RULS - AD - 1972 - 10 11/19/1972

· TRANSCRIPT RE: HEARING OF BLOCK 59

PGS-122.

BOARD OF ADJUSTMENT OF THE TOWNSHIP OF BEDMINSTER SOMERSET COUNTY

RULS - AD - 1972 - 10

January 19th, 1972

Municipal Building, Bedminster, New Jersey.

BEFORE :

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RAYMOND SCHAPLEY, CHAIRMAN. MRS. CANDACE ASHMUN JAMES NERVINE LOUIS STARR

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FOR THE BOARD:

LATTER OF THE

APPLICATION OF ALLAN-

BLOCK 59, LOTS 1, 11,

DEANE CORPORATION,

SALVADOR DIANA, ESQ., ATTORNEY.

ANN SIEMINSKI, CLERK.

19 ARANCES:

WILLIAM W. LANIGAN, ESQ., FOR THE APPLICANT.

INDEX TO WITNESSES

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@ 2 -5			EXAM.	DIRECT	CRC
		·		, <u> </u>	
3		RD OLIVER		• . •	
÷.	RV .	Mr Tentean	-	A	
4	- DL (Mrs Ashann	22/50	**	
5		Mr Starr	23/24/55	• *	
5		Mr. Nervine	24/26		
8	•	Mrs. Mae Van	Arsdale		
		Mr. James Lyo			
7		Mr. Ralph Del	Deo	5. 	
	2	Mr. John Ewin	4		
8		Mr. John Buce	ini		
		Mr. James Qui	AR	•	
9		Mr. Duncan 51	LSWOTTA		
10		ME, FEDER LAE			
10	DAVID MEND	ELSON		•	• • • •
.11				. •	
	BY:	Mr. Lanigan	57		
12		Mrs Ashman	· ·	71/116	1.1.1
		Mr. Schapley		73	·····
13		Mr. Nervine	· .	74	
		Mr. Starr		77	
14		Mr. James Lyo			
15		PE, Jauss Vol			
10	•	Mr John Buee	dad		
18		Mr. Ralph Del	Deo		
		Mr. John Ewin	2.		1
17		• • •			
	-	•		· · ·	L
18					
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-A		•			
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21				-1.	
	9 11 1	•		;	-
22	5) 11 87	•			
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23					
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EXHIBITS

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	DESCRIPTION	EVID.	IDEN.
T-de	Document entitled "Seasonal High Water Table", prepared by Robert Catlin and Associates.	9 C	2
P-21	Document entitled "Septic Effluent Disposal", prepared by Robert Catlin and Associates.	10	2
8-22	Document entitled "Average Depth to Bed Rock", prepared by Robert Catlin and Associates.	11	3
P-23	Document entitled "Soil Survey", prepared by Robert Catlin and Associates.	12	3
F-24	Document, map depicting surface drainage, prepared by Robert Catlin and Associates,	8	
P-25	Document entitled "#inicipal Income Analysis, Allan-Deane Property, Bedminister Township".		4
P-26	Aerial photograph showing the property and the surrounding area,	6	4

MR, LANIGAN: As I indicated at the close of the last meeting, Mr, Catlin's testimony had concluded, and I would not produce him again.

THE CHAIRMAN : NO.

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NR. LANIGAN: Before commencing - and in the interest of expediting the hearing in anyway I can - I would like to have an additional six exhibits marked for identification, beginning with P-20.

The first is an exhibit entitled "Seasonal High Water Table", prepared by Robert Catlin and Associates, and I ask that it be marked for identification as P-20.

THE CHAIRMAN: All right.

(P-20, document entitled "Seasonal High Water Table", prepared by Robert Catlin and Associates, referred to above, marked for identification.)

MR. LANIGAN: The next is a similar exhibit entitled "Septic Effluent Disposal" prepared by Robert Catlin and Associates, and I ask that be marked for identification as P-21.

THE CHAIRMAN: All right.

(P-21, document entitled "Septic Effluent Disposal" prepared by Robert Catlin and Associates, referred to above, marked for identification.)

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MR. LANIGAN: The next is a similar preparation by Robert Catlin and Associates, entitled "Average Depth to Bed Rock", and I ask that be

marked as Exhibit P-22.

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THE CHAIRMAN: Yes.

(P-22, document entitled "Average Depth to Bed Rock", prepared by Robert Catlin and Associates, referred to above, marked for identification.)

MR. LANIGAN: The next is an exhibit entitled "Soil Survey", prepared by Robert Catlin and Associates from the USDA Soil Survey Map of the area, of course, and I ask that that be marined for identification as Exhibit P-23.

(P-23, document entitled "Soil Sarvey", prepared by Robert Catlin and Associates, referred to above, marked for identification.)

MR. LANIGAN: The next is a map depicting surface drainage, prepared by Robert Catlin and Associates, and I ask that this be marked for identification as Exhibit P-24.

THE CHAIRMAN: All right.

(P-24, document, map depicting surface drainage, prepared by Robert Catlin and Associates, referred to above, marked for identification.)

MR. LANIGAN: The next is a sheet entitled

"Municipal Income Analysis, Allan-Deane Property, Bedminster Township", the sum and substance of which was testified to by Mr. Catlin, and this is a recap of his testimony, and I would like to have that marked as Exhibit P-25 for Identification.

(P-25, document entitled "Municipal Income Analysis, Allan-Deane Property, Bedminster Township", referred to above, marked for identification.)

MR. LANIGAN: Finally, an aerial photo showing the property and the surrounding area, which I would like to have marked for identification as P-26.

(P-26, aerial photograph showing the property and the surrounding area, referred to above, marked for identification.)

MR. LANIGAN: I would like to call my witness, Mr. Alan Oliver, Mr. Oliver, present yourself and be sworn.

RICHARD OLIVER, called as a witness on behalf of the Applicant, being first duly sworn, testified as follows:

23 DIRECT EXAMINATION BY MR. LANIGAN:

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Q For the benefit of the record, will you state your full name and address? Alan Richard

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Oliver, RD, Nashanic Station, New Jersey,

And by whom are you employed and in what capacity? I am employed by Donald H. Stires Associates in Somerville as a chief engineer.

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Q What is your educational background, Mr. Oliver? I am a graduate of Lehigh University, civil engineering degree.

Are you a licensed professional engineer? Q Licensed in New Jersey as a professional engineer. I have additional extension courses taken at Rutgers in storm sewerage design.

What has been your experience with respect to Q tracts of this size both as to minicipalities and as to ownerdevelopers? I have been working in À this field for about 10 years designing storm sever and sanitary sewer and roads on tracts of this size and smaller, industrial and residential tracts, working both on the developers, from the developers' point of view and as a concelerat to townships on occasion.

Mr. Oliver, did you at my request look at the 21 property which is the subject of the application before this Board of Adjustment? Yes. I did. Å. 23

Can you tell me with reference to Exhibit P-26 0 whether the property is shown thereon? Yes, A 25 1 it is.

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Q Have you seen this exhibit before, Mr. Oliver?

By whom was it prepared? A This was prepared at our direction, at our office's direction in conjunction with the aerial topography that was flown for the site. This is a composite photograph of the many aerial photographs that were taken for topography.

Q Does it depict the subject property? A It does.

MR. LANIGAN; If there is no objection, I would like to have P-26 offered into evidence THE CHAIRMAN; All right.

(P-26, aerial photograph showing the property and the surrounding area, referred to above, having previously been marked for identification, received and marked into evidence.) Q Making reference, if you will, and speaking as you make reference, can you briefly describe the location of the property and location in reference to abutting highways

here this is Route 287. Interstate 287.

Q Kindly, if you will speak for the benefit of the record, and indicate for the benefit of the record to which portion of the photograph you are pointing. A The highway shown across the left and upper portion of the photo-

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graph is Route 287. The highway crossing the lower portion of the photograph is Route 78. This area in the corner of the is. of course, the Pluckemin area.

A line - you can see possibly across here - is the township line between Bedminster and Bernards Township.

Is the location of the area within Bedminster Township noted in anyway on the map? The property in question - Allan-Deane's property - is delineated by the orange line.

An you have affixed, have you not, a designation 0 Bedminster T "Bedminster Township"? Å on the left side of the photo.

At my request have you physically inspected the Q premises? Yes, I have.

Could you in very brief terms describe the Q premises for the benefit of the record, starting perhaps, if you will, at the upper northeast quadrant of the property. Well, the upper northeast portion of the property in Redminster Township is a rather attractively wooded area. woods extending all the way down through this area along 21 the township line.

22 Around the township line the area is hilly but near 23 the top of the hill it's more or less a plateau. In that 24 area coming off to the left side of the photo there is a very 25 steep embankment more or less through this area paralleling

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	Baute 287 As we can down onto the lower portion of the
1	ANALE 207, SO WE COME OWN ONCE LIE LONGE POLLINE OF LIE
2	property near Pluckemin, we have a large open field, and the
3	terrain there is just a gentle slope down toward the highway.
4	Q Is it wooded or is it open field? A This
5	is open field in this portion near Pluckemin Center.
6	Q I would like you to refer now, if you will, to
7	a map entitled P-24, which was prepared by Robert Catlin
3	Associates from material submitted by you. Are you familiar
9	with that map? A Yes, I am.
10 j	MR. LANIGAN: If there is no objection I
	will ask the Board to admit that into evidence
12	as Exhibit P-24.
13	THE CHAIRMAN : Yes.
14	(P-24. document, map depicting surface
15	drainage, prepared by Robert Catlin and Associ-
16	ates, referred to above, having previously been
17	marked for identification vacatured and marked
: 13	into cuidence)
10	
	V ACISTING, 11 YOU WILL, EG EDAE MAP, CAB YOU
20	Gescripe in specific terms the topographical features of the
2F	Iand which you viewed and inspected at my direction?
- <u>-</u> 22	A Well, this is a topographic map and on it is delineated
23	the individual drainage areas - the drainage areas delineated
24	by a broken line and the drainage ditches and the direction

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25 of flows in those ditches indicated by a heavy dark line,

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the general overland flow being indicated by small arrows. From this map you are able to draw conclusions the drainage features of the tract? A' Yes.

Referring now to the exhibit marked P-20. I ask Q you if you can identify it? Yes. I can. A And what is it? What does it depict? A This Ô. is another map of the tract showing the seasonal high water table, the variations of seasonal high water table.

> MR. LANIGAN: If there is no objection. I would like to have Exhibit P-20 admitted into evidence.

> > THE CHAIRMAN: All right.

(P-20, document, entitled "Seasonal High Water Table", prepared by Robert Catlin and Associates, referred to above, having previously been marked for identification, received and marked into evidence.)

Mr. Oliver, looking at that, can you draw a con-Q clusion as to the seasonal high water table with respect to 20 A good portion of the tract the tract? 21 in Bedminster Township has a rather high seasonal high water 22 table.

Will you refer to the exhibit which has been 0 marked for identification as P-21, and I ask you if you can identify that? Yes. I can. A

1 What does it depict? A This depicts 0 2 the possibility of putting septic systems on this property. 3 hat areas are good, fair and poor. 4 3884 X 734X 4.5 y MR. LANIGAN: If there is no objection. 5 I will ask that Exhibit P-21 be admitted into evidence. 6 ÷. the surrege strate 7 THE CHAIRMAN: All right. 8 strate and the second (P-21, document, entitled "Septic Effluent 9 Disposal, prepared by Robert Catlin and Associ-10 ates, referred to above, having previously been 11 marked for identification, received and marked 12 into syldence.) " " say " lad in faray " Begeth 13 Mr. Oliver, what comelusions can you draw from 0 14 that exhibit? The first A of From this I would say that 15 the possibility of using individual septic systems on this 18 site is severely limited. 17 With respect to the applicant's application you 0 18 would conclude then that septic systems -- A Would be 19 one of the question. I would say. 20 What about with respect to other uses on the 21 tract. the tract being zoned for one and five acret a set 22 A It would be the same whether one or five acre zone or 23 whatever. 24 Q is So that you have concluded there is a necessity 25 for severs on the tract? Yes.

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Q Is that with respect to any development? A Tes. Q I ask you to look at the exhibit marked P-22, ENG I ask if you can identify it? A Yes, I can.

Q What does it depict? A This depicts
7 the average depth to bed rock which goes hand in hand with
8 the septic system problem.

MR. LANIGAN: If there is no objection, I will ask that P-22 be admitted into evidence.

THE CHAIRMAN: All right. (P-22, document entitled "Average Depth to Bed Rock", prepared by Robert Catlin and Associates, referred to above, having previously been marked for identification, received and marked into evidence.)

Yes.

Q Mr. Oliver, what is your conclusion to be drawn
from the map entitled P-22? Are there any special rock
problems presented? A The largest by
20 far, the largest portion of the land in Bedminster Township
21 shows bed rock at varied depths from two to eight feet be low the surface.

Q Is it capable therefore of being sewered? A Of being sewered?

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Sewered?

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Q I show you now a soil survey entitled Exhibit Fall, and I ask if you can tell us what it depicts? A This depicts the various types of soil on the property.

> MR. LANIGAN: If there is no objection, I ask that Exhibit P-23 be admitted into evidence. THE CHAIRMAN: All right.

(P-23, document entitled "Soil Survey", prepared by Robert Catlin and Associates, referred to above, having previously been marked for identification, received and marked into evidence.)

Q Mr. Oliver, are there any special questions, or soil questions or problems created by the map as depicting the soil survey on the applicant's premises? A No.

Q Mr Oliver, at my request did you give some consideration to the applicant's plan and the estimated runoff which would occur as a result of the applicant's plan? A Yes, I did.

Q Did you in conjunction with that study give some 20 consideration to existing run-off of surface drainage on 21 the applicant's land? A Yes, I did.

Q Did you give some consideration at my request to the possible run-off and drainage run-off created by existing zoning? A Yes

Q What are the results of your study? A

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approached this study from a standpoint of a run-off factor which is directly proportional to the amount of water that will run off the property.

The factor that we work with is a factor which will range anywhere from .1 to about .9 - .9 being the run-off that you would expect on a paved surface.

In other words, for a given amount of water, rainfall, on a paved surface, approximately 9/10ths of it will run off as opposed to say grass land, where given an amount, about 30 percent of the water will run off.

As I said, this is directly porportional to the amount of run-off that we can expect from the entire tract. Under the existing situation the figure that I have come up with is .23 under --

Q Excuse me. You say "existing situation". Would you clarify that for the benefit of the record? A The property as it stands now - wooded and open fields.

Q As it presently exists without any development whatmoever? A Correct. Q Would you explain that figure again. A The figure that I have is .23, meaning that for each given quantity of water falling on the property we can expect about twenty-three one-hundredths of it to find its way down to flowing off the property at the drainage points.

Were you supplied with certain figures as to what

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the development would be on the basis of the plaintiff's on the petitioner's application here? A Yes, I

Q What are those figures? A The figures I was supplied with have to do with anticipated roof area, parking lot and driveway area and payed streets.

Q What are those figures, explaining, if you will in some detail, the basis for those figures as to each type of use? A Well, in the wooded, presently wooded areas it is anticipated that 8.69 acres of land will be cleared and will become roof area, building roof ered. In the wooded area again approximately 9.3 areas will become streets, 2.71 acres will become driveways and parking areas and some 59.5 acres will become lawns.

In the open area - the open area is about 140 acres total as opposed to about 326 acres of wooded area - in the open area approximately 6.08 acres is anticipated to become roofs, 4.68 acres will become streets, 20.10 will become driveways and parking lots and 35.13 acres will become lawns.

MR. STARR: What was the figure for parking lots?

THE WITNESS: In the field for driveways and parking, 20.10 acres.

Q What is the estimated run-off in that respect with that development? A With that development,

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working with the same run-off factor that we were talking a-

As compared to what for raw land undeveloped? 0.23.

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Q Do you have any figures with respect to the development of the tract as it is presently zoned in one and five acres? A Yes, I do.

Q What figures were you supplied with respect to such a hypothetical situation? A We were supplied with anticipated, with an approximate amount, approximate number of houses that could be built on the property as it presently exists.

Q And the figures produce what result? A Using those figures and coming up with another run-off factor, I get a run-off factor of 0.28.

> MR. LANIGAN: May I parenthetically say to the Board the figures which were supplied to Mr. Oliver were those figures testified to by Mr. Catlin at the last hearing. To the extent that there is a minor deviation in one of the figures related, these figures control. There was a hundredth percent error in one of the figures, but these are the correct figures testified to by Mr. Catlin.

Mr. Oliver, based on your examination of the

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tract and the amount of run-off, are there provisions on the tract for draining the tract of this run-off? A Yes Q What are those provisions? A They are the existing drainage ways and open ditches presently existing on the property.

Q Referring to the exhibit which is depicted as surface drainage, can you identify by stating for the benefit of the record - and holding the map up so that the Board can see it as well - what those areas are? A There are basically three drainage areas that we are concerned with in Bedminster Township.

The northerly section, which on the map has a drainage ridge line here, and everything within that area generally finds its way into either this drainage structure, this drainage ditch, or off onto the road, the Schley Mountain Road, I believe it is.

Q That is the area of the proposed residential development, is that correct? A A small portion of it is -- yes. The area is -- only a small portion of it will actually be developed.

Q what are the other drainage areas? A Then there is a major drainage area in the central portion, the drainage coming down a large swale through the property and along this northern boundary of the Wardley Woods property out to Route 202-206. 6

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That is generally the area of the office re-0 2 search building proposed and motel meeting center complex? - 44 It extends from the top of the hill where there are 4 rome residential units proposed down through the office area. 5 yes.

Q what is the third area? Å The third area would be down on the southerly side of the tract. There is a small area of land which finds its way down toward Washington Valley Road.

 10^{-1} Did you consider what would happen to the 0 drainage as it left the tract? - A Yes. we be What provisions are there in existence for Q 13 reception of such drainage? There are exist-A ing drainage structures at the major highways carrying the existing drainage coming off the property now underneath the highways.

And where do they flow to? The Q southerly one would flow to Chambers Brook and the other two find their way eventually to the river.

20 Do you anticipate any special problems with 21 respect to the drainage on the tract in terms of draining 22 this run-off? No. I don't. A 23 1 What problems, if any, do you anticipate with Q 24 respect to the reception of the drainage as it leaves the 25 tract? A It has been our experience

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on many subdivisions adjoining state highways or township reads that the old drainage structures are inadequate and require enlarging, if not even before the subdivision. Oftentimes they are too small to carry the water before subdivision or before any improvements to the property, but as a matter of practice when the property is developed usually these structures have to be enlarged or new structures created, dualizing the original structures.

9. That would be created and paid for at the appli-Q 10 cant's expense, would it not? Yes.

With respect to the severing of the tr Û have made a statement that the tract must be severed the applicant has previously represented - both by testimony and in the opening - that it is the intention of the applicant to sever the tract.

16 # Did you at my request make an examination of the feasibility of such severing? Yes. I did. A 3 What are your conclusions with respect to the Q desirable manner in which this tract could be severed? A It is my feeling that the most desirable manner of 21 severing this tract would be to implement the tricounty 22 study, which would eventually bring a trunk sever line in-23 to the Pluckemin area.

Anticipating, Mr. Oliver, that that might never Q 25 || occur or might not occur because either it is not possible

or the Township of Redminster did not desire it, what are 1 any other alternate mans? A Another possible 2 3 alternate would be to sever down to the Bridgewater Township 4 trunk line. We are aware, however, that that trunk line is 5 presently over capacity and that they cannot receive any 6 additional sevage at that point at this time. We feel, how-7ever, with the possibility of this Pfizer coming in that something is going to have to be done for them, 8

⁹ We know that Bridgewater Township is trying to solve ¹⁰ their problem in some way, dualize the line, try to eliminate ¹¹ the infiltration in that line. It's a possibility that some-¹² time in the future that might be a route for us to use in ¹³ sewering.

14 Mr. Oliver, anticipating that Bridgewater will Q 15 not accept the flow, that Bedminster will not join in any 15 agreement with Bridgewater, and that never comes to pass and 17 never becomes a reality, what are the alternate methods for 13 sewering the tract? We could sever the tract A 13 by pumping up over the mountain into the sewer system which 20 will be serving the Bernards portion of the tract.

Q That would not affect the Township of Bedminster
at all, would it? A No. It would not.
Q Do you have any idea as to what would happen to
it as it was pumped over? A As I understand
there are two possibilities. We might have an on site

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treatment plant or Bernards Township has some plans of exdimetheir trunk lines up near this tract, and we would mentaly be able to use them.

For the tract development owned by the owner and 5 the adjacent community? Yes. sir. A 6 Assuming that that didn't occur or couldn't Ő. 7 occur, or for some reason the owner did not choose to avail 8 himself of that method, is there any other method to sewer 9 the tract? Yes. We could still build À 10 an on site treatment plant on this site and discharge the 11 effluent north along Route 202-206 to the river. 12

Q Is that being done now somewhere in the area? The State Department of Transportation complex has a A treatment plant at their site on the other side of Route 202-206.

15 They are doing exactly that right now? 0 They are treating and emptying into a drainage ditch over there.

19 Into a regular drainage ditch? Yes. Q ::-A As a result of your examination. Mr. Oliver. have you any conclusions with respect to the feasibility of 32 the sewering of the tract? I feel that the A 23 tract can be sewered one way or another.

And the applicant has represented, as well, that it will be sewered --À That's right.

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-- by whatever means and at its expense?

Do you have any opinion or idea as to the necessity of severs in the Pluckemin area based on the maps and based on what you know of the area? Å Based. on the soil studies and other studies that I have seen of the area. It would be my conclusion that the whole area is 3. in trouble as far as private septic systems go, and that a sever system is needed in the area.

In the course of your examination - and I realize 0 you are not a certified ecologist or conservationist. there be such a thing - did you consider those factors in your examination of the site? Yes. we did. A

What are your conclusions with respect to the 0 ecology and the conservation of the tract as it pertains to this application? I see no problems A. ecologywise. The main feature of the tract that could have an ecological problem created, if it were developed, is the extreme slope that we mentioned earlier, the wooded slope, where we plan no development. It will be left as is. The trees will remain and it will be left untouched.

What would happen if you developed that excessive Q If development did push into slope? A that area and trees were taken out. I am sure you would cause a considerable erosion problem.

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That's precisely the conclusion of the Bedminster Q spectome seven years ago and the master plan, is it

Yes.

MR. LANIGAN: I have no further questions THE CHAIRMAN: Does any member of the Board have any questions? Mr. Starr?

MR. STARR: I will defer then for the moment.

9 THE CHAIRMAN: Are there any questions? 10 EXAMINATION BY MRS. ASHMIN:

I want to ask you, Mr. Oliver, have you Q opinion about the amount of water resource there is i property excluding all development? In other words, you are talking about a lot of run-off and the water that is absorbed on the land or isn't absorbed, depending on how much pavement you have and how much you don't have. A Right.

Now you talk about the amount of run-off you Q have if you have it developed as it is zoned for now,

A

Yes.

versus the proposed development? A Yes. -Would you have a figure for no development? I had a figure that was relative to the three of them.

Could you give me that again? 0.23. A I don't know whether it is a fair question, and

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Does this strike you from a conservation or ecology or an engineer's point of view as a piece of property that has a water resource worth saying for the basin? A L'n not sure I understand what your quastion is or what you are driving at.

> MR. LANIGANS I didn't either. We represented, of course, that we are going to bring city water to the tract, so that in terms of depleting the underground water on the water resource which exists, we would not be discurbing it in anyway. I am not sure I understand your question.

> > MRS. ASHMIN: Never mind.

MR. STARR: May I ask a question?

THE CHAIRMAN : Yes.

EXAMINATION BY MR. STARRE

12.02

Mr. Oliver, when you mention these various run-Q. offs that goes with the development you are suggesting, and without it, and under the other zoning ordinance, what rainfall were you using? How did you determine that?

That is exactly the reason I did it. I don't want to get into all the variations of rainfall intensities and state whether 25. 1 it's on a five year storm or a ten year storm or a fifty year

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storm of sixty minute duration or twelve hour duration.

figure that I have given you ---

A VOICE: It doesn't mean anything.

MR. LANIGAN: Excuse me. Will you let Mr. Oliver finish his testimony? You are out of order.

A VOICE: You are just as much out of order as I am.

THE CHAIRMAN: You will have a chance to question this man in a few minutes.

A The figure I have given is a relative figure that in fact in figuring the run-off for anyone of those storms that you want to discuss, this factor enters into the equation and is a direct multiplier in that equation and it is directly proportional, in other words, to the run-off.

MR. STARR: That's all.

EXAMINATION BY MR. NERVINE:

Q Are you saying it's a constant, sir, or not?

MR. NERVINE: He used the same figure each time.

EXAMINATION BY MR. STARR:

Q You take an average rainfall over a given period of time, is that the way you figure this? A All right. If you are trying to compute the volume of water or

Oliver

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the rate of water run-off then you must go into what storm you are working with - a five year storm, a ten year storm, a fifth year storm.

Q You mean a maximum storm in five years? A Yes.

Q Did you do this? A I did it for my own benefit for one particular instance.

If you would like I will give you the figure.

Q We had some problems here, you know, earlier in the year.

MR. LANIGAN: With respect to which purtion of the property are you referring?

MR. STARR: We had a lot of rain here, Mr. Lanigan.

MR. LANIGAN: With respect to which portion of the property are you referring to, Mr. Starr?

MR. STARR: All over the community, and we had some pretty bad flooding, and I believe the ditch that you refer to on this property and emptying onto Route 202 caused a lot of trouble down there. The road was flooded.

Q In your figuring did you consider that particular series of storms we had here in September? A No, I did not. That storm is beyond the realm that we normally

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1	base our computations out is that that they have
2	EXAMPLATION BY MR. MERVINELS TAR CARENDAR & Louis on serve
3	Q Six, in your run-off testimony did you indicate
4	that new receptacles would be accessary in the three loca-
5	tions you talked about? we are the I indicated that,
6	they might possibly be wild reverence of the set will ave
7	Q And this would be provided by whom, do you know,
8	this replacement of the receptacles?
3	developer, by the gamer of the property and a character
10	Q Also, did you toatify to the fact that, severa
11	would be necessary for any development in this area under
12	question?
13	Q Even as it is presently sound? A Xes.
14	Q Are you saying that on five acre tracts no
15	septic system could possibly work as it now stands?
16	A I an saying it is doubtful and sate of sate of
17	Q In other words, that a your opinion? A Yes.
18	M. NERVINE, That's all 257
19	THE CHAIRMAN; Mrs. Ashman, do you have
20	any further questions?
21	MR.S. ASHDEIN ; No.
22	THE CHAIRMAN: If there are no further
23	Charles questions from the Board members, if the public
24	has any questions in regard to this testimony
25	this withes they may not ask the witness they are and the

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We will take this lady here.

MRS, MAE VAN ARSDALE: I live on what they call Washington Place. It isn't a street, an accepted street by the township. However, we do live back in on this street which is very close to this development. It is off Schley Mountain Road,

During the last storm we had a terrible situation. It was unbelievable. The water came from that montain through this ditch right through our yard and it raised it about three feet and came right over the street.

There are two culverts in there, two little drainage tiles - I guess. They would be about thirty inches in diameter, and the water came right up over that and eroded a lot of our soil. We had filled in there before and it just went. All the soil went under 287.

THE CHAIRMAN: Do you have a question to ask?

MRS. MAE VAN ARSDALE: Yes.

THE CHAIRMAN: Then ask a question. CROSS-EXAMINATION BY MRS. MAE VAN ARSDALE:

Q I would like to know what is going to happen to this water coming from the mountain? If they are going to

Oliver - cross

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put additional water in that ditch it certainly is going to

and we poor people at the foot of the hill have a

THE CHAIRMAN: Do you have an answer to that question? What is going to happen to that water?

A You have the water now.

Q We are going to have more if you put more in there. A The specific area you are speaking of, as I picture the site, actually has very little additional drainage coming, will have little added drainage due to this development, because there is only a small portion of property up at the top of the ridge above the drainage area you are speaking of that will be developed.

Q All right. On our streets - you are going to have streets on top of the mountain, and where are the storm sewers going to drain - in that ditch? Water has to come down and you are on top of the mountain. What are you going to down this water, throw it over the hill?

drain in that drainage area.

Q That's additional water. If you could have seen
that water and the same with Schley Mountain Road, you go up
there now at the mouth of Washington Place and there is a
streak of ice there.

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MR. LANIGAN: Mr. Chairman, you know, I enjoy hearing this, but if she has a question, please let her ask it.

MR. DIANA: The Chairman was just going to interrupt.

MR. LANIGAN: Do you concur?

THE CHAIRMAN; I do, Do you have any questions to ask this witness?

MRS. MAE VAN ARSDALE: The water runs there at a high level. That's all.

THE CHAIRMAN: Is there anyone else who has a question, and we will have questions only now in regards to the witness?

MR. JAMES LYONS: I live on Larger Cross Road.

CROSS-EXAMINATION BY MR. JAMES LYONS:

Q My question pertains to this subject that someone brought up about city water. May I ask this question?

> THE CHAIRMAN: If it is in regard to anything he has given in his testimony.

MR. JAMES LYONS: I don't know who talked about city water.

MR. LANIGAN: I believe Mr. Catlin did. Q My question is - if you bring city water in, doesn't this imply some sort of a high tank on top of a

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Oliver - cross

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mountain someplace?

THE CHAIRMAN: Is anybody able to answer that?

MR. LANIGAN: Mr. Catlin testified as to the availability of city water to the tract, and there is no tank contemplated in the Township of Bedminster to bring city water in.

MR. JAMES LYCNS; In sight of the Township of Bedminster?

MR. LANIGAN: I don't know of any in sight of the houses, frankly.

MR. JAMES LYONS: Thank you.

THE CHAIRMAN: Is there anyone else who has any questions?

MR. RALPH DEL IEO: My name is Ralph Del Deo, and I live in Bedminster. I would like to ask a question of the Board as to the procedure being followed.

Mr. Lanigan correctly, I assume, objects if the questions asked by the audience are improper in his opinion and you rule on it. Are we not permitted to object if we feel his questions are improper or are leading or if he is testifying instead of having the witness testify? Is he in a different position than we are? 1

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MR. DIANA: I should answer that. A11 procedures before a Board of Adjustment are in-There is a certain amount of liberality. formal. It is not like in a court of law where you have attorneys for both sides and objections are made and to be interposed to the form of the testimony. At this point, however, let it be emphasized that you may ask the witness any questions with regard to the testimony which he has given during these proceedings. If you have a statement to make, an opportunity will be given to you to make the statement, at time you may be placed under oath and your statement will have the same weight as presumably the witness who is now testifying.

But for an orderly proceeding you may not get up now and make a statement, but you may ask this witness any questions with regard to the testimony which he has given here at this hearing.

MR. RALPH DEL DEO: My question was - if we are permitted to object to Mr. Lanigan's questions if we feel they are improper? - because he objects to the questions that people ask in the sudience. .

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	Oliver - stars 32.
1	()
2	objected to a question put to the witness. I
3	think so far all he has done is he has objected
4	to statements being made and that's a proper
5	objections, LANTANA we will say the situate
6 .	ME. BALPH DEL DEG. Are you ruling that
7	ve can't object to his questions before some-
8	thing goes in the meand if we feel it would be
9 ^{- ;}	improper to an the people it one of
10	ME DIANAS I an auggesting to you that
11	so far in these proceedings I don't recall that
12	Mr. Lanigan asked his vitness any question which
13	would be objectionable. I we a service system.
14	Don's alounderstand. That is not to say
15 -	plane? In the statement of the vitness must be accepted as
16	the plane? the truth. A to be plane out at the the plane
17	about? MR. RALPH DEL DEO: I don't want to
18	argue with you - some other time we have a
19	160,000 ga difference of opinion on that. May I ask the
20	witness a couple of questions?
21	up that would have the CHAIRMAN: Surely.
22	CROSS-EXAMINATION BY M., DELEDEOLOGIC CONTRACTOR PART OF STREET
23	ever Que distry you togsified. I belleve, that the state
24	severage plant is exactly the same as the proposed severage
25	plant on the site sais that correct? I so isto the otra No.

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Oliver - cross

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Who testified to that?

MR. RALFH DEL DEC: Was that you, Mr. Lanigan? Did you say that it was the same type of sewage disposal plant?

MR. LANIGAN: We will ask the witness. Is it the same type of plant?

THE WITNESS: That we propose, no.

MR, LANIGAN: What type is it?

THE WITNESS: I homestly don't know what type it is. It's a small treatment plant for the facility there, and I think the important thing there is that a treatment plant was wested

there rather than going to a septic system.

Q How many gallons of sewage would be used in this plant? How much would come out of this site and go through the plant? A In our plant you are talking about?

Q Yes. A In the neighborhood of 19 160.000 gallons a day.

What kind of plant are you talking about putting up that would handle that much sewage? A Many, many plants handle that much sewage. We would put up whatever was dictated at the time. We are not designing now. The state has say in this and the township has say.

How much effluent would go into the stream?

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The 160.000 gallons a day.

When you get this water running off the site --ese any texts in preparing your testimony here? Oh. I used the knowledge of a number of texts that I 5 have used over many years.

Is your information based on a study of books 0 and statistics, or is it based on a study of the tract itself? It's based on a study of books, a study of the tract and on experience.

10 Based on your study of the tract, how many Q 11 gallons of water would you estimate come off that that into the stream? A As I said before. E 13 depends on what kind of storm you are talking about.

14 I believe the state publishes annual rainfall Q 15 statistics, does it not? I presume they 16 do. yes.

17 And the county publishes them also, isn't that Q 13 correct? Yes. A

> Did you consult those figures? No. no need to.

Why not? Wouldn't that have told you about how such rainfall to expect at this tract in the average year? Over a period of a year you are talking about? Q Yes. How much rainfall? Å Q Yes. A I did not look into that. I

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don't see the need for it. I don't understand what you are

Q In talking about the amount of water that comes off this tract - and if I am not mistaken that was basically the lady's testimony or question on the Board - you are dealing in percentages, and you indicate a thirty percent increase in your use over the present status of the property, roughly, is that not correct? A I haven't computed the percentage. I don't know. The figures that I gave you - if that is thirty percent.

Q Can you look at your figures and tell, as that
the percentage would be of increase?
for our development opposed to as it presently exists?
Q Yes, A That appears to be
approximately right, around thirty percent.

Q Around thirty percent, but you don't know thirty
percent of what - whether we are talking about a thousand
gallons or a million gallons? A You were
maining about the annual rainfall on the property --

²⁰ **Q** Right. A --- and in trying to take
²¹ the annual rainfall, the annual rainfall doesn't have any
²² significance drainagewise. If you take the annual rainfall
²³ over a total of a year your constant run-off is not what
²⁴ you design for. You design for a particular storm, the storm
²⁵ to be expected once in so many years.

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What particular storm did you design for? Q We have not designed the storm sever. And actually you have no calculations on this

site as to the amount of water you are going to be dealing with? If you want a figure I can give you a figure.

Q Well ----A For a ten year storm, sixty minute duration, the run-off from the entire tract in the Bedminster Township area would be in the neighborhood of 260-270 cubic feet per second as the site exists.

That would be thirty percent more under 0 Generally speaking, yes,

And how many gallons of water would that be? Q THE CHAIRMAN: Seven times it.

7.48 times that.

16 ^{li} I just want the figure for the record. A Q Ï 17 work in cubic feet.

18 I work in gallons. I am sorry. If my Q A 19 mich computation is correct, we are talking about 2,000 20 callons per second from the entire tract. That is off into 21 three different drainage areas.

They all wind up in the stream? Q. A Would all wind up in the river eventually, yes.

24 You testified that you are not qualified as an Q 25 ecologist? That's correct. A

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MR. RALPH DEL DEO: Thank you. No

further questions.

CAMINATION BY MR. JOHN EWING:

Mr. Oliver, what is the high water table that is one of the exhibits? What does it mean? Could you show it 6 to us? Hold it up please. What is the seasonal high water table? You can see areas shaded · A 8 differently in two different shadings and white on here. 9 The white area depicts the area in which you have a very 10 shallow water table and the water table they are talking a-11 bout is the water table that would be found in early spring. 12 where the water is less than two and a half feet from the 13 surface of the ground.

14 Ø It would be in the white area? In the A 15 white area.

16 The hatched area - which I am Okay. Q A not sure you can make out, as opposed to the gray area - in-18 dicates an area of - and there is an overhang here between the two- of variable from one and a half foot and over in descent It is more than a foot and a half below the surface. 21 And the gray areas here and over here are deeper than

four foot to the water table.

Did you do any percolation tests on the property? 0 No. I did not. I am basing my information on the A studies made by Catlin Associates.

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Q That was just off the top of your head then? A Pardon?

It is just hearsay by you that septic systems
could not be used? A It's based on the informa tion that is in the testimony here.

⁶ Q Based on the, you said, 0.28 run-off if the
⁷ property was developed as it is on the master plan. Now how
⁸ many houses would that be? A I don't seem to
⁹ have it here, what number I based that on. I can find it for
¹⁰ you if you would like. I have it in another --

Q Could we find it? A One bandred the
four, my helper says.

Q What is the zoning up there now on the present
plan? What is the zoning? A One care zoning
down along, generally along the Route 202-206 area, and the
remainder of the land is in five acre zone.

Q Isn't part of that five acre on the steep slope
there? A Yes.

Q Did you include houses on the slope there? No, we accounted for the fact that houses would be in that area.

Q Why would there be a greater run-off by having
128 homes and all the parking lots and all for the factory,
I mean the commercial property and the motel and everything?
A There is a greater run-off based on the plan that the

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applicant is proposing.

A There A There A There A There A There

4	Q I interpreted that you said it the other way a-
5	round. The on treatment, on sight treatment plant, would it
6	be primary, secondary or tertiarry? A It would be
7	whatever was designed at that time, whatever was required,
8	Q What do you feel would be best for the area?
9	MR. LANIGAN: Maybe I can clear this up,
10	Mr. Chairman?
11	MR. JOHN EWING: I am questioning Mr.
12 -	Oliver, Mr. Lanigan.
13	MR. LANIGAN: I am sorry.
14	MR. DIANA: Mr. Ewing has a right to ask
15	the question.
16	MR. LANIGAN: We have given alternates,
17	and he is misconstruing the alternates.
18	Q If the alternate of a treatment plant was used,
19	Mr. Oliver, would it be primary, secondary or tertiarry?
.20	2 If would be, definitely be either secondary or tertiarry,
21	and it would require more study on our part to determine
22	that.
23	Q What effect do you think this would have on the
24	confluence reservoir? A On the confluence?
25	Q Yes, A What effect what would have?

Oliver - cross

1 The elilance from your eligneis proposed develop Q) 2 maniaping into the river, going into the condimensive sing 3 TROOMSLITELCO TOSA DA CARLERAL WELL ANY RELLECTIONS 4 senser & fact Why is that has The confluence 5 reservoir is considerably domethese from this site as 6 was "Onk" Is it far enough downstreumles This is what I am 7 asking you. This is this to have be have have been see the is 8 in miles green the Assessed accelerate 9 How can you say it is far susar downstrams **Q**)

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10 Amyth Lin saying At's considerably domatrum and whatever 11 effluent we put in them is going to have the be presende by 12 the mulcipality, by the State, to be of acceptable quality. 13 dation Quarty, As to the state bighner treatment plants that all 14 they put in show may people axe they servingly be maked. 15 derandra powers to for the product of costing is an edge 16 and Quarte How many people would your treatment plant be 17 the sale star Append Renably a theoread and fifty serving? 18 people plan some 600,000 square fact of office building. 19 have Q breakand the thousand fifty would be the total and 20 ployees for the 6 00,000 square feet? 21 They would be in the residential section. That would be 22 population. A tora, Mary configure.

Q Wouldn't the treatment plant also service the servi

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That would be a total of a thousand and fifty 0 A thousand fifty people plus office area we designed, based on the number of square feet of office area.

How many total people are they estimating, do Q 6 you think? I don't know.

Would this treatment plant take any of the Q 8 effluent from the Bernards section? No.

9 None of it would come down on a gravity flow or Q 10 anything like that? I don't believe so. A 11 Can you state definitely that it will me Q 12 done? I don't think I can state th Å 13 definitely, but I can state that the area, there is a small 14 portion of the drainage area that does go into Bernards 15 Township, but as I recall the plan, that section is in the 16 golf course, so there would be no problem.

What was the total acres of parking for your 0 motel and your industrial complex? I den't

we a breakdown on how much of it was for the industrial. MR. LANIGAN: Mr. Chairman, if I ---

> MR. JOHN EWING: I am questioning Mr. Oliver. Mr. Lanigan.

MR. LANIGAN: Mr. Chairman, may I address the Board?

MR. JOHN EWING: I am questioning Mr. Oliver,

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beføre.

THE CHAIRMAN: I want to hear what he has to say.

MR. LANIGAN: These figures were testified to at the previous hearing by Mr. Catlin. They were supplied by Mr. Catlin to this gentleman for his computations.

If it is necessary to go into those figures - again for the purpose of eliminating any doubt - I will. They are a matter of record, and if Mr. Ewing has forgotten then or wants to have his recollection refreshed, we will de that, but it is going to take some time to deive into the background material that Mr. Oliver has drawn upon.

He stated at the outset that he has based his testimony on material supplied by Mr. Catlin, which is already part of this record. If he has to go through it again we are going to be here all night.

MR. JOHN EWING: He gave us the figures a few moments ago, and I ask him to recall the figures, those figures again.

THE CHAIRMAN: Ask him.

You are asking me to break down something I gave

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Q In your earlier testimony you ascribed so many ecces to the motel and parking, I believe, and so many acres to the se maybe you did it by the wooded lots that are going to be cut out and the field lots or something.

A That's right.

Q Do it from that point of view, How many total arres of parking do you have? A I had parking lots and driveways, which would include driveways to the residential houses, lumped together for a total of 22.81 acres.

Q For the whole complex? whole complex.



Q How many cars do you normally put in an acre of land?

> MR. LANIGAN: Mr. Chairman, may I address the Board?

> > THE CHAIRMAN: Yes.

MR. LANIGAN: With respect to traffic and cars and flow, that is my next witness, and that has not been testified to as yet.

THE CHAIRMAN; Okay.

MR. JOHN EWING: Mr. Chairman, I was trying to find out whether they had enough parking area or whether they were chintsing on it, and maybe there would be a greater flow from the

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1 paved area. or how many seres they are actually 2 providing for the maker of years a make 3 and and the same in the state of the state of the same of the the start in 4 " MR. DLANA! Y dis advis ing che Cheirman 5 that the questions so for the relevant to this 6 vieness* testingy, at least it is pertinent to 7 establish the factual circonstances uses which 8 he has based his statements? and so farel any 9 advising the Chairman that the questions are IŬ relevant to his testimony. de serve on the \mathbf{H} MANALLO THE CHAIRMARY The may proceed, Mc Ewing 12 You want to know how many cars go into an acre! 13 You the Area The handred treater I an bold Ö 14 ANDER MAN DEFENSION OF A CHARL. That will be azzin. 15 That is what you have assistance for, withess. Q 16 THE CHATTHANT MAY T ask who is a hving as 17 this new, the wirners or somebody elsel was is 18 this schebody else f and the chief a trace as the set -19 THE WITHESSI My assistant on this lob. 20 THE CHAIRMAN'S I would like to have his name. 21 22 Four thousand eight hundred forty cars, approxi 23 neely. is that right. Mr. Oliver? 24 so. I will say so. I am not miltiplying it out iter. 25 an old-farmined the JOHN EWING: That's all the the

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record show that it is 4,840 cars.

MR. LANIGAN: I asked at the beginning in order to present my case in an orderly fashion - that I be permitted to put the witnessee in and them have the questions later, so as to eliminate the difficulties as we are going through them now. That is so the testimony after it is all in - will be all in, so that the witnesses and this Board would each have an understanding of what was going on. The public is asking questions about things the haven't been testified to - with all due remot - and if it pertains to traffic or cars or ingress and egress from the tract, that will be furnished to the Board with the next witness.

THE CHAIRMAN: We had decided at the last meeting that we would give everybody the right to question the witness as the witness is here.

Is there any other person who wants to ask a question of Mr. Oliver?

EXAMINATION BY MR. JOHN BUCCINI:

Q I wonder, Mr. Oliver, if you can tell me of a
better way of testing the area other than the old-fashioned
percolation test? Is there a better way, Mr. Oliver, than
an old-fashioned percolation test, other than graphs and maps

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and theories and so forth?

I am somewhat dismayed that a percolation test wasn't taken which, I think, is step number one. I am not an engineer, but as an old country liver, I think that would be the first thing.

6 THE CHAIRMAN; Your question is - is there 7 any better way than a percolation test? 8 A I am reminded that we took a percolation test on the 9 tract for the Dorman Farms, and we got absolutely, as I re-10 call, absolutely nothing. It was zero. We couldn't get a 11 reading.

Q What percentage, Mr. Oliver, of the entire proposed tract does the Dorman Farms represent, can you tell me? In other words, you are confining the percolation test to the Dorman Farms.

What percentage of the entire tract does that represent?
A The Dorman Farms itself represents twenty-five percent.
Q So it is really not representative of the entire
So it is really not representative of the entire
area. In other words, spot percolation tests should have
In other words, spot percolation tests should have
In other throughout the entire area as an old-tashioned
Procedure.

Of course, I am not an engineer, but I am asking you
would that be the proper procedure. A A percola tion test is a good method, I will grant you. The informa tion that we have here relative to soil characteristics, water

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table, et cetera, gives us also a good look and experience mean area, in the general area with these soils. We can pretty well predict that percolation is going to be on the very poor side.

THE CHAIRMAN: Does that answer your question?

MR. JOHN HJCCINI: Well, partly, but I am just an old-fashioned man who likes to do things in old-fashioned ways, but I am not satisfied that the tests they have taken will give us the answer.

THE CHAIRMAN: That's the best he can

MR, JOHN BUCCINI: Thank you very much, THE CHAIRMAN: Is there anyone else who has any questions of Mr. Oliver?

> MR, JAMES QUINN: I have some questions. I am James Quinn from Bridgewater Township.

S-BLAMINATION BY MR. JAMES QUINN:

Mr. Oliver, you testified that a portion of this ²¹ tract is drained into Chambers Brook. I am interested be-²² cause Chambers Brook flows along our boundary, makes part ²³ of the boundary between Bedminster and Bridgewater Township. ²⁴ In the drainage figuras, whatewar work has been deep

In the drainage figures, whatever work has been done so far on drainage, has consideration been given to the

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effect that it would have on Chambers Brook? A The method which drains into Chambers Brook again is a very small pertion of the tract which again will have negligible development put on it.

It's only the southern fringe of the tract that drains toward Chambers Brook.

Q Isn't that the portion that has the parking lots and the industrial site? A As I recall the pictures, the parking lots and so forth are a little further into the tract, into the central drainage area.

Q How many acres do go into Chambers Brook, approximately? A May I look at one of the s face drainage documents?

Q I looked at a larger map at the last meeting, and I thought some of them, the more dense development - the offices and so forth - were in the portion that drained into Chambers Brook. A You are right. A portion of it will be. Maybe twenty percent of the area that we are **emaidering** as being this office area that is going to be **developed** with parking and so forth is in that drainage area and, roughly speaking here, I'd say it looks to me like maybe about fifty or sixty acres coming into Chambers Brook from this tract total, not fifty or sixty acres of the office area.

Has it been considered what effect this would

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have on Chambers Brook? I ask that question because we **Examply have problems with Chambers Brook in our township.** A Specifically how much is going in there, no, not in the terms that we talk about in flow quantities.

> MR. JAMES QUINN: Would it be proper to make any statement about the problems that we have at this time or at a later date?

THE CHAIRMAN: Not until after we have our public hearing. There will be just questions asked of the witness at this time.

¹¹ MR. JAMES QUINN: Just questions;
¹² THE CHAIRMAN: At the present time,
¹³ Q Mention was made of drainage improvements at the
¹⁴ applicant's expense, improvements to existing facilities.
¹⁵ A Yes.

Q Has it been determined how far downstream the applicant would consider his responsibility? A I don't think I can answer that. As far as I know it has not been determined how far downstream. I doubt that he is going to furnews down to the Raritan River or out to the ocean.

Q As far as the sanitary severs are concerned, is
the applicant aware that the trunk sever that runs along
Chambers Brook, Bridgewater's trunk sever, was not designed
for any area outside the boundaries of Bridgewater Township?
Yes. We are aware of that.

1 And as far as severing into Bernards is con-0 Sumping over the mountain into Bernards Township, four alternates, I believe ---A Yes, 4 has there been an indication that Bernards Ø -5 Township would accept this severe? Yes. 6 There has been discussion between the applicant and Bernards 7 Township with regard to enlarging their present treatment 8 plant facility. 9 They would have to enlarge an existing --Q. 10 Yes. 11 treatment facility --Q 12 in Bernards Township? 13 Is this an existing package plant? By "a pack-Q 14 ane plant" I mean a small treatment plant such as you would 15 find in a residential development? I can't A 16 answer that. I don't know. I am not familiar with their 17 plant. 18 Do you know what the degree of treatment is that Q t gives? No, I don't. Å MR. JAMES QUINN; That's all I have, Mr. Chairman. 22 THE CHAIRMAN: Mcs. Ashmun, do you have 23 a question? 24 EXAMINATION BY MRS. ASHMUN: 25 You put in evidence, Mr. Oliver, a soil survey 0

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in mind?

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Q Unless I read it incorrectly, there are some quite eredible soils in this area, and I am wondering if you would comment on the plans of your client in reference to soil qualities on the land and the effect of sediment in the streams and so forth during and after construction.

⁷ Have you studied this with that in mind? A I
⁸ haven't studied that soil map completely. I am familiar
⁹ with the soil map. Let me -- give me your question again.
¹⁰ I am not sure what you are trying to get at here.

11 The question in my mind is that there are soi 0 12 on this map that are classified as erodible to define 13 severe extent, in other words, disturbing them to build 14 roads or to build houses or whatever will create problems 15 of erosion on the land. Now they will also therefore in-15 directly cause sediment in the streams and so on. I am ask-17 ing you in doing the engineering and submitting this as 33 evidence whether you studied this soil survey map with that

Reve you any comment to make as to where roads are,
where buildings are, where anything is vis-a-vis the quality
of the soils involved? A Of course, once
the roads and the parking lots are in - if they are being
built where erodible soils exist - and the lawns are placed,
I think - if I understand your question - then your problem

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You are worried about during construction? is over No. I am not.

You really believe the problem is over as soon as the lawns are in? I think it would be improved Å over what presently exists.

MRS. ASHMUN: That answers my question. CROSS-EXAMINATION BY MR. DUNCAN ELLSWORTH:

0 Mr. Oliver, you testified there were three drainage areas, the main one. I think what you referred to, as the central drainage area, which I presume is the drainage area that roughly would place it or it flows down next A THE A the proposed motel, an I correct?

That area during flood times and at the present 0 time there is a tremendous amount of water that comes down through there. In your studies are you considering the use or the construction of artificial drainage ditches? 17 I think this would be definitely a part of the final

design, yes.

10 M 0 where you would have to actually make a large drainage ditch with ripraping and so forth? A Drainage ditches would have to be improved and ripraped or pipped or what have you.

MR. DUNCAN ELLSWORTH: Thank you.

THE CHAIRMAN: Are there any other questions of this witness?

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CROSS-EXAMINATION BY MR. JAMES LYONS:

Mr. Oliver, you testified, I think, that this area is not suitable to or is not suitable to percolation tests for absorption of sewage. My question is this - is it therefore impossible in your opinion to develop it as residential five acres based on individual family septic tanks? A No, it's not impossible. It depends on the amount of problems you want to have to put up with.

MR. JAMES LYCHS: Thank you.

THE CHAIRMAN: Are there any other questions?

MR. PETER LARSON: I am from Chester Township, representing the Upper Raritan Water Shed Association. I have two questions.

CROSS-EXAMINATION BY MR. PETER LARSON:

Q One question relates to storm drainage water. Is there any consideration to reducing the run-off by small ponds, et cetera? The only discussion that I understand as the the water drainage is to channelize it and the three alternates that you spoke of. Have you given any consideration to such things as small ponds, et cetera? A This has been mentioned in our discussions, yes.

Q The second question would be in relationship to 24 sanitary severage. I am under the impression that the State 25

requires approval or has the last say on any type of sewage

treatment plant.

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Yes.

midance at this point -- A No.

-- as to what they would require? A No.

MR. PETER LARSON: That's all.

THE CHAIRMAN: Are there any other questions of this witness?

MR. LANIGAN: May I ask two questions of the witness?

THE CHAIRMAN: Yes.

REDIRECT EXAMINATION BY MR. LANIGAN:

Q Would you at the preliminary stages normally consult the State Department of Health or such other regulatory authority at this time? A Not at this time, no.

Q Secondly, are you aware of the fact that as a matter of public record in the township Board of Health records, percolation tests were performed on this tract and had trouble passing because of the high water table and the lack of percolation? Was that not done by your office?

MR. LANIGAN: Thank you.

THE CHAIRMAN: Are there any other questions of this witness? If we are through with this witness I will declare a short recess.

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MR. STARR: I have one question. THE CHAIRMAN: Surely.

TION BY MR. STARR:

Q Mr. Oliver, I may have missed a point, but you testified, I think, that there would be ten hundred fifty people approximately in the residential side of this development. A In the residential portion of the development in Bedainster Township.

Q In Bedminster Township, is that correct? A Yes.

Q Can you tell me also then how many people you expect as employees in the office complex? A NG, T can't. I can't at this time because personally I don't know what type of office complex we are talking about. You have high density offices and you have low density offices.

Q This is very important from a sewage point of view, isn't it? A At the time we went into the final or the preliminary stage we would have to nail

thet dawn, yes.

Q

The next is an eight-story motel. Can you tell me how many people you would hope to have using that motel? A No. I can't.

MR. STARR: That's all.

CROSS-EXAMINATION BY MR. EWING:

If you don't know how many people are going to

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1 he working in the office complex. the factory area - or menual is - how can you design the run-off now and know the mm-off is going to be unless you know what the parking area is going to be? When you increase the parking 5 area for more people you will get more run-off. Ĩ 6 m using the figures supplied to me by the planners who have 7 apparently used some method of estimating this. I am not 8 ware of their method. I am taking their figures for the 9 parking area and using them.

Q I see, But you don't know what the figure is as to the number of people there? A No. MR. JOHN EWING: That's all.

THE CHAIRMAN: are there any further

questions of this vitness?

We will declare a short recess.

(A short recess was taken.)

THE CHAIRMAN: The recess is over. Mr.

Lanigan, do you have a witness now?

MR. LANIGAN: Yes.

THE CHAIRMAN: Before you put your witness on, I will state that 11:00 o'clock will be our finishing time. There will be no other witnesses after that time.

MR. DIANA: No new witness after 11:00 o'clock.

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THE CHAIRMAN: Thank you.

MR. LANIGAN: If we have a witness on at that time, can we conclude the hearing with his testimony?

THE CHAIRMAN: We will see as to how much longer you intend to be with the witness.

MR. LANIGAN: I intend to be very brief. THE CHAIRMAN: Present your witness, Mr. Lanigan.

MR. LANIGAN: Mr. David Mendelson, will you stand and be sworn, please. DAVID MENDELSON, called as a witness on bahalf of the Applicant, being first duly sworn, testified as follows:

THE CHAIRMAN: Give your name to the secretary, please.

THE WITNESS: David Mendelson, M-e-n-d-e-l-

DIRECT EXAMINATION BY MR. LANIGAN:

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Mr. Mendelson, for the record, what is your
address? A 12 Timberhill Drive, Livingston.
Q By whom are you employed and in what capacity?
A I am the president of Garman Associates.
Q What does Garman Associates do? A We are

a firm of traffic and transportation consultants.

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Q What is your individual educational background, Mandelson? A I have a bachelor's degree in civil engineering from the City College of New York and a graduate degree in traffic and transportation engineering from Yale University.

Q What are your memberships in the various prefessional societies? A I'm a member of the Institute of Traffic Engineers, Highway Research Board, National Society of Professional Engineers, and am on several standing committees within those organizations.

Q What does your work experience entail with repect to traffic? A I have approximately fifture years of consulting and public experience in both traffic and transportation, doing a wide range of projects in this State, in New York, Massachusetts, Florida, Kentucky, Ohio, California, Hawaii, and I have done work in Canada.

Q Have you worked for municipalities and for large tract developers? A Yes, I have. Q. Do you at times work for any of the State agencies Yes. I have.

Q Mr. Mendelson, I show you an exhibit marked P-26 and ask if you can tell me what it depicts? A It's an aerial photograph of the road system and also the subject property in the south quadrant of the Township of Bedminster. Q Did you at my request make a physical examination

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of the property and the surrounding area? Yes, I A

Will you describe very briefly for the Board and for the benefit of the record where the applicant's property is located with respect to the aerial roads abutting it? Very simply, the Allan-Deane property is located in the northeast quadrant of one of the most significant interchanges, of two Interstate facilities in the State of New Jersey.

We have as the circumferential connector between the New Jersey Turnpike and ultimately the New York They Interstate Route 287, which is an eight lane facility worth of 178 and variable six to four lanes north of that facility.

14 The other major facility serving this area is Interstate Route 78, which runs in an east-west direction. 178 starts at Newark Airport and, of course, will extend to the West Coast ultimately.

Both of these facilities have been completed in Somer-Bet Chunty. Do you have any estimate as to the completion of 21

287? Yes. I believe that that facility will be completed in 1972 or '73.

With respect to Route 78, do you have any in-0 sight as to when Route 78 will be completed? May Α. I beg off that question? For the record, I think that that

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facility will be probably completed by 1976 or '77.

It is completed, is it not, in certain areas of A Yes, it is.

Q And in what areas? A To the east of this site the facility is now open to Berkeley Heights, and I believe to the west of the site --- Berkeley Heights in Union County --- and to the west of the site I believe it is pretty much open to Phillipsburg.

Q Will you describe in some detail the other roads which abut the property or are in the general area of the property? A The most significant read serving this property is US Route 202-206, which follows a general north-south course and is crossed by both of the Interstate facilities.

That road is a two-lane facility which is posted for fifty miles an hour and is a forty foot wide or has a forty foot pavement.

The other major road is Washington Valley Road, which ¹³ **is a county** road, which is to the south of the subject ¹⁴ **Investy**. Those two facilities, of course, intersect at ¹⁴ Pluckemin Center, where both of them are somewhat widened ¹² to provide high capacity operation.

For example, the approach widths to those roads are approximately twenty-two and twenty-one feet each, which means that you have two-lane operation there. Washington Valley

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Read is posted for forty miles an hour.

in order to establish the existing condition of the roads in the study area we had taken a series of traffic counts in 1971. These traffic counts were of two types. 5 Mr. Mendelson, before you get into that, did you Q 8 at my request examine the facility and are you generally 7 familiar with the application which is before this Board? 8 Yes, I am, 9 You were here at the last hearing and heard the 0 10 testimony of Mr. Catlin, were you not? 11 did. and I was. 12 with whom did you consult, what other agene Q 13 or officials, with respect to the examination of the tract 14 We have and in connection with the traffic? 15 worked very closely with the Somerset County Planning Board 16 and their engineering department and, of course, the Depart-17 ment of Transportation in Trenton. 18 In what manner did you proceed to examine the Q presents and the abutting roads in the surrounding area? . 20 Well, as indicated, we physically inventoried each of

the roads to establish their respective widths, surface condition, and, of course, right of way, and we have obtained details of the various interchanges from the Department of Transportation, as well as projected traffic volumes,

However, to establish current traffic volumes we have

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taken a series of traffic counts. These counts were of two types - the first type being an intersection count at Plucksmin Center. This was a turning movement count to establish the volume of traffic during the A.M. and P.M. peak traffic hours.

Our counts covered the 7:00 to 9:00 A.M. peak period and the 4:00 to 6:00 P.M. peak period.

To establish traffic volumes on the remainder of the roads - that is that portion external to the critical intersection here - we took a series of machine counts. These are recorded on a fifteen minute basis, the traffic volumes over a full twenty-four hour period or longer.

Q What was the result of your study? A Well, we found, for example, that US Route 202-206 has a variable volume which ranges from about 3500 vehicles a day below 178 to approximately 4700 vehicles a day north of it.

I would like to say, however, that these volumes are approximately half the volumes that were recorded by the Department of Transportation prior to the opening of 287. So the volumes that we have today are roughly fifty percent what they were when that facility was open. On other roads the counts show, for example, that Washington Valley carried from about 1600 to 2600 vehicles a day with lesser volumes in the various interchange ramps that comprise the interchange between 287 and US Route 202-206.

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Q With respect to the other roads, did you make any examination of their capabilities? A Well, the examination of their capabilities has been expressed as well for them as for the major roads in terms of the relationship between volume and capacity. Volume in and of itself is really an insignificant indicator of what is happening.

One relates volume to capacity to determine how significant or how intense the use of a particular road is. Our studies showed that in 1971, during the peak hour, most critical peak hour - let's say, at Pluckemin Center - comparin the afternoon from 4:30 to 5:30, that at no time does the volume exceed more than thirty-seven percent of the capacity, which means that we can almost triple the volume before we are at the capacity of that road or the roads that lead into that intersection.

That's quite significant in terms of the utilization, future utilization of that road. Further up 202-206 - somewhere between Pluckemin Center and the interchange with 287 - we found that the variation there in the peak hour was approximately thirty percent. That is the volume during the peak traffic hour represented about thirty percent of its capacity.

The same conclusion, therefore, holds that we could triple the capacity of that road without it creating any

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problem or without it being at full utilization.

Q With that in mind did you examine the application and are you familiar with the number of people which would be created in terms of utilization of this tract? A Yes, I am.

What are those figures? 0 A Well. we have done perhaps the most intensive study of future traffic ever done in the State of New Jersey for a developer. This study is comprised of several aspects. The first is a determination of trip generation. This merely is a determination of the amount of traffic to be generated by the different uses that will be placed on site and. for example. there are three unique kinds of uses. There is a 600,000 square foot office complex proposed. There is a motel conference center that has 120 units and 250 seats, and then in the, or on the easterly side of the site we are talking about both single family and town houses, we are talking about some fifty-two single family homes and 264 town houses. Each of these has a very unique traffic generation characteristic. For example, an office complex generally attracts people to it and a motel also or a conference center attracts people to it.

A home residence produces trips. For example, you travel from your home to a place of employment someplace else. so the distinction is the office complex and the motel

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will attract work trips and other trips as well as commercial **The residential portion of that tract will produce** • As we meter to it in our trade - trips for work purposes, for shopping purposes and for other purposes.

Now we have separated those two uses into two analysis districts and have established districts throughout the county, some twenty, and we have established districts throughout the State in each of the abutting counties and have tied in Philadelphia, New York and Allentown, Easton and Bethlehem, and we then defined a future road system and went through a model, a sophisticated model system for limiting the trips that will be either produced or attracted on site to the population or the employment in those areas.

For example, the people 14 ing in external areas will be attracted to the commercial uses on site, and by the same token the people who live on site will be attracted to externa commercial areas, linking those trips and then assigning them back over the road system to determine the future volume of traffic established for use, what the composite volume would be like in our design here. This was done on a twenty-four hour basis and, in fact, we then tested the sensitivity of using various peaking factors to come up with a determination of what we call design hour volumes.

These relate specifically to the establishment of the impact on the whole road system and also the basic parameters

Mendelson - direct 66, used for designing new facilities. This becomes important managements later about the primary access facility to the allow much would be located off 202-206 at its northern extremity. Now the volumes that we have generated in terms of this analysis were then added to an expension of local traffic. We said that the full picture of activity in our future year - and we have looked at two, we have looked at 1975 and we have looked at two, we have looked at local traffic. We have expanded that by parameters obtained from the Department of Transportation in terms of normal growth of traffic on this type of road and also **management**

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The volumes represented then were put into our design effort and I guess the analysis showed that about eighty-one percent of the traffic to the site will be coming off the Interstate system and also from the north off 202-206.

If I might explain for the moment, the interchange of 202-206 and 287 is not complete. There are two quadrant memory missing. If you come from the south on 287 you memory must directly -- excuse me -- if you are heading north on 287 and want to turn south on 202-206 you cannot do that directly. You must head north and then south and the return of that movement, of course, is just the opposite. You head north on 202-206 and then, of course, you must change direction and head south. So these two movements -

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that is from, I guess, the south, to the south, of both Methods 202 and 206 are absent. But this interchange of Methods and between these two facilities will serve as the predominate feeder to the site and tied directly to the access road to the morthern part of the site.

Q The Highway Department has recently acquired the southern part that you were talking about from Mr. Elisworth and Mr. Kame, is that correct? A Yes. If X might repeat those figures, we are talking about eighty-one percent of the traffic to the site could from the north, and our intent in the design of access to this **sourcement** to minimize the impact on Pluckemin Conter. In second course

provide quality access we tested the design volumes on the road system and found the orderly development of the site by seventy-five in terms of high level access required that we construct an intersection at 202-206 and the access road, and this is a multiple lane facility with two lanes entering 202-206 from the access road, and we have provided a con-

This left turn will always take place against lower volume northbound traffic and can do so without any capacity or safety problem. The site distance, incidentally, there is 400 feet, which is well in excess of the distance needed for fifty mile an hour operation.

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Have you discussed the possibility of the com-0 of such an interchange with the Department of Home the tion? Å Yes. I have. I was just go-17 - 1 17 - 1 ing to get into that.

We also propose by 1975 that the River Road interseetion be signalized and at sometime between 1975 and 1980 the jug handle be widened to provide two operational traffic Lanes.

9 Now there have been other developments that have just 10 come up in my purview here and also. I think, that there will 11 be other developments that we cannot account for at the time. I think beyond 1980, in the period from I 13 the interchange that exists between 202-206 and 287 should 14 be reexamined by the Department of Transportation, and at 15 that time full consideration should be given to completing 16 that interchange to provide for the maximum case in, of providing access to the Pluckemin area.

18 Q Mr. Mendelson, who would provide the land and 19 for the establishment of this left-hand turn? We have at the present time a forty foot pevenant, and I am of the opinion that that payement can be used without 22 an expansion to accompodate the anticipated traffic volumes. 23 Does the owner have land which could be utilized 24 abutting that particular intersection? I be-Å 25 lieve you do, yes.

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At whose expense would that be constructed? applicant has advised that they are willing to road improvement in proximity to their property.

With respect to the tract itself, you are Q familiar, are you not, with the exhibits showing the road leading up to the top? Yes. I an.

What is the feasibility of that road in terms Q of traffic and construction of it? I guess I an an optimist. I believe anything can be built if you really want to do it. I believe that road can be built and it can be built at a grade of no more than to facilitate all weather use.

Is the topographical feature of the land at the Q top sufficient to accomposate any other branching of traffie? 15 I believe so.

What, in terms of specific volumes, do the 0 particular facilities such as the office. for example.

produce, office and research complex? Well. 19 Have estimated some 2850 two-way twenty-four work trips 1.23 to that use. There will also be some 1,030 other purpose trips attracted to that use, and there will be some 22 270 twenty-four hour two-way vehicular or -- I am sorry ---23 connercial trips made to that particular use.

> What does this mean in terms of cars and people? 0 Well, we've worked with a figure of 300 square feet
Mendelson - direct

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per employee, so if - and I think that it takes a great deal which to predict what is going to happen in the future which that in fact does take place we are talking about a maximum of 2,000 employees.

Q In the 600,000 square feet? A That is correct.

Q Is there local experience comparable to that that you could rely upon? A Yes. I believe there is. American Hoechst has some 400,000 square fact at the present time with some 900 employees, and they provide parking for approximately 840 vehicles, and that do include of the site on 202-206.

Q With respect to the motel and lodge type facility, what type of traffic will this generate? A I have anticipated - based on our survey - that we will have attracted to it some 110 work trips and to both the motel and conference facilities some 940 trips for other purposes. These again will be twenty-four hour trips made to and from They are two-way trips.

What are we talking about in terms of people and in terms of parking? A In terms of people we are talking about 120 units at the motel, and in terms of the conference facility approximately 250 seats.

Parking at that site is proposed for approximately 200 vehicles.

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	we found that there were some 220 vehicles on the southern
· 2	approach, 220 vehicles an hour in the peak hour.
3	The capacity was 620 vehicles at that same time. Okay?
4	The other direction - that is heading from north to south on
5	202-206 - we also measured 220 vehicles at that time. The
6	capacity is computed to be 590 vehicles an hour. In both
7	cases we are talking about thirty-five and thirty percent of
3	the capacity, the volume to capacity relationship.
9	THE CHAIRMANT Thank you Do you have any
10	mestime Mr Nordna?
- 11	EVANTEASTAR DU ME MEDVITREA
12	
13	Q ION ARE SAYING IN ONE CIRECTION YOU HAVE ADOUT
14,	IOUF CATS & MINUTE AND IN THE OTHER CIRECTION YOU HAD ADOUT
13	eight cars a minute going by, is that true? A I be-
16	lieve I gave you an hourly figure. If we multiply four time
17	sixty that is approximately 240 cars an hour.
ំវ័	Q You still feel that that is only utilizing it
	at thirty percent of capacity, is that right? A Yes, I
- 3	do.
20	Q This is determined by sound engineering study
	practice, is that correct? A That is correct.
	Q You went further and said that you recommended
23	River Road be signalized at sometime in the future, is that
24	true? A Yes, I did.
25	0 Is there any guarantse that this indeed would
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road"? Let me go back a little. You said the Highway Deperturner had made a survey of the intersection in Pluckenin and 206 before they opened 287 and 78, and that the traffic volumes had been reduced by approximately fifty percent, is that correct, between then and now? Their A count was, showed that in 1963 - prior to the opening of 287 - the volume was approximately fifty percent greater than it is now.

Then you said that it was presently being used Q 10. at about thirty percent of capacity. Can you define 11 "capacity"? Can you tell us what you mean by "capacity 12 There are two different kinds of capacities referred A hereto. One is an intersection capacity where you look at 14 the capacity of each approach to an intersection, and that capacity is a function of the which of the roadway, the parking condition on that width of roadway, I guess also the type of traffic control, the proportion of traffic turning left and right and the proportion of traffic that is represented by connercial vehicles.

The other kind of capacity which you measure on a road which doesn't have intersections - is called uninterrupted flow capacity. That is simply a two-directional figure which you use factors such as width of the road, lateral clearances, vertical and horizontal alignment, and percent commercial capacity, to give you the capacity.

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bave.

You are saying then that this is all a statistical Q thing in't it, the convenience or the safety of the road is strictly done in terms of statistics, right? , 4 I don't understand that question.

You are saying that the road is going to be safe Q because it meets certain criteria statistically, certain widths and the control of the intersection is either by I am saying that the light or policeman. capacity of the road has been calculated, based on accepted criteria for measuring that particular factor, which is a statistic, of course.

I might add that there is a relationship between capacity and safety. The higher the capacity of the road 14 the more apt you are to have a better alignment on the road and the safer it is to operate as such.

You yourself spent time at these peak hours at Q the intersection in Pluckemin and you feel the road is still being used thirty percent below capacity? Yes. I A

MRS. ASHMUN: That's all I have.

EXAMINATION BY THE CHAIRMAN:

Can you tell me how many cars per hour you call Q capacity? I can understand those terms better.

Certainly In 1971 - if we might refer to the P.M. A peak hour - and if we perhaps might look at US Route 202-206.

Mendelson -

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Q

1 we found that there were some 220 vehicles on the southern 220 vehicles an hour in the peak hour. The capacity was 620 vehicles at that same time. Okay? The other direction - that is heading from north to south on 5 202-206 - we also measured 220 vehicles at that time. The 6 capacity is computed to be 590 vehicles an hour. In both 7 cases we are talking about thirty-five and thirty percent of 8 the capacity, the volume to capacity relationship. 9 THE CHAIRMAN: Thank you. Do you have any 10 questions, Mr. Nervine? 11 EXAMINATION BY MR. NERVINE: 12 You are saying in one direction you have about 0 13 four cars a minute and in the other direction you had about 14 eight cars a minute going by, is that true? I be-A 15 lieve I gave you an hourly figure. If we multiply four times 18 sixty that is approximately 240 cars an hour. 17 You still feel that that is only utilizing it 0 13 at thirty percent of capacity, is that right? Yes. I A 19

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 This is determined by sound engineering study

 Practice, is that correct?
 Inat is correct.

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 Practice, is that correct?
 Inat is correct.

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 You went further and said that you recommended

 River Road be signalized at sometime in the future, is that

 This is determined by sound engineering study

 Practice, is that correct?
 Inat is correct.

 Q
 Yes, I ald.

Is there any guarantee that this indeed would

75. 1 Well, it's a Department of Transhappen? Å 3 portation policy to take counts and to establish basic 3 warrants for that and, if in fact the volume warrants and other 4 considerations justify signalization, they do it. Our appli-5 cant has indicated to me that they are quite prepared - and 6 they have gone on record as being quite prepared - to con-7 tribute to the cost of that signalization. 8 Is it not also true that even though the State 9 may see the need for such a signalizing that the thought or 10 the intent may by many years precede the actual act? In 11 other words, it can be quite a long time that goes by before 12 any signal gets in there with a bulk of the traffic getting 13 I would through there without a signal? 14 say about six to nine months. 15 I dispute that, but that's your opinion. Q 16

That's a fact.

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17 Sir, you also told us about the percent of traffic 0 18 that would come from the north, and you told us what amount 19 would be attracted to the motel. You did not say what would 20 produced by the dwellings and what direction they would 21 As I indicated, our model study was A 22 quite intensive and that number or that set of numbers which 23 I represented to the Board in fact includes all traffic that 24 would be generated or attracted to the site.

You said only attracted. You talked about

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attracted by office and motel and you never mentioned dwelling production. A I believe I did, but if you would like me to repeat it I would be very happy to do it.

5 I would like to hear it. Q Screly. The fifty-two single family residences would produce 750 --6 let's strike that from the record, if we might. The fifty-7 two single unit families and 264 town house units together 8 Э will produce 750 work trips, 560 shopping trips and some 10 1360 trips for other purposes, such as social and recreational. 11

Q what percentage would you indicate would go in.
either direction when they come out of there, sir?

A That again has been consolidated with the activity of the other portion of the site, and the numbers again, for the record, are eighty-one percent heading to the north to be ultimately distributed to both Interstate 78 and 287, with nineteen percent oriented to the south.

Q In other words, the eighty-one percent encompasses
 20 both coming and going to the north, is that true?
 21 A Yes.

Q I understood it the other way. If I am in error, 23 excuse me.

MR. NERVINE: I think that's all the questions I have.

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THE CHAIRMAN: Mr. Starr?

Q Mr. Mendelson, you estimated, I think, or testified that there would be 2800 office trips from the research part of the development, right? Is that 2800? A And fifty, yes.

Q Then 940 from the motel? A Those would be the number of trips attracted for other purposes to the motel and conference facility; for example, somebody staying over, let's say, an evening or perhaps somebody attending a meeting at that conference. The motel and conference facility will also have people attracted for the purpose of working to it. Again let us differentiate between trips attracted someplace, nonresidential uses attract traffic. Residential uses produce it - if we might use that word - so there is a distinction between the two.

What I am finding very hard - I may have missed Q.]8 it in your testimony. Mr. Mendelson - is that the apparent 19 capacity of 202-206 is 600 units per hour --Yes. 20 which is now being used to the extent in 91 round figures of 220 or a third of it. Yes. A 22 Now we are talking of another 2800, plus 940, 0 23 plus -- how many did we just have from the houses? That's 24 two or three thousand going in, and maybe you can explain $25 \cdot$ how the devil we are going to do it. Yes.

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£33.4 21 I think I can do that. The way we can do it is to just kind of separate in our ainds the fact that on the one hand we are talking about twenty-four hour two-way traffic. That relates to the larger set of numbers.

We must then convert that to a design hour volume by factoring it by anywhere between ten and forty percent. depending on the particular use, then relating back to the peak hour or design hour capacity. Then we are relating volume and capacity at the same level.

10 All of these other trips then we are talking a-0 11 bout - you are talking about - on this hourly basis of 22 12 is only going to be 400 which would bring us up to the 13 capacity of 202-206 as it now exists? Well. 14 agein recognizing the orientation of this traffic is primarily 15 to the north, we are providing an additional lane for the 18 left turn into the site, and we are providing additional 17 capacity in the interchange to make it work, and I guess 13 it's also important to remember that when volume and capacity 19

When we design a road we attempt to provide a sufficient number of lanes to accommodate the capacity so that the ratio between volume and capacity is one. When it starts 23 to exceed one at that point do we give consideration to providing additional capacity by widening the road or in making some other physical improvement to it.

are in balance that is the intent of the road designer.

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•	Q You would widen 202-206 in the Pluckemin area
2 2	then? A My recommendation to Allan-Deane
3	is to maximize the use of the existing payement. You have
€. 4)	forty feet of pavement out there now and provide a continu-
5	ous left turn for southbound traffic into the access road,
6	MR. STARR: That's all.
7	THE CHAIRMAN: Are there any other ques-
8	tions from the Board? Does anybody have any
9	questions to ask this witness?
10	MR. JAMES LYCHS: I don't want to bog the
11	meeting, but I have several questions.
10	CROSS-EXAMINATION BY MR. JAMES LYONS:
13	Q The first one is the meaning of "a continuous
14	left turn". I fail to see how you are going to have a
15	continuous left turn in the absence of some sort of grade
16	separation structure. When I see a continuous left turn
17	that precludes any northbound traffic, does it not?
10	A Well, I think technically you are right.
19	Q That answers one question. A May I, further
20	We are talking about a left-turn lane that will store vehicles
21	such that these vehicles can turn left when there are
· 22	appropriate gaps in the traffic and when there is a gap.
3	Analysis there, there is a relatively light northbound
-24	traffic and they can get in without interruption
25	0 Would you describe for us - I live in this area.

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I aight add, and I know a little something about these interchanges - so would you describe for us the procedure for an automobile wishing to reach Pluckemin from 178 from either direction or on 1287 from the south, in other words, moving north?

It seems to me this is a rather complex movement that this vehicle would have to go through, and I would like you to describe it for me. The complexity A is because of the lack of the two ramps that I have talked about earlier.

But they are not there? Q A correct. These vehicles would have to -- well, let assus all traffic, that is traffic from the south on 287 and from, both from the east and west on 78, reach the same point south of the interchange. Those vehicles would have to take the loop in the. I guess it would be the northeast quadrant, and then head not south but north through the River Road intersection or jug handle and then turn around and then head south to the site.

We are talking about an office complex and park-21 ing space for 2.000 cars, and it seems to me that it is reasonable to assume that a very large proportion of those 2.000 cars will have to go through precisely this procedure, once in the morning and once in the afternoon, and they are all going to try to do it within the twenty or thirty minutes

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on either side of the opening hours of that office.

I visualize a horrendous mess. That's A 1.6 why we have proposed first signalization. Well, let's back-4 track. We proposed the incremental development of that in-5 tersection. one. for signalization: two. through videning 6 and, three, as traffic warrants it, for the completion of 7 the interchange, such that is similar to the pressure to 8 bear on the local traffic and other development in the area 9 will be alleviated.

Have you come up with the amount? Have you Q calculated the amount of time that might be required in let's say, 2,000 cars to go through this procedure? Well. I would like to say that we have calculated the A time it takes to traverse the distance from the access road to that interchange and then have determined the time from that point to all other locations in our study area.

Basically my question is this - how long is it Q going to take the 2,000 people who work in that office to get in there in the morning and how long is it going to take then to get out at night? Well, when you 4 21 provide sufficient capacity as we propose --

I am talking about the roads that are in place Q 23 -- as we propose, when the develop-DOW. . 24 ment is completed I don't think you will have any more 25 difficulty than getting into any other site anyplace else in

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this State. Okay? The important point I think --

Q There are someplaces in this State where it is quite difficult to get in and out of. A Well, let"s hope that the people who designed those had some foresight, but I think the important thing is that one has to consider the distribution of traffic. Oftentimes not everybody enters nor does everybody exit from the parking lot at the same time,

9 We are talking about an office. An office has 0 10 an opening time and a closing time. You will buy that. I 11 think. I think you have to differe 4. 12 entiate between another factor, that is the concept of a 13 single owner or an owner-tenanted facility as opposed to one 14 that is multitenanted. They have very different peaking 15 characteristics and we have investigated both. Okay?

I would just like to say that not 100 percent of the traffic enters nor does it exit in the peak hour. You generally have a distribution of traffic during that hour which dissipates the impact over the road system. That's only we are providing sufficient capacity in our recommendation to the Allen-Deane Corporation.

THE CHAIRMAN: Open that answer your question?

R. JAMES LYCRIS: That's all.

CROSS-EXAMINATION BY MR. JAMES QUINN:

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What I am leading up to is what is the capacity Q of Route 202-206 as you have determined south of Pluckemin Center, namely, in Bridgewater Township? Our study has not extended into Bridgewater Township, simply because the impact on that area is relatively light, and we have looked at the most southern point of the study area as Pluckemin Center, because this is the area we are dere ing it.

Have you figured how many additional vehicles Q will come into the Pluckemin Center area in an hour? Certainly have. Yes. **A** .

How many is that? By 1980 the 0 A volume capacity ratios at that intersection, which you remember from before, were approximately thirty to forty percent. They will be up near sixty percent.

> Sixty percent? Yes. The volume will be about sixty percent? Sixty percent of the capacity.

Of the capacity? Q À We propose no improvements to that intersection simply because you have 25 residual capacity at this time and will when we consider the

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full impact of the development on that intersection.

Q What about Washington Valley Road? A Actually there is very little traffic that is going to use Washington Valley Road and there too you have residual capacity.

Q It seems to me that - and I wonder if you have taken this into consideration - the difficulty of managementing from 287 that you have mentioned -- A Yes.

8 -- some traffic may leave, northbound traffic Q 9 may leave Route 287 at Route 22 and come up 202-206. Has 10 this been considered? What we did in our model A 11 forecasting is to find the minimal time path between all 12 analysis districts and one has to consider the fact th 13 people will travel up to sixty minutes away for the work 14 trip normally, so consequently the people who are traveling 15 from great distances - and I really think very close to the 16 site - will use the Interstate facilities and will not get 17 off on the local roads to get to the site, and again we 18 are providing sufficient capacity in the system so there 19 will not be delay or difficulty in getting to the site. 20 Tenticipate very little impact on Washington Valley 21 Road and consequently very little impact in your township. 32

Q By 1980 the southerly approach to the intersection will be about sixty percent of capacity. Without your facility what would that ratio be? A We assumed a fifty percent increase in local traffic.

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Q About forty percent? A Yes. MR. JAMES QUINN: Thomk you. CROSS-EXAMINATION BY DR. HELEN NEAVE:

Q I would like to go back to this question of capacity for a minute. What do you call "maximum capacity" - bumper to bumper at five miles an hour? A Well, if you bear with me for a moment, Doctor. There are several levels of capacity that we consider.

Q You have been talking about road capacity and you have given us lots of figures and statistics, and I am sure they are very fine, but let's get it down to words that people can understand. A Ckay, The levels of capacity that we normally consider - and pardon me for getting back to the statistics, there really isn't any way to explain it other than they go from A to F. We have done all of our analysis at the level of C which is stable flow conditions.

Q That is bumper to bumper? A F is bumper to bumper.

Q That is the capacity you think we will reach in this area at 1980? A we are designing it at level C, which is a flow condition, which precedes breakdown.

In other words, it is a stable flow condition. It is the

Q In other words, when you get between two and three thousand cars on this road you will have bumper to bumper passage or nonmovement? A I am sorry, I just don't seem to be able to communicate with you. Perhaps if you rephrase that we will be able to respond.

Q You are postulating approximately 2,000 employees at the office facility plus the working employees - not the regular employees - plus your motel employees and plus the people going in and out of the houses. So 2,000 is an underestimate. I would say you are going to add 2,000 people to 202-206 turning left across traffic.

Isn't that going to be bumper to bumper? A Well, I think if you were adding 2,000 I think you might have a difficulty but you are not. We are talking about twentyfour hour volume again.

Q We are talking about people coming to work in the morning and going home at night. Let's leave that. I 20 howe enother question.

Under what weather conditions did you inspect the roads? A We have inspected the roads for the past nine months under all weather conditions.

Q And you know how quickly they ice? A Some roads have a tendency to ice in the winter.

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The exit from 287 going under 287 north is iced 0 even as of this morning. How are you going to work out cross traffic for people that live in this area? There are people that use Schley Mountain Road - which I happen to live on - but if I want to go to Pluckemin I am going to have to cross your increased flow and so are the school buses.

Have you considered the school bus stopping for pickup and discharging of children? The school A bus figures are reflected in our counts.

With your maximum traffic load? Q the tolerable volumes forecast.

13 And just one other question. How many people do 0 14 you expect using Washington Road and the Pluckemin intersection from the Bernards Township development that you are proposing? Very little, as a matter of A fact. In this analysis we have taken out completely the portion of the development proposed for Bernards Township. How are people going to get to that development if they don't use 287 and 202? A People will 21 in fact use the local roads after using the most convenient access facility to them no matter where it is.

23 -Which is 287 here, no? I quess it 0 A 24 depends where you live, doesn't it? Not everybody lives on 25 287 nor 78.

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Q Nobody Lives on 287.

DR. HELEN NEAVE: That's all. CROSS-REAMINATION BY MR. JOHN BUCCINI:

Mr. Mendelson, I hope you have more influence with the State Highway Department than we have had. I am speaking as to the signalization that you spoke of before. We have been trying to get signals on 292-206 up around Pottersville Road for the past two or three years.

⁹ A We would be very happy to represent you in that matter, ¹⁰ sir.

Q As I understand it, Mr. Mendelson, it is not
 based so much on traffic flow but rather on credits - M yes
 want to convert debits to credits - and you have to have a
 certain amount of credits or debits before they will even
 bear your plea for a signal.

We have been trying to get a signal up there for many, many years and haven't been able to get it yet. You say it will take six months to nine months. I hope you are not overly optimistic.

We haven't been able to do it. A What's

Q If putting a signal there is going to alleviate the problem, it will be years before the problem is alleviated. If signals will alleviate it - which I think will only slow things down - but it wouldn't alleviate the problem.

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THE CHAIRMAN; Are you finished?

MR. JOHN BUCCINI: Yes.

LOSS-EXAMINATION BY MR. DEL DEO:

4 Mr. Mendelson, what standards do you use in There is a 1965 highway computing capacity? A capacity manual that is widely used in the field of traffic engineering.

And I trust that wasn't the one that was used on Q the Garden State Parkway? No comment. A It was, wasn't it? Pardon me? 0 A It was, wasn't 1t? 0 A Do you it for a fact, sir?

> MR. LANIGAN: If he is going to give testimony we might as well have it on the record. The Garden State Parkway was constructed before then, MR. RALPH DEL DEO: Not all of it.

In computing capacity you used this manual, is 0

That's correct. that correct? A

• 13 What variations do you take into consideration 20 en you use the manual? I am sorry. I just A 21 don't understand what that question means.

How do you use the minual - by road width and 0 42. speed limit? As indicated to the Board A 34 earlier, there are several factors that affect the capacity 25 a and there are two different kinds of ---

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Q Excuse me. I want to know how you personally used this particular manual in formulating your opinion. I don't want to know it as a generality. I want to know it specifically. How did you do it in this case? Don't look at your attorney. Just tell me.

> MR. LANIGAN: Give him an education, please, Mr. Mendelson.

A One starts by opening the book to the appropriate page and that defines something called basic capacity, which is a function of road width, area that you are in, peak hour factors, load conditions. I believe that's all.

Starting with that base number, one makes up a table which has several columns on it. One then relates those columns to one's past experience. One then says "Column one" -- before one says "Column one" one thinks perhaps that one might make up two forms, because he is going to de two intersections or three, depending on the number.

Did you do this? A Yes.

Do you have those sheets with you? A Yes,

May we see them, please?

MR. LANIGAN: No, you may not. MR. RALPH DEL DEO: Why not? THE CHAIRMAN: Mr. Lanigan said, 'No". He wants to know why he can't see the maps. I

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an in conference with counsel now.

MR. DIANA: Are they have to be produced? MR. LANIGAN: No. sir.

THE WITNESS: No. They are not.

MR. DIANA: Are they here available?

MR. LANIGAN: They are here available. If counsel would like to see them or if the Chairman of the Board would like to see them I would be happy to show it to them.

THE CHAIRMAN: His testimony I don't believe has anything to do with the books that you are talking about.

MR. RALPH DEL DEO: He said he based his testimony on the books and on his calculations and on his opinion.

THE CHAIRMAN: I think that's all that is necessary.

MR. RALPH DEL DEO: I think we are en-

THE CHAIRMAN: He was explaining to you how he did it. I don't think it's necessary to bring the books here. I may be wrong. I don't think it is.

don't have any books with us, just as Mr. Del Deo

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doesn't carry around his law library with him.

MR. RALPH DEL DEO: He said he made a calculation when he figured this out, using the books, and he said he made a chart or two charts - I forget how many charts he has made - and I would like to see the charts, and I think the Board is entitled to see how he calculated it, so if you have a traffic engineer of your own who is going to study this they can determine whether his opinion is based on anything or whether it is out of the whole cloth, If I were Mr. Lanigan - and, of course, I am not - but if he wants us to see these, fine, and if he doesn't want us to see it. then I would want to know why we can't see it. What's so secret about how this man arrived at his opinion?

THE CHAIRMAN: I am not a lawyer and I can't compete with you, but I will ask counsel.

MR. DIANA: Will you make them available to the Board, Mr. Lanigan?

MR. LANIGAN: Yes, I will.

MR. DIANA: Okay.

MR. RALPH DEL DEO: Will they be available for anyone to look at?

THE CHAIRMAN: They will be available to

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the Board.

MR. DIANA: I might advise the Board as follows - that the weight of this witness' testimony may depend in some measure upon his background of factual information upon which he bases his conclusion. If he chooses to produce his field notes for the benefit of the Board, if he chooses not to use them, the Board may take into consideration the value of his testimony, but I think it is a matter of the weight of his testimony and that is up to the Board.

MR. LANIGAN: Mr. Chairman, I will certainly have them furnished to the Board for their review in consideration of this case.

THE CHAIRMAN; That's to the Board. That's not for the public.

MR. RALPH DEL DEO: Will the witness be reproduced so he can be questioned on his notes?

MR. LANIGAN: NO.

MR. RALPH DEL DEO: I dich't ask you, Mr. Lanigan.

ER. LANIGAN: I answered it.

MR. DIANA: I don't think that in these proceedings that every person in the audience should examine them. If there was a group of

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objectors who were represented, he, the attorney asked to see those records, I think perhaps it would be perfectly in order to produce them.

On the other hand, we may be here hour after hour if each person has a right to inspect those records and then cross-examine on these records. I think if they are produced for the Board, the Board may take them into consideration, but I think that if they are not produced by this particular witness that it is not necessarily a must.

MR. LANIGAN: If I can show counsel, you are going to see the problem we are going to have. Here are the notes. Can you read them, six? THE WITNESS: It's a work sheet.

THE CHAIRMAN: It looks like Greek. MR. LANIGAN: I am perfectly willing to make them available to the Board.

THE CHAIRMAN: Do you want to put them in as an exhibit?

MR. LANIGAN: We would like to make copies of these. You can see these are pencilled off notes, and I have no objection to submitting them to you.

THE CHAIRMAN: Okay. I think that's all

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we require. If you want to put them in as an exhibit and he has given testimony on the exhibit, and I don't think it is necessary to show the papers. That's my opinion. I don't know.

MR. LANIGAN: Will counsel permit me to send them to you after I have photostated them?

MR. DIANA: Do you want to mark that in evidence?

MR. LANIGAN: I will, if you like. I am really trying to accommodate the Board. I don't see anything wrong with them. I don't understand them and I know --

MR. RALPH DEL DEO: That's just the point. I don't either.

MR. LANIGAN: I know Mr. Mendelson has testified from them and they are his work product. We are not ashamed of it. We are not hiding anything, and I would be happy to make them available to the Board.

THE CHAIRMAN: I don't think anybody would understand them. I don't think you would understand them. Maybe you would.

MR. RALPH DEL DEO: Mr. Chairman, I am just here as a fellow who lives in this town and pays taxes. I don't represent a group. If you

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want to include my wife and the children, I represent a group.

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I don't see why I should be able to get something if I represent one and not see it if I don't. This man has given a lot of figures and he hasn't given me personally - if somebody else can understand them I bow to them - but he hasn't given me one relationship to what he is saying and any logical method that he figured it out.

I can't figure out how he got his answers. He says that a road will take so many cars. 2 live in this area and I have trouble figuring it out and I want him to explain it to me, and every time he is asked to explain it he goes into a lot of polysyllabic words that I don't understand, and I don't think anybody else can.

MR. LANIGAN: You didn't go to Yale Traffic School.

I will represent to the Board that I will submit these to the Board directly as part of the proofs.

MR. DIANA: Can this witness indicate briefly what those field notes represent?

> MR. LANIGAN: Go ahead, Mr. Mendelson. MRS. ASHMUN: Why don't we go on where

Mr. Del Deo left off at. Would you go on with your description of how you got these figures. please.

BY MR. DEL DEC:

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We are trying to figure out how you come to a Q figure of capacity. How do you use these statistics available to you? Where do they come from? How does it relate to the size of the read? How does it relate to speed? We want to know how you did it. Well. I don't Å mean to oversimplify, but/is a very basic thing that everybody practicing professionally in traffic engineering of and does it on a day to day basis. But to go, to fai up what we were saying, capacity, the basic capacity comes 11 : out of a table that is a function of certain descriptors of the road that you are looking at. Do you understand what I am saying?

I understand, but I want it as to this road, Q 202-206. I want to know how you relate what's in the book to that road. I want to know what you did.

Did you measure the road? How did you do it?

Do you think you might understand if I went down a list of figures for you, do you think that might explain it? Why don't you try. I will do Q A that. For example, from the table, there is a table that gives us what we call basic capacity based. as I indicated

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before, on several factors, such as the area roadway, width, 2 **peak howr** characteristics and other things that again are 3 **descriptors** of it.

Then based on the forecast of traffic at that particular intersection - and let's take an approach and let's look at northbound.

Q Let me stop you a minute.

You talk about the forecasted traffic at that particular intersection. What particular intersection are you talking about? A We are talking about Pluckemin Center.

Q And what is the forecasted traffic? have forecast in this particular ituation --

In what situation?

THE CHAIRMAN: Let him answer your question you asked him. You asked him a question. He can't answer three or four at once.

Q In the situation with your project built, is that **correct!** A We are talking in this particular situation of 1980 traffic volumes on the north 202-206

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 approach at Pluckemin Center at level of service C load
 factor. If you would like to copy this down - 0.3.
 Q Going back one step, you said you figured a
 capacity, I believe. A Yes

Q. Where did you get the number from? A This is

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a look up in a table.

Q It is based on a table? A That's correct.

Q And that particular table deals with a road of a certain width, is that correct? A And other characteristics, yes.

Q What is the width of the road in the table? A The width of the road that we are analyzing, the approach width is twenty-one feet.

Q The one in the table? A The one that we are analyzing.

Q What's the one in the table? A feet.

Q What's the speed limit in the table? A I don't believe there is a speed limit defined. That is reflected in the level of service and the load factor on the road.

Q when you say "level of service", how is that calculated? A Level of service is a design 20 parameter, as I tried to explain to the Doctor before. One 21 designs a road for level of service C usually, which is stable flow operation. Okay?

Q That's fine. Let's get back to downtown Pluckemin. Does it say anything in your table about a shopping center emptying out on the intersection in the

No. it does not. table? Å Does it say anything about the number of stores along the way? There is a para-A meter that reflects the kind of area that you are in. 5 0 What kind of area was on this table that you S looked up? A I believe we have worked in a fringe 7 business area. 3 A fringe business area? As differ-Q. A 9 entiated between downtown Morristown or downtown Somerville. 10 What is the definition of a fringe business area Q 11 I would relate it to the south? A 12 of use in proximity to the roads. 20 ^{||} Did you meter any of the traffic north of Q. 12 0 Pluckemin? A Yes. I indicated that we have 35 taken both intersections, counts and machine counts. 13 In Bedminster? We have taken them 0 A 17 up to the northern part of the interchange off 287 and the 1.2 202-206. Did you take any in Bedminster itself? 20 I presume that interchange is in Bedminster. 21 Downtown Bedminster? Q à No. 0 Did you take any at the intersection of Lauring-23 ton and Route 206? No. I did not. A 24Would you characterize this project, as far as Q 25 traffic, as a large one? Yes, I would. À

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Q You certainly would say that it was of great manipule, would you not, since you said it was the most intensive study you have ever made for a developer?

A I think this project in total represents the largest planned unit development in the State of New Jersey.

Q Largest planned unit development in the State of New Jersey.

MR. RALPH DEL DEO; I have no further questions.

CROSS-EXAMINATION BY MR. JOHN EWING:

Q Mr. Mendelson, who have you been working with at the Department of Transportation regarding this project A We met with a Mr. Thomas and Mr. Kuzef.

Q What departments are they in? A Planning. Q And what did you discuss with them? A We made a presentation to those gentlemen and Mr. Decker and Mr. Roach and Mr. Rubin of the Somerset County Engineering Department and Planning Boards.

> Based on the figures that you have given us here A That is correct.

Q I didn't even go to Yale, let alone its traffic school. Can you just -- A I apologize to you for that, sir.

Q -- can you give us -- because Western Electric, when they put on their presentation gave us a number of cars

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per hour going up and down a road - could you interpolate Figures to say between 7:00 and 9:00 in the morning coming south on 202-206 will be X thousand cars and coming north on 206 will be X cars? To me I think this would be 5 a better understanding. I think it would be a better under-5 standing for the average person or below average, such as 7 myself. A Would you like a twenty-four 8 hour volume or would you like a design hour volume?

Seven to 9:00 I asked for. I don't Q A have 7:00 to 9:00. I have what we call a design hour volume which is a single hour.

Which hour of the day is it? Q approximates a P.M. peak hour.

Does that vary from the A.M. peak hour? A Yes, Q More or less? In this particular area Q A our study shows that the P.M. peak hour is the most critical. 0 What would that be then? For example --A Let's say going north from Pluckemin, crossing Q there going north to get onto 287. Shall we A rake the intersection of the access road? Would that be 21 sufficient. sir?

Whichis the access road? Q A To the proposed site.

Let me back up. Could you show me on the map 0 :5 . where that is going to be? I couldn't figure out where that

is going to be.

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A Has that been submitted in

tereineny the last time?

MR. LANIGAN: Yes. MRS, ASHMUN: At the Dorman Farms, MR. LANIGAN: Yes. It's on this map. THE WITNESS: This is the access road. MR. LANIGAN: Referring to the road ---Where is 202-206? A This is 202-206. 0 This is the access road here.

Coming in? Q A Yes.

11 The traffic is going to be coming down south and 12 make a left hand turn and go across the traffic. Where it 13 the Department of Transportation building on that map, please! It's approximately there. Å

15 Where? For the record, between Q -15 287 and 202-206

It will be right opposite your access road? Q A Yes.

And all the traffic for the motel that is coming northern section will have to come down and make a Left hand turn across Route 206? A Yes, sir. 22 Have you discussed those plans with the State 0 23 Department and with the county, and they feel it's all 24 Yes. We have discussed it with right? 1 25 both the State and the County.

Q And they say it's all right? A We have have have have have have have to a meeting.

Q What was their informal response? A They thought it was well designed.

Q From what point of view? A A traffic planning point of view.

Q You mean well designed from the point of view for the additional roads that will have to be put in or what? A Which additional roads are you referring to?

Q Isn't there some additional lane on there? Isn't there a feeder lane or something? A Are you talking about the left turn lane that we are providing southbound?

> MR. JOHN EWING: Can you lift that up, Mr. Lanigan? I am so confused.

MR. LANIGAN: The left hand turn lane is not on here.

Show us on the serial photograph. Where would

MR. LANIGAN: Are you familiar with the one at Squibb on the way to Trenton?

MR. JOHN EWING: No. There is much too much traffic that way. That road down there to Squibb is a very dangerous area, and I would not



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travel on it.

THE WITNESS: We would be providing -there are two lanes at the present time within forty feet of pavement in through this section, as a matter of fact, continuous through here -we would be providing, at this intersection our access road comes somewhere in here, full utilization of that forty foot pavement, so that you have two lanes southbound, one for left turns and one through.

Q But there is only a shoulder in there now. It's not a full pavement. You have to put your footings and everything down there. A Footings?

Q Your base, I mean. The shoulder will not hold up under heavy traffic. It's only a two lane road at the present time, correct, for trucks and things -- A That's just been resurfaced.

Q -- and shoulders off to the right and left?

Q Have the shoulders full foundations under them? A I have not dug into the shoulder to determine what is under there.

Q Maybe that would have to be redone from the State's point of view? A It might have to be repaved.
Q

Q What would be the cost of that? A I would think that you are talking about something like -- well, 3 to put in a fairly high type road, you are talking about 4 \$150.00 a linear foot. 5 How many feet would this be? 0 T70 hundred feet. S 77 From River Road, just from that short area? 0 MR. LANIGAN: At the expense of the 3 Э applicant, you will recall. Mr. Ewing. 10 MR. JOHN EWING: At the owner's expense? MR. LANIGAN: Yes. MR. JAMES LYONS: Could we get back 3 the question as to the number of hours? 4 This is the design that represents the peak hour. Is this going north on 202-206? . Q Let's A look at the southbound condition. . 3 7 0 From where to where? From the A interchange. With 287? 202-206. A Going south? A Heading south.

A In the P.M. peak. At the subject intersection we anticipate some 440 vehicles per hour at that point. That would be the approach volume one way into the intersection.

Which intersection are we talking about, from

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the entrance going out there will be 440 cars going south, out of your planned entrance? A No. We were just on 202-206 --

Q Right. A -- at the intersection with the access road to the site --

Q Okay. A -- on the southbound approach to that intersection, which is the area just north of it, where we propose to put the second lane, we will have 440 vehicles by 1980 in the design hour.

Q Going by without any traffic added from you people? A That represents the expansion of local traffic that is there regardless of what Allan-Deane does, in addition to the Allan-Deane volume.

Recognize that this is a P.M. peak hour condition where the Allan-Deane volume will be primarily existing, although some people will be coming to the site at that time.

Q You said, I believe, approximately eight-one percent of these people would come down 287 to come to work.

G So eighty-one percent normally should be going north - what is the load of traffic going north at the peak hour P.M.? A At that intersection, on the approach to the intersection, on the access road now, the stuff coming out of the development, turning right or left, that volume is approximately by 1980,930 vehicles an hour.

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Q How many cars will they join going north on 202-206 that are coming up? A I don't have that Simure separated out.

⁵ volume existing from the access road.

Q Won't they meet certain traffic going north? A Yes, they will.

Q How many cars will be coming north to join them? A I can give you two directional numbers. I don't have it separately out conveniently now.

Q I must say Western Electric at least showed us
what the direction the traffic would be going in in each
hour. A Are you still interested in the
number?

Q Yes, A I would estimate the total
volume between the interchange and the access road on 202-206
in two directions now in the peak hour to be approximately
1500 vehicles.

Q Per hour? A That is correct. Q What is that road designed for now, would you Say, in both directions -- A Well, that road is designed for --

Q -- without the widening? A The capacity of that road is approximately 1450 an hour.

Fourteen hundred fifty? A Yes.

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This would be overloading it then? Q There be fifty more vehicles.

It would be overloading it, wouldn't it? Can you define what "overloading" means to you, sir. Q More than what it was designed for A PLICY vehicles.

That would be overloading it, Mr. Nendelson? Q I don't consider that overloading.

Q Was there some talk about a new interchange being put in? Some land had been bought from Mr. Kane and Mr. One of my recom Ellsworth. Å the Allan-Deane Corporation, and ultimately to the Departs ment of Transportation, is to restudy the entire interchange somewhere between 1980 and 1985.

That's the 206 --And 287. Q Å -- and 287, right. Has land been purchased Q from Mr. Kane and Mr. Ellsworth for that, do you know? Yes.

> By who? The Department of Transporta-A

21 # For that specific project? A I don't know 0 what the purpose is. I do not know what they are going to do with the land. I assume it is for that purpose.

> You figured on 300 square feet per employee. Q

> > Yes.

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Q And you mentioned American Hoechst, but your study didn't take you down as far as American Hoechst, did it? A No, it did not. Q What does American Hoechst do at their plant that you got the 300 square feet per employee? A I am sorry. What has one to do with the other?

Q I think you are going to have more employees. Three hundred square feet per employee is a very, very large amount. A I think it's a very conservative number. In fact, again we don't have the ability to have 20/20 vision in the future.

Q But American Hoechst does consist of a deg Mannel, quite substantial, and there are not people going in and out of there all the time, and they have very sizeable warehouse operations. A I think we are talking about an office research complex. You will find out, if you look into it, that the higher facilities are being built at approximately 300 square feet per employee now.

I thought it was extremely high.

In the motel complex are there going to be substantial banquet facilities? A For approximately 250 people.

Q Will it be limited to that from the plans you have seen or restrictions to it? A I think it's extremely difficult to respond to that at this point in time. Mendelson - cross

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No final design has been done on it. It's just really preliminary. Q So there is a potential for a great deal more

traffic to be generated there if they enlarge the banquet facilities? A Or less if the market shows that it is not satisfactory.

Q Two hundred fifty people? On the traffic count coming down here was there any coordination made with the traffic study for AT and T up in Bernards Township? A No. there was not.

> MR. JOHN EWING: It would be interesting to see what that states. That's all I have, THE CHAIRMAN: Is there anyone else who would like to question this witness?

MR. LANIGAN: I would like to finish with him so I do not have to bring him back. These witnesses are expensive to bring back.

THE CHAIRMAN: I want you to have all your witnesses back when we have the public hearing.

MR. LANIGAN: No, I won't bring them back.

MR. DIANA: No. He doesn't have to bring them back.

THE CHAIRMAN: All right.



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MR. DIANA: I understand from Mr. Mendelsom that there is a text by which the capacity is measured as a standard. There is a formula and that formula contains many different factors. Would you submit a statement, Mr. Mendelson, submit a statement comparing the various factors in the formula related to the findings in these particular areas and submit that to the Board for the Board's study?

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THE WITNESS: I am not quite sure what you are trying to get at. I can give you the book.

MR. LANIGAN: We can give you the book. MR. DIANA: No. You were following the text. You are following the books, are you not, sir?

THE WITNESS: Yes, I am.

MR, DIANA: And in that text there are various factors by which you measure capacity, am I correct so far?

THE WITNESS: Yes.

MR. DIANA: Then you have investigated this particular area and these roads and you have related the factors in the formula to the findings, physical findings in this particular

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case, have you not?

THE WITNESS: Yes, I have.

MR. DIANA: Then just give us your schedule of what the factor is in the text and what you have found with relation to that particular factor.

THE WITNESS: I don't mean to belabor the point, but it really is not a factor that one looks up on a page and says, "Here it is, eureka." It is just not that simple. There are many factors that go into the interpretation of charts and tables that produce an end product.

I would be very happy to give you an illustrated example of how to use the text and show you exactly how that relates to a particular finding that we have come up with.

MR. LANIGAN: For these particular roads can you do that? You want to know the data sheet for one of these particular roads?

MR. DIANA: Yes.

MR. LANIGAN: We will supply that.

THE WITNESS: Ckay.

MR. LANIGAN: No problem.

MR. JOHN BUCCINI: I thought being a security analyst was a tough job, but I think

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Mr. Mendelson's job is tougher. In fairness to him, he has done a back of a lot of work and probably a good job. The only trouble is we don't speak the same language.

THE CHAIRMAN: Do you have a question? MR. JOHN BUCCINI: Allow me to talk, Mr. Schapley.

THE CHAIRMAN: We don't want to know his background. We want you to ask a question.

MR. JOHN BUCCINI: I have a solution for the problem. Why don't we submit - with Mr. Lanigan's permission - the data compiled by Mr. Mendelson to our expert.

MR. LANIGAN: With all due respect, if you have a question, please ask it. If you want to ask this witness something, please ask it. If you have any comments they can be presented at the public hearing.

MR. JOHN BUCCINI: Why submit all that data to the gentlemen on the Board? I doubt whether they can interpret it intelligently. We want an expert.

MR. LANIGAN: I give them credit. You are entitled to do whatever you want.

MR. JOHN BUCCINI: We want an expert of



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our own, probably from Harvard and not from Yale, to look at the data and see if the conclusions correspond with Mr. Mendelson's.

MR. LANIGAN: What is your question of this witness, if there is one?

THE CHAIRMAN: Do you have a question? MR. JOHN BUCCINI: The impact of traffic is a serious one. We can't accept Mr. Mendelson's opinion, and I think we should have an expert of our own.

THE CHAIRMAN: That has nothing to de with him.

MR. LANIGAN: Mr. Chairman, I would like you to rule the man out of order.

THE CHAIRMAN: He is out of order.

MR. WHITMAN OSGOOD: I have no question of this witness. Mr. Lanigan has brought up some testimony of Mr. Catlin from the prior meeting. Would it be proper at this time to ask him to clarify one final figure that Mr. Catlin brought up? Would it be proper, counselor

MR. DIANA: Do you want to?

MR. LINIGAN: We have offered into evidence P-25 which will be made available to the Board, which is a complete synopsis of Mr.

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Catlin's final testimony, and I think that is not relevant to poer Mr. Mendelson, who is a traffic witness, and, frankly, it would be part of the proofs. It is part of the proofs, and when the hearing is concluded it will be left with the Board of Adjustment for their consideration.

It is our intention to give them as much data as we have to make our application meaningful.

MR. WHITMAN OSCOOD: Mr. Chairman, then I would reserve the right to make a statement at the public meeting.

THE CHAIRMAN: Yes.

MRS. ASHMUN: I have a question of Mr. Mendelson.

EXAMINATION BY MRS. ASHMIN:

Q Mr. Mendelson, is it right to assume that the **craffic** volume at the peak coming out of the development, **at peak**, whatever you call it, design hour, is 930 per hour,

you are telling us that it takes two hours to empty that office complex? A No. I don't believe I have said that.

Q You said and you told Mr. Ewing that coming out of the road onto 206 at the peak design hour, which was

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supposed to approximate the P.M. peak hour, you said that______ that volume was 930 cars per hour. A Yes. That's what I said.

Assuming that the other sixty people have decided to stay behind and there are 2,000 cars coming from somewhere, is it going to take two hours to empty out that place? A There are not 2,000 cars coming from someplace.

Q Tell me how many cars are going to come out of there in an hour, you know, total? A Nine hundred thirty cars.

Q Are you telling me when everybody gets up their desk to go out there are 930 cars?



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everybody gets up from their desks and go home at the same time.

You don't work where I work.

THE CHAIRMAN: Let's get this answered. 17 How many cars are there parked in that parking Q 18 lot? Let's get to that first. We have. A 19 well, the capacity of the parking lot I believe is approxi-20 mately 1900 vehicles. That provides for visitors and users and other people in and out during the course of the day. 22I have tried to say that there is a characteristic curve 23 that describes the peaking of people coming into a facility 24 and from it during the course of the day, 25

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You do not get 100 percent of the people in from 7:00 m \$:00 or 8:00 to 9:00, nor do you get 100 percent of the people out.

Q Is it because you can't or you don't want to? A It's the kind of function that the building is. If it is an owner tenanted building you have about twice the peaking than if it would be multitenanted. In this particular case since the Allan-Deane Corporation has just moved their corporate offices to Denver, it seems unlikely that you will have an owner tenanted building, so with the multitenanted building you find that the characteristics in terms of people is approximately half of what it would be.

Q It sounds like a lot of approximations.

At what point would you suddenly have to have a policeman there to get the people out of the driveway? A Galy if the driveway is done poorly. We try to design intersections that work.

MRS. ASHMUN: There is no point in pursuing it. I give up.

THE CHAIRMAN: Are there any other questions? We are going to adjourn this meeting until the 26th of this month, which is a week from tonight, at 8:15, and we will have a public meeting. Then anybody from the public can express their opinions.

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CERTIFICATE

I HEREBY CERTIFY

W. Vas

JOSEPH M. PASCALE,

CERTFIED SHORTHAND REPORTER.

that the foregoing is a true and accurate transcript of the testimony as taken stenographically by me at the time and place hereinbefore set forth.