talked
21 about additional treatment facilities, that I indicated
22 that I could foresee the ultimate possible need for
23 carbon filler facilities to remove the organics that
24 lead to and cause the tastes or odors in water, or maybe a
25 possible health threat. At that time I estimated the



1 facility would be six and a half million dollars.

2 Q Now, you are not telling the Board and you
3 can't state that this project does not require that kind
4 of equipment; would it?

5 A I cannot unequivocally say the effect, the term
6 pounds of those pollutants that General Whipple stated
7 would be coming from this would take the reservoir to a
8 point where we would have to put those facilities in.

9 Q Is the reservoir that close to that point;
10 at this point?

11 A No, the reservoir, I would classify it as
12 pristine..

13 Q Would you say the same thing about a single
14 family development on twice the acreage?

15 A Well, I understand it stands to reason if you
16 increase the amount of contaminants going into the
17 reservoir, it only promises the need for this type of
18 facility.

19 Q So if this project has approximately,
20 slightly more of whatever, twice the pollutants of
21 a single-family subdivision in the same tract, do I understand
22 then the same danger exists of this project is on 180
23 acres or 360 acres?

24 A There is a certain amount of natural --

25 MR. MARKS: I object to that.




1 question. It is irrelevant.

2 MR. BRENNAN: I think you are
3 working in ratios. I think you really ought
4 to talk of 2,274 single-families on two
5 acres.

6 MR. FRIZELL: His testimony
7 was, as I recall, that this project, which
8 is on 187 acres, would generate twice the
9 pollution of a single-family development
10 on the same acreage.

11 MR. BRENNAN: He said single-
12 family, residential, would generate,
13 excluding septic, twice as much pollution
14 as one multi-family unit.

15 MR. FRIZELL: That's correct.
16 It is also correct, as I understood his
17 testimony, that this project -- and you will
18 have to look at the record yourselves,
19 but as I understood, this project would
20 generate approximately, twice the pollution
21 of a single project on the same tract, same
22 size. That I think is his testimony.
23 What I'm asking him is, is it the same
24 danger as Mr. Moser is talking about
25 presently, with the single-family subdivision



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with the same size.

MR. MARKS: Mr. Chairman, I would like the Board to rest on the record and move to the next question.

MR. FRIZELL: I have no other questions.

THE CHAIRMAN: Any other questions? Would anyone like to ask a question of Mr. Moser?

Thank you, Mr. Moser.

MR. MOSER: Thank you.

THE CHAIRMAN: Mr. Frizell, you have a couple of witnesses for tonight?

MR. FRIZELL: Yes, sir.

MR. SAGOTSKY: Gentlemen, you may move your case.

MR. MARKS: I have about five minutes of submissions.

Gentlemen, the Township has been kind enough to loan to me a sole copy that was received, I think on Monday or Tuesday of the revised draft of the New Jersey State Development Guide Plan.

I would like to have this marked and also I would like to ask it be reproduced



1 and that the original go back to the Township
2 Committee which I believe needs it
3 immediately.

4 MR. SAGOTSKY: It's Planning
5 Board PB --

6 MR. MARKS: I think it is 11 or 12.
7 It was received by the Township, according
8 to my calculations, on August 15th.

9 MR. SAGOTSKY: May I borrow it
10 for marking?

11 MR. MARKS: Certainly.

12 MR. SAGOTSKY: State Development
13 Guide Plan Revised Draft, consisting of
14 179 pages, herein marked as PB-11.

15 (Whereupon, State Development
16 Guide Plan Revised Draft, consisting of 179
17 pages is received and marked PB-11 for
18 identification.)

19 MR. MARKS: Now, I would like to
20 move that into evidence, if there is no
21 objection.

22 MR. FRIZELL: I don't have any
23 objection.


24 MR. MARKS: It is a revised
25 draft.



1 I would like to call the Board's
2 attention to page 127 in which it has various
3 development zones, and I point out to the
4 Board that the largest white area, in fact,
5 the sole white area, which is designated
6 limited growth area, is only to be found
7 in Colts Neck Township.

8 I would like to point out on
9 pages 71 through 72 of the State Development
10 Guide, that the New Jersey Department of
11 Community Affairs and the Division of
12 Planning, stated that the limited growth
13 to areas are areas of scattered low density
14 development, because other portions of the
15 State are more accessible to markets and
16 population centers. This is one of their
17 definitions. The guide further recommends --

18 MR. PRIZELL: May I interpose an
19 objection to this? Mr. Kingman wrote a
20 letter to the Director of State Planning and
21 comments on the fact that Colts Neck is in the
22 limited growth area largely, but not entirely.
23 Therefore, the letter makes certain comments
24 about it, and I think his comments are really
25 the only ones that are pertinent.



1 MR. SAGOTSKY: Let him put it in
2 and after he's finished, and then you can put
3 it in where you want.

4 MR. FRIZELL: Let me go further,
5 Mr. Sagotsky. You see, he put the document
6 into evidence, and that's fine. I don't
7 care. Any further than that, he can make
8 part of his own. The documents are in
9 evidence. He can read it at the time of
10 argument.

11 Let's go forward. I have two
12 witnesses.

13 MR. MARKS: I will continue.

14 The Development Guide recommends
15 and determines that areas of limited growth,
16 which is Colts Neck Township, the only one
17 in Monmouth County, should be left, and this
18 development, "To grow at their own moderate
19 pace", because to do otherwise would require
20 "major public investment in services and
21 facilities and an energy inefficient pattern
22 of scattering development would be continued."

23 The Guide further goes on to say
24 that these areas of limited growth may
25 become critically important resources for the



1 New Jerseyans of the twenty-first century.

2 So I submit that for
3 consideration by the Board.

4 MR. FRIZELL: Since Mr. Marks
5 was permitted to finish, rather than me
6 saving it for summation, can I have one minute
7 on that document?

8 Number one, Mr. Gindenberg
9 clearly said our project does not require
10 a public investment. Therefore, it is not
11 in conflict with the plan.

12 Number two, there is extensive
13 material that that plan that Mr. Marks did
14 not read to you, what it says, is that that
15 plan should not be used in terms of excusing
16 or avoiding the constitutional responsibilities
17 upon decisions. There is some exception to
18 that rule, which are listed in the back
19 of the document. They list certain
20 townships, because they are so remote,
21 entirely agricultural areas, that they could
22 be excused. Colts Neck is not among them.

23 MR. MARKS: I find Mr. Frizell's
24 comments to be in variance with what I have
25 examined. I would like the Board to examine



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that for themselves.

THE CHAIRMAN: We do have that letter. We can consider it in conjunction with what you presented tonight.

MR. MARKS: Now, I would like to have marked into evidence, pages of the July, 1980 issue of the New Jersey Law Journal. May that be marked?

MR. SAGOTSKY: It is offered as PB-12.

MR. FRIZELL: You have got to be kidding. You are suggesting that is evidence? That is a law case.

MR. MARKS: That's right.

MR. FRIZELL: I thought cases were subject to attorney argument?

MR. MARKS: May I have it?

I think we have here a very serious issue. First of all, I move before this Board that the testimony of the Chief Planner and Designer of this project, Mr. Reinkamp, be stricken from consideration by this Board.

I want to submit this case because it buttresses and confirms my objection.




1 This case says where someone comes before
2 this Planning Board or before a Zoning Board
3 or before any Board, and says they are a
4 planner or a landscape architect, that their
5 testimony is not worth any more credibility
6 than is the Applicant's. They are not
7 entitled to consideration of a professional
8 licensed planner.

9 MR. FRIZELL: That's absurd.
10 I know the case very well. We will save it
11 for argument because the whole thing is
12 totally ridiculous.

13 THE CHAIRMAN: In your opinion,
14 can this be entered into evidence?

15 MR. MARKS: I would submit that
16 it really, as a matter of fact, goes to
17 judicial notice and it is something the Board
18 should read and make its decision.

19 Now, I would like a legal
20 opinion on it and then give me a chance to
21 study it myself and review it. I have
22 come to a definite opinion, if no one
23 objects, I could give it to you at the
24 deliberation meeting, which will be August
25 the 25th.



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THE CHAIRMAN: I think that would be fair in view of Mr. Frizell's objection. We do get a legal opinion on it and whether it should be entered into evidence.

MR. MARKS: Mr. Frizell should have a right to answer or make his statement as to his determination.

MR. MARKS: In this State we have a thing called a professional planning license. The professional planning license is required for anyone who prepares a municipal master plan. That's the only thing that it is required for.

MR. FRIZELL: Only for master plan, you say?

MR. MARKS: To prepare a Township Municipal Master Plan you have to have a license.

The firm of Ron Saxwell Associates, located in Denver, work across the country. They have professional planner licenses --

MR. FRIZELL: For your information, and to tell you what the professional planning license is like in New Jersey, anyone who holds a professional engineering license,



1 get a planning license automatically.

2 Anyone who holds an architect license,

3 gets a planning license automatically, even

4 if he doesn't know anything about planning.

5 Anyone who holds a surveyor's license

6 can become a surveyor and obtain a surveying

7 license and he doesn't need a degree.

8 Surveyors don't have degrees. Anyone who

9 holds that license, gets a planning license

10 automatically and doesn't have to know anything

11 about planning.

12 Mr. Reinkamp testified in this
13 case as a planner who designed this project

14 as he has designed eighty others in New

15 Jersey. He does not hold, as he indicated,

16 a New Jersey professional planning license.

17 He doesn't require a planning license in

18 New Jersey. He is a designer of this

19 project. If you read the case, the witness

20 said he was a planner. Obviously, the problem

21 with that is that he had no credentials of

22 any kind, not from another State. There was

23 no legitimate reason for him going around

24 New Jersey commenting about master plans and

25 testifying about master plans on the public



1 record.

2 The New Jersey Planning Association,
3 Federation of Planners, took issue with that
4 because he seemed to be misrepresenting
5 himself to the Board. I suggest Mr.
6 Reinkamp never misrepresented himself.
7 He's a planner. He practices in 48 states,
8 and he does this work on a day-to-day
9 basis and he has several planners that work
10 for him. They came in and testified,
11 including Mr. Goodwin. Several of them
12 came in and testified that worked for John
13 Reinkamp. He designed the project, there
14 is no requirement for Mr. Reinkamp to do what
15 he did in this case.

16 MR. MARKS: I would just like to
17 point out, this is the same argument advanced
18 by Mr. Frizell prior to this decision, the
19 decision says, however, Bradley, who is a
20 landscape architect in that case. However,
21 Bradley uses the term land planner and refers
22 to himself as a land planner, and to
23 identify and characterize his activities in
24 his employ is a violation of a privilege.

25 I will further point out to you,




1 Mr. Chairman, that procedurally, this
2 Board on May 29th, 1980, on pages 16 and 17,
3 this attorney sitting right here, said he
4 designed this project and said he will be
5 testifying as a general planner and general
6 designer.

7 MR. FRIZELL: That's right..
8 He presented himself to the Board as a
9 practicing professional planner and that
10 is the kind of professional planner that
11 designs Master Plans in New Jersey and
12 I disagree with the fact he lacked the
13 required licenses.

14 Now, he misrepresented his
15 position as a planner who prepares Master
16 Plans in New Jersey, and, therefore, the
17 Board of Professional Planning took issue
18 with that and said that he never misrepresented
19 himself in any plan or BOD project.

20 I clearly suggest to you that
21 90 per cent of professional planners in the
22 State are not capable or qualified to do
23 the work.

24 MR. MARKS: Mr. Frizell, leave
25 it to the Board's personal recommendations.



1 THE CHAIRMAN: The Board will leave
2 it to the legal opinion of our attorney
3 who may want to research and study it.

4 MR. DAHLBOM: Has this been
5 entered for identification?

6 THE CHAIRMAN: I don't think we
7 should move it into evidence.

8 MR. FRIZELL: It is just not
9 evidence.


10 MR. DAHLBOM: It is for
11 identification?

12 MR. SAGOTSKY: I do think that the
13 Board should get the whole case and it should
14 be made available.

15 MR. MARKS: We will be glad to
16 furnish you a copy to the whole Board.

17 THE CHAIRMAN: I think we can
18 determine from the transcript in what
19 manner he represents himself right on the
20 outset.

21 MR. LARKIN: I don't think this
22 is relative or not, but I believe the only
23 thing is that a professional planner
24 prepares master plans with regard to the
25 development of planning areas.



1 MR. FRIZELL: The governmental
2 employees, Mr. Larkin, can't view that way.

3 MR. LARKIN: In other words,
4 somebody decided in governmental policy,
5 must have a license.

6 MR. FRIZELL: Mr. Larkin, I
7 said the case speaks for itself.

8 MR. MARKS: Don't misjudge,
9 Mr. Frizell.

10 MR. FRIZELL: Mr. Reinkamp has
11 testified as he indicated, in Superior Court
12 in the Bradley matter, and in Mount Laurel
13 and certain land cases.

14 MR. MARKS: But he's not licensed
15 in the State of New Jersey.

16 MR. FRIZELL: Not here.

17 MR. MARKS: He represents himself
18 as a planner.

19 THE CHAIRMAN: Let our attorney
20 decide that. One thing you did say, Mr.
21 Frizell, at one point in his testimony he
22 disavowed being a professional planner,
23 which you can extract from the testimony.

24 MR. FRIZELL: He said, he didn't
25 have a license.



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THE CHAIRMAN: Mr. Sagotsky,
you can research that case as to whether
it can be entered into evidence.

MR. MARKS: I further want to
enter into evidence the report of the
Colts Neck Planning Board relative to the BUD
use variance of Orgo Farms and Greenhouses.
We will mark it into evidence.

MR. SAGOTSKY: PB-13.

THE CHAIRMAN: PB-13 is in
abeyance and is for identification.

MR. SAGOTSKY: A report of the
Planning Board of the Board of Adjustment
is marked PB-13.

(Whereupon, a report is received
and marked PB-13 for identification.)

MR. FRIZELL: Is the resolution
attached to this?

MR. MARKS: No, this report was
discussed on Monday night and approved by
the Planning Board.

MR. FRIZELL: There is an
objection by the Applicant to the admission
of this report by the Planning Board.
I have an objection.



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THE CHAIRMAN: The ruling is that anything is to be researched by counsel to make a determination.

Now, you have submitted something else?

MR. MARKS: For the very same objection he raised, I raise to this.

MR. SAGOTSKY: We have a scheduled meeting set for the consideration of deliberation on the 25th. That's next Monday night. Would you feel you need more time, and if I ask the Board between now and next Monday to give you whatever time you think you may need in view of your reading of that case.

MR. FRIZELL: Mr. Sagotsky, as you know, the hearing is to be closed tonight. I might say on all of our witnesses that we have brought into the Board, we were given an opportunity to rebut the evidence. Now, here it is 11:30 p.m. on the last night of the last hearing and we're being presented with this, fine. I object to it. I should have had this a long time ago. I finished my case almost a month ago. They had an



1 opportunity to present their case. At least
2 give me an opportunity to rebut.

3 MR. SAGOTSKY: I must call it to
4 the Board's attention. The Planning Board
5 under the ordinance and under the ruling,
6 the report should be entered at the end of
7 the case. There is no way that the Planning
8 Board's report really could be presented.
9 He entered it at the last minute because
10 you haven't finished your testimony or will
11 not finish your testimony until late tonight.
12 This report is being submitted and marked
13 for identification. It is the report of the
14 ruling, and I say it can be presented.

15 The case says quite clearly,
16 Mr. Frizell needs reasonable time, that is
17 the case. I would ask the Board to give him
18 a chance to review it. What it says in here
19 is what Mr. Frizell already knows. He has
20 heard all the testimony and there can be
21 nothing in the report. It is just a review
22 of the testimony as to what has taken place
23 and it is evidently the conclusion.

24 I request the Board to accept
25 this as a report, as a pure and simple report.



1 If Mr. Frizell would like time to answer it
2 and review it, fine. I ask the Board to give
3 him that permission.

4 MR. HERMAN: My name is Jay Herman,
5 attorney for the Board of Education. I feel
6 compelled to participate here to a limited
7 extent to assist the Board.

8 I think what Mr. Frizell has
9 indicated about an extension of time beyond
10 which time is imposed for the Board to act,
11 tonight is not a deadline for the Board to
12 act.

13 It is sometime after now. It is
14 true, of course, that the Board had
15 anticipated closing the hearings with regard
16 to hearing evidence tonight. That is not
17 at all what Mr. Frizell is making reference
18 to.

19 So I think it is wholly
20 inappropriate.

21 Secondly, I was here last week
22 when both Mr. Marks and Mr. Frizell made
23 their comments, and they each have written
24 reports submitted this week. I may be wrong.
25 I don't know if Mr. Frizell has furnished Mr.



1 Marks a copy of his report. Secondly, I
2 haven't received it.

3 The only other thing I would like
4 to add is that at the last meeting you will
5 recall, Mr. Frizell came in with no advance
6 notice to me, or I assume to anybody else, with
7 three exhibits that we contested, and I
8 don't remember accepting on any basis.
9 Tonight he's submitted to me a new or
10 different, if it is not proposed, an exhibit
11 of about 16 pages. I think that for Mr.
12 Frizell to get terribly upset with Mr.
13 Marks' submission of the report tonight,
14 in light of Mr. Sagotsky, offer affording
15 him an opportunity to comment on it, I
16 think by Monday, is not at all unreasonable.

17 MR. MARKS: One second.

18 MR. FRIZELL: I would have no
19 objection to it if Mr. Marks take the
20 Planning Board's name off it and sign his
21 own. What I have brought tonight is a
22 summation. The Board is free to take my
23 view of the evidence, and reject it or
24 accept it. That is not quite true with the
25 Planning Board's report. It is an evidential



1 piece of material for which the Fogue
2 (phonetic) case says I have a right to a notice
3 of.

4 MR. MARKS: I'll offer it in
5 both manners.

6 I'll offer it as a personal
7 report by me. I will also offer as a
8 summation by the Board of all the evidence
9 it heard, plus a summation of the testimony
10 of General Whipple, as I reported to them
11 it would be presented tonight. If in this
12 case there is any questions, the Board
13 can consider it my summation. If I'm
14 right, as I contend I am, it is the Planning
15 Board submission.

16 THE CHAIRMAN: Is there
17 anything in that report that will be new
18 to Mr. Frizell?

19 MR. MARKS: Not a thing, not a
20 thing.

21 THE CHAIRMAN: Is there
22 evidential consideration?

23 MR. MARKS: Absolutely not.
24 That's why I presented the State Guide
25 Plan and that's why I presented it in the



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case.

THE CHAIRMAN: On the basis that you agreed to submit it as Marks rather than the Board.

MR. MARKS: No, if necessary.

THE CHAIRMAN: If necessary, Mr. Frizell is going to deliver his in his name, we can rely on you to give a copy of that to Mr. Frizell and he can write in or offer any objection if he wants to enter it into evidence Monday night on that basis.

MR. MARKS: I will leave -- how many copies do you need?

MR. TISCHENDORF: Mr. Marks, do you concur with the full Board concurring in this opinion?

MR. FRIZELL: On the evidential case an issue that was raised.

THE CHAIRMAN: You're asking the full Board of Adjustment? I will poll them and ask them if they agree with that decision.

MR. NIEMAN: The purpose of the summarization of the position of the Board



1 of Adjustment, I'm not going to be
2 concerned about anything that might be
3 introduced in terms of new evidence, and
4 allow you to get up here and tell me what
5 you would say. I'm going to read that
6 and I'm going to consider you as being the
7 first person present and telling me what
8 I'm reading. That's what I mean.

9 MR. MARKS: I have no problem
10 with that at all.

11 MR. HERMAN: You said the Board
12 of Adjustment. I think you meant the Planning
13 Board.

14 THE CHAIRMAN: I'll poll the
15 Board.

16 MR. SAGOTSKY: I want to call
17 your attention that there is an Order of
18 the Court that the time may be extended to
19 September 18th or 19th, there is written
20 in that Order, provided the testimony is
21 completed by August the 20th.

22 MR. FRIZELL: I signed that.

23 MR. SAGOTSKY: You did? You put
24 those little words in.

25 MR. FRIZELL: Yes, I did.



1 Public evidential hearings. This is as I
2 construe it and intend to be evidence as
3 opposed to argument. I object to it on that
4 basis.

5 MR. SAGOTSKY: Therefore, I'm
6 calling to the Board's attention in view
7 of that limitation, that the ruling that
8 you're making, that it be put into evidence
9 as of tonight. The proposition I made to
10 Mr. Frizell, is that he may answer it, if
11 he likes, by the 25th, and, of course, I'll
12 also endorse the position that Mr. Herman
13 took that we do have until September. Under
14 the words of the Ordinance and under the
15 words of the Court Order, I ask you to act
16 upon it tonight subject to that condition.

17 MR. DAHLBOM: I hope it is
18 August 21. I'm not certain.

19 THE CHAIRMAN: We will accept it
20 on the basis of the advice of counsel. How
21 does the Board feel accepting it tonight?
22 I think we will do it in that manner.

23 MR. TISCHENDORF: I would remind
24 counsel we are not bound by the strict
25 rules of evidence. Does that give us any



1 latitude here under your interpretation?

2 MR. FRIZELL: My interpretation,
3 Mr. Tischendorf, is the interpretation of
4 the Supreme Court, notwithstanding the fact
5 the same rules apply in the Board's favor.

6 MR. SAGOTSKY: Mr. Frizell is
7 making an issue out of it. The Court will
8 look at it as what harm is done. Everything
9 in here Mr. Frizell knows. He remembers
10 very well. I think the Court will look
11 at it in that respect.

12 MR. FRIZELL: How do you know that?

13 MR. MARKS: I also don't know.

14 The 1977 case Mr. Frizell referred
15 to does not refer to the prior Municipal
16 Plan Act. I had not an opportunity to study
17 that case.

18 MR. SAGOTSKY: That was before
19 the Land Use Act?

20 MR. MARKS: I just noted the
21 decision in the case. Absolutely, Mr.
22 Sagotsky. I don't think it's pertinent
23 to the whole issue.

24 MR. SAGOTSKY: You are applying
25 it to the Land Use Act even though it predates



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the Land Use Act; aren't you?

MR. FRIZELL: The case is directly on point, period.

MR. SAGOTSKY: You chose to come in tonight to pull it out of the hat.

MR. FRIZELL: I didn't know what was going to happen. It is now ten minutes to twelve. I didn't see this until Mr. Marks pulled it out of the box a few minutes ago.

THE CHAIRMAN: Anything else to offer, Mr. Marks?

MR. FRIZELL: I might say, Mr. Sagotsky, in addition to that, we have checked with the Planning Board. We called and they said nothing on the agenda for this or Orgo Farms at all. We would have been there.

MR. MARKS: An open meeting conducted on the record?

MR. FRIZELL: Without notice.

MR. MARKS: You had your notice last week.

MR. SAGOTSKY: Well, I guess repetition proves it.

THE CHAIRMAN: Anything else to



1 offer, Mr. Marks?

2 MR. MARKS: No, in any event,
3 I'll offer it in the alternative as my
4 summation.

5 THE CHAIRMAN: I might ask, did
6 the Planning Board have an offer as to the
7 number of units?

8 MR. MARKS: Yes, I believe we
9 had a letter. The Board requested that
10 if it was available. Yes, research was done
11 by Mr. Festler (phonetic) who is on vacation.
12 I think you have a copy of that.

13 Is there anything in that report
14 that will be new?

15 MR. FRIZELL: Not a thing,
16 not a thing.


17 THE CHAIRMAN: Is there several
18 considerations?

19 MR. MARKS: Absolutely not.

20 THE CHAIRMAN: On the basis that
21 you agree to submit it as marked.

22 MR. MARKS: If necessary.

23 THE CHAIRMAN: If necessary,
24 since Mr. Frizell is going to deliver his
25 in his name, we would like to give a copy



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of that to Mr. Frizell and he can offer any objection and it can be entered into evidence Monday night on that basis.

MR. MARKS: I will agree.

MR. SAGOTSKY: I want to call your attention that there is an Order of the Court the time may be extended to September 18th, I think, or 19th, and that is written for that purpose providing the testimony is completed by August the 21st.

(Whereupon, there is a discussion off the record.)

(Back on the record.)

THE CHAIRMAN: Anything else to offer, Mr. Marks?

MR. MARKS: No, as I said, in any event, I will offer it in my summation.

THE CHAIRMAN: I might ask, indeed, if this Planning Board had an offer in the last two and a half years of the number of units.

MR. MARKS: Yes, I believe we have a letter. Yes, research was done by Mr. Festler (phonetic), who is on vacation. I think you have a copy of that. The letter



1 regarding the number of subdivisions.

2 MRS. O'CONNOR: Would you like me
3 to get a copy?

4 THE CHAIRMAN: Mrs. O'Connor is
5 running the copy machine and I think it is
6 best the you proceed with your witness.

7 MR. FRIZELL: Mr. Gerkin.

8
9 G L E N N G E R K I N Sworn.

10 DIRECT EXAMINATION BY MR. FRIZELL:

11 Q Mr. Gerkin, when you designed that
12 subdivision of Orgo Farms, did you use any topographic
13 data or soil data in laying out lots?

14 A Yes, we did. The topographic data was interpreted
15 from the U. S. Coastal Geographic Quadrangle Sheet and
16 Soil Information and what was available from the County
17 maps.

18 Q As well as those maps in areas that have
19 water tables very close to the surface; isn't that
20 accurate?

21 A Soil maps indicate there was one spot towards the
22 rear of the property which I believe it's a coalman
23 soil, which has a high ground water table.

24 Q In order to install sewers on those
25 lots, some degree of fill might be required; isn't



Gerkin - direct

1 that true?

2 A Possibly.

3 Q Now, did you attempt to determine how many
4 lots you could put on that site if you avoid those sites,
5 that have high water sites completely?

6 A I think the County Soil Map can only be used as a
7 guide. It differs and indicates at such places out there
8 that has a high ground water table. You cannot take
9 that as verbatim at that particular spot as shown there
10 because the maps were inadequate at that time.

11 There are other ways. When you get to a more
12 complete design stage, you do on-lot soil borings,
13 percolation tests even when you do more preliminary
14 tests on a larger scale, you can locate that area and
15 if any redesign was necessary, there is ample room to
16 redesign that end section of the road to avoid that.

17 Q Mr. Gerkin, giving the experience you have
18 had with other subdivisions here in Colts Neck, is it
19 possible that either several lots would have to be
20 filled in order to install a septic system and avoid
21 these areas, and, therefore, reduce the number of lots?

22 A I didn't say that. I said I could redesign it
23 and make the road a different road to be more suitable
24 land.

25 Q I didn't suggest you said it previously.

What


Gerkin - direct

1 I'm asking you to do, Mr. Gerkin, since you haven't
2 redesigned it, and if you did, you might find that there
3 was a high water table, and nevertheless, in areas that
4 you could either not avoid or you would have to fill
5 those lots or avoid them completely alluding the total
6 number?

7 A That may be the case. It may not be.

8 Q I recognize that.

9 A Without more data, it would be impossible to even
10 determine.

11 Q I recognize that.

12 Now, you are aware, for instance, of the
13 subdivision here in Colts Neck that as many as one-third
14 of the lots are located in high water tables; aren't you?

15 A I know only cases. They were certainly considering --
16 you can't get an estimate number of lots out of the parts
17 you would like to get as a developer.

18 Q When you estimated the development cost
19 of that project, what did you use for engineering on a per
20 unit, per lot basis? What numbers; do you recall, or
21 didn't you do that at all?

22 A I didn't do that at all.

23 Q You were not the source of that information?

24 A No, I was not.

25 Q Now, on the improvement cost estimate; do you



1 have it there?

2 A Yes, I do.

3 Q What do you say, or what figure did you use
4 for bituminous stabilized base on a per unit basis?

5 A Bituminous stabilized base was \$26 a ton.

6 Q Is that the number you are actually now
7 using in Colts Neck Township for improvement estimates
8 or on other projects?

9 A It varies on a site by site basis. It would be
10 12,520 tons, which is an extremely large quantity. And
11 the prices vary in quantity in what you would get.

12 Also, when you do estimates for the Planning Board,
13 our purpose for that is for bonding purposes. So if the
14 Town forecloses on the bond, the Town has ample funds.
15 If the Town then puts out that work, they have to comply
16 with the prevailing wage act, which has whole different
17 scales of prices.

18 The developer on his own does not have to pay
19 scale prices. So the price is not too far from there.

20 Q On a bituminous concrete surface course,
21 the next number you use is \$28; is that your experience?

22 A I can show you jobs where it is cheaper than that.
23 They are paying the prevailing rate and paying for their
24 bonds and, et cetera.

25 Q Is that what you're using now in Colts Neck?



Gerkin - direct

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A I don't know.

Q All right. In terms of bituminous stabilized base, is that below that; \$26?

A Right, well, this is the price that we can get the work done for; correct.

Q And \$28 is for bituminous concrete, two inches thick?

A Correct, on the basis we have taken public buildings, which come in cheaper than that.

Q Mr. Gerkin, did you make an attempt to estimate what the average improvement cost estimate, that you have used in preparing the improvement cost estimate for the Township on the subdivision within the Township in the last few years?

A Could you repeat that?

Q When you prepared this estimate, did you attempt to use, or attempt to refer, what according to Township standards, did you attempt to refer to your own improvement cost estimate on a per lot basis so as to compare it to what you came up with in this case?

A No, I didn't. I wasn't asked to compare it on a per lot, and you're talking about if it came to be five thousand or ten thousand, or twenty thousand on a lot. No, I didn't compare it.

Q Do you know what you came up on a per lot on



1 this?

2 A No, I don't know. I didn't even compute it.

3 Q All right.

4 Do you have any idea in your mind what an average
5 in Colts Neck is today?

6 A It is \$882,000. I forgot what the total was.--
7 eighty-three lots roughly, you are talking \$10,000 a lot.
8 Approximately, I would assume.

9 Q Is that your experience that what you
10 estimated yourself in Colts Neck Township or current
11 subdivisions in the Township?

12 A We don't really get involved with it on a per lot
13 basis. Every site may have different factors involved
14 with it. There are several variables.

15 MR. SAGOTSKY: At this point
16 I would like to make a comment. It might be
17 an objection. If I'm on the wrong wave
18 length, please tell me.

19 It seems to me that there
20 was testimony that estimate development
21 costs would be \$40,000 on an average.

22 Now, this \$10,000 a lot,
23 which is being talked about now, do I
24 understand that is with reference to
25 generally in Colts Neck, or are you talking



1 about lots in the particular area of the
2 Orgo tract?

3 MR. FRIZELL: No, Mr. Sagotsky,
4 what this is is Mr. Walker used these cost
5 estimates to project out the feasibility of
6 the development under present zoning.

7 MR. SAGOTSKY: He called for a
8 40,000 general average.

9 MR. FRIZELL: He based his
10 economic analysis on the improvement costs.
11 They are one of the factors. We are simply
12 inquiring about that.

13 MR. GERKIN: If I may interject
14 one thought, too.

15 When you use your computations,
16 and I remember when you asked me my prices
17 in the bituminous concrete which, if I
18 looked at the prices which you are mentioning
19 for his computations on other items such as
20 curbing and piping, you'll find his
21 prices substantially less than I used here.

22 MR. FRIZELL: Well, what you're
23 talking about, Mr. Gerkin, is development
24 under the BOD standards.

25 THE WITNESS: Right



1 MR. FRIZELL: That may or may not
2 be the same standards. These are vegetative
3 swales and curbs and they might not be
4 street curbs.

5 THE WITNESS: I see.

6 BY MR. FRIZELL:

7 Q So, as I understand, then, you didn't
8 make an attempt to determine whether the \$10,000, or
9 whatever, close to that per lot, was below, high, or
10 near the average?

11 A I made no attempt at all. I was not requested to.

12 Q Who requested you to prepare this
13 analysis in the first place?

14 A I don't even recall.

15 Q Was it Mr. O'Hagan?

16 A It was done in connection with the court suit
17 which was up in, I believe, probably, it came through
18 Bob O'Hagan's office.

19 Q When you prepared this thing you knew you
20 were involved in litigation or at least the Township was?

21 A I would assume so.

22 MR. FRIZELL: I have no other
23 questions.

24 THE CHAIRMAN: Any questions?

25 MR. SAGOTSKY: I have nothing.



Gerkin - direct

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MR. BRENNAN: Addressing the \$10,000 number. Isn't that what you were driving at, Mr. Frizell? The \$10,000 number was roughly the improvement cost.

Were you attempting to say that would be the average cost of a buildable lot?

MR. FRIZELL: That's what Mr. Gerkin said the improvement costs for each lot on an average basis would be.

MR. GERKIN: The street improvement doesn't include any grading around or the construction of the house?

MR. BRENNAN: You now have a lot that is buildable. You can go in there.

MR. GERKIN: Right, there are no wells and there is no septic. That is not included with this and within the housing cost.

MR. FRIZELL: I have one other question.

You didn't design the detention facilities for this proposal?

MR. GERKIN: No.

MR. FRIZELL: I have no other



1 questions.

2 THE CHAIRMAN: Does anyone have
3 a question they would like to ask Mr. Gerkin?

4 Fine, thank you, Mr. Gerkin.

5 (Witness excused.)

6 THE CHAIRMAN: Mr. Kiefer, please.

7 MR. HERMAN: I note it is after
8 midnight and Mr. Frizell kind of technically
9 indicates that all the testimony was to be
10 heard by the 21st. This witness, and the
11 one, I think he is going to call after this
12 have already appeared before this Board and
13 have undergone direct examination and
14 cross-examination. I am not sure that it is
15 necessary to hear them again.

16 I wonder if you might want to
17 see if all the parties here are willing to
18 extend the hearing for the purposes of hearing
19 the same witnesses again.

20 MR. FRIZELL: First of all, Mr.
21 Herman, it's not necessary to give all the
22 parties an extension. Only the Applicant
23 has this power or authority, number one.

24 Let me say that the 21st date
25 was actually a typographical error. As Mr.



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Sagotsky said, I put that number in and as luck would have it, the Court Order actually says the 22nd. I didn't realize it when I wrote that in.

THE CHAIRMAN: Why didn't you tell me that before?

Therefore, we will do like they do in Congress and not stop the clock right at twelve and say, "That's it."

D O N A L D E. K I E F E R, Sworn.

DIRECT EXAMINATION BY MR. FRIZELL:

Q The hour is after twelve.

Mr. Kiefer, did you analyze the fundamental method used by Mr. Walker in analyzing the feasibility of development of the project in the current zone?

A Yes, he did.

Q What was the purpose of that investigation, do you have that report here?

A Yes, I do.

Q Do you have extra copies?

MR. MARKS: I would like that marked for identification that anything evidential comes from the lips of the witness.



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MR. FRIZELL: Let me address that point. The State Development Guide Plan was marked and it didn't come from the lips of any witness.

MR. MARKS: It's public knowledge.

MR. FRIZELL: It makes no difference.

MR. MARKS: Certainly, it does.

MR. SAGOTSKY: Wasn't that by consent, Mr. Frizell?

MR. FRIZELL: It was by consent because I recognize the futility in this kind of procedure.

MR. SAGOTSKY: Let me determine what that is. A-55 is my last exhibit. Does that check with you? It is not? I offer it as A-56. I'll just put it in for ID and you can make a determination after that.

BY MR. FRIZELL:

Q Mr. Kiefer, the investigations, before I rudely interrupted you, that you had made of the Township; what was the purpose of the investigation?

A The investigation was basically, two-fold. One was to determine subdivision approval history and also preliminary subdivision approval history in Colts Neck



1 Township from the period beginning January 1, 1975 through
2 the present.

3 The second was to determine sales activity within
4 subdivisions as approved at that time.

5 Q In terms of subdivision activity; what
6 did you discover?

7 A I might preface first my statement by saying that
8 when the research was done, part of it involved contacting
9 the Planning Board in the Township, and I have a copy of
10 the Township's letter dated August 17th, 1980, which I had
11 previous to this meeting was part of what was utilized
12 in this research.

13 (Whereupon, a copy of a report
14 is received and marked A-56 for identification.)

15 MR. FRIZELL: Do you want to
16 mark that, too, Mr. Sagotsky?

17 THE WITNESS: Perhaps it would be
18 best if I summarized my findings, unless you
19 would like to go through them individually?

20 MR. FRIZELL: I think since it is
21 ten after twelve, Mr. Kiefer, it is perfectly
22 acceptable to summarize the findings.

23 MR. SAGOTSKY: You are referring
24 to what you're summarizing the findings?

25 MR. FRIZELL: He's going to



Kiefer - direct

1 summarize for us now.

2 MR. KIEFER: That's a partial
3 report.

4 MR. SAGOTSKY: Colts Neck Planning
5 Board Report on Major Subdivision Approvals,
6 January 16th, 1978 to July 14th, 1980,
7 inclusive, is marked A-57 for identification.

8 (Whereupon, a report of Major
9 Subdivision Approval is received and marked
10 A-57 for identification.)

11 THE WITNESS: As I said, Mr.
12 Frizell, this is a partial report as to the
13 research. I went back further than that
14 particular report.

15 BY MR. FRIZELL:

16 Q Yours went from '75?

17 A January, '75 through the same date as that report.

18 Q Through August, 1980?

19 A That is correct.

20 Q What did you discover in terms of
21 subdivision activity?

22 A During the period from January 1, 1975 to the
23 present time, approved subdivisions by year in 1975, there
24 were a total of 66 lots created through major subdivision
25 approvals. 1976, a total of ten lots. 1977, 49 lots.



Kiefer - direct

1 1978, 66 lots. 1979, 9 lots. To date in 1980, 7 lots.
2 That equates to a total of 207 lots created through
3 major subdivision approval since January, 1975.

4 Q What next?

5 A I also obtained information regarding subdivisions
6 which have obtained preliminary approval but for which have
7 not received final approval to date.

8 Q What was the total for what time frame?

9 A The preliminary approvals run from June of 1979,
10 through August of 1980. The total number of lots
11 involved in those preliminary approvals total 143.

12 Q Then did you attempt to determine the
13 number of residences actually constructed?

14 A Yes, I did. I made an analysis of the
15 residence activity constructed in Colts Neck Township.
16 From the beginning of 1975 to the end of 1979.

17 Q On a year-by-year basis, what did that
18 reveal?

19 A In 1975 there were 22 new residences constructed.
20 In 1976 there were fifty-one. In 1977 there were also 51.
21 In 1978, 35. In 1979, 44, for a total of 203.

22 Q Did you also add that number, and did you
23 analyze new home sales and also lot sales?

24 A Yes, I did. I confined myself to the subdivisions
25 which had received approval within the time reference I was



1 Kiefer - direct

2 working in.

3 So as to analyze just sales within those
4 subdivisions.


5 In the year 1975 there were sixteen sales of homes,
6 and three sales of lots, for a total of nineteen sales.
7 In 1976 there were forty-six sales of homes and two sales of
8 lots, for a total of forty-eight. In 1977 there were
9 twenty-four home sales and twelve lot sales, for a total
10 of thirty-six. In 1978 there were twenty-three home
11 sales and sixteen lot sales, for a total of thirty-nine.
12 In 1979 there were twenty-eight lot sales, excuse me,
13 twenty-eight home sales and thirteen lot sales, for a total
14 of forty-one.

15 Q From all that data, did you attempt to
16 recapitulate and analyze the residential demand in Colts
17 Neck Township by the subdivisions?

18 A Yes, I did. That was the purpose of the research,
19 to attempt to develop historic patterns, both for new
20 subdivisions coming on line with the Township and becoming
21 available, and also to establish trends as to the
22 absorption rate of those lots which were created.

23 Q What was the result of the analysis?

24 A Based upon the total number of lots which
25 became available through major subdivisions and the total
demand, which would be the total figure for both home



Kiefer - direct

1 sales and lot sales, assuming that were a subdivision
2 could come on line, either a home or a lot could be
3 purposed, the average absorption rate for the last five
4 years within the Township has been 36.6 units. When I say
5 units, it encompasses both homes and lot.

6 Q How did that compare to the supply of homes
7 or lots for sale by virtue to your analysis of subdivision
8 approval?

9 A There has been an annual average excess over that
10 five year period, which over the five years, just in home
11 construction totals 66 units.


12 Q On an average annual rate of home units?

13 A Thirteen point two, and you are approximately one-
14 third of the total community point figure.

15 Q Did you attempt in your own opinion to
16 form any conclusions as to some factors that might be
17 creating this condition of supply in outstripping demand?

18 A I considered a couple of factors which I considered
19 fairly basic. One being that the buying trend of the
20 home buying public is changing somewhat.

21 There is, for a number of reasons, they move
22 away from large single-family dwellings. Whether it's
23 because of the fact it's becoming increasingly expensive
24 to maintain and be it the fact that families are
25 becoming smaller or the population is growing up in age,



1 Kiefer - direct

2 and lots of people don't require large homes any more.


3 I feel there is a declining overall market for large
4 lots, and large single-family homes.

5 The cost of single-family housing, particularly of
6 the size and type dictated by the A-1 zone in Colts Neck,
7 is becoming increasingly less affordable to a greater
8 number of people. The prices are just outstripping the
9 ability to purchase.

10 So I felt that overall it was generally a soft
11 market that is not related specifically to Colts Neck
12 or any other community that you would find large single-
13 family residences.

14 Q Without going to the physical analysis
15 of the property and its surrounding features again on the
16 Orgo Farm tract, but based on this information you now
17 have; did you reach any conclusion of the competitive
18 position of the Orgo Farm tract for this type of housing?

19 A I visited all of the subdivisions which were
20 included in my report, at least to the extent of driving
21 through them quickly. It was my opinion, for reasons
22 which were stated in the report, that I previously
23 submitted to this Board, the Orgo Farms property would not
24 hold strong competitive position when compared to most
25 or all of homes on other subdivisions, and I assume
you perhaps learned since then that Mr. Walker shares the



Kiefer - direct

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same view.

He says the sites in the northern part of town near the reservoir, especially, were superior sites for this type of development.

MR. MARKS: I object to that question. The question would borne out the testimony.

MR. SAGOTSKY: It's not very evidential what someone else said. It's pure hearsay.

MR. MARKS: It may be late, but let this go on. Let's not take excess liberties, Mr. Frizell.

MR. FRIZELL: I'll withdraw that.

BY MR. FRIZELL:

Q Mr. Kiefer, notwithstanding the non-competitive position, in your opinion on the Orgo tract, and Mr. Walker's opinion, and the report will bear me out, did you make an assumption for the purposes of an analysis that the Orgo Farm tract is equal to all other tracts in terms of its attractiveness to potential buyers?

A Yes, I did.

MR. LARKIN: Sir, equal in terms of what?



Kiefer - direct

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MR. FRIZELL: Equal in its attractiveness to buyers.

MR. LARKIN: In what way, the PUD's?

MR. FRIZELL: No, single-family homes.

MR. SAGOTSKY: You mean financially, topographically or historically?

MR. FRIZELL: If lots were for sale in the Orgo tract and lots were for sale on the Swimming River Estates or in that area, a buyer would be equally attracted to either area. That's the assumption Mr. Kiefer has made for his analysis.

BY MR. FRIZELL:

Q That analysis based on the hard data that you obtained and based on how the Orgo Farm tract would be developed, did you make analysis of the current supply?

A Yes, I did. What I considered as the current supply, assuming that the Orgo Farm site were to be developed as attached to single-family housing under current zoning, we have indicated a surplus between 75 and 79 of seventeen units. Approvals in 1980 for seven units.

Once again, when I'm saying units, I'm relating to



1 both homes and lots. Preliminary approvals for 143 units.

2 I utilized a figure of 83 units for the Orgo Farms site

3 for what I called a total current supply of 250 units.

4 Q So you didn't count any potential loss of

5 units as Mr. Gerkin indicated? You gave the full 83

6 units that he came up with on his plan?

7 A That is correct.

8 Q Now, did you then attempt to determine what

9 the overall absorption rate was?

10 A Yes, I did.

11 In order to do that, I made one other assumption.

12 The average increase, or average number of units coming on

13 line each year through major subdivisions is an average of

14 approximately forty over the last five years.

15 Since I'm projecting into the future, I held that

16 as constant as lots were absorbed, and they were replaced

17 by these forty units a year.

18 As you brought out, Mr. Frizell, I assume absolute

19 equality of marketability. That any particular lot in any

20 location would have just as good a chance of being

21 purchased as any other lot.

22 Making that assumption, the probability of any

23 particular lot being sold becomes a mathematical function

24 of the ratio of the number of lots within a given

25 subdivision with the overall supply. It is a situation



1 of random probability.

2 Q What was the absorption rate based on the
3 data that you estimated reasonable with the Orgo Farms
4 project, assuming that it was equal to all other
5 subdivisions available?

6 A Assuming total equality, the absorption rate
7 that was calculated was six units per year.

8 Q Now, some of these subdivisions that were
9 approved would be built out if they had six, but I take
10 the years you assumed they would be replaced in other
11 subdivisions of similar quality.

12 A Correct, that would be a constant supply of
13 equal type lots available.

14 Q Similar to the same conditions as
15 experienced in the first year that you know exist today?

16 A That is correct.

17 Q Now, did you then attempt to determine
18 what the improvement costs of this particular project
19 would be?

20 A Yes, I did.

21 Q What did you use as a source of information
22 for that?

23 A I relied on a number of sources.

24 MR. BRENNAN: I would like to ask
25 him about his sources. If Orgo Farms




1 constitutes 83 lots, just about on the
2 button, one-third of the 250 supplied,
3 yet you then make reference to 36.6 units
4 annually, moving out the supply and being
5 replaced.

6 It seems to me you have compounded
7 5 per cent.

8 THE WITNESS: I actually increased
9 the demand into the future.

10 MR. BRENNAN: What I am getting
11 at is if we take this 36.6 units and Orgo
12 has one-third of the supply, why don't
13 you have twelve units instead of six units
14 that you mentioned?

15 THE WITNESS: The way it was
16 calculated was to take the Orgo Farms
17 subdivision, theoretical subdivision of
18 83 lots, and not concerning myself with
19 any particular lots within that subdivision,
20 and assuming that any one of them could be
21 sold, relating those 83 to the total supply,
22 you come up with a factor which is
23 approximately a third. For the third year,
24 taking that third and applying it against
25 the total project, the absorption rate for



Kiefer - direct

1 the entire municipality, which in this case
2 would be roughly twelve, but as Orgo lots are
3 sold, they decrease the ratio and become
4 smaller in number and actually continues to go
5 down for the sake of analysis and comparative
6 purposes, I took the grand time required
7 for absorption, and related that to six units
8 a year, which was equated to the average
9 absorption rate for Orgo Farms.

10 MR. FRIZELL: I'm glad you asked
11 that question. There were six locations
12 and you simply divide it by six. Is that
13 what you mean?

14 THE WITNESS: No.

15 BY MR. FRIZELL:

16 Q If there were twelve locations, wouldn't that
17 make any difference?

18 A If the supply was greater?

19 Q In other words, why didn't it make a difference
20 if Orgo has more lots available, and if another man had
21 six available and he is in a superior location; wouldn't
22 he sell his six?

23 A Except, the assumption was if all the lots available
24 were equal, it is a situation of like there is a bin full
25 of baseballs. Some had red cores and some had yellow cores



Kiefer - direct

1 You wouldn't know which one you picked out until after
2 you got it.

3 To make a projection like this you really have to
4 assume equality as I stated in my report. It was not an
5 opinion that Orgo Farms was competitive with the other
6 subdivisions. But for the sake of argument, and analysis,
7 I considered it to be so.

8 Q Did you try to test that analysis against
9 any actual experience in Colts Neck?


10 A I did an analysis of sales in the Swimming River
11 at Colts Neck subdivision. The 45 lot subdivision, which
12 was approved in 1975.

13 Q What did you find the average sales volume
14 was?

15 A Over a five year period, the average sales volume
16 in Swimming River at Colts Neck was 7.4 units to the 6.1,
17 which I calculated for Orgo Farms.

18 Q Did you find that within an acceptable
19 range in terms of testing?

20 A Yes, considering that I made the assumption of
21 equality, I considered the Swimming River Development
22 to be a highly competitive development. So I felt it
23 would be indicative of the random probability
24 philosophy 7.4 to the 6.1, which I felt close enough to
25 lending validity to my calculations.



Kiefer - direct

1 Q I was asking you about your sources of
2 information for the development cost per lot. You said you
3 used several sources?

4 A Yes, and the report I had previously submitted to
5 this Board, I did a detailed analysis of the cost breaking
6 down subdivision in Colts Neck. Saw Mill Estates was
7 the application.

8 I utilized a cost estimate figure, which is now
9 approximately a year old, which had been prepared by the
10 Township Engineer. Any of the items that we deemed to be
11 particular to Saw Mill Estates and not typical were taken
12 out. The remaining figures were used to arrive at a
13 per lot improvement cost, an average per lot improvement
14 cost.

15 As I said, realizing that the purposes for that
16 it was done by the Township Engineer, and I did not make
17 any adjustment to the fact that they're almost a year
18 old.

19 Q Now, did you also attempt to make any
20 corrections or additions to Mr. Walker's engineering
21 costs for final approvals?

22 A Yes, I did. I spoke to Mr. Ney, regarding
23 cost for engineering and for final approvals, and relied
24 on his representations as to what the typical average
25 costs currently are in Colts Neck Township would be.



Kiefer - direct

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Q Did you find that the \$500 figure used by Mr. Walker, which incidentally, Mr. Gerkin is not the source of, but did you find the five hundred conforms to Mr. Ney's advice?

A No, the figure I received from Mr. Ney was three times that figure, \$1,500.

Q Are you assuming that Mr. Walker's analysis was correct in terms of legal? I know you didn't call me and ask what the legal services would be.

Did you assume Mr. Walker's analysis was correct?

A I did. I accepted a number of Mr. Walker's figures to allow for comparison.

Q Did that include interest on direct or indirect cost at 14 per cent?

A That is correct.

Q Did that include sales commissions?

A At seven per cent, yes.

Q Insurance at a fixed rate?

A Yes, \$2,500 per year.

Q Legal fees for closing of \$200?

A That is correct.

Q And real estate taxes? Did you know the amount?

A I made my own computations as to real estate taxes. I felt that Mr. Walker's figures for real estate taxes



1 were excessively low.

2 Q Now, did you make any other assumptions
3 concerning when the improvement of the subdivision would
4 be made and on what basis did you make that assumption?

5 A I made that assumption --

6 Q Maybe I should ask this question first.

7 Do you know how long the preliminary subdivision is
8 good for under the Municipal Land Use Law before a final
9 is to be submitted?

10 A I'm not certain. I have two figures in mind,
11 and I'm not sure if I base my analysis on the proper figure.

12 MR. SAGOTSKY: Are you referring
13 to 180 days?

14 MR. FRIZELL: No, I'm talking about
15 three years for preliminary and major. There's
16 a three year limit. Well, it is a matter of
17 law. It is a three year limit on preliminary
18 and major and two years, additional and final.

19 BY MR. FRIZELL:

20 Q When did you assume in terms of when the
21 improvements would be made in this project?

22 A I assume that initially one-third or twenty-seven
23 lots would be improved the first year. I provided for
24 the improvements of an additional third during the third
25 year of development. Final third, which is the 29 lots



1 during the fifth year of development.

2 Q The assumption being if you didn't put in
3 the improvements, the developer would stand the possibility
4 of not having the preliminary stand in losing it and the
5 zoning being changed and, et cetera?

6 A That's correct.

7 Q Based on the analysis and study; did you then
8 attempt to determine, using Mr. Walker's methodology and
9 fundamentally, what the residual land value of the land is?

10 A Yes, I did. I followed, although in format it is
11 somewhat different than it is set up. It is an identical
12 process of taking gross sales from that and subtracting
13 direct and indirect cost to arrive at a net sales revenue
14 and then discounting those figures to present day
15 growth.

16 Q Using the same discount rate that Mr. Walker
17 used?

18 A That is correct.

19 Q Do you have an analysis?

20 A Yes, I do.

21 Q Do you have a copy of it?

22 A It's in the report.

23 Q You, of course, were not there, Mr. Kiefer,
24 but you can confirm this that when I asked that certain of
25 Mr. Walker's figures were changed, such as the build-out



1 and improvement cost primarily, that absorption rate is
2 simply a mathematical process and to use his math and
3 come to a residual land use of the project; you confirm
4 that it is fundamentally a mathematical process?

5 A Yes, that is correct.

6 Q Using that same mathematical process, what
7 did you conclude was the residual land value for
8 development purposes?

9 A My calculations for the Orgo Farm site to be
10 developed and marketed as a detached single-family
11 subdivision. That over the course of the sell-out
12 period, costs would exceed discounting the present day
13 worth of sales, which is equivalent to the residual value
14 of the land by \$1,703,989..

15 That is to say, there is a negative value to the
16 development of the land of this proposal.

17 Q Now, Mr. Kiefer, whatever the residual land
18 values Mr. Walker came to, only confirm that that analysis
19 work only tells us the total sum of the following
20 components and the price of the land to the seller, and
21 all of his costs, including all of his taxes, et cetera.
22 The developer's profits, and the interest, if any, on the
23 purchase money mortgage, that they would all have to be
24 accommodated within the so-called residual land value?

25 A That is correct. We treated the analysis of the



Kiefer - direct

1 development for this, both Mr. Walker and I conducted it,
2 and when the residual land value was arrived at, it would
3 consist of the price that would have to be paid for the
4 land for the purchase land value of the land, and the
5 profit which the developer could expect to receive, as
6 well as certain other costs and value that were not
7 provided for in the analysis.

8 One being the cost of financing.

9 Q The total sum of the money would be, as I
10 said, the sum of not only the seller would be, but only
11 what the developer could expect?

12 A That is correct. That would all come out on the
13 residual land value.

14 Q Beyond the one million seven negative value
15 of the land, did you try to reduce the build-out schedule
16 as a test?

17 A I did. I was very satisfied with the original
18 computations as to absorption rates. I thought it was
19 well documented.

20 However, half out of curiosity and also to provide
21 a point of reference, I work the calculations and I may
22 have miscalculated the absorption rate by a hundred
23 per cent. Instead of being six units a year, it would
24 be twelve units a year.

25 Q What was the land value that you calculated?





1 A It's an identical process to the one shown in
2 my report. The only changes would be the gross sales of
3 land values and computation of real estate sales commissions
4 and real estate taxes.

5 Q On an annual basis?

6 A On an annual basis.

7 Q The total would be the same?

8 A That is correct.

9 Q What is the residual land value under that
10 seven year build-out system?


11 A It shows a negative residual land value of
12 \$634,267.

13 MR. FRIZELL: I have no other
14 questions.

15 MR. BRENNAN: I have a copy of it
16 and it's very hard to pick up your fourteen
17 year absorption rate. You're implicating
18 and you are compounding the sales price
19 20 per cent annually it appears.

20 THE WITNESS: That is correct,
21 yes.

22 MR. BRENNAN: But technically,
23 I can't figure what it would look like if
24 twelve lots were sold in the first year,
25 and then say eleven in the second year?



Kiefer - direct

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THE WITNESS: It would make it a less attractive situation for the following reason.

The heavy expenses are in the first five years. That's when all of the development costs are provided for. Interest on those direct costs are carried through the life of the project. If sales were to decrease and then further to be discounted by present day worth, which is fourteen years, that is the factor of point 1597 and it would show in my opinion, in almost constant negative present day worth in lot sales. Right on down the line. The way I have structured it from year six through year fourteen, the present day worth, or discounting the worth of lot sales, is already a plus number.

It shows a positive income through those periods, but the expenses are so heavy for this type and development, and since income is coming in the later years, and it is so significantly discounted, it is not enough to offset the final total negative residual land value. When you have from



1 year six through year fourteen becomes a
2 smaller negative number, which is close to
3 zero, but still it is a negative number.

4 THE CHAIRMAN: Any more questions
5 of Mr. Kiefer? Any member of the Board?

6 Mr. Marks, do you have any questions?

7 MR. LARKIN: I have one question.
8 What is the average price going to
9 be? You mentioned 120 to \$150,000 range
10 roughly. How many single family units in
11 Colts Neck; 240 per year?

12 THE WITNESS: I would have to refer
13 to my notes. I don't recall what the exact
14 number was. A couple of hundred, perhaps
15 more.

16 MR. LARKIN: I'm not talking per
17 year, I'm talking about the total.

18 THE WITNESS: I have not done an
19 analysis of that. One reason that I feel
20 that the figures that I developed for this
21 projected absorption rate is because you are
22 talking about entirely a different type of
23 commodity than that which would be produced
24 under the existing zoning.

25 MR. LARKIN: The decision being of



1 less maintenance?

2 THE WITNESS: That would be
3 one of the considerations. Small homes,
4 smaller lots differ in concept in housing,
5 as I understand it.

6 A California type of single-family
7 home as opposed to the larger more traditional
8 historical type of homes.

9 MR. LARKIN: How did you arrive
10 at the figure single-family units, and Mr.
11 Frizell, you can correct me, how did you
12 propose that?

13 MR. FRIZELL: It is 68 on larger
14 lots. If you want to count the 5,000 foot
15 lots?

16 MR. LARKIN: I'm trying to get a
17 number of houses selling between 120 and
18 \$175,000 for the proposed development.

19 MR. FRIZELL: I think it's
20 around seventy, the total.

21 MR. LARKIN: Again ten a year?

22 THE CHAIRMAN: If you phase it out.

23 MR. FRIZELL: If you phase it out,
24 yes.

25 MR. LARKIN: Would that be a



1 significantly greater number?

2 MR. FRIZELL: He said there is
3 different commodities.

4 MR. LARKIN: That's your
5 contention. I'm not sure that's the
6 contention that I'll get. \$150,000 homes
7 on lots of 40,000 a lot.

8 MR. FRIZELL: Use ten, and see
9 what happens.


10 MR. LARKIN: Again, the number,
11 even based on an absorption rate of six?

12 THE WITNESS: I also did an
13 analysis based on twelve, which shows a
14 negative residual value in excess of
15 \$600,000.

16 MR. LARKIN: I'm not talking about
17 a residual value at all.

18 How many lots can be sold in
19 Colts Neck?

20 THE WITNESS: Projections into
21 the future can only be made based on
22 historical trends. I think that I've
23 thoroughly documented historical trends,
24 and it was how I arrived at my projections
25 for absorption.



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MR. DAHLBOM: You think the present economic indicators have some impact on your conclusions?

THE WITNESS: To a certain extent. I started my analysis in 1975, which was the period when we were coming out of a recession. Similar to the one we're in now, where the housing market had been very depressed. Building had been cut way back as such. When it finally did pick up and conditions improved, seventy-five was a heavy year for sales, above the average, I believe.

I feel we have gone the full cycle in this five year period and it would be indicative of the general overall market conditions.

We started out coming out of a recession on the rebound and we're ending up going back into another one. So I felt it would be indicative of the general overall conditions.

THE CHAIRMAN: Did your company have any on site experience in Colts Neck? Did you sell in Colts Neck?



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THE WITNESS: We do not sell homes at all.

THE CHAIRMAN: Just consultant?

THE WITNESS: We are strictly commercial and industrial brokers. There are actually two firms in the same building. Although I am associated with a brokerage firm, I have association only in name. I am strictly in the capacity of a real estate appraiser and consultant. I am not directly involved with sales. Exposure wise, I'm not even around residential sales, because our office does not do that type of work.

THE CHAIRMAN: Then wouldn't it be rather peculiar that you would be testifying on residential when you say you specialize in commercial and industrial?

THE WITNESS: No, I believe I said I specialize as a consultant and an appraiser, and as such I deal with all types of real estate.

Perhaps I misunderstood your question. I thought you were asking me if I have experience in selling homes in Colts Neck?



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THE CHAIRMAN: The initial one was, yes, if your firm did.

You indicated that you thought Mr. Walker's figures on the taxes were extremely low. On what base did you use in making yours higher?

THE WITNESS: Mr. Walker and I both felt with a \$40,000 sales price for an improved lot, going by the general rule of thumb, that the cost of an approved but not improved lot in the subdivision would be worth approximately 10 per cent of the total sales price of the completed package, home and finished lot. Taking a \$150,000 sales figure and putting in a value of \$15,000 on the per lot or the approved lots. I did my computations actually, three steps were involved for each year. I considered the lots that were sold each year as improved lots. I assume a steady sell-out over the course of the year so that the developer would not be liable for the entire year's taxes on those lots that were sold. Assuming that it was evenly spread, I computed the taxes on those sold, \$40,000 lots, and



1 divided it in half to arrive at a figure
2 for the sold lots. Then I took for each
3 given year, the remaining improved lots.
4 Computed the taxes for the full year on those.
5 Then I took the approved but not improved
6 lots, the total for each year, running
7 totals in each column, and computed the
8 taxes on those. The total of those three
9 computations are the figures that I utilized
10 for the real estate taxes in each year
11 given.

12 THE CHAIRMAN: What I really
13 should have asked, is what tax rate are you
14 computing?

15 THE WITNESS: I took the 1980 tax
16 rate and kept it as a constant. Feeling
17 that to do otherwise would just be too much
18 conjecture, and that whatever the tax rate
19 did in my analysis and Mr. Walker's analysis,
20 be reflected accordingly and proportionately.

21 THE CHAIRMAN: Any other
22 questions?

23 MR. SAGOTSKY: Mr. Kiefer, do
24 you understand what I mean when I say just
25 for location, topography, frontage, depth and



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other limits?

THE WITNESS: Yes, I do.

MR. SAGOTSKY: In making a comparison?

THE WITNESS: Yes, sir, I do.

MR. SAGOTSKY: When you took the Swimming River project, did you make a set of adjustments for various lots and compared them to adjustments as to the Orgo tract?

THE WITNESS: No, I didn't.

MR. SAGOTSKY: Did you make an analysis?

THE WITNESS: I made -- as I said earlier -- my conclusions --

MR. SAGOTSKY: You said you made an assumption in the quality. I know what you said. I know that.

My question was, you didn't make adjustments, and I am talking about the adjustment analysis for each lot in each development as compared to the others.

THE WITNESS: No, sir, I did not.

MR. SAGOTSKY: I have no other questions right now.



Kiefer

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MR. HERMAN: Would the Reporter
just repeat Mr. Sagotsky's last question.

(Whereupon, the Reporter read
back Mr. Sagotsky's question.)

THE CHAIRMAN: Any other questions?

CROSS-EXAMINATION BY MR. MARKS:

Q Mr. Kiefer, you told us that you physically
inspected the sites in Colts Neck, and you told us you
drove through them quickly; is that correct?

A That is correct, yes.

Q You say you drove through them quickly
and just drove by; did you stop on the property?

A The intention of my visiting each site was just
to get an overall feel for the general character of each
area. I did not get out and make a physical inspection
of lots and it was not a detailed inspection. Merely,
it was for the purpose of comparing the overall character
and atmosphere to the Orgo Farms property.

Q You just drove by and determined whether
it was attractive or unattractive to you?

A That is correct.

Q You didn't really use anything except your
eyes and your feelings; is that correct?

A That is so.



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Q You told us that you never had any sales in Colts Neck; is that correct, no residential sales, correct?

A I do not sell real estate, no.

Q You have never done any residential appraisals in Colts Neck either?

A I believe I have. I'm not certain. I know I have done a number of appraisals in Colts Neck. I would have to review my files to see how many were residential.

Q Well, about how many residential would you think that you have done?

A It would be impossible to say. Based on the magnitude of the number of appraisals that I do each year, it's impossible to remember them. All I can say approximately, 20 per cent of the total appraisal work I do is residential appraisal work.

However, to relate to that a specific number in Colts Neck, I do not know.

Q You wouldn't know whether you did five a year or ten a year?

A I don't know. I think it would be higher.

Q Under five?

A I would assume that it would be approximately, five some years, one or two some years and seven or eight.



1 Q You said there was a surplus compared to
2 other townships, of the lots?

3 A I don't believe that was my testimony.

4 Q Excuse me, you're correct.

5 You said there was a surplus of lots in Colts Neck.

6 Did you compare --

7 MR. SAGOTSKY: Over and above the
8 need.

9 MR. MARKS: Over and above the
10 need.

11 THE WITNESS: What I said was that
12 based on the number of lots that have come
13 into existence during the five year period
14 I studied through major subdivision
15 approved as compared to the absorption of
16 lots out of those subdivisions, the creation
17 of lots exceeded the absorption rate.

18 BY MR. MARKS:

19 Q Have you ever compared that rate to other
20 Townships?

21 A I can find this analysis to Colts Neck.

22 Q But you really didn't compare it to any
23 other Township?

24 MR. FRIZELL: I object. It is
25 totally irrelevant. There might be a demand



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or a supply or surplus in other towns, but it has nothing to do with it.

BY MR. MARKS:

Q You don't know whether this absorption rate for this difference is high or low; isn't that correct?

MR. FRIZELL: That has nothing to do with it.

THE WITNESS: It is really for the purposes of my analysis I made that reference at all. I wanted to determine the historical trends for the creation of new lots or supplies, and the absorption of lots and demand on lots in order to project an overall absorption rate.

MR. BRENNAN: Do you agree though that the process that you went through in your study does treat Colts Neck as if it was an island? That is, if there were many lots approved or improved and let's say a lot of homes were put up in Holmdel or Middletown, the market may deviate conversely fifteen years. And one might say that the development going on in Holmdel you might have a higher absorption over here. You are studying a very narrow market in the



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Township of Colts Neck.

THE WITNESS: That is correct.

If I can just expand a little bit on what you said.

The purpose was to ascertain a competitive position or to determine how the Orgo Farm development would fare against other similar A-1 zone sites within the Township. I agree demand could increase next year. What I was trying to do, was, irregardless of whether demand went up or down, I still feel that the site would maintain its same relative proportion. Unless there was a situation where there was a tremendous demand and limited supply, then rather the current buyers' market, it would become a sellers' market, but there was no indication of this previously happening. For the reasons that I stated regarding the overall market for large lot, large homes, single-family housing. It is my opinion that will not be the situation, but, yes, it was confined to a narrow market.

THE CHAIRMAN: I think you did testify earlier on that the general real



1 estate sales malaise exists not only in Colts
2 Neck, but it exists all around?

3 THE WITNESS: No, I believe I
4 did say that at the outset particularly,
5 with regard to the character of the home
6 buying public, family structure is changing.
7 Birth rate is going down. We have more and
8 more older families whose children have left
9 home. All of whom either don't need, or
10 don't care to maintain a large home. The
11 current trend is toward smaller more economical
12 housing.

13 So it is a condition that exists
14 probably, cross-country as to large lots.

15 THE CHAIRMAN: I have one other
16 question.

17 Did your reports on subdivisions
18 agree with the report that you have just
19 seen from the Planning Board?

20 THE WITNESS: As I believe I
21 stated, I had acquired that report, yes,
22 and I use that report as part of my basis.
23 That was the basis for my figures from
24 1978, I believe, through the current time.

25 THE CHAIRMAN: I may be a



1
2 simpleton, but they have in just two and a
3 half years, 212 lots and I think you only
4 had 205 for four years. I can't quite resolve
5 that.

6 THE WITNESS: That total in that
7 letter, I believe, also includes totals
8 for preliminary approval.

9 THE CHAIRMAN: Mr. Marks, you
10 have some more questions?

11 RE-CROSS-EXAMINATION BY MR. MARKS:

12 Q Yes, you said you did an analysis of the
13 development of costs in other developments; is that
14 correct?

15 A I took a specific development and did an in depth
16 analysis of developments costs there.

17 Q Is there any reason you chose that
18 development?

19 A I had access to the figures on development costs,
20 and figures on the particular subdivision, and as I said,
21 I ran through them quite carefully so as to pull out any
22 costs that may be strongly related to another site.

23 Q Does the fact that Mr. Burnelli owns the
24 other development, Saw Mill Estates; did he tell you to
25 do the analysis on that?



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A No, he provided me with the figures which, in particular, had been provided to him by the Township Engineer.

Q But you just happened to pick that one?

A That is correct, yes.

Q Just by yourself?

MR. SAGOTSKY: He said yes.

THE WITNESS: Yes.

MR. MARKS: I have no further questions.

A VOICE: I don't understand the relationship of this analysis to the impact of the availability of similar houses in nearby townships?

THE WITNESS: That is not the intended purpose. It's merely to relate the probability of this type of housing on the Orgo Farms site as compared to the A-1 areas in the Township.

A VOICE: The reason I asked that question is that sales along Route 34 in Holmdel certainly seem to be far in excess of the rates to be shown here in Colts Neck. There is certainly 120,000 to \$150,000 homes.

In Marlboro Township, they



1 authorized several thousand. I think it's
2 close to 3,000 homes that haven't been built
3 in Buttonwood and West Park, and certainly,
4 they are a hundred and twenty to \$150,000
5 homes. In fact, in Marlboro Township they
6 authorized a five acre development on Route
7 520, and last night they authorized a major
8 subdivision of two acres of development under
9 the power lines on Conover Road, and cleared
10 a public hearing for another five acre
11 development.

12 So activity in Marlboro Township
13 and Holmdel for selling large lots certainly
14 doesn't seem to match what you have explained.

15 THE CHAIRMAN: I guess that was
16 sort of a statement.

17 A VOICE: I discussed both
18 with respect to sales in West Park and
19 Buttonwood.

20 THE CHAIRMAN: Thank you for the
21 comment. Do you have a specific question
22 to address to the witness?

23 A VOICE: I think he answered
24 my question.

25 THE CHAIRMAN: Okay, fine.



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MR. SAGOTSKY: I submit it is pertinent.

THE CHAIRMAN: No question about that.

MR. SAGOTSKY: I would like to swear him in. I find he's very qualified. I think he would be reluctant, but I would like to.

A VOICE: I explained why I asked the question. I got the answer.

MR. MARKS: I think we can move on.

THE CHAIRMAN: Any other questions of this witness?

MR. HERMAN: I have a few.

CROSS-EXAMINATION BY MR. HERMAN:

Q Mr. Kiefer, did you say before in response to Mr. Schrumph's question that you figured as a rule of thumb that the cost of improved lots is about 20 per cent of the ultimate sale?

A No, the sale of the approved but not improved. In other words, no site improvements in, but it has received subdivision approval.

Q When you said there was figuring on the



Kiefer - cross

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single family tract, you were figuring on homes ranging between a hundred and twenty and \$150,000; is that correct?

A That is correct, roughly as a range.

Q Is that roughly equal to the price of most homes in town now, or is it above or below?

A I feel that it represents the appropriate range for a lot at \$40,000.

Q That's not what I'm asking.

In other words, you think that's consistent with most of the homes in town now above or below it?

A At the upper end of my estimate, I think it would be relatively consistent. Of course, there would be areas where it would be higher, yes.

Q At the \$120,000 range, would it be lower than most sales in the town?

A I would assume it would represent the lower end, yes, under the A-1 zone.

Q Did you say before that lower priced units tend to sell more quickly?

A I said there was a general slump in large lots, large single-family home. I didn't mention that one factor was increasing the price and making housing less available. That is people who are able to afford a small house.

What I was generally talking about is the trend



Kiefer - cross

1 of families getting smaller, the upkeep and maintenance
2 on large grounds and large homes becoming a burden to
3 people, and the trend of getting away from the large
4 lot.

5 You're getting off the point.

6 What I would really like to know is in your opinion
7 would a \$120,000 home, would it sell more quickly than
8 one of 150,000 or 175,000 in the town?

9 A My analysis again is based on equality, including
10 the equality of prices.

11 Q I know what it is based on. You're talking
12 about an equal unit --


13 A The cheaper ones are going to sell first.

14 Q I'm talking about the \$120,000 that you
15 envision would be built on this tract as opposed to what
16 might be typical of \$160,000 home in a township which would
17 tend to sell more quickly.

18 A In my opinion is that --

19 MR. BRENNAN: I think you said
20 when it was established the equality for
21 \$120,000 homes in the Orgo site and one
22 hundred --

23 MR. HERMAN: He was using
24 statistical data based on the sales rates
25 for homes generally in the Township and



1 applying that to these homes, which would,
2 in his opinion, be priced below the typical
3 houses.

4 THE WITNESS: No, there is
5 absolute equality assumed. As soon as I
6 made any assumption as to non-equality, then
7 I think back to my stated opinion in my
8 report that large lots, single-family homes,
9 are not feasible on that site. It is only
10 done theoretically for point of comparison.

11 MR. HERMAN: How many houses were
12 sold in Colts Neck last year, in 1979?

13 THE WITNESS: I confined my
14 study to the subdivisions that I analyzed
15 that were approved within the same time frame.

16 MR. HERMAN: You didn't analyze
17 resales?

18 THE WITNESS: No, I only
19 considered the sales of new construction.

20 MR. HERMAN: Do you think the
21 number of resales in town would be substantially
22 larger than the number of sales of newly
23 constructed homes?

24 THE WITNESS: I really haven't
25 formed an opinion as to that.



1 MR. HERMAN: Would you be
2 surprised that there were approximately
3 150 homes sold last year on resale?

4 MR. FRIZELL: I object to that.
5 I think it's totally irrelevant.

6 MR. HERMAN: I don't think it is
7 irrelevant because before Mr. Kiefer
8 testified and Mr. Brennan had some questions
9 as to how narrow in scope his testimony was,
10 due to the fact his analysis was not in others.

11 The purpose of my question is
12 to show the Board that not only did he
13 consider only this Township, but he only
14 considered newly constructed homes and not
15 all the homes. I suggest that if you're
16 going to talk about what demand is,
17 which may be characterized as large and/or
18 expensive homes, then the demand ought to
19 be based on how many homes were listed for
20 sale in the Township. How many were sold
21 in the Township and not based upon the
22 particular construction schedules to be
23 adhered by any particular developer.

24 MR. FRIZELL: Mr. Herman, you
25 misunderstood the whole analysis.



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MR. HERMAN: I don't think I did.

MR. FRIZELL: When you're assuming the development impact of resales is equal, it's only all the lots. These are homes offered for sale on an equal basis with other new homes. These are new homes. They are not resales.

MR. HERMAN: But we have no data as to the demand or what might be characterized as your large and/or expensive homes. It is very possible that homes that are listed for sale on a resale basis sold very rapidly. If that is so, then I would suggest that the demand for large and/or expensive homes in the Township is rather substantial. I think it is very relative to the study if that happened.

MR. FRIZELL: You still don't understand. If there are resales being absorbed, that may be one of the reasons why new homes aren't being absorbed that quickly. It's going to impact all these hypothetical developments equally.

MR. SAGOTSKY: Just please remember and develop a sense of awareness of



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the men before whom you are arguing this. So bearing that in mind, you can all guide yourselves accordingly and Mr. Kiefer, please try to make your answers as short as you can, please.

MR. HERMAN: Mr. Kiefer, then you don't know how many homes were listed for sale any of those given years in Colts Neck?

THE WITNESS: That was not a function of my report, no.

MR. HERMAN: Did you go back more than five years in your study?

THE WITNESS: No, I did not.

MR. HERMAN: Did you analyze to the extent that you did in the Swimming River or any of the other developments of Clover Hill in the Township?

THE WITNESS: For comparative purposes, I selected only Swimming River for two reasons.

I believe the largest subdivision approved within that time frame and because it went back to 1975 to the beginning of my study.

MR. HERMAN: Would you be



1 surprised to learn that development sold more
2 slowly than any other development in Colts
3 Neck?

4 THE WITNESS: As I said, it was
5 the only one I specifically singled out
6 for my analysis.

7 MR. HERMAN: You mentioned, I
8 think in answer to Mr. Sagotsky before,
9 you did attempt to analyze any differentials,
10 and I assume to the proximity to major
11 highway frontage, and consequently, additional
12 exposure; you didn't consider that?

13 THE WITNESS: It was my opinion
14 that if I started considering differences,
15 it is my conclusion that sales would
16 probably be not as good as projected as for
17 the Orgo Farms.

18 I gave the benefit of the doubt
19 in my analysis.

20 MR. HERMAN: But you didn't
21 consider the highway exposure there?

22 THE WITNESS: I assume equality.
23 I will consider that to be detrimental
24 to that type of housing.

25 MR. HERMAN: Highway exposure



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was detrimental to the sale of units?

THE WITNESS: Location wise I do not feel it's the best of locations for that type of housing that was analyzed. But no, I assume equality, absolute equality.

MR. HERMAN: I have nothing further. Thank you.

THE CHAIRMAN: Any other questions?

MR. PRIZELL: Mr. Ney, we'll make him fast.

(Witness excused.)

H E N R Y N E Y, previously sworn.

DIRECT EXAMINATION BY MR. PRIZELL:

Q Mr. Ney, you are still sworn.

First of all, Mr. Ney, I have one preliminary question about the improvement costs. You have heard some different opinions and your firm does single-family subdivision work; doesn't it?

A Yes, sir, it does. I also have built a number of single-family homes.

Q In your experience, Mr. Ney, would you consider the \$18,000 figure used by Mr. Kiefer accurate as opposed to the 9,000 or 10,000 figure used by Mr. Gerkin for this type of development?



Ney - direct

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MR. HERMAN: I have to object.
How is Mr. Ney qualified, when you first
qualified him?

MR. FRIZELL: On the testimony that
he is a professional engineer and he is a
principal in the firm of Abbington and Ney.
He just testified it is his firm.

MR. MARKS: I thought he was being
called as a rebuttal witness?

MR. SAGOTSKY: My only objection
is on the fact that there has been a
comparison already made with another and
now this is an effort to make a third
comparison and to have the other witness
as to what he thinks the first two comparisons.

MR. HERMAN: Not only that,
but a witness to testify on direct and
cross as to traffic, and if he's here for
rebuttal, then I expect to hear about the
traffic. It is not as though --

MR. FRIZELL: You are really getting
out of line now, Mr. Herman. Mr. Ney is the
principal of Abbington and Ney and he is
going to be permitted to testify, Mr.
Sagotsky, concerning not only his personal



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experience in subdivisions, but the experience of his firm of which he is a principal, which does possibly more single-family subdivision work than any engineering firm in the County.

MR. HERMAN: As a rebuttal to his traffic testimony?

MR. FRIZELL: Come on, Mr. Herman. Will he be permitted or not?

Doesn't matter. I can bring him in for any purpose we want to come in for.

MR. HERMAN: Sure you can. This Board doesn't have to hear new witnesses.

MR. FRIZELL: That's not true.

MR. HERMAN: You said a half hour ago that you're entitled to rebuttal to have your witnesses come back and presumably Mr. Ney ought to invite Mr. Nelson back.

MR. FRIZELL: Mr. Herman, your rules of evidence are totally wrong. I can bring a totally new witness to rebut a prior testimony. I don't have to bring in --

MR. SAGOTSKY: I'll ask the Board



1 to rule on the previous question that it
2 was improper and asking for this opinion
3 witness is a decision by way of comparison
4 between two previous witnesses. I think
5 it is relevant and improper.

6 MR. FRIZELL: I want Mr. Ney
7 to support the analysis done by Mr. Kiefer
8 and I would like to have the ruling.

9 MR. MARKS: I join in that.

10 MR. SAGOTSKY: The objection is
11 sustained. Let's go on to the next question.

12 THE CHAIRMAN: Mr. Ney has been
13 recalled as a traffic expert, or are we
14 in a totally different area?

15 MR. FRIZELL: Mr. Schrumph, we
16 will cover a number of points, and perhaps
17 we will touch on them very quickly.

18 Mr. Ney is here to testify about
19 his professional engineering. He is a
20 principal of the firm of Abbington and
21 Ney and they do many things. I don't think
22 that Mr. Ney's ability to testify about
23 this general area in terms of the
24 improvement costs and et cetera, is really
25 an issue here. He obviously is qualified



Ney - direct

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and he's being asked to testify as to that issue right now.

MR. MARKS: Mr. Ney, did you prepare the engineering data here?

THE WITNESS: What data?

MR. MARKS: The one submitted by your firm.

THE WITNESS: No, that was done by Larry Kovacs, P.E. and checked by Jim Kovacs, P.E., and that has nothing to do with the question Mr. Frizell asked.

MR. HERMAN: Mr. Chairman, if we were in May or June and Mr. Frizell wanted to bring in more witnesses, it might be a different story. I submit to you that you have no obligation to listen to people talking about things that have been talked about ad infinitum.

THE CHAIRMAN: And ad nauseam.

MR. FRIZELL: This is ad nauseam. Let's just get going and let Mr. Ney tell us what he knows, just move on. What is all this technical business all of a sudden?

MR. HERMAN: Mr. Chairman, can



Ney - direct

1 we have the ruling?

2 THE CHAIRMAN: I'm trying to make
3 one. Filling in ad finitum and ad nauseam
4 on the advice of counsel, I think if you
5 promise to make it brief, we will permit
6 you to bring it back as a professional
7 engineer.

8 MR. HERMAN: Is that the advice
9 of counsel?

10 THE CHAIRMAN: He said one was
11 enough.

12 BY MR. FRIZELL:

13 Q Do you remember the question, Mr. Ney?

14 A First, eighteen thousand per lot for the improvement
15 cost is not unreasonable.

16 MR. SAGOTSKY: I think Mr.
17 Frizell has to have his own way. Proceed
18 to your next question.

19 MR. FRIZELL: I thought the ruling
20 was in my favor?

21 MR. SAGOTSKY: Yes, it was,
22 because of your persistence.

23 MR. FRIZELL: My batting average
24 is any evidence of my persistence.

25 MR. BRENNAN: It is more



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unreasonable than the \$10,000.

THE WITNESS: Yes, sir, it is.

To give you an example, I wanted a two acre subdivision that was recently approved in Freehold Township and Marlboro Township. Two towns there is a 200 foot lot frontage that has a site improvement cost and bonding of about \$15,000 per lot. Two years ago in July, using the 10 per cent per year, that's almost a \$3,000 increase, which brings it close to 18,000. In 1973 a subdivision, '73 and '74, --

MR. SAGOTSKY: Please don't volunteer, Mr. Ney. You go on and on and the hour is late.

BY MR. FRIZELL:

Q Mr. Ney, did you have an opportunity to review the analysis done by Mr. Nelson in terms of traffic?

A Yes, sir.

Q And the intersection of Route 537 and Route 34?

A Capacity analysis, yes.

Q Could you tell the Board briefly, if you can, the results of your review of that analysis?

A Yes, Mr. Nelson used a series of nomographs, which



Ney - direct

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we based upon the 1955 Highway Capacity Manual.

His analysis was based upon a rural intersection using basically a standard capacity analysis work sheet form. The problem with this form in analyzing it, is you have to go back to the nomographs and run through the same curves that Mr. Nelson did to approach within the percentage of turns and, et cetera, and see if all the numbers are correct.

Since the nomographs are based upon the capacity manual, I went directly to the capacity manual and we went through all of the computations. In addition, I went to the traffic counts that I had conducted and was part of my summary to determine the peak hour factor which worked out to be approximately point nine. Based on the computations, and I will leave the information with the Board for a rural intersection, wasn't exactly in accordance with Mr. Nelson's analysis. We would up with a capacity of 28 per cent greater than Mr. Nelson.

Some 591 vehicles for example, from the approach of I-E, the easterly approach of County Route 537, as he runs it.

MR. FRIZELL: Do I understand that transposition is in error that he made?



Ney - direct

1 A We have to go back to the nomographs. I went
2 directly to the capacity manual. I leave this with the
3 Board and there is an explanation of the capacity manual
4 contained therein.

5 There are stipulations on rural conditions which
6 basically, I will point out that all of the capacity
7 information and statistical information, the manual is
8 based upon studies taken between 1955 and 1956. The
9 manual further states that few data was obtained from
10 the rural locations during the 1955 - 1956 studies.
11 Basically, that is the interpretation, and they give
12 some latitude when the peak hour factor approaches, one
13 multiplies the capacity by 1.4. The normal peak hour
14 factor being .7, since we have .9, we use 1.2, which gave
15 us a 28 per cent increase in capacity over what Mr.
16 Nelson had computed in his nomograph analysis.

17 Q He used his precise analysis and you said
18 it was 28 per cent off in terms of capacity?

19 A I used the actual manual. I didn't use the
20 nomograph charts, which are based on the manual itself
21 by Jack Leesh (phonetic) a number of years ago to
22 simplify the procedures in computing the capacity.

23 Obviously, when you look at the chart and there
24 is a diagram between one thousand and fifteen hundred,
25 you are interpolating. I can't go back and relate the same



Ney - direct

1 scales Mr. Nelson did. I went directly to the computations.

2 Q Then are you saying that the capacity manual
3 itself would repute Mr. Nelson that the studies were
4 done on cars all the way through the 1960's?


5 A Yes, it would. As a matter of fact, when I was at
6 Yale University, L.K. Norman dedicated, who is, in effect,
7 the father and lecturer. I am very familiar with the
8 data that was in the manual and it was actually supposed
9 to come out in 1962 except it took three additional years
10 to edit. There was no additional data taken from that
11 period.

12 Q And you have a copy of it for the Board?

13 A I have a copy. This is my copy of the excerpts in
14 the capacity manual. If you want, I'll leave it here
15 until next week. If you want to look through the capacity
16 manual.

17 Q Would you just describe briefly what
18 the capacity analysis did tell us?

19 A Mr. Nelson's capacity and analysis is based upon
20 basically, what is termed a three time signal. That
21 is one that runs through the same cycle length and
22 allocates the percentage of green. It does not fluctuate
23 with the demand. The analysis that he has done that
24 we have ached through utilization of the manual, is, in
25 fact, the main reason why the capacity manual is undergoing



1 a change right now.

2 The critical lane analysis is the analysis more
3 appropriately, that can be used when a signal is able to
4 fluctuate. It is green time to meet the demand of traffic
5 as registered on vehicular detectors.

6 Q On that point, Mr. Ney, would you just tell
7 the Board again what type of signal this is at that
8 intersection?

9 A This is a fully actuated traffic signal with a
10 maximum cycle of 160 seconds. Not a fixed cycle of
11 160 seconds. There is a minimum of green time as Mr.
12 Nelson ordered, 25 seconds to each approach, which means
13 if a vehicle actuates the signal, one car at 537 at 11:00
14 p.m., that when the green shifts from Route 34 to 537,
15 no other vehicle proceeds through the intersection for
16 25 seconds of green and they rest on that phase. Then
17 they will be back to Route 34 the vehicle waits there.

18 It is a maximum extension of 78 seconds as
19 vehicles are reported passing over.

20 Q Was Mr. Nelson generally correct when he
21 said the State designed more than 50 per cent of the time
22 to the intersecting streets as opposed to the State
23 highways?

24 A Absolutely. There are very, very few instances where
25 the State has given anything close to 50 per cent on major



Ney - direct

1 arterial systems.

2 Q Does that particular intersection currently
3 deviate from that general standard?

4 A Yes, it is one of the few fully actuated traffic
5 signals on a State highway system in New Jersey.

6 MR. BRENNAN: You could get more
7 than 50 per cent of the cycle time on 537?

8 THE WITNESS: Yes, in the absence
9 of an equal demand on Route 34, yes. If
10 the demand is equal, then it will fluctuate
11 fifty-fifty, and if there is more demand
12 on 537, as long as the Route 34 maximum
13 doesn't extend out, then it will go to the
14 maximum number for 537.

15 Q Mr. Nelson also appears to have a different
16 observation from your own, Mr. Ney, in terms of a cueing.
17 He said, that fifteen out of twenty-eight cycles that
18 he observed, cars had twenty-eight on more than one cycle.
19 There were a few threes, and a few twos, as I recall his
20 testimony.

21 Can you explain that different observation?

22 A It's quite true. I can't. There is a problem
23 with that. Actually, I wasn't there when Mr. Nelson was.
24 On a day-to-day traffic, conditions will fluctuate, but
25 there really are very few places along 537 that you can sit



1 and watch the cue form on 537, or Route 34. The most
2 convenient place is the vacant corner where trucks park.
3 I guess it's the southeast corner. If you want to look at
4 the easterly approach, you have to sit in the school parking
5 lot. I have been in the cue of traffic already, which
6 extends past the curve.

7 Now, obviously, if it stacks that far on such
8 occasions, to see that you have to park up at the end
9 of the school and you can't see the signal, and you don't
10 know whether the guy has made it. I don't know how he
11 made the observation. I can't argue whether they are
12 right or wrong.

13 MR. MARKS: Did you make a
14 cueing study?

15 THE WITNESS: Yes, I did.

16 MR. MARKS: When did you conduct
17 it?

18 THE WITNESS: When I made the
19 original study, Mr. Marks.

20 MR. MARKS: Was it labeled a
21 cueing study?

22 THE WITNESS: I testified that
23 on no occasion during my observation that
24 vehicles failed to clear the signal.

25 MR. MARKS: Did you label the



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cueing study?

THE WITNESS: I will if you want me to.

MR. MARKS: You are changing the nature of it.

THE WITNESS: No, I'm not changing anything. I testified at the original hearing, if you look at the tapes.

THE CHAIRMAN: I just have one question that is of interest to me.

I know where Creamery Road is. You just told us on one traffic change you cleared from Creamery Road through the intersection.

THE WITNESS: Just about that, yes. If I can explain what I'm saying.

Approaching vehicles are slowly reducing speed as you approach Creamery Road and the curve, and you get to the school. I have been back to the point where I can't see the traffic light. I don't know if it's green or red. When the cue is moved, I've cleared the intersection, not once, but many times, because I use 537 many, many times. I live off 537.



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THE CHAIRMAN: You would estimate how many cars, normal size vehicles?

THE WITNESS: I would estimate that would be in excess of twenty vehicles, perhaps thirty vehicles, as I indicated, I have to go back in my notes. I've counted as many as 28, 22 vehicles clearing the cycle on 537 during my personal traffic count.

MR. FRIZELL: Is that abnormal green time?

THE WITNESS: Green or 78 seconds of green is once vehicles get rolling the headway figure is about 2.1 per vehicle. Theoretically, any absence of left turn conflicts where traffic could slow down could get about 39 vehicles in 78 seconds.

BY MR. FRIZELL:

Q Mr. Ney, Mr. Nelson also testified about the potential for putting higher density uses on the eastern end of Route 537. Did you take any time to analyze that?

A Yes, sir.

Q What was the result of that analysis?

A I looked specifically at the Monmouth County Topic Study for the areas which basically consist of New



1 Shrewsbury and areas to the east of Colts Neck. The
2 intersection of Swimming River Road and 537, which is the
3 intersection that was mentioned, as being convenient was
4 recommended for improvement because of its critical
5 capacity and its safety problems in the year 1973.
6 Obviously, the program hadn't been implemented, but the
7 study was done in '69 and '70 and at that time for
8 improvement.

9 The intersection of Water Street and Sycamore
10 Avenue and Tinton Avenue, was recommended for
11 improvement on the topic study. Again, I believe it was
12 in '73.

13 Q Is that the immediate vicinity that you
14 refer to?

15 A Yes, sir, it is. On the border of Colts Neck
16 and Tinton Falls. The intersection of Tinton Avenue and
17 Wayside Road was recommended for improvement that has been
18 approved by the County. In addition, Tinton Avenue is
19 scheduled for improvement by the County and when, it's
20 indefinite. From Swimming River Road all the way down
21 through the Ecom Building through Fort Monmouth, including
22 the intersection, and the improvements of Hope Road,
23 and all of the areas of the County roads that those roads
24 are alluded to disburse traffic. That's the report
25 read by the Planning Board. All of them have severe



Ney - direct

1 capacity constraints at their intersections. Many of
2 the improvements have started to be made that was due
3 in the early seventies. That was recently the improved
4 intersections of Sycamore Avenue and Shrewsbury Avenue.
5 There was also some improvement on Route 35 at
6 Sycamore Avenue. Sycamore Avenue is identified as being
7 over capacity.

8 What I'm saying basically, is the roads in the
9 area that are suggested, don't always exhibit severe
10 capacity constraints, and the real problem I have is one
11 road will lead anywhere in terms of major arterials.
12 The best place to get to Route 34 to the north because
13 you don't want to go north on Route 35, your nearest
14 Parkway interchange is either through Five Corners and
15 Lincroft, and you have to go to 109, or back to 106.
16 I believe, or whatever, to 105, and at Route 36 and the
17 Parkway Spur.

18 So, that from an overall access circumvention
19 standpoint, you have to get, in effect, northerly,
20 through Lincroft or easterly through the congested areas
21 that I've just mentioned, to get to major arterials.

22 Route 35 is not a major arterial in this area
23 to service regional traffic because you have to go
24 through Red Bank.

25 MR. FRIZELL: Excuse me, Mr.



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Sagotsky, can we mark that as the Master Plan of the Borough of Tinton Falls.

It contains numerous maps and talks about traffic.

MR. SAGOTSKY: A-58.

(Whereupon, Master Plan for the Borough of Tinton Falls is received and marked A-58 for identification.)

MR. SAGOTSKY: For identification.

MR. FRIZELL: I'm moving that, Mr. Sagotsky. I move my evidence consistently and I'm not offering anything for identification.

MR. SAGOTSKY: I will accept it for identification for the reasons I once told you and we once argued about, that and did tell you if it came to a map and you showed it, all right. Anything else, unless the Board is aware of it, its contents, I'm just accepting it as a recommendation to the Board for identification.

BY MR. FRIZELL:

Q Mr. Ney, based on the fact, do you recall or form any conclusions, whether or not you felt this general area was compatible for these high density forms



1 of use in residential use? In terms of its traffic
2 capacity and overall ability to provide the future
3 residents with a means of access to and from jobs,
4 transportation service entrances.

5 A Which, in this general area?

6 Q The areas you've referred along Route 537.

7 A As far as this type of development complex, I
8 do not feel that that area meets the normal requirements
9 of access and circulation for more intense development.
10 I pointed out, I took a lot of time in reading this.

11 THE CHAIRMAN: How do you feel
12 about the proposed site?

13 THE WITNESS: As I indicated
14 by comparison, the proposed site has
15 excellent regional access because it is a
16 north-south arterial on Route 34. It also
17 has an east-west arterial with Route 18.
18 Which is a limited access freeway.

19 Finally, it has a neighborhood
20 which is sub-regional and a County-wide
21 access through 537, which again is an east-
22 west roadway. I don't know if the Board
23 remembers, but I had maps prepared showing
24 this site in relationship to the surrounding
25 highway employment regions.



Ney - direct

1 I had based it on the distribution
2 of employment as studied by the Monmouth
3 County Planning Board and it worked out a
4 distribution of traffic. A point of fact,
5 the main distribution is north and west
6 because the north Jersey employment centers
7 over the Raritan and industrial centers,
8 have the same type of location to the west
9 of when you use Route 18 to get to 287 in that
10 area. The easterly area of Monmouth County,
11 the Planning Board study in the southern
12 area, were not intense employment centers.

BY MR. FRIZELL:

14 Q Mr. Ney, you weren't here, but I did speak
15 to somebody in your office on this. Mr. Alaimo testified
16 on the record here that the private small sewer system
17 for the public. Do you have any information to the
18 Board of Public Utility contradicting that testimony?

19 A We spoke to a Mrs. Lucy Hernandez at the Board of
20 Public Utilities. She was an analyst and obtained a
21 rate for three developments. I have listed as Sun Bird,
22 which is \$46 per quarter. High Ridge, which was \$25 per
23 month, and Birch Hill Park, which was \$198 a year. These
24 are the rates she gave us. They're all in Burlington
25 County.



Ney - direct

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MR. MARKS: I'm going to object to it. This witness didn't gather it first hand. I believe it came in good faith, but they are interconnections. Did you get her phone number, by the way?

THE WITNESS: No.

MR. MARKS: You didn't talk to her?

THE WITNESS: I was out.

MR. FRIZELL: I submit, anybody can call the Board of Public Utilities and possibly get the same assumption.

THE CHAIRMAN: I think we can accept that on the basis of what you submitted.

MR. FRIZELL: I think as you're saying, you have to understand Alaimo's testimony was more extensive. We're using that as an example and what I'm saying, you can check with the Board of Public Utilities.

MR. MARKS: That's not the function of this Board.

MR. FRIZELL: I understand that. That was testimony from that side of the evidence. I didn't ask for it. That's where it came from. The Public Utilities said



Ney - direct

1 \$46 a year for the same development.

2 He said 500 a year. And actually, it was
3 \$180 a year.

4 BY MR. FRIZELL:

5 Q I do have one question. The traffic
6 impact on the elementary school, could you tell in your
7 opinion what it involved?

8 A Well, that's under the assumption if there was a
9 noise problem. You may have the double pane windows
10 or if there was a noise problem, I'm not prepared that
11 it would or wouldn't be. I did not make that type of
12 study. I mitigate that there were some noises.

13 There is a question as to the parking lot and that
14 additional parking would have to be provided to compensate
15 for that which are lost. That's what I would have
16 intended.

17 Q Well, one other question on the same idea.
18 They said something about they were short of spaces
19 for parking. If you widened the streets, do you have
20 any opinion whether that could be involved?

21 A As I stated, there would be a taking from the
22 parking lot and it would have to be made up with
23 additional parking.

24 THE CHAIRMAN: I think Mr. Nolan
25 has already testified they really can't



1 afford any land to expand the taking of
2 any parking lots. As a minuscule playground
3 as it is right now. He also did testify
4 there is a real noise pollution problem
5 from 537 as it now exists.

6 THE WITNESS: Just on the parking
7 end. I have not done an analysis which
8 might be possible by looking at vehicles
9 there to see whether a realignment of
10 parking based upon the compact car and a
11 full size car mix might increase the
12 efficiency of the lot something like that.

13 Obviously, if they were a key
14 problem, then widening would have to take
15 place on the other side. The only point
16 I would make is that at any time, whether
17 it is a County project at a later date
18 maybe ten years from now, or the development
19 in the area causes traffic to cause
20 intersection widening, that would be a
21 consideration. That would have to be made
22 at some point in time.

23 MR. FRIZELL: Let me include an
24 argument on the same point. As I recall
25 his testimony, he said, this project, which



1 on a full pack of \$50,000 per annum,
2 excuse me, on a \$50,000 average sale price
3 per unit, if you then take the latter from
4 the information from the architect about
5 sales prices in an area when bought, the
6 package would be \$90,000 for the unit,
7 99 cents of County school taxes against that,
8 and come up with a \$400 surplus to the School
9 Board for this development.

10 MR. SAGOTSKY: In light of what
11 you just said, didn't you just say that
12 would generate \$100,000 and that could be
13 equal to \$100,000 in the local --

14 MR. FRIZELL: \$400 for your
15 surplus at full build-out because that is
16 the break even point.

17 MR. MARKS: Mr. Ney, how come
18 you didn't consider the traffic coming
19 from the shopping center on the corner of
20 537 and 34?

21 THE WITNESS: For two reasons.
22 One of which I'm not sure they'll ever be
23 built. Secondly, the shopping center
24 itself would really crowd this development.
25 I know the reason it hasn't been built,



Ney - direct

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because overlooking this feeling it didn't have the population to support or to generate any traffic. Again, a shopping center we would have to look at individual units per se, and I was concerned by any driveway activity.

MR. MARKS: Don't you think the other traffic is going to come from other areas of the Town to get to the shopping center?

THE WITNESS: Some, yes.

MR. MARKS: You mean more than from this proposed development?

THE WITNESS: Oh, certainly, yes, I also pointed out that --

MR. MARKS: So you have considered some of the traffic going into that intersection?

THE WITNESS: From the shopping center?

MR. MARKS: Sure, being generated by the shopping center.

THE WITNESS: I will answer the impact no. I think I considered it otherwise.



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MR. MARKS: You said that project is in excellent north-south access; is that correct?

THE WITNESS: Yes.

MR. MARKS: You consider it an excellent north-south access to travel south on Route 34 and all the way down to the Collingswood Circle, five miles down and five miles back up again. The industrial area, is that an excellent north-south access?

THE WITNESS: What are we talking about?

MR. MARKS: To the industrial area.

THE WITNESS: I'm not talking about an industrial area, I'm talking about residential area. I indicated that in my opinion --

MR. MARKS: You want to change?

THE WITNESS: I'm not changing anything.

MR. MARKS: It's an excellent access, north and south access, for the industrial area? Is it an excellent north-



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south access for an industrial area?

THE WITNESS: For industrial areas when the highway development access is provided, yes, it will be. Under current conditions, as I indicated, I don't feel that area will develop for quite some time. When it does, it will need the construction of a jug-handle and a signal at the entrance to the Earle Naval Base. Once it has that, we'll have excellent access.

MR. MARKS: You told us that no one knows when it will be built?

THE WITNESS: Yes, that's correct. If it isn't, then it will not have excellent access. None of these commercial areas zoned in the Township will have excellent access.

MR. MARKS: Do you consider excellent access to be cars coming down Route 34 south and trying to get into the project and they would have to go on 18 on the access way and then on the exit way in order to turn north?

THE WITNESS: I don't follow you



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MR. MARKS: Henry, to get into the townhouse commercial industry areas from 34 south, you have to get on 18; do you not?

THE WITNESS: Coming on 34 south, no. You make a right turn into the property.

MR. MARKS: That's not what I said. I said traffic on 34 south.

THE WITNESS: On 34 south you make a left turn on Route 537, which is the way I was contemplating.

If you're talking about strictly the industrial and commercial area --

MR. MARKS: I'm talking about the townhouse area.

THE WITNESS: I'm saying that is how you get access to it.

MR. MARKS: Knowing that you come down Route 34 south?

THE WITNESS: That isn't what you asked me. You asked me how someone coming from the north on Route 34 south would enter the property. Our analysis in which jobs are constructed, which I felt was highly positive recommendation on the



1 developer when he first came in with the plan,
2 I suggested that roadway be placed on the
3 map in conformance with the Colts Neck
4 Master Plan, because as the commercial
5 areas are developed on Route 34 it would be
6 an excellent secondary access. Until that
7 is built, traffic in the residential portion
8 of this development will do so from Route
9 34 south, left turn on 537, and a right
10 turn into the property.

11 MR. MARKS: So you're saying no
12 traffic coming on Route 34 south will
13 attempt to go on Route 34 north; is that
14 correct?

15 THE WITNESS: No, some people
16 may find it more convenient to move through
17 the interchange twice.

18 I assume in our analysis, which
19 is a more conservative approach, obviously
20 it disburses less of an impact on the left
21 turn.

22 MR. MARKS: What you mean is double
23 or nothing?

24 THE WITNESS: In a sense, yes.
25 All the numbers simply mean you have



1 assigned traffic by the shortest, fastest
2 travel time route.

3 MR. MARKS: I have no further
4 questions.

5 MR. HERMAN: Mr. Ney, you mentioned
6 about the proposed shopping center on the
7 corner of 537 and 34, and I think you
8 hypothesized the reason it hasn't been
9 developed is an insufficient demand; is
10 that correct?

11 THE WITNESS: Yes, sir.

12 MR. HERMAN: Would you be
13 surprised if I told you that I tried on a
14 first-hand basis to make a deal with the person
15 that presently owns the land lease there and
16 the real reason is not inadequate demand,
17 but rather outrageous terms asked by the
18 holder of the land lease.

19 THE WITNESS: I don't agree
20 with that.

21 MR. FRIZELL: I don't agree with
22 that either.

23 THE WITNESS: The reason I don't
24 agree with that is that I assisted in two
25 marketing studies by major supermarkets.



1 The reason that the developer may have
2 asked outrageous terms, I don't know who
3 you represent. You represent the supermarket,
4 I'm sure his terms would be something you
5 couldn't beat because he has to amortize
6 expensive off-site drainage costs. In order
7 to do so, if just one user wants it, it is
8 too heavy a cost for the user to come in
9 and say he needs the supermarket, which will
10 allow him to speculate on the remaining
11 smaller tenants.

12 MR. HERMAN: It is sufficient
13 to say if it was not a supermarket, someone
14 who had a legitimate commercial interest
15 there and the price was too high, the fact
16 that the owner of the land lease doesn't
17 own the fee, complicates development of
18 that property?

19 In your traffic calculation, did
20 you contemplate the expansion of the Bell
21 Labs in Holmdel or in Middletown or any other
22 major proposed in approved tracts in
23 coming up with your traffic data?

24 THE WITNESS: Not when I
25 originally did the study. However, I did do



1 the traffic study for the Bell Labs complex
2 in Middletown and also the study included
3 in Holmdel the predominant influence of
4 that traffic will be on 34 and Phalanx
5 Road. I did run an average through the
6 intersection and they would not have a
7 dramatic impact.

8 MR. HERMAN: What's the percentage
9 of increase on Highway 34?

10 THE WITNESS: It is not a
11 percentage increase. 34 comes up from the
12 south and it was in the range of 3 per cent.
13 There was about 2 per cent, 2 to 3 per cent,
14 utilizing 537 proceeding north. I think
15 that the total on Phalanx Road, and
16 between Swimming River Road and Phalanx
17 Road was 19 per cent. I think Swimming
18 River was like twelve, by the way, it was
19 about 7 per cent.

20 MR. HERMAN: All those figures
21 are the result of Bell Labs in Holmdel?

22 THE WITNESS: No, the Bell Labs
23 in Middletown. The Holmdel analysis was
24 similar. We both did similar analysis.

25 MR. HERMAN: That was 2 per cent,



1 and it would be 4 per cent for both.

2 THE WITNESS: That's not an
3 increase. That is vehicular movement. That
4 is not an increase in traffic.

5 MR. HERMAN: But the approximate
6 figures you gave potentially it could be
7 twice.

8 THE WITNESS: Yes, sir. That's
9 correct.

10 MR. HERMAN: I have nothing
11 further.


12 THE CHAIRMAN: Any questions
13 from members of the Board?

14 MR. TISCHENDORF: Mr. Ney, you
15 gave us the work sheets and 8 per cent you
16 gave us.

17 THE WITNESS: I didn't make a
18 lot of copies.

19 THE CHAIRMAN: Did you find
20 any figures on your original report
21 inaccurate, Mr. Ney?

22 THE WITNESS: Yes, I did. I
23 found that heading on page -- I don't
24 remember the number. The traffic
25 eastbound and westbound should be reverse.



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However, on the analysis sheet based upon what the critical lane analysis was done, all the numbers relate to the approach. I reversed these and really -- my notes are for my own use and I also found that I added wrong. In fact, you can reduce my peak hour on Route 537 by about 100 vehicles. It was the critical lane so it does not change the results.

MR. FRIZELL: You are not going to submit that?

THE WITNESS: I initially wasn't. This is one of the sheets that I gave to you and Mr. Festler took a copy and asked for more. I made more.

I now have a copy of the peak hour factors, which shows about .9. Also, the comparison capacity chart would be looking at the outline in red here.

MR. HERMAN: Mr. Chairman, before the meeting breaks up, having already received Mr. Frizell's consent, I would like permission to address you at seven o'clock, on Monday, with a summation, rather than keep everyone here now.




1 THE CHAIRMAN: Fine, that's granted,
2 with Mr. Frizell's consent.

3 MR. SAGOTSKY: I have one
4 comment.

5 The access to 24 acres south of
6 Route 18 where the sewer work is to be
7 located as part of the Orgo site, the
8 State of New Jersey, has informed me that
9 the verdict taken before Judge Yaccarino,
10 they will take it up to the Appellate
11 Division.

12 MR. BRENNAN: What was the
13 verdict?

14 MR. SAGOTSKY: Judge Yaccarino
15 sometime in June decided the Orgo people
16 did have access to that tract of about 24
17 acres south of Route 18, which was land locked
18 because the State had purchased certain
19 surrounding areas that were paid for.
20 I did have occasion to read the briefs.
21 Then Judge Yaccarino decided in favor of the
22 Applicant that the State had to furnish
23 access. The State has informed me that
24 they will definitely take an appeal from
25 that decision to the Appellate Court.



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I just wanted to note that.

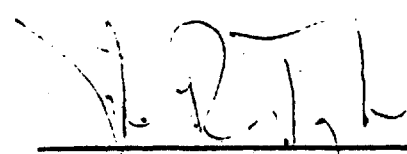
MR. MARKS: Just one further point. I just want to object to the lease cost analysis. I had an opportunity to review it and it goes as part of the argument. I have no problem with it. It's not evidential. It is interlaced with figures and opinions.

(Whereupon, the within hearing terminated.)

* * *

CERTIFICATE

I, STEVEN R. TAYLOR, a Shorthand Reporter and Notary Public of the State of New Jersey, hereby certify the foregoing to be a true and accurate transcript of the proceedings as taken stenographically by me on the date and place hereinbefore set forth.



STEVEN R. TAYLOR
Notary Public of New Jersey

My commission expires
July, 1981.

