

Mr. Lyon said three and four were taken before construction. Five was taken recently and has the same view. When questioned about the hardship Mr. Lyon explained it was due to the lot size/shape. It is wide with no depth. The width of the deck is determined by our needs. It is 34 ft. wide (about half the width of the house). A smaller deck would not allow for much sunshine as the tree shades most of the yard – they get more sun at a higher level.

Mr. Hyland questioned the proposed screening. He is envisioning a railing with some vines.

Mr. Lyon explained that he was thinking more of an arbor (lattice 8-10 ft.) attached to the deck for privacy.

Mrs. Kenny felt that was a bit unusual. She thought evergreens might work better.

Mr. Lyon said he would do what the Board suggested.

Mrs. Kenny thought Mr. Lyon probably wanted the lattice for his privacy.

Mr. Shaw said that was certainly something he could put on his own deck and he did not think the Board would need to be involved.

Mr. Lyon asked if he would have to modify his building permit for that and was advised it would be best to speak to the construction official.

Mr. Weston asked if there were any further questions from the Board. None Heard. Were there any Questions from the Public?

Mr. Vic Primere, THC LLC, 25 Mountain View Rd. – said his concern was privacy. Re: screening/lattice – he did not feel that was attractive nor did it afford privacy. He thought evergreens would give four seasons of privacy. He suggested using the rear yard with a lower structure. He thought there were other options to consider. He was also concerned about the visual as it pertained to seeing into windows of either house. He questioned the grading and storm water runoff.

Mr. Shaw thought that at this point they are only talking about is a deck so he did not think storm water was an issue.

Discussed Mr. Primere's construction project.

Mr. Borsinger asked if the side deck was to be removed.

Mr. Lyon said it would be.

Mrs. Kenny thought Mr. Primere's argument was not ringing true to her as he can see out of his kitchen everything that is going on in that back yard. He can decide if he wants shades. So whether he is on the deck or in his house he still going to see into your back yard. Also, she thought the topography of the neighborhood is part of being in the neighborhood and you will

see your neighbor next door. She sees hers. It is part of living in a neighborhood. She was listening to what is being said but she just felt that in this case the applicant is making improvements to his house. She could understand why he wouldn't want to go down a flight of steps to "grill". The problem is the placement of the house where it doesn't allow for him to enjoy his yard.

As there was not further comments the public portion was closed.

Mrs. Kenny wanted some clarification of the deck dimensions.

Mr. Lyons said the deck was 34 ft. across and when the 6 ft. deck is removed it will then be 28 ft.

Mr. Shaw noted that the drawing shows the two decks as connected. You are proposing now to eliminate the six ft. deck so it is no longer 34 ft. but 28 ft. wide. Mr. Shaw noted this was a hardship variance which is based on the size of the lot (C1). Usually what the Board will try to do is to see what can be done to minimize variances. In this situation the variance is requested because of the lot and could also be viewed as a potential C2 variance with the idea that the deck structure was to promote the light/air/space. You also have to make an affirmative finding that there is no adverse effect on the neighboring properties or the zone plan. We have had testimony from the neighbor regarding his concerns.

Mr. Hyland thought it was hard for him to vote at the moment as the plans seem to be so much in flux.

Mr. Shaw said that was correct as the current plan does not reflect what is being proposed. He suggested we carry this to the next meeting which would allow the applicant to update the plans depicting the deck as you are proposing it now, show the plantings/landscaping and provide some testimony as to why you need the dimensions of the proposed deck.

Application carried to January 21, 2016

New York SMSA d/b/a
Verizon Wireless
Pine Street
Block 83 Lot 3
2.47.21

Calendar BOA 15-83-3

Mr. Frank Ferrera, Attorney

Mr. Ferrera said this application was for a new wireless facility at Pine Street in an R3 Residential District. Verizon Wireless is currently experiencing unreliable service in this area. As the Board is aware the property is 225 ft. wide PSEG right of way. There are two lines of towers that run through this right of way. The one we are talking about is on the south side of Pine Street. The right of way will be

replaced with new monopoles type electronic electric transmission towers. They will be doing away with the lattice type towers. This particular pole that exists on the property is 132.5 ft. tall. Verizon is proposing to install a eight foot extension on top of the tower and to that they would have a platform and 12 panel antennas. The distance to the top of the antennas would be 140.5 ft. On the ground they are proposing a fenced in area behind the existing pole. Within it is proposed an equipment shelter which will be enclosed with a seven foot tall composite Board on Board fence as well as landscaping as requested by the Board Engineer. For access to the property there would be a new ten foot wide gravel access away from Pine St. to the tower and fenced ground locations. Since wireless communication is not a permitted use in the R3 zone we are requesting a use variance. We are also requesting a height variance since we exceed the required 35 ft. As to the fence height we are requesting a one foot height variance as 6 ft. is permitted and seven feet is proposed for additional security and to obscure it from public view. Finally we are asking for preliminary/final site plan approval for the installation. There is an existing facility on the north side of Pine Street which had been approved by this Board in 2006. ATT wireless, is a provider of these services, was approved to put their antennas 12.5 ft. above the existing transmission tower. In addition T Mobil was also approved to install their antennas on that tower as well.

We will have four witnesses for the Board to run through the application. We will have our Professional Engineer for the review of the site plan. We will demonstrate the need for this particular site (radio frequency, emissions) Our professional planner will review the criteria for the granting of these variances.

Mr. Shaw suggested that perhaps you could put the sight engineer on to briefly familiarize us with where it is. We then will have a site inspection on January 9th at 9 am and we would ask that you mark out the equipment compound.

Mr. Hyland asked if it was a new tower or was it a move in from a temporary tower to a new tower

Mr. Ferreira said Verizon does not have a site in this area so this is the first time you will be seeing this request for a facility from them in this location.

Mr. Weston asked as this is the first installation for Verizon on this tower is it likely tht others would want use of it as well.

Mr. Ferreira said he could not speak to other providers but from his experience that ATT or T Mobil to locate on this tower only because they have a facility on the opposite side of Pine Street. That only leaves one other major carrier which would be Sprint.

Mr. Ferreira called his first witness, Mr. Ron Lei, Professional Engineer.

Mr. Lai was sworn and gave his qualifications.

Mr. Shaw explained that they were looking for an overview so that we are oriented so when we are out at the site inspection we will know where to look.

Mr. Lai referred to File drawings showing the Location as block 83 lot 3 in R3 zone along Pine Street. We are adding an eight foot extension with a twelve foot square platform w/railings. The antennas will be mounted along the railing of the platform. The idea of the platform is that when the workers go up there is some room for working. There will be a transition ladder so they can climb from the bottom to the platform. The extension will be analyzed by a structural engineer to be sure that the platform and the extension meets all requirements. There will be twelve antennas on the platform and from them there will be twenty for coax cables. The cables that you see coming down would go to the bottom of the pole and travel horizontally towards the building. The purpose of the building is to house the antenna equipment, batteries and other equipment that may be needed. The antennas on top are 6'.72" long and about 11.5 inches wide with colors similar to the platform (grayish). The cables to support along tower by brackets at four foot intervals so going up the tower you will have about 62 brackets with extension arms 1.5 ft long supporting six cables back to back.

Mr. Ferreira thought we should show on the overall site plan what you are speaking about. He referred to Sheet Z1 dated 9/28/15

Note: Mr. Vivona arrived 8.45 pm. Mr. Weston turned the meeting over to him.

Mr. Lai noted that sheet Z1 of the site plan which showed the existing tower located on the right hand side of the plan. (Portion in audible due to paper turning) The lot is 207 ft. deep owned by PSEG. The existing pole is shown as the round circle to the north of the proposed compound. The fenced compound would be located behind the existing pole. There is also an elevation view (Z3) showing what the tower would look like with the antenna/platform installed.

Mr. Ferreira passed Exhibit A9, 8 pictures. 4 pictures on the left are existing conditions on the site and photos on the right contain the proposed conditions showing the antennas as well as the fence which is super imposed on the existing conditions.

Mr. Shaw clarified that this was just for orientation at this point. One of the comments in Mr. Ruschke's report is that there needs to be a demonstration proving that there are no noise impacts. This is an equipment shelter which is designed to keep the noise under control as opposed to the other application that we had where they added a noise barrier with plants.

Mr. Ferreira said these particular shelters come completely fabricated.

Mr. Shaw said part of the presentation would clarify what the structure would look like, materials it is constructed of etc.

Mr. Ferreira said that it essentially it will be like the photo simulations. The fence will be seven foot tall; the shelter itself is ten feet tall so only about three feet will be visible above the fencing. We have some four foot tall landscaping around the shelter. The photo's are really representative of what it would look like. These shelters are kept as small as possible while still being functional.

Mr. Vivona asked about the wire bridge.

Mr. Ferreira said that there was an overhead wire bridge that is 10 ft. tall. That is to support the coax cable in a horizontal direction.

Mr. Vivona said with ATT we had them bury it.

Mr. Ferreira said the only thing – at some point the cable would have to come out of the ground near the tower to a portable level and then go into the port in the tower.

Mr. Vivona said we would prefer that. We are just trying to accommodate what you need and what the neighbors would have to look at. We would like it to be as inconspicuous as possible.

Mr. Ferreira said they had basically modeled this installation after the approved ATT facility based upon recommendations in that resolution.

Discussion ensued re ATT application, conditions, etc.

As there were no other questions from the Board the applicant was advised of the Site Visit date – January 9th at 9 am. The application will be carried to the next regular meeting – January 21, 2015 without further legal notice.

•
Golden River Homes, Llc
11 Sunset Drive

Calendar BOA 14-61-16

Mr. DeAngelis, Attorney

Mr. DeAngelis asked that Mr. Simon, Attorney for Ms. Foley and Mr. Trojanowski - Fairmount Ave begin the hearing by calling his witness.

Mr. Simon introduced Mr. J. Miller. Profession Engineer of Princeton Hydro who was sworn and listed his credentials.

Mr. Miller, in reply to Mr. Simons' question, said he had visited the site in question on March 19, 2015. He observed the site in question from Sunset Drive and from the rear yard of his clients property. He noticed that the site was wooded and was steeply sloped toward the rear yards on Fairmount Ave. He had reviewed the application, plans reports submitted, was present at prior hearings and has read the minutes. He is familiar with the Ordinances and Master Plan with regard to this application. His clients are Ms. P. Foley and Joseph Trojanowski, 749 Fairmount Avenue. They hired me to provide expert advice regarding the variances requested by Golden River Homes, LLC. They wish to construct a large single family house at 11 Sunset Dr. He is familiar with the variances relief requested. In addition to the height and setback variances and the grade changes to the property line the applicant is seeking variances to the Township's steep slope Ordinance which is code section 30-96.24. As discussed at previous Board meetings there is significant relief requested of various steep slopes. We have a 302 percent difference for slopes greater than 25%; 81% difference for slopes in the range of 20-25% and 10% difference which is an increase from the allowable for slopes in the 20% range.

He said he found it interesting that your steep Slope Ordinance – it is very clear on why you have steep slope limitations. I read from that Ordinance that the purpose of the Ordinance is to regulate the intensity of use in areas of steeply sloping terrain in order to limit soil loss, excessive erosion and storm water runoff as well as the degradation of surface water and to maintain the natural topography and drainage patterns of land. He said he had been involved with his own towns steep slope Ordinance and modification and adoptions. Disturbances of steep slopes, especially with regard to drainage, and some of the intense rainfalls we have had recently can create some problems. That is why your Township has restrictions on steep slopes and treats them very seriously. Also in the Ordinance is a category called "background" which reads "the disturbance of steep slopes results in a accelerated erosion process is from storm water runoff" and further says "related facts include soil logs, changes in natural topography and drainage problems increasing flooding potential" and further reads "it has become widely recognized that disturbance to steep slopes should be restricted or prevented based on the impact disturbance of steep slopes could have on water quality and quantity".

It is important to realize that your Ordinance does not distinguish between manmade slopes and natural slopes. As you may be aware constructed slopes is also subject to erosion. They are especially susceptible during soil disturbance and construction activities. He believed that the variances granted for the proposed

development the downhill properties on Fairmount Ave. will suffer adverse effects from soil erosion during the construction disturbance and until stabilization and excess water runoff during construction and post construction. One thing that is really important and this came about roughly ten years ago, every municipality in NJ needed to go through a slower planning and adoption processes. This is part of your municipal storm water program. You had to develop a storm water management plan that is an element of your master plan. Then you adopted Ordinances. These issues are covered by the residential site improvement centers. One of the main features of your Ordinance and your permit is to use nonstructural strategies instead of engineered methods or structural methods. For example: Nonstructural strategies can be maintaining existing vegetation, limiting your disturbance, limiting impervious coverage, limiting the change in time of runoff, items like that. The intensity of this proposal makes using nonstructural strategies nearly impossible. It is a self-imposed hardship. There is no room to do these things. I looked at the Master Plan re: storm water management plan (element) and it under the form of guiding principal. To quote the storm water management plan – “reliance on technological solutions means that they must be well maintained with four standards”. Going into the Township code it mandates that non-structural storm water management practices shall be utilized prior to the use of structural storm water management measures unless it is demonstrated that the practices are not feasible from an engineering environmental or economic perspective on a particular site. Again, I have been here listening to testimony and have not heard any proof given by the applicant other than the desire to build a big house on this property. Reducing the intensity of the development by reducing disturbance and impervious cover is a nonstructural strategy.

Based on that background going in to the dry well that is proposed in this application I do question the feasibility and the adequacy of the proposed drainage system. Again this is a drywell system. To maintain storm water runoff on the site and prevent impact to down slope properties my specific concerns are: testing was performed and I find it was inadequate. Per the NJDEP Best Management Practice Manual used by designers and reviewers I will refer to chapter 9.3 that gives the standards for drywells. Drywells must be tested five ft. below the bottom of the infiltration elevation. To put this in lay terms then what is on the set of plans, testing was performed at a 120 inches. What is proposed is the bottom of the stone is at ten feet. If you add the five feet as per this chapter of the Manual your down at fifteen feet - that is three feet below the testing that was done on this site. Recently the manual was updated to include appendix E which goes a little further and deeper. So again testing was performed at 12 feet where appendix E of the Manual

says to test eight feet below the infiltrated surface which again is a ten foot depth so you are adding eight to the ten foot which is eighteen feet so you are shy here six feet in depth where the testing was performed and where it is required for appendix E.

What you want to do when you are doing your testing is to go down deeper because you want to see if there is a restricted layer for this system. A restricted layer would be a layer that does not allow that infiltration to occur. You can exaggerate your infiltration rate if you don't go to that depth. It is basically making sure that the system will perform as proposed/designed.

Mr. Vivona asked what are they using for testing... are they digging up or drilling a core.

Mr. Miller said there were a couple different ways to do it. He realized that they went out on a rubber tire excavator, there was a limitation to the depth, but that depth is really cradles into really understanding the soils under the system. Where they basically went to is about at the bottom of the system. You want to go deeper than that to see if there is a restrictive layer and to see what the soils are like.

Mr. Vivona asked if it had to be done with a digger or could it be done with a drill. He noted that eighteen feet down would need a huge machine that will disturb the soil before you get in there.

Mr. Miller said if you are doing it with an excavator you would need a track excavator do go down that deep. There are other ways of performing the testing through borings or some method like that. Looking at the soil surveys and seeing the infiltration rates that are on the web soil survey – the set of plans have the infiltration rates what they measured. What was actually measured is far in excess of what that soil survey shows. What that means is that there was no testing done that specifies on the April 13, 2015 letter. What was recorded for a rate of infiltration was 3 minutes per inch which is equivalent to twenty inches per hour. He was skeptical as this would be the rate per sand, and odd term but a sandy silt loam that is sort of oddball term. It could be sandy loam or silt loam. There is really no such thing as a sandy silt loam. This is an excessively high rate. It is actually two of magnitude greater than what the plans are saying from the web soil survey. It was his professional opinion that it is not believable. The plan said that the infiltration had a range of point 2 to point 6 inches per hour.

Mr. Miller went on to explain that a web soil survey. There were paper copies of county wide soil maps. Within the last decade those maps were moved to a web

format so when you want to look up soil properties and where soils are into that on a web soil survey. It is supported by the US Dept. of Agriculture, the National Resource Conservation Service. To summarize the whole area he did not believe the recorded infiltration rate as shown. He felt it was an exaggerated rate. It is far out of whack. He did not believe that was the rate. That is what they are using to prove that their system will work. Other things that need to be calculated when you are doing an infiltration system like this is that you need to calculate the drain time for the drywell and why this is important is that you want that volume ready for the next storm so we use a 72 hr. period time. That is also a rough length of time before mosquito breeding. The evacuation of the system is critical to match its state of performance and your having another storm along the way you want that entire volume ready so it infiltrates into the ground.

There hasn't been any discussion about the mounting analysis which is basically something that you look at the performance of the system as it infiltrates into the ground. It refers to the concentrating the rock from most of the sight; all of the root area of the driveway into one small location and does a mound form which is basically the water that infiltrates into the ground does it actually well out and cause a slower infiltration rate of the system. Mr. Miller pointed out that dry wells are not septic systems and that the proposed 5,148 sf of impervious cover produces about 3,209 gallons of runoff per one inch of rainfall. That is what he had calculated for this. That is a much greater load or volume going to the drywell system then would go to a septic system. You really need to take more care in finding out what the infiltration rate is for the system because a lot more water goes to these drywells that does a septic system. This drywell system could take about 3.7 inches of rain over 5000 sf of impervious coverage. With his doubts on the infiltration rate he had concerns for the system surcharging. When it surcharges it will go downhill and again without proper maintenance, which I will talk about in a minute, the ordering of the system to prepare for the next storm will diminish over time. He questioned what happens with overflows from the system, where that runoff will go? There is not a failure analysis for where the surcharge will go if the drywell is exceeded or if clotting occurs. According to the NJ Erosion and Control Standards – “when infiltration practices are proposing an alternative analysis which is also a failure analysis must be provided which ignores infiltration so you have no dead storage volume available, no static or dynamic infiltration lost grids in the routing calculation, meaning that there is no water going into soils and to demonstrate that no erosion will occur at the point of discharge if infiltration fails the function.”

What is of most interest to me and my client is runoff from this property both during construction and after. As required by your Township Ordinance the check list asks for a requirement of 200 ft. of topography. This is about standard of care, seeing where runoff, grading or different things will affect neighboring properties. Having been in this business for twenty three years I have seen lots of cases that dumping water to a property line can create problem whether it's a big subdivision or a small single family lot. I have prepared an exhibit showing **liner** topography (Exhibit O3) which consists of sheet showing aerial topography overlaid by tax maps, property lines and also aerial topography from the NJ Highlands Water Protection Planning Counsel. I married these things together. I plotted this out at a 20 scale which matches the plan set provided to the Board. He showed the lot in question (Lot 16) the property lines which are highlighted in red; the street to the east is Sunset and we also show Fairmount Avenue to the West. My clients property is Lot 3 and we also have lots 2 and 1 that are downslope of the property in question. Again the reasoning for providing this is to show a trend of topography. The property is not field surveyed and is from Mylar information. There are numerous properties within the neighborhood that are encumbered by steep slopes the same as we are seeing on lot 16 exist to the north (lots 15, 5). This also depicts single family homes on 15 and 17.

Mr. Simon asked in relation to the buffering to the rear of the houses on lots 15 and 17 will the proposed design and home location on lot 16 have similar types of buffering.

Mr. Miller said No. The storm water management system discharge is approximately 25 ft. from the property line. There is very little distance between that and coming off the property. The buffering to the lots 15 and 17 is just various types of vegetation will help with erosion control. Not only the trees but actually the leaf litter, the understory and as such does provide a buffer to adjacent properties.

The proposed design shows an overflow pipe that discharges toward downstream properties without any kind of alternative analysis such as the soils underperform due to clogging makes it difficult to access the ability to discharge runoff in safe and stable manner. It shows the point of discharge from the system is concentrated runoff which will flow down to the Fairmount Avenue rear yards. This isn't a flat property where you are installing a drywell so that discharge/surcharge is going to runoff down the slope into these back yards.

Mr. Simon referred to Mr. Millers plotting of the topography for the surrounding properties down toward the Fairmont properties does that lead you to conclude or substantiate your concerns in regards to storm water runoff.

Mr. Miller said it did. We are talking about direct impacts to the existing properties. My topographical delineation is based on aerial to show entrance. He was not certain from this topography where that discharge point will go. Will it go into lots 2 or 3. From this topography it shows it impacting lot 2 but a slight change in the grading could send it to the back of lot 3. He would recommend that a field survey should be done. Going back to the completeness check list for the Township it is on the Chatham books. The reason it is on the check list to show the impact to the surrounding properties.

When you fully develop a site you don't have a lot of room to put a dry well so it is based on the intensity of the development proposed. This is spread out and made more shallow and how this effects performance/maintenance – maintenance on this proposed system is crucial for its performance to protect the downslope properties. I asked questions about its maintenance and how will the homeowner maintain it, what tools or equipment will be used, etc. What really happens in a lot of instances is that maintenance is not conducted. The reality is that you have to make sure that the system works even before you talk about maintenance. I have not seen a maintenance plan for this or heard anything about maintaining the system. He referred to the Master Plan on Storm Water page 11 under the 4th guiding principal points to storm water management ordinance where a “maintenance and monitoring plan is required along with an agreement with the owner”. I ask the question as to who will maintain this if the owner doesn't maintain it. What happens if there is an oversite in the system and a system failure? What is the remedy to solve that? We really have to make sure the system works. Again, as I've said the drywell overflow pipe is only 25 ft. from the property line. I want to give my client some comfort and tell this board that I can give you an assurance but I can't that this drywell will function adequately to prevent a downslope impacts (referring to full system). It was his feeling that the concerns and issues that he had raised must be addressed before the variances are considered. The Township has an ultimate responsibility for storm water management systems per you Municipal Storm Water Management. Should the owner not maintain the system the Township becomes the responsible party.

In summarizing his testimony there is too much proposed on this lot and the deviations from the ordinance leads to these variance requests and the resulting difficulties in managing storm water runoff. Your Storm Water Management

element expresses on page 10 under its second guiding principal that the “cumulative impacts of individual actions are managed by strict implementation of land use ordinance that is intended to manage the impacts on local drainage of new development or modified single family residential lots”. There has been previous discussion in this allocation about knock down and rebuilding existing homes and you element of the Master Plan speaks to that. Finally you have the “Planning Questions” for residential/commercial construction projects dated May 2008 and under 3 Land the questions regarding unusual features of the property such as steep slopes, bedrock or shallow water table and the document responds “when these complicating geological features exist the numbers will expect most applicants/home owners to work with the land rather than trying to overpower the land with special engineering Example: Retaining walls and would expect that you work more closely with your engineer/planner to find the best locations for your house, driveway and other aspects of your project. Be sure to review Chatham Township’s Steep Slope Laws and regulations and other natural resource protection requirements. In general Board members will be looking for ways to minimize the disturbance of the land”.

To conclude by testimony this is too much house on this lot. If the impervious coverage, building footprint on the site were reduced it would reduce downslope from and erosion sanitation and storm water runoff standpoint. Based on experience and the familiarity of the variances requested a reduction in the size of the house, lot coverage etc. would reduce the number of variances or more importantly the percentage or the amount of deviation from the standards set forth in the ordinance. Before we get there I would recommend that under any circumstances that testing be done properly. The infiltration report was to him, not accurate and was two orders of magnitude greater than what is recorded on the web. The differences need to be explained and have a rational for it. You need to do the proper testing to show an accurate measurement.

Mr. Simon asked if Mr. Miller was saying that before this Board even has the tools of the information necessary for a comprehensive analysis for the variances being requested that you first have to do this testing. Is that Correct? Mr. Miller agreed. Mr. Simon went on to suggest that by reducing the amount of development on the site, not to say that they can’t build a house there, but a house that is more in keeping with what you are finding shows from an engineering standpoint. It is important to do the testing and then do the analysis.

Mr. Miller said that you would expect that the impacts would be lesser with a complaint home.

Mr. Simon recognizing that Mr. Miller was not a professional planner asked if he understood as you are a Planning Board member of many years, that this applicant is requiring a C1 variance with regard to the proposed development. You understand the even if this Board possible considers the variances, if they conclude that they do have enough information, what you are saying is that they could not possibly have The Board would not be in a position in any event to rule favorably on any of the variance relief considering the information provided especially in regard to the negative criteria, in terms of the detriment to the neighborhood.

Mr. DeAngelis objected to the question. We already went through the planning testimony. He is not a professional planner and he didn't care if he was a Board member or not he can't answer that question.

Mr. Simon, addressing Mr. DeAngelis, said he specifically asked the question as a Professional Engineer. I was asking him to give an opinion.

Mr. DeAngelis – you asked him about C1 variance relief and hardship variance relief of the whole planning issue.

Mr. Simon said there were issues that your client is seeking relief for under the MLUL and your client, engineer and planner mentioned them. Mr. Miller specifically sited to all those provisions as well as Master Plan provisions. As to The storm water runoff he is fully equipped to access what there would be a substantial detriment to the surrounding neighbors.

Mr. De Angelis said he would repeat again...

Mr. Shaw suggested that the question be rephrased.

Mr. Simon asked Mr. Miller, from an engineering perspective and based on your extensive experience with regard to storm water issues and as a Professional Engineer do you have an opinion whether this property/development/application warrant the granting of 8 variances of the magnitude proposed by the applicant currently with regard to whether there would be substantial detriment to the surrounding area.

Mr. Miller believed there would be a detriment to the downslope properties.

Mr. Simon asked Mr. Miller, as a Professional Engineer and based on your experience with storm water management issues do you believe (as an engineer) that based on your review of the Ordinance and Master Plan specifically in regard

to storm water runoff and erosion issues that there would be a substantial impact to the Master Plan and the Zoning Ordinance.

Mr. Miller said the variances lead to a more developed sight which will have the impacts I referenced regarding erosion, sedimentation, pollution issues and runoff issues.

Mr. Simon, just to reiterate, as a Profession Engineer the steep slopes in particular are not an exceptional situation uniquely affecting this property because there are steep slopes in the neighborhood.

Mr. Miller said that was correct as I provided in my earlier testimony.

Mr. Simon asked, if as a Professional Engineer, believe that you need to disturb the slopes to such a great extent and also require the other variance relief being requested by the applicant to such an extent for this particular property that instead a more appropriate size and situated property home could be put on this lot.

Mr. DeAngelis objected. He asked how Mr. Miller can give an opinion as to the size of the property and the size of the proposed house as an engineer. Mr. Mills and our Planner have testified to this.

Mr. Simon, addressing Mr. DeAngelis, it is in fact an engineering question. A Planner doesn't necessarily have the expertise to assess how much less slope disturbance there would be if the house was smaller. An engineer is the guy you have to ask and that is what I am doing

Mr. DeAngelis said we don't have a smaller house here. This application is what is proposed.

Mr. Simon asked Mr. Miller if he had a house that were smaller with less coverage you would not be disturbing the slopes to such a great extent... Correct?

Mr. Miller said that was correct.

Mr. Simon asked if you might even avoid some of the other variances requested including the change of grade within "X" feet of the property line and also the amount of deviation regarding the setback distance from the principal structure or above ground structure to a retaining wall.

Mr. DeAngelis objected. That is planning testimony and has nothing to do with his expertise.

Mr. Miller said as a Civil Engineer he could comment that absolutely a smaller footprint, smaller development area would have less relief required and less impact to down slope properties.

Mr. Simon said he had no further questions of this witness at this time.

Mr. DeAngelis asked Mr. Miller if he had testified before a board in favor of a steep slope variance.

Mr. Miller did not believe he had.

Mr. DeAngelis asked. if as an Engineer, he had testified for applicants in support of variance cases.

Mr. Miller said he did not recall testifying on behalf of variances

Mr. DeAngelis asked if Mr. Miller only testified for objectors in cases such as this.

Mr. Simon objected – that is not what his testimony is at all.

Mr. Shaw thought it was a question that could be asked.

Mr. Miller said he has many years of design experience. Most recently doing more review work.

Mr. DeAngelis to clarify - you said you reviewed the application and the submissions by this applicant. Did you review the storm water management plan.

Mr. Miller said he had.

Mr. DeAngelis said it had been submitted to Mr. Ruschke in the Engineering Department.

Mr. Miller thought it had.

Mr. DeAngelis noted there was no objection poised by Mr. Ruschke.

Mr. Simon objected and asked how this witness would know whether Mr. Ruschke objected or not objected other than what may have been in a report.

Mr. Vivona said that is how he would know. If he reviews what is submitted and makes recommendations as to the correctness.

Mr. DeAngelis said that Mr. Ruschke issued two letter of review for this Boar and didn't find any objection to the storm water management plan proposed. Did he?

Mr. Simon asked if a particular letter was being referred to.

Mr. DeAngelis said the applicant and his engineer testified that they agreed to comply with all the recommendations from Mr. Ruschke's report.

Mr. Miller said he believed he reviewed the minutes from that hearing.

Mr. DeAngelis asked if Mr. Miller knew that Mr. Ruschke's office also approved a letter from Murphy & Hollows dated April 13, 2015 regarding the soil log and perk testing.

Mr. Simon objected – he did not know what he means to approve the letter.

Mr. DeAngelis to clarify, in review of the file he asked if there was any objection from Mr. Ruschke to the findings in Mr. Murphy's report

Mr. Miller said he wasn't aware of any but Mr. Murphy couldn't remember when the testing was performed. I do recall that it was associated with that letter.

Mr. DeAngelis noted that Mr. Murphy's letter (dated Apr. 13, 2015) did say that in accordance with variance application review letter dated March 4, 2015 .. would you think the testing would have been done between March 3th and April 13th.

Mr. Miller said it could have been.

Mr. DeAngelis asked if he had heard Mr. Murphy testify to when the actual testing was done.

Mr. Miller no..as I said I reviewed the minutes.

Mr. DeAngelis asked if Mr. Miller knew Mr. Murphy to which Mr. Miller replied that he did not. You reviewed the infiltration rate and said it was not believable.

Mr. Miller said that was correct.

Mr. DeAngelis asked if Mr. Miller was calling Mr. Murphy a liar.

Mr. Miller said no he just did not believe what he recorded here is accurate for the soils that he discovered.

Mr. DeAngelis said if it is not accurate and he wrote it and he said that based on the soil logs it was his opinion that the drywell will provide necessary storm water management is he lying?

Mr. Simon objected. That was a mischaracterization.

Mr. DeAngelis – you say it is not believable to politely call him a liar?

Mr. Simon objected.

Mr. DeAngelis said if it was not believable why would he make up the data and why would he make up the report. Isn't it true that engineers that make these reports that are accepted by the Township Engineer as to the soil logs?

Mr. Miller said there are instances where certainly the engineers go out and do soil logs and measure infiltration rates. It could be that he didn't follow the BMP manual standards and that is why we are seeing an exaggerated infiltration.

Mr. DeAngelis asked that if anywhere in your review of the file did Mr. Ruscke object in any way to Mr. Murphy's findings.

Mr. Miller said he didn't see anything but I also don't see anything from Mr. Ruschke that he accepted this report.

Mr. DeAngelis – you talk about how much the 3.7 inches in the drywell –it will store that number – Mr. Miller said it would.

Mr. DeAngelis then you talk about the water down hill.

Mr. Miller said it would start evacuating, correct.

Mr. DeAngelis asked where the water went now?

Mr. Miller said right now it is a combination of infiltration, some runoff, some taken by the vegetation on site and tree canopy also accepts rainfall. the leaf litter, the irregular land form picks up water, those type of things.

Mr. DeAngelis on a steep sloping lot does the water go downhill?

Mr. Miller said it did but the importance is in its current state there are rockiness or it is basically with the tree canopy and other features of the site mitigate some of the runoff.

Mr. DeAngelis asked if Mr. Miller had measured currently how much water runs off especially onto the properties on Fairmount your clients property and the neighboring property just below this property.

Mr. Miller said he had not.

Mr. DeAngelis asked if the properties on Fairmount had any drywells.

Mr. Miller said not that he was aware of.

Mr. DeAngelis asked about the properties at 15 & 17 on Sunset, do they have drywells?

Mr. Miller said he was not aware if they did.

Mr. DeAngelis noted that this would be the only lot that would have storm water management on their property.

Mr. Miller said it was possible.

Mr. DeAngelis said it was more than possible as it is the only one that will have any type of storm water management such as drywells to capture the water which all has been approved by the engineering department in the Township.

Mr. Simon objected as there is no evidence that they all are approved.

Mr. DeAngelis asked if Mr. Simon thought they would let them build this single family house without Hatch Mott McDonald approving the storm water management system and to ensure that it protects the downhill neighbors.

Mr. Miller said he was capable of looking at the ordinance and the master plan and my clients hired me to look at the application with regard to her and her neighbors impacts.

Mr. DeAngelis asked if Hatch Mott McDonald will let this applicant build a house and not assure themselves that the storm water management system works to protect the downhill neighbors.

Mr. Miller said he could not speak for the Engineer that is not here right now but I can say that I have concerns about what is proposed.

Mr. DeAngelis had no further questions.

Mr. Simon asked if Mr. Miller was aware that the client that had hired him currently has water problems in the basement. You are also aware that water problems are experienced by her neighbors.

Mr. Miller said he had been told.

Mr. Simon asked, as a Professional Engineer, do you believe that since this Board is faced with eight variances the incredible magnitude should be

Mr. DeAngelis objected on the comments regarding the variances.

Mr. Simon asked Mr. Miller if he thought that the variances requested are incredibly magnitude based on you experience as a Professional Engineer.

Mr. Miller thought they were. There is not just a slight request for relief it's a lot.

Mr. Simon asked, as a Professional Engineer, you believe that notwithstanding, Hatch Mott McDonald or Mr. Ruschke's experience or expertise, etc. that this Board is charged by the MLUL to make a determination of the variances and one consideration as an engineer is whether it will be a substantial detriment to the surrounding neighbors... Correct?

Mr. Miller – Correct.

Mr. Simon - and you believe that notwithstanding all the questions Mr. DeAngelis said that this Board is not in a position at to fully and fairly make that assessment without a lot of additional information.

Mr. Miller – Right.

Mr. Vivona noted the test was done at eighteen feet and came up clear and that it can except the water is your point or....

Mr. Miller said he would have to see what the infiltration rate is. As I already talked about the infiltration rate effects the dewatering of the system. I have not seen any calculations supporting what that timing is.

Mr. Vivona – okay. As far as retaining walls I know we have changed a bunch of that stuff but that also on the upside of the retaining walls now flat which eliminates runoff does it not?

Mr. Miller – what is being proposed here is a series of pipe conveyance systems so you have yard inlets, patio drainage, roof runoff, driveway runoff and so that is basically taking that order to a very small area and trying to infiltrate all that. That is my concern.

A question was raised regarding Mr. Miller's testimony re: flooding/drainage impacts currently experienced by the downslope property owners.

Mr. DeAngelis clarified that he did not testify to that but to what he had been told by his client. He noted that he objected to that testimony as he didn't have any personal knowledge of that.

Mr. Simon noted that the NJ rules of evidence technically apply and as a result of that Mr. Miller certainly can testify as to what his client told him.

Mr. Miller said as a Professional Engineer he had no reason to disbelieve what his client had told him.

Mr. Simon – given what your client has told you in terms of current experience would this situation worsen if the development goes through as proposed.

Mr. Miller said that would be his concern as there would be more runoff to the rear of her property and exacerbate any existing conditions she may have. He did not see how it could get better.

Mr. Hyland said if the drywells captured all the water because they are well maintained and no water goes down hill is there a possibility that the basement is suddenly dry?

Mr. Miller said he did not see that possibility. He did not see where developing the site even with the drywell system would make her condition better.

Mr. Hyland so putting anything in the drywell that is three times bigger than the one proposed, ten times bigger than the one proposed, is it possible that the downstream neighbors are better off?

Mr. Miller said there is a potential that made properly and supported and designed system would eliminate all water coming down to the back of those properties.

Mr. Hyland asked if it was possible to build a system like that.

Mr. Miller said it is not what is currently proposed but speculating it is.

Mr. Hyland as the expert you can speculate.

Mr. Miller said he guessed so if its in the rules ... yes. Something could be designed that holds back the entire water from all the slope area.

Mr. Hyland noted that Mr. Miller had said that there was no vegetation and understory at the back of this property but there was on 15 & 17. Why is there none here.

Mr. Miller said he was talking about was that they were concentrating the runoff to one location (west corner of Lot 16) and there is very little room for the discharge to be intercepted by a buffer. A buffer is not just stands of trees with lawn it is having a denser understory with leaf litter and basically unmaintained woods.

Mr. Hyland asked if they were developing back in the northwest corner.

Mr. Miller said the northwest corner is where the drywell system is proposed.

Mr. Hyland said it was 25 ft. from where the drywell is proposed.

Mr. Miller said the discharge is about 23 ft. from that property line.

Mr. Hyland asked if there was anything going on in those 23 ft. Isn't it going to be just wild as everyone else's back yard?

Mr. Miller said he was talking about the value of a buffer which is the width of the buffer. In looking at the drawing the lot to the north is significantly greater which is about 2.5 times.

Mr. Hyland you were talking about best practices/regulations – are they the same thing?

Mr. Miller said the BMP manual is an accepted design with standards in it.

Mr. Hyland asked if that meant that everyone that came before the Board should be doing that.

Mr. Miller said that you should explain why you're not doing it if you are not.

Mr. Hyland asked if Mr. Miller's contention was that the soil samples/infiltration rates were not done using the BMP standards and that the person who did them didn't explain why they didn't use the BMP suggestions.

Mr. Miller said the report doesn't speak to what method was used. Certainly, it did not follow the BMP Manual. He referred to the two different chapters 9.3 which are the drywell standards and the appendix which are more recent.

Mr. Hyland noticed that when you were asked the questions regarding substantial detriment you answered only that there would be detriment. How much detriment are we really talking about? Is it a lot or a little?

Mr. Miller felt substantial was a fine word for what he thought would happen. You don't have proper testing, you don't show the topography, there is no maintenance plan or any idea of what will be done to maintain the system so he could only assume that the system won't function and there will be a substantial detriment.

Mr. Hyland asked if that primarily meant just more water in the basement.

Mr. Miller said it meant more runoff into the properties and potentially more runoff to the basement of downslope properties.

Mrs. Kenny asked that when Mr. Miller had testified in other hearings have you ever found a similar thing, is this a common thing that they don't bore down enough or follow the best practices.

Mr. Miller said no that most engineers will follow the BMB manual because it gets them approvals quicker. While it is called a BMP manual a lot of people will put that manual, even with the new appendix, a significant number of infiltration systems failures that have led to the need to have that appendix added to the BMP manual.

Mrs. Kenned asked if Mr. Miller had ever testified to another case that was similar to this where they didn't go down far enough. That was your finding and your recommendation and the reason why you think it's not adequate.

Mr. Miller said he was trying to think if I have ever encountered where the sampling wasn't done deep enough. I would imagine that I have encountered this before whether it's the testing was not done. He did not recall this specific situation.

Mrs. Kenney said that the situation is not that common or not something you find all the time.

Mr. Miller did not think so. Again the BMP manual gives a standard to follow and gives more prescript guidelines so that everyone can feel more comfortable about what has been designed.

Mrs. Kenny had a question for Joseph Modzelewski, Engineer regarding maintenance. It has come up in the past as to how it was to be maintained and I think we have included things in the Resolution to make sure that they are maintained. I wondered if you could speak to that.

Mr. Modzelewski, Engineer said he was not familiar with this application and was not sure if it was required to have a maintenance manual. If they are supposed to provide a maintenance manual then it would have to be recorded on the deed of the property. Specific maintenance schedules would be included.

Mrs. Kenny said we probably can't infer that its not in John;s report but it doesn't mean its not required although I would think he would put it in there if so.

Mr. Shaw said he thought if it was required it would be in there but that it doesn't mean that the Board might want that as a condition of approval and would require a maintenance manual, recording on the deed any protections which would be in place for that.

Mr. Simon asked that even with the maintenance manual that was proposed as a condition by this it doesn't change at all your opinions/testimony in terms of all of your concerns.

Mr. Miller – correct.

Mr. Simon had nothing further for Mr. Miller.

Mr. Borsinger asked if Mr. Miller had any suggestion for the drywell to make this structure suitable for this lot.

Mr. Miller said he had previously testified that this is a deep system and if there was room, which there is not because of the intensity of the site proposal that you would have a broader and shallower system.

Mr. Vivona asked why that was better than a deep one.

Mr. Miller said, especially from a maintenance standpoint, even a visual inspection of the system, access to the system, a shallower system it would be – the depth of your testing maybe in deep enough but the problem here is that you don't have room. The system has been put in where there was room remaining after taxing out the site.

Mr. Vivona asked if there were any further questions of Mr. Miller. None Heard.

Mr. Vivona asked if there was anyone from the public that would like to ask Mr. Miller questions about his testimony. None Heard.

Mr. DeAngelis asked Mr. Miller if he had ever done a Perc Test.

Mr. Miller said he had.

Mr. Simon said he had one more quick witness, Mr. Vincent Core, neighbor, 739 Fairmount Avenue.

Mr. Core, sworn, looked at the lots shown on the map and identified his property. He is on the curve. He said he has an uphill neighbor. There are two people to the left of his house. There is a home above him but no homes above the properties to the east just steep slopes and vegetation. To the left of them is a home, not directly behind them but partially so there is a wooded area and a home.

Mr. Core said he had lived in his present residence for 38 years.

Mr. Simon asked if he was here this evening for testimony given by Mr. Miller regarding the storm water runoff. You heard as part of the testimony that his client, Ms. Foley, that he was told she as well as other neighbors experience water issues. Do you experience water issues on your property?

Mr. Core said he has. We have been fighting water for the past thirty years. When I say there is a home above me and a steep slope it happens that everything from their property runs down to my property. We have tried numerous things to mitigate the flooding in the basement (3-4 inches of water) and the garage. I have French drains across the back of the property with crushed rock, work that had to be done more than once. I had it rebuilt with a pipe put in to try to drain the water away from the foundation of the house. All the downspouts in the back of the house go into the French drain. It became apparent at the time it was happening the home above me was remodeled/expanded trees removed in the back yard leaving a nice grassy slope. As a consequence there seems to be a direct correlation with the increase size of the house and the absence of trees that I was getting more water. Every step that I have taken over the years never proved sufficient to keep the water away from the house. Ultimately we went to putting in a French drain inside with sump pumps etc. We have been fighting water for thirty eight years.

Mr. Simon said he had nothing further.

Mr. Vivona asked how old Mr. Core's house was and was advised that the house was built around 1964 but he did not know when the house above him had been built.

Mr. Vivona clarified that Mr. Core always had water problems but the house above him had been there when he moved in. It was then expanded/landscaped/removed trees and your water problem got worse. Mr. Core said yes his water problem did get worse.

Mr. Vivona asked if the neighbors to the east of him had any water problems.

Mr. Core said his neighbors to his immediate left and to the east they also have water problems. They always have to pump out their basement. Two houses removed he has sump pumps. The year before Sandy there had been a tremendous downpour with a power outage. Unfortunately that meant that the sump pump system and battery backup system proved ineffective in trying to keep the water out. He had two sump pumps and as a consequence of the storm those two sump pumps were inefficient to rid him of the water.

Mr. Core said he was not an expert but he has been there. When we had the French drain installed across the back of the property and with that came rock. You cannot stick a shovel in the ground on that property without coming to a rock or ledge. When my landscaper put in an irrigation system they had to find ways around the rock to try to install it. I have rocks that make their way to my driveway. You can come by and see them. The place is filled with rock. He did not know to what extent that has to do with the drilling but he was surprised that anyone would be able to drill anything on the property because of all the existing rock.

Mr. Vivona said that the rock would be a type of shale that breaks up very easily. That is how they can build these foundations but added that rock doesn't absorb water.

Mr. Core said he had been told by his landscaper that the formation of the hill that we live that the water collects between the rocks. I can take you to several places on the property that are always like mush, always wet. I don't know when we last had rain but we haven't had rain in the last week and I can show you where the ground is wet. Its always wet and the mountain always has water and when it rains there is a lot and I end up getting it in my basement.

Mr. Vivona asked if there were any questions from the Board of Mr. Core. None Heard.

Mr. Vivona asked if Mr. DeAngelis had any questions.

Mr. DeAngelis asked if the development of this lot is any way going to affect your property.

Mr. Core said he couldn't say with absolute certainty that it won't have an effect. The way the house above me is situated and the way I understand this new home will be situated with a lot of the trees currently on the property removed I don't know. Will the water go directly downhill or to the side. I can't say with absolute certainty that it won't have an effect.

Mr. DeAngelis said the water basically goes downhill to Fairmont. Your water problem are due to the neighbor that is above you. Did you ask him to put in a drywell?

Mr.Core said he was downhill on Fairmont and he did not ask the neighbor to put in a drywell.

Mr. Simon had no other questions but did have a short summation when we are done.

Mr. DeAngelis called Mr. Murphy in rebuttal to the testimony.

Mr. Murphy, previously sworn, said he had prepared your report on April 13, 2015 addressed to Mr. J. Ruschke, Township Engineer. He had performed the soil logs data and drywell construction certification. He is very familiar in how to prepare them and have done them in the past for Chatham Township. He had done soil testing at the bottom where the drywell will be and we extend the soil log another two feet to show that there is no ground water or bedrock interference with the bottom of the drywell. That is the procedure I have followed for years for work done in the Township and it has always be accepted. The data submitted passed the Township standards.

Mr. DeAngelis asked if Mr. Murphy had heard Mr. Miller say very politely that your report was not believable.

Mr. Murphy said he had heard that. This report had been submitted to Mr. Ruschke and April of 2015 and there were no objections and was accepted . I might note that it was done during the wet season and for septic systems that's when you do them to show ground water. That is typically between January thru April is the wet weather season. You can report ground water based on observation.

Mr. DeAngelis noted that your letter does not say which date you performed the test but it references Mr. Ruschke's review letter of March 4th and your letter is dated April 13th.

Mr. Murphy said the testing was done in between the date of Mr. Ruschke's letter and mine. It was late March early April.

Mr. Vivona asked Mr. Murphy to explain how he got his numbers for the drainage calculations that Mr. Miller found so outrageous.

Mr. Murphy – I called it sandy silt loam. I could have just called it sandy loam which would take out the silt. The perk test I did I followed the rules for perk tests you would do for a septic system. You would dig a hole 12 inches deep and saturate it with water and if it drains within four hours you can continue testing. I did that – drained at 2 minutes per inch. I did the constant rate to show that the 2 minutes wasn't a fluke and once I had that constant rate then I did my final rate and it all came out within that 2-3 minute range. They are all consistent as far as testing. If I reword that soil log and take out the word silt it might be more acceptable to Mr. Miller. A sandy silt loam is sand with some silt in it. The other thing is if you went down eighteen feet there is no way somebody going down to the bottom of that hole and dig a perk test. If you can't take a soil sample for a dry well you have to do a physical test. I can't see an Engineer going down 18 ft. to do a test.

Mrs. Kenny said Mr. Miller made it sound like everyone does it this way but you don't do it that way.

Mr. Murphy said no – I dig the soil, I record the soil and I do a perk test. What he is saying is that I didn't go far enough down with the soil log after the test. We had a track machine and went down to the limits of the change which is 12 ft. hit bedrock or anything that would prevent us from digging it – that was the limit of the machine. I am not sure of the BMP manual where it says you have to go down that deep. He was not familiar with the appendix but as I say Chatham Township has always followed this rule to my knowledge.

Mrs. Kenny asked Mr. Murphy about Mr. Millers comment on the discharge – not knowing where that will go.

Mr. Murphy said when you design a system you design it for 100 year storm. If you exceed that the water will come out of something so we have an overflow coming out of the top of the drywell which discharges onto a riprap apron and would continue downhill just like it would if it was not there at all.

Mr. DeAngelis asked if this is the method you have done in Chatham Township before.

Mr. Murphy said it was. They have done it many times and it has always been acceptable to the Township and their Engineer.

Mr. Hyland wanted to follow up on the different depths. I heard 10 ft., 120 inches, 12 ft., 50 ft., 18 ft. What goes on at 10 ft. down?

Mr. Murphy said ten feet down is the bottom of the seepage pit. It is the bottom of the drywell. You test that soil to make sure it drains. Then you continue after your testing to go down another two feet to show that you are not sitting on bedrock and it will stop the water from percolating down.

Mr. Hyland so you went ten feet and another 2 ft. to 12 ft. Mr. Miller wanted what?

Mr. Murphy said Mr. Miller was saying that you have to go down 6 ft. below where you test so you are talking 16-18 ft. And then he was saying that you didn't have to do a test at that level. I went down 10 ft. on this one for the perk test and then I got out of the hole and we continued to excavate/measure with a tape - but 18 ft. is scary.

Mr. Hyland said he has always envisioned a little extractor device going down there to do it. How big a hole do you dig.? Do you walk down the 10 ft.? Then you dig a smaller hole of two feet.

Mr. Murphy said he did a perk test which is 12 inches deep at that level. When we are done I get out of the hole and a machine goes back and continues to dig that hole down another two feet. Then we observe.

Mr. Vivona – so its pretty much all soil and not much rock.

Mr. Murphy said its 10% cobble which is small stone but it wasn't bedrock or like the description you had before from the neighbor. He is right, soils change. These are two different lots but fairly close together.

Mr. Hyland – to clarify- you said you do this with the digger with the owner and 12 ft. was as deep as you could go.

Mr. Murphy said yes.

Mr. DeAngelis asked if the drywell system that you propose was that review/approved by Mr. Ruschke's office.

Mr. Murphy believed it was.

Mr. DeAngelis asked if they had made any changes to your plan for the drywell.

Mr. Murphy said they just wanted to show that the system worked. He says he goes out there and supervises the installation and make sure it's in conformance with my design. I then certify that.

Mr.DeAngelis asked if that certification was accepted by the Township.

Mr. Murphy said it was.

Mr. DeAngelis asked if Mr. Murphy had submitted a Landscape Plan and had it been submitted.

Mr. Murphy said he had..

Mr. Shaw said they were marked as A31 and 32.

Mr. Murphy gave a brief description of the plans pointing out the fencing along the back which would provide some buffer, the 4 drywells to the north west and the rip rap apron. He noted that there are 12 trees being put along the south side between the houses as he had concerns about his views. There are also trees along the north side to buffer that property line. There are larger shrubs which are basically around the back of the deck and patio areas. There are small shrubs and perennials along the front. We have buffer the entire site. We are trying to minimize any visual impacts. There are large trees in the existing area so they are being maintained and preserved. All the shrubs will absorb the water and help the runoff as well.

Mrs. Kenny raised a question regarding the conservation easement which the Environmental Commission had suggested (50 ft. wide strip along the rear downslope property line) and a discussion ensued.

Mr. Vivona asked if there were any question for Mr. Murphy.

Mr. Simon asked Mr. Murphy why he didn't just design a more shallow system as Mr. Miller testified that the test that you had done actually may comply with the BMP.

Mr. Murphy said he could but it would increase the disturbance. I will look into that. Assuming that you get a variance approval we still would have to submit a grading plan to the Engineer for his review. It is the same plan but at that point I could change it to a shallow system.

Mr. Simon as a condition of approval you would redesign that as a shallow system if the Township Engineer approves it.

Mr. Simon asked if Mr. Murphy would redo the testing as suggested by Mr. Miller in accordance with the laws that complies even as a shallow system to appendix C as required by law.

Mr. DeAngelis said questioned "as required by law".

Mr. Simon said that was in the appendix to the manual.

Mr. Vivona said in a shallower system the information we have would be enough.

Mr. DeAngelis thought if it were required by law Mr. Ruschke would certainly make us do it.

Mr. Hyland admitted that is where he got confused. Best practices don't necessarily mean the law.

Mr. Shaw said for everyone's information, the DEP basically adopts a manual for use basically state wide. Chatham Township follows BMP practices with stormwater. We actually have one of the more innovated ordinances requiring storm water recharge in the Great Swamp Water Shed. The reason why we have plans requiring infiltration like this because of the town's standards. Mr. Ruschke would be applying, in reviewing those standards, when he signs off on plans.

Mr. Simon said that there was no evidence that the plans have been approved in terms of testing as Mr. Miller testified to. In addition, Mr. Ruschke is not hear to comment on the testimony of Mr Miller and as a result of that certainly I believe it is improper to speculate as Mr. Ruschke;s reaction to Mr. Miller's testimony being what he may require or reconsider. As you all know applications change and part of the reason why homeowners spend hard earned money to retain experts is to present an alternate view for consideration specifically by the Township Engineer professionals to either change their minds or see it a different way; maybe require additional testing; or give advice as to the Board as to whether before you consider 8 variances that you should require the applicant to come back with this different testing so there can be a thorough review and get it right.

Mr. DeAngelis said it could be that Mr. Ruschke makes changes and we will comply with whatever he requires in order for us to build this system and the house. They review every single thing and tell us what we have to do before we will ever get a vote from them. We have no problems if he wants to improve the system we have no problem with that. We are not going to redo the system, redo all the testing and come back here because we would be back here in January and February and we have no application because we have not enough Board members to pass it.

Mr. Simon felt it was not true or accurate. Our position would certainly be considering that this is permanent, that we sit in consideration of whether it's a month, fifteen days is to give Mr. Ruschke what sounds like, I don't want to mischaracterize the testimony or the representation of Mr. DeAngelis but it sounds like the crux of it is that Mr. Ruschke didn't have a problem with it before so it should be ok and that is what the applicant is relying on. You're entitled to rely on that. However the public is entitled to have the experts that they spent a lot of money for to come to many meetings to sit and listen to testimony at least be able to provide that testimony to the Board and Professional Engineer and have the Engineer consider it and maybe giving some advice to the Board concerning the testing that has been done or should be done. An overview of the variances in light of testimony so under those circumstances certainly, at a bare minimum, this Board is not in a position yet to make a full fair decision especially where your engineer who you rely on for many applications, including this one, hasn't had an opportunity to listen to Mr. Miller's testimony.

Mr. DeAngelis noted that a representative from Mr. Ruschke's office is sitting right here in front of us and he certainly heard all of the comments and can mischaracterize what I said. I said if Mr. Ruschke's office decides that they want a more shallow plan we will comply with it. These things get mired down into these types of details for the Board consideration when its really not appropriate. It is the engineering department that makes those final decisions on the building plans themselves. It is the Board that passes on the variances.

Mr. Shaw that were raised – 1) related to testing – was it adequately done. If the applicant is going to submit new plans to the town as a condition of approval and the Township Engineer reflecting a shallower system which would be consistent with some of the testimony the main issues is you still feel that the perk test that was done was so radically different than the soil type/maps that you were not satisfied with the accuracy of the testing.

Mr. Simon said the point was that there were numerous, probably 7-9 issues that Mr. Miller brought up concerning the accuracy of the drainage plan and there is case law that specifically talks about a Board cannot and should not simply rely on its professionals as conditions of approval to approve essential elements to the plan. In other words, the application in all cases needs to be denied if pertinent information is not presented sufficient to appropriately analysis the adequacy of the storm water management plan in relation to the eight variances. It's the Good Fellows vs. Washington Planning Bd case; Field vs. Franklin case; Morris County vs..Boonton; and they are all right on point. They all said the same thing which is that you have to make sure the storm water management works and you can't rely upon, as great as Mr. Ruschke is, your Board's engineer just to make sure that its right and the applicant is saying we will just rely on whatever Mr. Ruschke says. That is not Mr. Ruschke's call, in all due respect. It's the Board's call. Because it is the Boards call the Board needs the information to make the call. As a result of that, based on the testimony and information provided tonight, certainly at a minimum, Mr. Ruschke's office should be provided an opportunity to not only listen to the testimony but listen and consider the reality of the plan itself and see if it the additional advice to the Board or show requirements to the applicant. The fact that there is no maintenance manual that is required – if that's the case then how will the homeowner know to maintain the system and what happens when its not maintained. That is the concern that we have. People forget about the overflow that is not maintained properly is when there are problems. So for all these reasons with all due respect there is a lot of answers that are not resolved at this point.

Mr. DeAngelis respectfully disagreed. This Board has more than enough information to decide, based on Mr. Miller;s testimony and the rebuttal to decide this case this evening.

Mr. Vivona felt there has been a huge public appearance here. The public is concerned about what is going on in the neighborhood. They concerned about their own properties. I would like to get this thing moving but I think we really need to have Mr. Ruschke here. I want these people to leave here knowing that we deliberated, we thought about everything and everybody's property values and all concerns whether we vote yes or no. I want these people to know that we represent them. You came here for variances. We represent our neighborhoods. I know it's another month but he doesn't even own the property yet. It sounds like you are building a dream home. I think these people deserve to have another time to have all their questions answered.

Mr. DeAngelis agreed with that. You don't want to make a decision without taking into consideration all of their concerns. The question is how do we do it. A representative from Mr. Ruschke's office is here and I am sure he can report what Mr. Miller testified to and if for some reason Mr. Ruschke wants these proposed systems redesigned then I guess we will do it.

Mr. Simon said he had just talked with Mr. Miller and we can make an additional suggestion as an accommodation. Mr. Miller can also prepare a letter summarizing his findings if that makes it easier for Hatch Mott to review.

Mr. Vivona had no problem with that. A copy of said letter would be sent to all concerned.

Discussed number of votes needed which was 5. Mrs. Kenny was asked to stay as a Board Member until the application was finished.

Mr. DeAngelis said the next meeting would be summations with no more witnesses. Members of the Public can make their comments before a vote is taken.

Application carried until January 21, 2016.

Meeting Adjourned

Respectfully submitted:

A handwritten signature in cursive script, appearing to read "Mary Ann Fasano".

Mary Ann Fasano
Transcribing Secretary