# In The Matter Of: <br> In Re: Bonnie Burn 

## Transcript of Proceedings <br> February 18, 2020

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## In Re: Bonnie Burn



CHAIRWOMAN SCHAEFER: Okay. I want to thank you for indulging us. And we have gone back online at 7:45 p.m.

The Chair seeks a motion to continue
the BNE application.
MR. ELLIS: So moved.
CHAIRWOMAN SCHAEFER: Thank you.
Second?
MS. SPRINGLER: Second.
CHAIRWOMAN SCHAEFER: Thank you, Ellen.
Discussion?
(No response.)
CHAIRWOMAN SCHAEFER: Roll call, please.

MS. SNYDER: Ms. Spingler?
MS. SPINGLER: Yes.
MS. SNYDER: Mr. Ellis?
MR. ELLIS: Yes.
MS. SNYDER: Councilman Martino?
COUNCILMAN MARTINO: Yes.
MS. SNYDER: Ms. Pennett?
MS. PENNETT: Yes.
MS. SNYDER: Mayor Balla?
MAYOR BALLA: Yes.
MS. SNYDER: Mr. Speeney?

Page 6
1 MR. SPEENEY: Yes.
2 MS. SNYDER: Mr. Pote?
3 MR. POTE: Yes.
4 MS. SNYDER: Mr. Fiorilla?
5 MR. FIORILLA: Yes.
6 MS. SNYDER: Madam Chair?
7 CHAIRWOMAN SCHAEFER: Yes. Thank you.
8 Okay, Ms. Coffey.
9 Oh, my mind is just like --
10 MS. SPINGLER: Case No. PB 19-01;
Bonnie Burn/BNE Bonnie Burn Road Redevelopment, Block
7402/7403, Lot 19.01, 19.02, 5 \& 10. Represented by
Katharine Coffey, Esquire. BBRRA Zone. Expiration: 3/31/20.

CHAIRWOMAN SCHAEFER: Thank you.
Before we continue on with this
application, if anyone is here tonight for The
Learning Experience, that has been continued until
our March 17 meeting.
So they will not be heard and there
will be no further notice for that.
MR. LINNUS: So if you're interested in
TLE, come back on March 17th and presumably they'll be here.

No further notice will be given.

1 CHAIRWOMAN SCHAEFER: Thank you, Ms. Coffey.
MS. COFFEY: Thank you.
CHAIRWOMAN SCHAEFER: All yours.
MS. COFFEY: Thank you, I appreciate
it. Can everyone hear me? Am I the right height?
Great.
So thank you. As you all have said,
we're back tonight. The applicant is Bonnie Burn
Urban Renewal Entity, LLC. I think at this point we
all know what property we're talking about, so I'm
not going to rehash that.
I will just talk a little bit about
who's with me this evening. We have Mr. Keller, who's the project engineer. He's returning to address a few open items that we had from our meeting
at the end of January, so he'll be here to cover those.

And then after him, we have Jack Raker, who is the project architect. He will be reviewing the buildings that are proposed.

And then depending on if we have time,
Mr. Keller will be providing planning testimony as well.

So that's our intentions for the

Page 8
evening.
CHAIRWOMAN SCHAEFER: And just a question, when do you think environmental will come up?

MS. COFFEY: So our intention would be to have our environmental person come at the next meeting.

Well, I would say, it depends on how
far we get in all of this today, but assuming that
we're able to advance through the rest of
Mr. Keller's engineering testimony and our
architecture testimony, we would expect that
environmental would come after that.
CHAIRWOMAN SCHAEFER: And I'm going to make an announcement to the public that, again, as we did last meeting and the last several meetings, when testimony is given, we will open it up to the public.

We will first open it up to Mr. Butler, who represents Weldon, the opposer, to ask questions of the witness or the expert. We will then open it up to the public to ask questions of the expert.

I will make this statement loud and
clear. I gave a lot of latitude at our last meeting to ask questions of previous testimony that was not done that night. We are not going to do that
tonight. We're also not going to -- I am not going to allow comments. It is questions only.

You will have ample opportunity to
mention or make any comments you have at the end of
the application, but if you start making comments, I
will shut you down. And I don't want to be harsh
about it, but I have to follow our rules.
Ms. Coffey?
MS. COFFEY: Thank you.
Mr. Keller, I'd ask you to come up and join me, please.

MR. KELLER: Good evening, everyone.
ERIC KELLER,
54 Horsehill Road, Suite 100, Cedar Knolls, New
Jersey 07927, having been previously sworn,
continues to testify as follows:
DIRECT EXAMINATION
BY MS. COFFEY:
Q. Mr. Keller, you were previously sworn, correct?
A. Correct.
Q. Thank you.

MS. COFFEY: And Mr. Keller's
credentials as an engineer were previously accepted
by the board, I believe, just for the record.

Page 10

## CHAIRWOMAN SCHAEFER: Yes. BY MS. COFFEY:

Q. Mr. Keller, why don't you -- we start
by talking about some of the changes that we had agreed to make at the January hearing with regard to additional plantings, please.
A. What are --
Q. I think we're on A-11. I'll double
check.
MR. LINNUS: I think the last exhibit was A-10.

Does that ring a bell?
MS. COFFEY: That's what I had, too.
That makes me feel better.
(Whereupon, Rendering entitled,
"Supplemental Buffer Plantings" is received and marked as Exhibit A-11 for identification.)

THE WITNESS: Okay. So I have marked Exhibit A-11 with today's date. It is entitled, "Supplemental Buffer Plantings." The rendering is dated today as well.

This supersedes Exhibit A-10 from the last meeting and what we have done on this based on the discussions at the last meeting, two things.

One, the outside corner, this is
Building 3 in the plan view (indicating), we have shown a variety of plantings in this area to provide screening for any headlight glare that may come as vehicles come around this curve. The roadway is higher than the adjacent ground and we have a mix of evergreen trees, deciduous shrubs, and evergreen shrubs along that area that are layered in so that there is ample buffer through that area.

We have also changed the detail to show a composite fence. It is not the color. We couldn't find a photograph of a lighter earth-toned composite fence. So this is to show the style of the fence, not the color of the fence (indicating).

And those are the changes that we made to that plan.

CHAIRWOMAN SCHAEFER: And the fence is going, if you can just show us.

THE WITNESS: The fence would be along the top of the retaining wall and extending northerly along the loop road to where the retaining wall ends towards the bioretention basin.

MS. PENNETT: I mean, I know you said, you know, shrubs and so forth. Can you be more -can you be a little more specific?

Page 12
THE WITNESS: Sure.
MS. PENNETT: Exactly what types.
THE WITNESS: We have American holly, there are, I believe, nine of those. Those are planted height of 8 to 10 feet. Those are located -where did they go -- disbursed along that.

Then we have Serbian spruce. These are picked because of the shading from the deciduous trees that are to the south of us. So both of those are shade tolerant evergreens. We have --

CHAIRWOMAN SCHAEFER: How tall would they be?

THE WITNESS: Those are also 8 to 10
feet in height. We have four of those. So we have a total of 13 evergreen trees in that stretch.

We then have a mix of deciduous shrubs that include witch hazel, highbush blueberry, Mapleleaf viburnum and another viburnum species. They range from 2-and-a-half to 6 feet in height at planting.

So, again, we're layering those in there and there's approximately 57 of those deciduous shrubs in that area and then we have Mount Laurel, which is an evergreen shrub planted at 4 to 5 feet in height and we have 15 of those through that same
area.
So there's quite a dense planting of
buffer material from low up to high.
MS. PENNETT: Yeah, I was more
concerned if they were the native plants. It seems
like they're more of the native plants.
THE WITNESS: Yes, yes.
BY MS. COFFEY:
Q. Okay.
A. The only ones that are -- the only one that is not native is Serbian spruce. We would typically -- I shouldn't say typically, we would like to specify hemlock, but with the issues with the disease of hemlocks, we tend to stay away from those. There's no guarantee that they would become diseased, but why, you know, tempt fate.

So we went with Serbian spruce to provide the same type of evergreen plantings, but without the worry of disease potential.
Q. So that probably is a good transition
to the next topic that we were reporting on, which was we've been asked to look into whether organic fertilizer, insecticide, and pesticide are a viable possibility for the property in lieu of a more commercially available one.

Page 14
So why don't you talk about that, please?
A. Sure.

I want to preface this by saying
whether it's a synthetic fertilizer or an organic
fertilizer, it's still providing the same basic nutrients that lawns need to grow. You have nitrogen. You have phosphorous. And you have potassium. The difference is how that -- those nutrients are delivered to the lawn.

The synthetic, it's a chemical makeup for that. The organic materials are naturally sourced. They're derived from pine needles, decomposed grass clippings or decomposed animal maneuver. The issue with organic materials is that it is not as control -- a controlled process as far as the amount of nitrogen, phosphorous and potassium that is applied. So it's possible that more applications of the organic fertilizer would need to be made, because with the synthetic you know exactly what you're getting.

And as I testified to at the last
meeting, it's four times a year and they're putting it down, and there's a uniform application of that material.

With the organics, it can vary widely
within the product that you're getting. So you can end up with greater need to apply and, you know, what we're trying to do is to manage this through a
licensed certified landscape contractor, which BNE uses for all of their communities. So...
Q. Mr. Keller, can I just ask you to
remind folks about what portion of the property would
be given this treatment, in terms of how many acres
we're talking about of the 41 that are subject to the application?
A. Thank you.

We are talking about treating three
acres of the property. There's three acres of lawn area around the buildings, around the clubhouse that is a lawn area that would be treated, which is about 7 percent of the entire site.

So it's a very nominal area that we're treating and we -- our opinion with the applicant is that using the synthetic, what everybody or most everybody buys at the store applied by a licensed contractor is a more efficient and appropriate way of applying those materials in a uniform manner and minimizing how many times we would have to apply. MS. PENNETT: Right.

But then what about the runoff when it rains and stuff, when it runs off, it's all going to go into the basins and it's going to go into the wetlands.

So you're not -- yes, you're getting
instant gratification, but you're not -- you know,
the whole aspect of the environment is --
THE WITNESS: Well, I'll talk a little
bit more about the bioretention basins in a little bit, but the point is the nutrients which are used for all plant growth, I mean all plants use nitrogen, potassium and phosphorus for growth. Without that, I mean, they wouldn't grow. So they're all necessary for the plants.

What you don't want to do is to provide
too much of that material, because an
over-application of that creates unwanted growth or actually too much of it can be toxic and that some of our concern with the organic material is because they all contain the same nutrients is that we're applying it more often because it may not be as effective in it's application.

And what would end up in the bioretention basin is only what overspreads onto a sidewalk or onto a paved surface and then is washed
into first the bioretention basin. So I'm going to hold that discussion for a little bit.

MS. COFFEY: We thought it would be helpful to talk about winter-storm treatment before we get into the bioretention basin, because it processes those applications similarly, but we don't -- I don't mean to cut off the questions on the insecticide, pesticide and fertilizer, but I just wanted to let you all know that that was our thinking in terms of sequencing.

THE WITNESS: And just a point on insecticide, that's applied once a year. That's part of the summertime fertilizing program where the fertilizer is combined with an insecticide to deal with grub in the lawn. That's a summertime thing. It's once a year.

And the herbicide for the weeds is also part of the spring feeding and the fall feeding. So that you're getting it before the weeds take hold of your lawn and at the end of the year you're using it to prevent or minimize the weeds that show up the next year.

So those are applications that are made as part of the four-step application process.

So to move on to, because there was
also a question about what is the impact of the icing salts that are used in roadways and parking lots on the bioretention basins.

First off, there's a number of different deicing treatments that are available. BNE uses only calcium chloride. So their contracts with their vendors only use calcium chloride. Calcium chloride is the most effective means of dealing with deicing and is also the most water soluble and will melt into and dissolve into calcium and chloride.

Calcium is also something that while plants are using it in the wintertime because they're dormant, it is part -- it is a nutrient for plant growth. So it is a better solution than using rock salt, which is sodium chloride. Sodium in high enough levels can be toxic to plants and can have a negative impact.

Now, of the 41-acre site, only
5-and-a-half acres of the site, about 12 percent or 13-and-a-half percent of the entire site is paved areas, parking lots, roadways, sidewalks.

So, again, it's a fairly small area that would be treated with the calcium chloride. Obviously, I don't need to explain to you the importance of properly salting the paved surfaces and
the sidewalks for both pedestrian safety and vehicular safety. I mean, that goes without saying.

Obviously, they're applying it in
appropriate quantities to provide that level of safety without overdoing it.

But, again, anything that gets onto the roadway surfaces ends up in the bioretention basin -the two bioretention basins. So...

BY MS. COFFEY:
Q. And now let's talk about bioretention basins to Ms. Pennett's question.
A. Let's talk about bioretention basins.

I'll try not to get too technical.
But bioretention basins are the -- kind of the highest and best stormwater management facility that's recognized in the stormwater rules. They're dynamic. They're living ecological systems that are designed to protect the integrity of the downstream ecosystem. The whole purpose of the state's stormwater rules is to control quantity and to protect water quality. So all of the paved surfaces on the site are directed into two bioretention basins.

I'm referring to Exhibit A-5. We have a bioretention basin in the northwest corner of the

Page 20
site near the roundabout and then we have one in the northeast corner of the site adjacent to Building 4.

The design of these facilities involves a couple of different elements. The hydrologic cycle, how we manage the storm attenuation of different rainfall events; non-point pollution, pollutant treatment; the water quality aspect of it; resource conservation; habitat creation; nutrient cycles; and ecology.

These bioretention basins have a 2 -foot soil layer underlain by a 6 -inch sand layer and then below that at a minimum, 12 -inch stone layer with underdrains that convey the water after it's been filtered into the outlet structure and then on into the downstream facilities.

These are planted areas. We have an extensive seed mix that's applied to the whole bottom of the basin with -- where did my -- bear with me a second here, my notes for this project have gotten a little voluminous.

What we're planting in the bottom of both basins is a mix of milkweed, aster, broomsedge, bergamot, switchgrass and bluesteam grass.

In addition, there are deciduous trees, evergreen trees and deciduous shrubs planted

1 throughout the basin.
So there's a lot of plant material in
the bottom of these basins, which filters suspended solids and also absorbs any excess nutrients that are washed off of the lawn areas will be absorbed by the plant material in the basins.

Now, the function of these basins, is, one, to remove pollutants that are generated by land development sites and these include suspended solids, excess nutrients, metals, hydrocarbons and bacteria. That is accomplished in three ways.

Physical treatment, where the water flows through the vegetation and that vegetation traps those suspended solids and particulates within the vegetation.

There's a chemical treatment. Certain chemicals are positive and negative and they attach to the soil layer that we are providing in the bottom of these basins and then there's also the biologic treatment, which is the vegetation that's self-absorbing the nutrients, whether it's from fertilizers or the calcium chloride that washes in there, all of those things are absorbed by the plant material. The total suspended solid removal rate for these basins is 90 percent. That's the highest level

Page 22
that we can provide within a facility. So the quality of the water leaving these basins is, you know, well-treated.

The bioretention basins have proven to be very effective in various studies removing phosphorus levels, nitrogen levels, which are common components of fertilizers. They remove oils and grease that come off of cars that are on the roadways that get washed into the basins. They remove salt ions, both sodium if, you know, that happens to be used, which it won't be, and calcium.

It also reduces the heat in the surface runoff, because it's run through the basin, it has time as it seeps through the ground or is trapped by the vegetation. It cools the water before it is discharged into the downstream systems.

Bioretention basins remain effective during the wintertime while the plants are dormant. There is still plant mass there. There is still the soil bed there. So they are still effective during cold weather.

CHAIRWOMAN SCHAEFER: Excuse me. The people that just came in, there are seats up here if you want to sit.

Okay, I'm sorry.

THE WITNESS: That's okay, Chairwoman.
As far as herbicides, pesticides, salt
that may run off from the site, the mulch layer that's provided in the bioretention basin and the plantings help filter these materials out before they will be discharged, again, downstream.

Most importantly, I think is that with any stormwater facility, this is not a build it and, you know, we're done.

There are requirements that stormwater facilities are maintained. As part of any stormwater management design we have to prepare an operations and maintenance manual. There are quarterly inspections that are required. There's an annual inspection that is required.

We have to provide an annual report to the borough engineer and if there are damage or plant die off or anything, that has to be corrected and that is noted in the quarterly reports.

So this is an ongoing process where the facilities are constantly maintained.

CHAIRWOMAN SCHAEFER: Who do you send those reports to, the quarterly reports?

THE WITNESS: The quarterly reports are held and then they're combined into the annual

Page 24

THE WITNESS: Well, it runs off today, and that's why we have an underdrain system in these basins is because the underlying soil is not very permeable.

So today it runs off into the wetlands and then it runs down, you know, whether it's towards the Green Brook in Berkeley Heights or down towards 22 and ends up in the Green Brook down there.

With these bioretention basins, we are providing a better opportunity for at least, because the 2-foot sand -- 2-foot soil layers that we're putting in the bottom of the basins will retain some of the water, because it is a much more permeable soil, but when it gets to a certain point, that's why the underdrain is there and then it just runs out.

We are not reducing the volume of runoff from the site. The rules do not require us to reduce the volume runoff from a site. We have to attenuate the rate of runoff and that is being done.

BY MS. COFFEY:
Q. So just to put it plainer English, when
you say you're attenuating the rate of runoff, what you mean is you are slowing down the amount of volume that's coming out at any given time?
A. Yes.

Page 26
MAYOR BALLA: That I understand.
My question relates to the existing
wells that are there and the wildlife that's there is dependant upon the existing runoff and volume of water that builds on that site.

So if you now divert that water
somewhere else, the wildlife and wells don't get the same volume of water.

Is that correct?
THE WITNESS: No. I mean, the wildlife, we're actually creating a better environment with these basins.

We're providing greater diversity instead of a -- you know, a monoculture of a wooded area. The wells -- if -- whatever wells are in the area are drawing from an aquifer below the grade of this soil surface. The borough engineer's representative was out there when we did all the test pits and looked at the soils. The soils at the surface are not permeable.

So what is falling from the sky and hitting the ground is not -- I mean, I'm not saying that there is absolutely no permeability, that there's no seepage of water into the ground, but there's very little. to the stream that's on the eastern part of the
property, which then is picked up by the stormwater sewer system in Bonnie Burn Road and does down the hill to 22. We're not changing that pattern. What goes towards Berkeley Heights today, will continue to go to Berkley Heights. What goes down to 22, will continue to go down to 22 .

I hope that answered your question.
COUNCILMAN MARTINO: I think I
understand what the Mayor is saying.
What he's saying is everything within
that colored area is no longer flowing, it's going to be caught in the catch basin.

Is that right?
MAYOR BALLA: Correct.
COUNCILMAN MARTINO: And, basically, you're not feeding the wetlands any longer with that additional 15 acres that you guys are scrubbing, I believe that's --

MAYOR BALLA: Yes.
COUNCILMAN MARTINO: -- if I'm not
mistaken.
MAYOR BALLA: Right.
BY MS. COFFEY:
Q. So let me see if I can -- so,

25 Mr. Keller, is it correct, though, that we are

| Page 29 | Page 31 |
| :---: | :---: |
| essentially going to continue to feed the same areas that we were feeding before, it's just going to be at a more, sort of, regular volume as opposed to a flood or a trickle? <br> COUNCILMAN MARTINO: No, that's not possible, not if you're catching all of the roof water, all the roadway, all the paved areas, the landscaped areas, are going into the two retention basins. Those retention basins are now holding the water that used to trickle down into the wetlands, correct? <br> MS. COFFEY: Well, I'll let him answer. <br> COUNCILMAN MARTINO: Okay. <br> THE WITNESS: Yeah, I mean, you know, <br> the design of the stormwater system, yes, we're -- <br> what is falling onto the wetland complexes along the <br> perimeter of the site is still going to go to the <br> stream, is still going to go to the wetlands. <br> What we are capturing within the developed area does go to the bioretention basins and is piped into the storm sewer system, which is where the wetlands discharge today, but we've been to DEP, the DEP is going to look at this as well. <br> We're not negatively impacting the <br> stream or the wetland areas, but, yes, I mean, what | COUNCILMAN MARTINO: Okay. <br> It will be? <br> CHAIRWOMAN SCHAEFER: Yes, sir. <br> COUNCILMAN MARTINO: Okay. <br> MS. PENNETT: A couple of questions. <br> Someone on the environmental committee asked if the bioretention basins are designed and certified to treat herbicide, such as Glyphosate. <br> THE WITNESS: A/k/a Roundup, <br> Glyphosate. <br> MS. PENNETT: And 240? <br> THE WITNESS: I mean, it's -- the <br> bioretention basins will treat all <br> commercially-available herbicides. I mean, that's what they do, yes. <br> MR. SPEENEY: Question on the volume of these bioretention basins. They're designed to, obviously, a certain volume. What happens when the volume is exceeded? <br> THE WITNESS: We all should get an ark. <br> I'm not -- I'm sorry, I couldn't -- they're designed for the 100-year storm, which is -- <br> MR. SPEENEY: Every two years. <br> THE WITNESS: I know, but the 100-year <br> storm is kind of a misnomer. It's a storm of a |
| falls within the developed area, by rule, has to be treated, attenuated. <br> So, yeah, I mean, but we are not cutting off the wetland areas. We are maintaining a connection between the wetland area and the northwest portion of the site, and that -- all along the Bonnie Burn Road, that complex will still be interconnected. We're providing a pipe through the Boulevard area so that those areas will still relate together. <br> COUNCILMAN MARTINO: Just a real quick question, just a clarification. You said they're not using salt anywhere on this side, not even on the paved area? <br> THE WITNESS: We're using calcium chloride. <br> COUNCILMAN MARTINO: You're 100 percent sure about that? <br> THE WITNESS: Yes. <br> COUNCILMAN MARTINO: Because you know it's, like, 10 times the cost between salt and calcium? I just did some quick calculations. I think you better talk to your contractor -- <br> CHAIRWOMAN SCHAEFER: Mr. Martino, if that's what they're saying, that is what would be in our resolution. | volume that has a 1 percent chance of occurring in a year. We just call it the 100-year storm. It is 8 -inches-plus of rain in a 24 -hour period. That's what we're required to design to. <br> If we get the 500-year storm, what will happen is that -- and that's why we have an emergency spillway on each of the basins -- it will then over top and what it will do is it will flow into the wetland areas. <br> MR. SPEENEY: In other words, the outflow would be designed to flow into the wetland areas and -- <br> THE WITNESS: If the basins are <br> overtopped, which is an extremely rare event -- <br> CHAIRWOMAN SCHAEFER: But it does happen. <br> THE WITNESS: It can happen, yes. <br> MR. SPEENEY: But there's a design, you <br> designed your basin to handle that? <br> THE WITNESS: Yes. <br> MR. SPEENEY: What is it? What happens is, is what you said, it just outflows, goes into the wetlands area, but I'm a little confused as to where the -- all that volume is going to run. <br> THE WITNESS: Well, most of it is -- |

well, I mean, if this basin overflows, the emergency spillway is pointed into the wetland area in this northwestern portion of the site (indicating).

It then, you know, if it flows out of
the wetland area -- and remember, this rain is falling on the entire area, not just our site.

So I mean, there's a lot of water on
the roadways and everything else. This -- it would still be attenuated by the basin and only when that basin filled up, would it -- could it overtop. With the basin by Building 6, it would -- this whole wetland complex is where it would flow to.

MR. SPEENEY: All right.
MS. PENNETT: The filtration system, I understand that, it all sounds great, but after a while filters clog, and, you know, with any coffee makers, vacuums, everything, filters do clog after a while and after several years, I mean, sooner or later all this filtration system will clog up. How is -- how are you going to prevent that or how are you going to resolve that?

THE WITNESS: Well, that's part of the maintenance and inspection program. Every quarter, go out there. If there's evidence of sedimentation at a discharge point into a basin, then the

Page 34
maintenance contractor will go in there, they will remove it. If they remove some of the plant material in getting it out, then they restore the soil material that was there, they replant that area, re-vegetate it and this is all part of the maintenance program that's provided.

So it's an ongoing thing. It's not going to be that it's not done at any point.

MS. PENNETT: And then when they remove this material, where is it taken to?

THE WITNESS: They have to dispose of it in accordance with solid waste rules.

CHAIRWOMAN SCHAEFER: Any other questions at this point before we allow them to continue on?

MR. SPEENEY: Question about the underground basin.

THE WITNESS: That serves --
MR. SPEENEY: That takes the runoff from the roof?

THE WITNESS: Correct, roof water.
MR. SPEENEY: The liters are piped directly into the --

THE WITNESS: Underground system, yes, sir.

MR. SPEENEY: Underground system that goes into --

THE WITNESS: Right.
MR. SPEENEY: Is there a maximum volume associated with that to worry about?

THE WITNESS: Again, that's all
designed to accommodate the 100-year storm.
MR. SPEENEY: Okay.
And what about some of these
fertilizers that we're talking about, is that going to get in there as well?

THE WITNESS: Into the underground system? No. The underground system is -- there's no inlets connecting to that, it's roof drains to underground pipes. There are manhole access points for inspection, but there are no open grates.

MR. SPEENEY: All right. Thank you.
THE WITNESS: You're welcome.
MS. PENNETT: Rainwater from the roof that is going to the underground system is going to get debris and stuff from the quarry and different things within the air.

Does that get filtered at all?
THE WITNESS: The DEP treats roof water as clean water. There is no water quality provisions

Page 36
required for roof water.
CHAIRWOMAN SCHAEFER: Okay. You can continue.

BY MS. COFFEY:
Q. I think, Mr. Keller, at this point we
were going to talk about, we had an inquiry in
January about our waterline and whether it was looped.
A. Correct.

I have reviewed the Residential Site
Improvement Standards for water systems and this is spelled out in Section 5:21-5.3, which talks about the need for looped water mains so that customers are provided water from multiple directions and our -- I have another exhibit I think will help. A-12. Q. A-12.
(Whereupon, Utility Plan is received and marked as Exhibit A-12 for
identification.)
THE WITNESS: It's a very high-tech rendering.

This is Sheet 6 of 22 of the plans. It's the utility plan, last revised November 15 th of 2019. This is the same plan that is in the set of site plans you received, except that I've highlighted
the water main in blue (indicating).
We have a 12 -inch main in Bonnie Burn
Road. We tap off of that to a standard New Jersey American hotbox, which contains all the valving, the meters and so on.

We then come up the boulevard road and then we have a fully-looped system within the site and within a sub-portion of the site.

Off of that are the domestic feeds for
each building, the fire feeds for each building. The hydrants serving the entire site and we also provided as requested by and in locations approved by the fire chief, fire department connections so that when the fire companies, should they have to come out, have a way of surcharging into the sprinkler system within the buildings.

All of the FDC locations are located proximate to fire hydrants.

Just to put some context to the flow and pressure that's available, New Jersey American Water did a flow and pressure test in two locations on Bonnie Burn Road, which I think I said it's a 12 -inch water main. The residual pressure is 140 PSI. Anything over 80 PSI needs a pressure-reducing valve. So we're going to be providing
pressure-reducing valves on this so that we don't blow out facets and everything else within the units.

The flow that -- the flow at each hydrant that was tested ranges between 1,550 gallons per minute and 1,635 gallons per minute.

So there is sufficient flow and pressure within the system. We are required by RSIS looping the water main within the site and the design of the system is consistent with the standard practices of New Jersey American, which we've on numerous other projects within their facility -within their service area, I mean.

BY MS. COFFEY:
Q. Mr. Keller, I think you may have
misspoken. I think the flow is 6,000 gallons per minute.

Is that correct?
A. That's at 20 PSI.
Q. Thank you.
A. At the higher flow, there's -- there's
two flow rates. One is at the pressure of 140 gallons a minute and then at 20 PSI , which is the minimum necessary within the system. It's 6,000 gallons per minute at one location and it's over 10,000 gallons per minute at the other hydrant.

So there is more than sufficient flow and pressure available in Bonnie Burn Road to serve this community.

CHAIRWOMAN SCHAEFER: Councilman
Martino, these were your questions from the last meeting.

COUNCILMAN MARTINO: Correct.
CHAIRWOMAN SCHAEFER: Are they being answered?

COUNCILMAN MARTINO: For the most part.
MS. PENNETT: I have a question, the
flow in -- how is that -- all all of a sudden you're, you know, adding to the water system.

How is that going to affect everybody else on Bonnie Burn Road when you're tapping in?

THE WITNESS: Our discussions with New Jersey American, there's -- I mean, this is part of an overall system. They have plenty of capacity to provide service. It's not going to have an impact. At those flows and pressures, it's not having an impact on existing users.

MS. PENNETT: Okay.
CHAIRWOMAN SCHAEFER: Okay.
THE WITNESS: That's it.
MS. COFFEY: Okay. That was our report

Page 40
in terms of open items from January.
CHAIRWOMAN SCHAEFER: Well, we did have a couple of other open items. You were going to give site exhibits as to --

MS. COFFEY: Our architect will be
providing those.
CHAIRWOMAN SCHAEFER: Okay. Along that the graphics of what the buildings will look like?

MS. COFFEY: Yes.
CHAIRWOMAN SCHAEFER: Okay.
MR. SPEENEY: A new thought here.
Mr. Keller, on the soil profile pit logs that you provided.

THE WITNESS: Yes.
MR. SPEENEY: They generally reach in
-- the pits reach bedrock between 1 foot up to 12
feet.
How does that impact construction of the buildings?

THE WITNESS: Well, I mean, where
there's shallow bedrock, I mean, there's going to either -- you know, they're going to have to rip it, hammer it, they will have to remove the bedrock to a depth below the footings of the building so they can construct the building.
given this evening.
If you have a question, I ask that you
please come up, state our name and address.
Actually, we're going to open it up to
Mr. Butler first.
MR. BUTLER: I have no questions, Madam
Chair.
CHAIRWOMAN SCHAEFER: Okay. Thank you, Mr. Butler.

So any public want to come up and ask
questions of this testimony?
Okay. Oh, we do.
THE WITNESS: Damn.
MR. LINNUS: Almost made it, Mr. Keller.

THE WITNESS: No offense.
MR. TOSCANO: No problem, none taken.
Ben Toscano, 185 Bonnie Burn Road.
A couple of questions. You brought up the bioretention basins.

THE WITNESS: Yes, sir.
MR. TOSCANO: One of the council people mentioned that the underdrain -- that the whole idea is that the underdrain will take all of the filtered water, it will go into the outlet structure and then
run out into one of the two discharge basins, which are on Bonnie Burn Road, correct?

THE WITNESS: It will go into the storm sewer system of Bonnie Burn Road.

MR. TOSCANO: The existing -- okay.
THE WITNESS: Yes, sir.
MR. TOSCANO: So when you do your inspections and all of that, you're going to check for any kind of siltation or anything and you'll remediate it.

However, what about the underdrain that's several feet down in the bottom of the bioretention basin?

THE WITNESS: Well, it's wrapped in filter fabric. It's in a stone bed. You can also see the end of it in the outlet structure, because it daylights into the outlet structure.

MR. TOSCANO: Now of course.
THE WITNESS: So if you saw sediment in there, you can see it, but the likelihood of getting sediment into the underdrain after almost 3 feet of soil and sand and stone is --

MR. TOSCANO: Well, I could see -- I'm thinking 15, 20 years from now.

THE WITNESS: Still, I mean --

MR. TOSCANO: What's the remedy? Redoing it?

THE WITNESS: I mean, in the ultimate worst case, yeah, you would have to rip it out and redo it.

MR. TOSCANO: Okay.
THE WITNESS: The likelihood of sediment in the underdrain is a lot less than sediment that's going to get into the storm pipes that run along Bonnie Burn Road.

MR. TOSCANO: No, I understand, understandable.

THE WITNESS: To put context to it.
MR. TOSCANO: And you also mentioned that the runoff from the site, the developed site will not exceed what is currently running off the site right now, correct?

THE WITNESS: As to the rate of runoff.
MR. TOSCANO: The rate of runoff?
THE WITNESS: Correct.
MR. TOSCANO: Okay. So it's not a problem. And looking at the plans --

THE WITNESS: Actually, I'm sorry to interrupt. We actually have to reduce the rate of runoff for each of the storm events.

So we're going to discharge at a rate less than what comes off the site today. The rules require it.

MR. TOSCANO: That will help, that will help, because when we get heavy storms, it's pouring out all over the place, so that should help then.

Is it true that two buildings are
discharging directly into the Bonnie Burn drainage system?

THE WITNESS: Two buildings? No.
MR. TOSCANO: Well, Building No. 1 and Building No. 2, the --

THE WITNESS: The roof area is tied into -- because the DEP considers that clean water, it does not need to be filtered, it does not run -it's detained. The rate of runoff is controlled by an underground system, but it does not run through the bioretention basin, that is correct.

MR. TOSCANO: So why was it done that way? Why didn't it follow suit with all the other buildings and go into the bioretention basin? Was it economics, save a couple of bucks?

THE WITNESS: No, actually this design is more expensive with underground pipes. It was a matter of having enough volume to treat all of the

Page 46
impervious surfaces. We have a lot of wetlands on the property. We have other environmental constraints. The basin couldn't be any larger, so we had to treat those two buildings separate.

MR. TOSCANO: No, I understand that.
However, Building 1 and 2, I believe, they're discharging directly into the Bonnie Burn Road system. They're not going into any underground detention basin.

THE WITNESS: No, they are.
MR. TOSCANO: They are?
THE WITNESS: They are going through an underground detention system.

MR. TOSCANO: So all of them are then?
THE WITNESS: Yes.
MR. TOSCANO: Oh, okay.
THE WITNESS: They're all -- all of
them are detained. None of the buildings require water quality, but it was just easier to pipe the other four buildings into the basins.

MR. TOSCANO: So it's okay.
And then with regards to the water line
system, I understand and you had a lot of interesting facts that the existing 12 -inch main is sufficient, more than adequate to handle the development, the
proposed development, but it still doesn't answer the question.

Why wouldn't you loop the system so that in the event that there's an issue, you can always back feed the system through another -another --

THE WITNESS: It's a very good question. We're still tying into the water main at Bonnie Burn Road. We don't have access to another street. We don't have access to another water main.

MR. TOSCANO: Well, couldn't you -couldn't you tie in at the lower portion of Bonnie Burn?

THE WITNESS: We could, but I mean, if there's an issue with the water main on Bonnie Burn Road, having those two connections isn't going to do us any real benefit.

MR. TOSCANO: And then my final question was, with regard to the building construction.

THE WITNESS: That's the architect.
MR. TOSCANO: That's the architect?
THE WITNESS: Yeah. I don't do buildings.
(Laughter.)

MR. TOSCANO: Well, there was a mention about blasting. So I was just -- possibility of blasting?

CHAIRWOMAN SCHAEFER: Well, I think he answered that they don't know if they are going to need to be blasting at this point, but if you have --

MR. TOSCANO: Well, we live in
Watchung, so...
CHAIRWOMAN SCHAEFER: I understand that, I know.

MR. TOSCANO: Would you be the individual to talk to about if blasting is required, what provisions, what requirements would you abide by?

THE WITNESS: Well, I mean, if there's blasting, if the borough has their own requirements, we have to comply with those. We certainly have to comply with state regulations on blasting.

MR. TOSCANO: So that would include
pre- and post-blasting surveys and, you know, by a certified PE and everything?

CHAIRWOMAN SCHAEFER: I'm going to let Tom, our engineer, answer that.

MR. HERITS: Whenever we blasted for a sanitary sewer, that's what we had to do. Before and

|  | Page 49 |  | Page 51 |
| :---: | :---: | :---: | :---: |
|  | after pictures and the whole thing. |  | minimal treatments, but how will they determine that |
| 2 | MR. TOSCANO: And what about the -- | 2 | there's additional treatments needed? |
| 3 | what's the radius? | 3 | Are they doing tests on the soil or |
| 4 | Within how many feet of the site? | 4 | other things of that nature, plant growth rates, |
| 5 | MR. HERITS: That I don't -- that | 5 | things of that nature. |
| 6 | don't know off the top of my head. | 6 | THE WITNESS: Well, the applicant's |
| 7 | MR. TOSCANO: Okay. | 7 | proposal is that what they have done for all of their |
| 8 | Because, you know, blasting travels. I | 8 | communities is four treatments a year. It's been |
| 9 | live across from the quarry, so I know. | 9 | effective, it's worked. You know, so that's our plan |
| 10 | Okay, thank you. |  | and that would be using synthetic fertilizers and |
| 11 | THE WITNESS: You're welcome. | 11 | herbicides and so on. |
| 12 | CHAIRWOMAN SCHAEFER: We have this | 12 | MR. JUBIN: Okay. |
| 13 | gentleman next. | 13 | MS. COFFEY: And just -- |
| 14 | MR. JUBIN: Hi, good evening. Ron | 14 | MR. JUBIN: Yup, go ahead. |
| 15 | Jubin, 25 Birchwood Lane. | 15 | MS. COFFEY: Mr. Keller, it's also true |
| 16 | THE COURT REPORTER: Please spell your | 16 | that the applicant has an on-site maintenance person |
| 17 | last name, sir? | 17 | who would report back if there was some kind of an |
| 18 | MR. JUNIN: J-U-B, as in boy, I-N. | 18 | issue on the site, correct? |
| 19 | I just had a few questions for | 19 | THE WITNESS: Correct, yes. |
| 20 | clarification. | 20 | MR. JUBIN: And then I guess the list |
| 21 | MR. LINNUS: What was your address |  | of the pesticides and herbicides will be made |
| 22 | again? | 22 | available to -- for review as part of the -- I guess |
| 23 | MR. JUBIN: It's 25 Birchwood Lane | 23 | the whole comprehensive plan? |
| 24 | You mentioned pesticides and you said | 24 | THE WITNESS: Yeah, we could do that, I |
| 25 | -- first you said, once a year and then you said, | 25 | mean, everything that they use is, you know, in |
|  | Page 50 |  | Page 52 |
| 1 | well, once in the fall and once -- is it the same |  | accordance with state regulations. |
| 2 | treatment once a year or is there a heavier one? | 2 | MR. JUBIN: Okay. Yeah, I just wanted |
| 3 | HE WITNESS: I said herbicides ar |  | to understand that. |
| 4 | multiple times a year. The pesticide is the | 4 | And I guess another question, and you |
| 5 | summertime. |  | don't need to put the whole plan back up, but trying |
| 6 | MR. JUBIN: Okay, okay. |  | to get a vision of the three acres of the grass, is |
| 7 | THE WITNESS: Unless, you know, they |  | that a large field or how is that laid out across the |
| 8 | have to spot treat. |  | plan? |
| 9 | MR. JUBIN: Okay. So that was -- and I | 9 | Oh, you just have to take it off. |
| 10 | guess that question and when you mentioned about the | 10 | THE WITNESS: I just have to take that |
| 11 | chemical and the organics and organics would be -- - | 11 | off. |
| 12 | I guess it's because of the control rate of release, | 1 | MR. JUBIN: Okay. So just, again -- |
| 13 | it might be more required for more frequent | 13 | THE WITNESS: That's Exhibit A-5 for |
| 14 | treatments. | 14 | the record. |
| 15 | THE WITNESS: No, no, no, the synthetic | 15 | So the light green areas are the lawn |
| 16 | fertilizers, because they're manufactured, have a | 16 | (indicating). So they're, you know, kind of |
| 17 | better controlled and more uniform release than the | 17 | concentrated around the buildings and the clubhouse. |
| 18 | organics. The organics, just by the nature -- | 18 | You know, the green areas of the bioretention basins |
| 19 | MR. JUBIN: Yeah, no, that's what I |  | are not treated. They're not going to treat areas |
| 20 | meant. | 20 | below the retaining walls either. It's only going to |
| 21 | THE WITNESS: So the organics might | 21 | be really the areas around the buildings and the |
| 22 | need more applications, because they may not be as | 22 | clubhouse. |
| 23 | affective as the synthetic materials. | 23 | MR. JUBIN: Okay, great. So to that -- |
| 24 | MR. JUBIN: So is it fair to say then |  | and, again, it looks like it's good, it's |
| 25 | there's -- as you said, there's going to be four |  | interspersed. I'm just wondering if -- again, I get | having grass?

It's still green, but the requirements
for herbicides and things like that can be --
THE WITNESS: I mean, we have that in areas around the buildings and so on, but there's other areas where we're keeping it open lawn for pass of recreation.

MR. JUBIN: Okay. That's -- yeah, that's the answer to the next question.

And then I'm just curious with these, the bioretention basins and you mentioned, you gave some solid facts on 90 percent removal rate and things like that.

So is that historical or when these are put in, are there actually tests being done to evaluate the efficiency of when they're placed in.

THE WITNESS: The removal rate is as established by the DEP, but there have been university studies that shown -- have shown that these basins are effective and meet those standards.

MR. JUBIN: So you're not required then
when you put one in to do some type of drainage or remediation type of testing?

THE WITNESS: No.

MR. JUBIN: Okay. So then the
maintenance then would be -- then it's just you're looking at it and seeing if it's maintaining its composition?

THE WITNESS: Correct.
MR. JUBIN: Okay. And then I just --
what you mentioned about sodium potassium being
removed by them and then you mentioned later that it was calcium chloride.

So is it safe to -- is calcium also
being removed by the bioretention in addition to sodium potassium.

THE WITNESS: It does.
Calcium is actually a plant nutrient.
So the plant material in the bioretention basins would absorb the calcium.
MR. JUBIN: And the phosphorous and nitrogen as well?

THE WITNESS: Correct, that's correct.
MR. JUBIN: Is there any worry about overgrowth at all or is that maintained as well with those systems?
THE WITNESS: I think considering the limited amount of additional nutrients that get into the bioretention basin, there's a lot of plants in
there, so I don't think that we're worried about overgrowth or things like that or toxicity to the plants.

MR. JUBIN: And is there a -- I guess a detailed cross section or plans of the bioretention basins on file already?

THE WITNESS: Yes, they're all in the set in the site plans.

MR. JUBIN: Okay.
THE WITNESS: There's a soil section through the bottom of the basin, shows the soil layer, the sand layer, the underdrain system.

MR. JUBIN: Great, don't want to bring that up again.
(Laughter.)
MR. JUBIN: And I guess, just the last one, you mentioned at the last meeting that you had filed and you were waiting to receive a DEP response for about the wetland management. Did you receive that yet from them and is that going to be covered in the environmental section?

THE WITNESS: I'm going to leave that for the environmentalist to talk about.
MR. JUBIN: Okay, okay, okay. Thanks.
THE WITNESS: You're welcome.

MR. JUBIN: Thank you very much.
CHAIRWOMAN SCHAEFER: Someone else over here had a question.

Sir?
MR. VETTER: Good evening. George
Vetter, 182 Mountain Avenue.
THE COURT REPORTER: Please spell your last name, sir.

MR. VETTER: V-E-T-T-E-R.
THE COURT REPORTER: Thank you.
CHAIRWOMAN SCHAEFER: Mountain Avenue
in Warren?
MR. VETTER: Yes.
CHAIRWOMAN SCHAEFER: Okay.
MR. VETTER: What is the square footage
of asphalt and concrete or impervious surface on this project?

THE WITNESS: Including the buildings or just of the asphalt and concrete?

MR. VETTER: Without the buildings.
You know what, you don't have to answer
it now because I don't want to waste everybody's time.

THE WITNESS: No, no, that's okay.
MR. VETTER: Maybe for another --

Page 58
THE WITNESS: Five-and-a-half acres of asphalt, concrete, etcetera. Not including buildings, 5 -and-a-half acres.

MR. VETTER: Square footage, an acre
being 46,000 square feet?
THE WITNESS: Whatever 5-and-a-half acres is.

MR. VETTER: Okay.
THE WITNESS: 250,000 square feet, give or take.

MR. VETTER: Okay. When it rains, what is the volume of water in like, I'm just going to say, a 1-inch rainstorm?

THE WITNESS: So you're going to make me --

MR. VETTER: Well, water is landing on the surface. You are retaining it, but I'm just asking -- I'm just trying to show these people what the volume of water is that ends up on a site like this. We don't have to answer it now. I'm just trying to --

THE WITNESS: Okay. I mean the water is going to run off from the asphalt areas and go into the basins and be attenuated.

MR. VETTER: Yeah, I've always been
under the impression that woods, like let's say a scale of 0 to 10 , I've always felt like woods being a 10 on absorption where, you know, the trees break the water pellets and the leaf litter breaks the water pellets and, you know, the clay or the silt or the sand will absorb some of the water.

THE WITNESS: That's not exactly true when you have poor underlying soils.

MR. VETTER: I know, you keep saying that, but I'm just -- you know, I'm familiar with the soil triangle, but I'm just -- I would think that soil would absorb something.

THE WITNESS: It does absorb something. It's just not a lot in the fact that it's woods and leaf litter. It still absorbs more than the pavement would, which absorbs very little.

MR. VETTER: I would think pavement absorbs zero.

THE WITNESS: Well, it doesn't.
MR. VETTER: It absorbs something?
THE WITNESS: There's a very small amount that is absorbed or evaporates.

MR. VETTER: Okay. Getting back to a 500-year flood and I'm going to -- two thoughts that came to my mind were Hurricane Floyd and Sandy. I

Page 60
was driving in the Watchung traffic circle during Floyd and I thought my car was going to float away and I was by Water \& Wine restaurant, which these people know.

But, anyway, I'm going to take those
big storms where we get 14 inches of rain, which occurred in Floyd or Sandy or something, one of them had 14 inches of rain, when these ponds -- you said we have the emergency overflow, right?

THE WITNESS: Right.
MR. VETTER: Wouldn't that concentrate the water discharging?

Like let's say if you had, like, 10
acres of woods and you very 14 inches of rain hit all 10 acres, all 10 acres of woods are absorbing some water and it might not be concentrated in one little rivulet, it might be dispersed through the 10 acres. When you're putting it over an emergency overflow that's, whatever, 4-feet wide, now you're concentrating 14 inches of extra rain into one area, which is going to flow down to Bonnie Burn within increased velocity.

THE WITNESS: Well, first off, the emergency spillways are designed to accommodate the storm, you know, when the out -- it's designed based


| Page 65 | Page 67 |
| :---: | :---: |
| this evening. <br> MR. VETTER: All right. You were <br> asking us to ask questions. My last question was <br> going to be, what is the height of the retaining walls? <br> CHAIRWOMAN SCHAEFER: I'll let them answer that. <br> MR. VETTER: Okay. It doesn't have to be exact, I mean, is it 10 foot, is it 30 foot? <br> THE WITNESS: I have to find my notes from the October meeting. <br> MR. VETTER: Okay. I guess I wasn't present at the October meeting. <br> CHAIRWOMAN SCHAEFER: There are <br> transcripts available that you can read and you can actually read the entire transcript. <br> The other thing is is that we are now videoing our meetings. So our last meeting was our first video. You can watch that in its entirety tonight and moving forward, but last meeting we had a lot of -- I opened it up and I gave a lot more latitude, because there were a lot of questions and we didn't have a lot of residents, but there comes a point in time that I now have to get back to what our rules are. | We can't hear. <br> MS. QUAN: Were geotechnical borings <br> performed before design work was done? <br> THE WITNESS: We did soil testing. <br> MS. QUAN: Just soil testing? <br> THE WITNESS: For stormwater purposes. <br> You can ask the architect when he gets up, hopefully soon, about any geotechnical, because that would have been for him. <br> MS. QUAN: I was curious about what the retention time through the bioretention basins were. <br> THE WITNESS: I don't have that information. <br> Most of that discussion was in the first meeting. I did not review that testimony. I don't -- <br> MS. QUAN: Okay. I just want to make sure that, you know, the mosquitos and things like that were considered. <br> THE WITNESS: Let me put it this way: <br> The rules say it has to drain within 72 hours, it does. Mr. Herits, the borough engineer, has made sure that we comply with the rules. So the mosquitos would not be an issue. <br> MS. QUAN: Okay. What's the percent |
| So we're only allowing questioning on <br> testimony from that night, otherwise we can keep <br> going and going and going. <br> MR. VETTER: Okay. <br> CHAIRWOMAN SCHAEFER: But please read <br> the transcripts or watch the video. <br> MR. VETTER: Okay, thank you. <br> CHAIRWOMAN SCHAEFER: Well, they are <br> getting you the answer. <br> MR. VETTER: I can hear from here. <br> CHAIRWOMAN SCHAEFER: Okay. <br> THE WITNESS: The maximum retaining <br> wall height is in Basin 1, it's 22 feet. Most of the <br> walls are much lower. <br> MR. VETTER: Thank you. <br> CHAIRWOMAN SCHAEFER: Any other <br> questions from public? <br> MS. QUAN: Hi. Hue Quan, 10 Corey <br> Lane. It's spelled H-U-E, last name Q-U-A-N. <br> I'm sorry, I came in late, so I'm sorry <br> if this was covered or if it wasn't. I was just <br> curious, were geotechnical borings performed for design work? <br> MALE AUDIENCE MEMBER: Can you use the mic? | coverage of establishment of the vegetation within the bioretention basin that's required, you know, like, when you have a planting and you have, like, so much survivability? <br> THE WITNESS: Well, the -- and this is <br> part of our maintenance program is that the -- we have to inspect it and make sure that it has taken whatever may not take, any die off that occurs will have to be -- any plant material would be removed and a new plant installed and if it's the -- the basin bottom, it will be re-seeded. <br> MS. QUAN: Okay. Yeah, so sometimes there's -- you know, I don't know if there's a requirement on like 85 percent survivability or, you know, like, in terms of, like, this is what you're going to plant and -- <br> THE WITNESS: Mr. Herits will make sure that we -- <br> MR. HERITS: I would think the owner would want 100 percent. <br> MS. QUAN: Right. <br> I was just curious about that. <br> And, yeah, so it will be monitored by predation, by animals and just weather. <br> THE WITNESS: Correct. |

MS. QUAN: I was just curious --
CHAIRWOMAN SCHAEFER: Speak into the microphone, because you keep fading.

MS. QUAN: I was just curious if this
township has, like, an MS4 permit for stormwater.
THE WITNESS: Yes.
MS. QUAN: It does?
So, you know, does a site plan like
this require them to fall under the township's MS4 in terms of, like, the inspection and things like that, like, an annual inspection and maintenance, kind of, like, have a certification.

CHAIRWOMAN SCHAEFER: I'm going to let our engineer answer that.

MR. HERITS: If the borough was
maintaining it, we would be inspecting it.
If the owner of this property is going
to be maintaining it, and any inspections would be done under property maintenance.

MS. QUAN: No, I understand that. You
know, I've done work for other townships where they require certification by, you know, the owner to provide that information to the township so that, you know, you guys have paperwork for your own MS4.

CHAIRWOMAN SCHAEFER: Isn't that what

Page 70
you were talking about, this quarterly or annual report?

THE WITNESS: The O\&M manual and the borough's MS4 requires us to submit an annual report to the borough engineer, because that's part of the reporting that the borough has to make to the state, is that have you received the annual report from privately maintained, so, yes.

MS. QUAN: Okay, thank you.
That's it.
CHAIRWOMAN SCHAEFER: Thank you.
Any other questions?
MR. DePARTO: Mike DeParto, 46 Orchard
Road.
Just following up on her question,
because there was a town easement put next to my
property where the easement owners, we donated the waterline to the town, they were supposed to put all these trees, they all died.

Is there an enforcement provision with
this when all of your stuff dies? You're saying it's part of his -- their maintenance of the property.

Self reporting the trees dying? The
people renting reporting? Can I, as a stranger
walking by and noticing that that tree is dead, call
the town and have them replace it?
What's the mechanism for that? He
plants 400 trees, they all die, who's -- who's -- who has to file the report?

CHAIRWOMAN SCHAEFER: I'm going to let their attorney answer that.

MS. COFFEY: Sure.
Well, first of all, one thing to keep
in mind is that it is a rental property, so we want people to want to live there. So it's in the applicant's own self-interest to keep the vegetation alive and healthy. People aren't going to want to pay the rents that we want to collect for a property that's full of dead trees.

But, beyond that, we are required to post performance guarantees and maintenance guarantees with the municipality at the outset and typically if there's a maintenance issue on the property, which we don't expect, that gets reported to your municipal zoning officer.

MR. DePARTO: By whom?
MS. COFFEY: By whomever wants to report it.

MR. DePARTO: So I walk by, I see a dead tree, I call the municipal -- the municipal

Page 72
zoning officer and report you or I call you up and say replace the tree?

MS. COFFEY: I would think if you were concerned about enforcement, typically you would call the municipal zoning officer and say, they haven't built what they said there were going to build or it doesn't look like what I thought was going to build.

CHAIRWOMAN SCHAEFER: Our zoning officer gets a lot of calls.

MR. DePARTO: But do I have standing as somebody who lives down the block to make that call or is it only up to the owners --

CHAIRWOMAN SCHAEFER: Absolutely.
MR. DePARTO: So anybody can walk by
and say, you have a dead tree, call the zoning officer?

CHAIRWOMAN SCHAEFER: It's no different than if you go to XYZ company on the highway and they're selling things off the sidewalk and somebody says, hey, you can't do that, it's illegal, you haven't gotten the proper permits.

They can report it to the town. People report their neighbors to the town. So, yes, you can as --
MR. DePARTO: I have five dead trees
the town owes me somewhere, then I should go report you guys to -- on the easement that I donated, they died a year later. They look lovely when they come.

So I'll walk by every day and I'll just
call you and is there -- is there a -- besides you calling them and telling them they're in violation, is there a penalty for this if they don't respond in 30 days?

What's the -- how does that work?
CHAIRWOMAN SCHAEFER: I don't have an answer to that.

Tom?
MR. HERITS: I was just going to go
back and say the project -- the developer has to post a performance bond --

MR. DePARTO: Right. For how long, 10 years?

MR. HERITS: Can I finish?
MR. DePARTO: Okay, sure.
MR. HERITS: So he has to -- he has to post a performance bond.

Before that performance bond is released, there will be an inspection of the entire site, every improvement, which includes landscaping. If there's anything dead at that time, he'll be made

Page 74
to replace it before he gets off his performance bond. When he gets off his performance bond, there's a two-year maintenance bond and before that is released, there will be another inspection done to check everything from sidewalk, pavement, landscaping and that all gets checked before that gets released.

So you're kind of covered for at least three years through his bonding.

MR. DePARTO: But he's not going to plant the trees day one. So he's basically -- he's going to plant the trees at the end. So really there's one year, the --

MR. HERITS: No, no, no, no. So he plants the trees at the end and that starts the clock and that all has to be planted and healthy before he gets off his performance bond.

MR. DePARTO: Okay.
So they put the plants up last. So
we've got two, potentially three years from finishing -

CHAIRWOMAN SCHAEFER: From the date when they're planted.

MR. DePARTO: From when they're
planted. Okay?
But the performance bond only goes to
finishing the project, plus -- my question is: When does this all end and when the trees die 2-and-a-half years later after or three years and one day after, what is our recourse, to call you again? There's now no performance bond.

MR. HERITS: I have an open line for dead trees, believe me. You're not the only per -there's people calling with dead trees in this borough everywhere. So, and anyone can make these calls.

MR. DePARTO: Yeah, but these trees are specific for shading for the neighbors. These are more specific than any tree lying around. These are specifically to protect the neighbors from the --

CHAIRWOMAN SCHAEFER: Ms. Coffey, do you want to add --

MS. COFFEY: Sure.
Just to sort of finish the -- well, one
thing to clarify, I think what you mean to say is the trees are intended to provide screening, rather than shading.

MR. DePARTO: Right.
MS. COFFEY: So just to clarify that.
But then in terms of calling the zoning officer because you're asking so what happens when

Page 76
you call, typically a zoning officer would first reach out to the property owner and say, I've had a complaint and you need to address it.

And if the property owner continues to be noncompliant, at that time they receive a violation, which can take a number of forms. It often includes a fine and/or you can't use the property anymore. Depending on the level of the violation and you can get called into municipal court.

So there's an escalating process depending on how egregious and repetitive the offense is.

MR. DePARTO: Okay. Thank you.
THE COURT REPORTER: Sir, can you spell your last name, please.

MR. DePARTO: DeParto, D-e P-A-R-T-O.
THE COURT REPORTER: Thank you.
CHAIRWOMAN SCHAEFER: Any other questions?
(No response.)
CHAIRWOMAN SCHAEFER: Okay, let's move on.

MS. COFFEY: Okay. I'm going to move over.

So our next expert is the project architect, as we promised.

CHAIRWOMAN SCHAEFER: As you remember, we do have a bewitching hour of $10 \mathrm{p} . \mathrm{m}$.

So I would like to try to -- I'm not going to stop you in the middle, but...

MS. COFFEY: We'll try to come to a spot.

CHAIRWOMAN SCHAEFER: Thank you.
MR. KELLER: Do you want me to introduce?

Jack is going to use it.
MS. COFFEY: All right. We have one
exhibit that our architect is going to use, but our
engineer prepared it, so if we can have the engineer just introduce it onto the record and that was our architect can refer to it and then we'll really be done with him.

So this is A-13.
(Whereupon, Site Plan Rendering is
received and marked as Exhibit A-13 for
identification.)
MR. KELLER: This is a site plan
rendering, dated $2 / 18 / 2020$.
It's the same rendering we have shown

Page 78
previously. It's just at a bigger scale so that you can see the context of the neighboring properties around the subject site.

It shows the entire subject site and
the adjacent properties on Johnston and Mareu and other streets around the site.

MS. COFFEY: Thank you, Mr. Keller.
MR. LINNUS: Sir, do you want to raise
your right, please?
MS. COFFEY: Just for the record, this
is Jack Raker, the project architect.
CHAIRWOMAN SCHAEFER: I'm sorry, Jack?
MS. COFFEY: Raker, R-A-K-E-R.
MR. RAKER: My name is Jack Raker.
CHAIRWOMAN SCHAEFER: We know that.
MR. LINNUS: Do you swear the testimony you're about to give will be the truth, the whole truth and nothing but the truth, so help you God?

MR. RAKER: I do.
JACK RAKER,
80 Lambert Lane, Suite 105, Lambertville, New Jersey 08530 , having been duly sworn, testifies as follows:

MR. LINNUS: Do you want to state your name and address for the record, please.

MR. RAKER: My name is Jack Raker. I'm
with Minno \& Wasko Architects at 80 Lambert Lane in Lambertville, New Jersey.

MR. LINNUS: Your witness, Counsel.
MS. COFFEY: Thank you.
DIRECT EXAMINATION
BY MS. COFFEY:
Q. Mr. Raker, can you please introduce
yourself to the board and the public and tell them a little bit about your experience and qualifications? A. Sure.

I'm a principal with Minno \& Wasko Architects and Planners in Lambertville, New Jersey.

I graduated with a bachelor's degree in architecture over 20 years ago from New Jersey Institute of Technology.

I've been practicing in the field of residential and mixed-use architecture land planning for the past 20 years.

I've testified before numerous boards in the State of New Jersey.
MR. LINNUS: Are you licensed?
THE WITNESS: I am.
I'm currently licensed in the State of New Jersey and my license is in good standing.

Page 80
CHAIRWOMAN SCHAEFER: Okay, we're good. MS. COFFEY: Thank you.
Okay. Get up to full power here.
There we go.
THE WITNESS: Thank you for your
patience, I apologize.
Okay. I have a copy of this
presentation and a thumb drive with a copy of the presentation.

So rather than mark every slide into evidence, I'm going to go through the slides and then just provide that.

Is that okay?
MR. LINNUS: Well, why don't you mark the slides for the public and identify the slides and you say that you have a replicate of the slides here.

THE WITNESS: Sure, sure.
I'm going to refer to the slides. The
slides are essentially color versions of the submission, but there are additional slides that were not part of the submission in this presentation.

MR. LINNUS: So the first page up there that is -- want to identify that and we'll marked this A -- first page A-14.
(Whereupon, Cover Sheet of

Architectural Drawings is received and marked as Exhibit A-14 for identification.)

THE WITNESS: Sure. This is the cover sheet of the architectural drawings that were submitted. This particular version is in color.

CHAIRWOMAN SCHAEFER: And you're
saying, though, that this does not include everything that you're going to be showing us?

THE WITNESS: That copy includes everything you're are going to see.

MS. COFFEY: What he was saying was that what was previously submitted does not include everything that's included in what he's showing you this evening.

MR. POTE: The October version?
MS. COFFEY: Correct.
THE WITNESS: It's the January version,
that's the latest architectural --
MR. POTE: Right, this is.
MS. COFFEY: So the January version that has been submitted to the board also does not include some material that's going to be shown on the -- so for example, we had some requests at the January meeting to bring additional exhibits that are incorporated into the slides that are in the --

Page 82
CHAIRWOMAN SCHAEFER: The last revision we got was January 17th, 2020.

MR. LINNUS: If the witness is going to testify from the slides, we're going to go page by page and slide by slide.

And what I'll do is I'll mark the
replicas of what you're testifying to.
So A-14, you want to identify what A-14
is, please?
THE WITNESS: Sure.
A-14 is the cover sheet of the
submitted architectural set.
So I'm going to do a little
housekeeping. I'm going to talk a little bit about the overall project mix and the number of dwelling units in the overall project and then I'm going to get and dive into very specific elements of each.

So the project includes 230 dwelling
units. Of those dwelling units, there's 184
market-rate dwelling units. There's 46
low-and-moderate units.
Of the market-rate units, there are 42
one-bedrooms and 142 two-bedrooms. And 26 of those two-bedrooms are two-bedroom dens. And I'll get into a little bit more testimony about that a little
later.
Of the low and moderate, we have to
comply with state regulations and there's -- that's less than 20 percent can be one -- are required to be one-bedrooms and that would be nine. More than 20 percent need to be three-bedrooms, and that's 10 in this project and the remaining units are two-bedroom units, that's 27.

The next thing I would like to note is on the submitted sheets there was an error in marking a low- and moderate-unit and I want to point that sheet out to everyone.

I know the planner, I'm sure is looking at the number of low-and-moderate units and would like to know. On Sheet A-4, and I'll bring it up when it comes up, on the third floor plan there's a two bedroom, 913 unit that was not labeled as a low and moderate and should be.

MR. LINNUS: While we're on the low and moderate, how many are going to be very low and you want to identify the beds, the bedrooms that are going to be very low?

THE WITNESS: Sure, I do have that information.

MR. LINNUS: And 13 percent are
required to be very low.
THE WITNESS: Okay. I'm going to take it by unit type by unit type. So --

MR. LINNUS: Just show us 13 percent very low.

THE WITNESS: Okay. The very -- for
the very low, there's one one-bedroom, four
two-bedrooms and one three-bedroom unit.
For the low income, there is four
one-bedrooms, 10 two-bedrooms and four three-bedrooms.

For the moderate income, there's four one-bedrooms, 13 two-bedrooms and five three-bedrooms.

MR. LINNUS: And your representation is that complies with the COAH requirements, the UHAC requirements and the affordable housing requirements?

THE WITNESS: Correct.
Okay. I'm going to go onto the next slide.

And before I do, I just want to talk a little bit about some of the site design issues, because it was my firm that worked with the engineering firm to design the site and the site layout and, you know, we were really proud of what we
have done.
I know there was some concerns that we were just plopping buildings down on the site in some random fashion and we really took into account the building design to be -- have the least -- we know we're in an environmentally-sensitive site. You know, we have wetlands surrounding us. And we know that we want these buildings to work with the grade, we have a sloping site.

It slopes from this back here all the way down low area to the right side of the site (indicating).

MR. LINNUS: Let the record reflect that you're -- excuse me, let the record reflect that you're referring to $\mathrm{A}-13$.

THE WITNESS: Correct.
I was going to just say that. I was
pointing to the board over there, A-13. So what we needed to do was to find a way to have these buildings make up that grade, that grade difference.

We could have just went and a lot of developers just flatten the site, throw their
building on it, put their parking, and put up a bunch of retaining walls.

That's not what we did. We were very

Page 86
concerned about how this building -- how these buildings would work with the grade. We didn't want to put a lot of retaining walls everywhere. It is a sloping site, we knew they we're going to be required, we knew that there was going to -- there was some boring samples done.

We knew there was going to be rock. Going through rock is expensive. Developers don't want to do it, so we want to avoid that as much as possible.

So with this next slide --
MR. LINNUS: For the record, you're
referring to what I'm now marking as A-15 and putting today's date on it.
(Whereupon, Drawing is received and marked as Exhibit A-15 for identification.)

MR. LINNUS: Do you want to identify what A-15 is?
THE WITNESS: A-15 is Sheet A-17 in the submitted drawing set. It is called "Section."

This drawing shows a section through the two different types of buildings on-site.

We have three -- two-and three-story buildings on this side of the site.

Again, I'm pointing to Sheet A-13, the
three-story, you can enter on the three-story side or the two-story side and get access to the buildings.

They're elevator-served buildings. So
it doesn't matter which side you access on, you can just take an elevator up to the floor you live on.

Another thing I wanted to talk about is, we have -- we wanted to reduce the amount of impervious surface as well, so one of the ways to do that is to put under-building parking and take those spaces off-site and put them under the building.

So we've done that in both of these sections (indicating). You can see at least in these sections on the high side, we have garages and it varies per building. Each building section is slightly different depending upon its location. Sometimes the building is on the low side.

But we've done this so that we can take those parking spaces, move them in site and then offer an additional amenity to our guests, to our renters.

CHAIRWOMAN SCHAEFER: How deep are those garages?

THE WITNESS: The garages vary in width from 20 to 25 feet. I'm sorry, vary in depth, I apologize.

So we have a total on-site of 107
parking spaces, which pulls 107 parking spaces inside the buildings and allows us to reduce some of that impervious surface.

All of these buildings are fully accessible and they are fully sprinklered. They're sprinklered with NFPA 13 system.

All of the corridors, one-hour rated;
stairwells, two-hour rated down.
Every unit has two ways out of the building.

Next side, which is titled "A-1
Building 1 Plans."
MR. LINNUS: That's A-16. I'm marking that A-16. Would you identify that, please.
(Whereupon, Sheet A-1, Building 1 Plans is received and marked as Exhibit A-16 for identification.)

THE WITNESS: That is A-1, Building 1
Plans. This is the A-1 sheet in the submitted set.
So I'm just going to take you through these floor plans pretty quickly. I'm not going to go through every building. I'll describe one building and then I'll briefly touch on the aspects of the different buildings, things that make them

Page 90
slightly differently.
But all of the buildings are designed essentially the same. The tuck-under garages, and they're split from a two-story, three-story design or a three-story, four-story design.

So on Building 1, you can see the garages are here. The lowest level, which is on the left labeled "Ground Floor," that level is the -it's one-sided. The back portions over here are essentially unexcavated area.

So there's a hallway that serves these stairwells and these units. There is no access or exit other than the stairwells at this level.

At the next level, now the garages come into play and they're accessed from the back.

There's also a lobby access here and every garage gets access through a corridor into the corridor spaces and each one of these little bump areas is a doorway into those units. The corner units get two bedrooms. They get a lot of extra glass. And then there are storage spaces as well. They're in orange here (indicating) in this plan, they're for tenants to store some seasonal items and some additional items that they don't -- can't fit in their units.


This particular building has 23
dwellings in total. It has 12 ones and 11 twos.
CHAIRWOMAN SCHAEFER: So Building 1 on the other exhibit is where?

THE WITNESS: Building 1 would be located on Exhibit A-13 right here (indicating). It is the smallest building.

We've distributed the low- and moderate-units throughout the entire site. This is the only building that doesn't have a low- and moderate-unit in it and it's just because it's smaller and it just didn't fit within the building matrix.
I'm going to move to the next slide.
MR. LINNUS: That would be A-17. You want to identify that, please.
(Whereupon, Sheet A-2, Building 1
Elevations is received and marked as Exhibit A-17 for identification.)

THE WITNESS: It's called Sheet A-2, Building 1 Elevations.

So the building we were just looking
at, the garage side is located to the top
(indicating) and you'll note we've changed -- we do a lot of things here. This is a smaller building, so

Page 92
we didn't use as many of the techniques that we use, that I'll talk about in future buildings, to break down the mass.

This building is fairly small, but we do create some turn gables, roof dormers to break up the mass of the roof. We have turn gables and we do recess different sections of the building, large recesses to create break shadow lines, changing in the material heights so that your eye is drawn all across the elevation and not one static linear line. They're all high-quality materials. It's going to be fiber cement siding, brick, there's going to be metal accent roofs, vinyl windows, all high-quality materials.

CHAIRWOMAN SCHAEFER: So on Building 1 on the first exhibit, can you show me what side the garage is?

THE WITNESS: The garages would be on the uphill side right here (indicating).

CHAIRWOMAN SCHAEFER: Thank you.
So the other side will show the
three-story.
THE WITNESS: Correct.
And that would be the drawing underneath that. That is the three-story side of

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that elevation.
    MS. COFFEY: Just for the record,
that's the side that's facing towards Bonnie Burn
Road.
    THE WITNESS: Correct.
    And, again, same techniques, the same
materials.
    We don't treat any side of this
building any differently, they're all treated the
same with the same materials; brick, fiber cement
siding and metal railings, metal accent roofs, all
high-quality materials.
    I'm going to go to the next exhibit.
    MR. LINNUS: A-18. You want to
identify that, please, sir.
    (Whereupon, Sheet A-3, Building 1
Elevations is received and marked as Exhibit
A-18 for identification.)
    THE WITNESS: Building 1 elevations,
    Sheet A-3. These are the end elevations of that
    building and you can see in this elevation, you can
    see how the grade slopes along here and changes from
    one story to the other.
    Building 1's building height complies
    with the ordinance and it's 34 feet, approximately
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    Page 94
    34-and-a-half feet. And that is measured from
    average roof to average grade and those calculations
    were provided in the engineer's submission.
    MR. LINNUS: Do all the buildings
    comply with the height requirements of the ordinance?
THE WITNESS: All of the buildings do
comply. I'm going to go to the next slide.
MR. LINNUS: That will be A-19. Do you
want to identify that, please, sir.
(Whereupon, Sheet A-4, Building 2 Plans
is received and marked as Exhibit A-19 for
identification.)
THE WITNESS: Sheet A-4, Building 2
plans. This sheet, I'm not going to spend too much
time on it. You'll notice that there's a green low-
and moderate-unit that is pointed out here
(indicating).
This building contains 18 two --
market-rate two bedrooms, two low-and-moderate one
bedrooms and six low-and-moderate two bedrooms and
one low- and moderate-three bedroom. That three
bedroom is located right here (indicating).
CHAIRWOMAN SCHAEFER: So is this --
this building is all low or moderate?
THE WITNESS: No. This building has a
mix of both market-rate units and low- and moderate-units. It has the one low- and moderate-one bedroom and the blue here (indicating) is the lowand moderate-two bedrooms, they stack (indicating).
We'd like the units to be the same all the way up through the building so that they stack all the way up. You do all the plumbing runs, you have to do everything through the building. You really don't want to switch floor to floor.

BY MS. COFFEY:
Q. Mr. Raker, just for the record, how
many market-rate units are in this building and how many affordables just to give everyone the total view?
A. Sure, sure.

There are a total of 26 dwelling units in this building and there are nine affordable units in this building.
Q. And could you also point out the trash
rooms, please?
A. Sure.

Every building has a trash room that is
located -- so all trash is handled internally. The trash is -- there's a trash room located on each floor in this area right here (indicating).

Page 96
And those trash rooms contain a chute inside of it and the tenant goes in with their trash, puts the trash into the chute, the chute drops down into a container, a compactor.

It's compacted at the lowest level and then brought out on trash day. It's picked up just like a residential trash. Those containers are rolled out, brought out. The truck is scheduled, the truck comes by and picks it up and then continues on. And that's the same for every building.

MS. PENNETT: What about recycling?
THE WITNESS: Recycling is handled the same way and some of the ways, there's alternate ways to handle recycling.

Sometimes you can put a chute in. That can be pretty loud going down as well, but sometimes what we'll do is we'll just do containers next to the chutes and that's emptied by maintenance, it's brought down to the trash room for recycling and it's picked up on scheduled recycling times.

MS. PENNETT: So you have recycling for papers, plastics, cans?

THE WITNESS: All that's required by the township.

MR. LINNUS: And the county?

THE WITNESS: And the county, county requirements.

Next slide.
MR. LINNUS: That would be A-20. You want to identify that, please.
(Whereupon, Sheet A-5, Building 3 Plans is received and marked as Exhibit A-20 for identification.)

THE WITNESS: This is Sheet A-5 of the submitted set, Building 3 plans.

This building is nearly identical to
Building 2. There's just a slight modification in
the number of low-and-moderate units, one additional unit.

Whoops, I apologize.
That unit is located here (indicating).
BY MS. COFFEY:
Q. So Mr. Raker, can you just give us the
breakdown again, total number of units and how many are affordable, please?
A. So for Building 3, again, it's 26
dwelling units and included in them is eight low-and-moderate units.

This building is three -- two-split and it's 34-and-a-half feet in height. This building has

Page 98
18 garages as well.
Next slide.
MR. LINNUS: That would be A-21. You want to identify that, please?
(Whereupon, Sheet A-6, Building 2 and 3
Elevations is received and marked as Exhibit
A-21 for identification.)
THE WITNESS: This is Sheet A-6 in the submitted set, Building 2 and 3 elevations. It's
both buildings. There's no difference in the elevations of Buildings 2 and 3, even though there's a slight unit shift and name.

This building is getting a little bit
longer. One of the things that we've done to this building is we've dropped the roof line in the center and raised it at the edge.

So that sort of helps break the length
of the building up and we've also included some balcony bays that are different from gable bays, so that it breaks some of that mass up along the building.

Again, all high-quality materials, the
same as the previous buildings and it goes entirely around each side of the building.

MR. LINNUS: Where is Building 3 on

## A-13?

THE WITNESS: Building 3 is located in this location here, furthest from Bonnie Burn Road (indicating).

BY MS. COFFEY:
Q. In the northeastern, northwestern?
A. Southwestern.

CHAIRWOMAN SCHAEFER: And the
three-story would be facing towards Bonnie Burn Road?
THE WITNESS: The three-story goes to to Bonnie Burn, the two-story is this direction (indicating).

And another thing, I don't know if I've pointed out previously is we recessed a lot of some of the garage doors. You can see a lot of them end up in shadow. We changed their colors as well. We don't want to have a tenant drive down a row of garage doors that are all lined up and visible. We want to offset some of the aesthetic so that when you drive down, you're not seeing any more than a grouping of three or four at a time.

CHAIRWOMAN SCHAEFER: And maybe it's just me, are those garage doors taller than normal?

THE WITNESS: No, they're standard garage doors. There will be an accessible garage in

## Page 100

each building. It's not a van-size space. It is a standard-size accessible space. It doesn't require any additional height. It's going to be the same as the remaining spaces or garage doors.

Next slide.
MR. LINNUS: A-22, you want to identify it, please.
(Whereupon, Sheet A-7, Building 2 and 3 Elevations is received and marked as Exhibit A-22 for identification.)

THE WITNESS: This is Sheet A-7,
Buildings 2 and 3 elevations. These are the end elevations of Building 3.

I'm not going to spend much time on this slide. It's the same discussion that we had on the previous ones. I'm going to skip onto the next slide.

MR. LINNUS: That would be A-23. You want to identify it, please.
(Whereupon, Sheet A-11, Building 4
Plans is received and marked as Exhibit A-23 for identification.)

THE WITNESS: This is Sheet A-11 in the submitted set, titled "Building 4 Plans."

Building 4 contains 54 dwelling units
and in that 54 is 13 low-and-moderate units. You can
see those low-and-moderate, the three-bedroom low-and-moderate you can see here and here (indicating).

And all of the low-and-moderate units are labeled with an "LM" for low and moderate.

This building is handled the same as the other buildings. It's just longer. We moved the garage doors in and out so that you're not seeing groupings of them all lined up along that alley (indicating).

We've created some storage spaces in the back here (indicating) and this building also has a trash room like the other buildings and an elevator for circulation. Two means of egress from every floor.

MR. LINNUS: And where is Building 4 on A-13?

THE WITNESS: Building 4 is located in the northerly side of the side, north, northeasterly side of the side in front of that detention basin.

Move onto the next.
MR. LINNUS: A-24.
Do you want to identify it, please?
THE WITNESS: Yes.
(Whereupon, Sheet A-12, Building 5
Plans is received and marked as Exhibit A-24
for identification.)
THE WITNESS: Sure.
I'm handling these two buildings the same. This is A-12 of the submitted sheets, Building 5 plans.

Buildings 4 and 5 are nearly identical.
There's just a slight change in the low-and-moderate units. So Building 5 has 56 dwelling units and that includes 12 low-and-moderates.

I don't know if I said Building 4. I
just want to make sure I get that on. Building 4 was 54 dwelling units with 13 low-and-moderate units.

I'm going to move onto the elevations.
MR. LINNUS: All right. A-25, you want to identify that, please.
(Whereupon, Sheet A-13, Building 4 and 5 Elevations is received and marked as Exhibit A-25 for identification.)

THE WITNESS: This is Sheet A-13 in the submitted set, it's Buildings 4 and 5 elevations.

In this building, now this is -- you're seeing the buildings that are a little bit further away from the western side of the site.

MAYOR BALLA: So the base to the ridge.
THE WITNESS: The building height is 45 feet, 6 inches. The lowest point to the highest point, it would be if you had, you know, you took a

Page 104
view only from this corner all the way to the highest point, probably be about 56 feet in that range somewhere.

THE WITNESS: I'm going to move on to the next slide.

MR. LINNUS: That would be A-26. You want to identify that, please.
(Whereupon, Sheet A-14, Buildings 4 and 5 Elevations is received and marked as Exhibit A-26 for identification.)

THE WITNESS: That's Sheet A-14 in the submitted set, Buildings 4 and 5 elevations. And these are the end elevations of those buildings. You could see as the same as before, we have the topography that changes from side to side taking up the grade.

Next sheet.
MR. LINNUS: That would be A-27. You want to identify what that is, please.
(Whereupon, Sheet A-8, Building 6 Plans is received and marked as Exhibit A-27 for identification.)

THE WITNESS: This is Sheet A-8 in the submitted set, Building 6 plans. Building 6 has 45 dwelling units in it and four low-and-moderate units.

CHAIRWOMAN SCHAEFER: You said 45 units?

THE WITNESS: Correct.
CHAIRWOMAN SCHAEFER: And I'm sorry, how many --

THE WITNESS: Four low-and-moderate units.

BY MS. COFFEY:
Q. Mr. Raker, before you go further with

A-27, do you want to point out where Building 6 is on A-13?
A. Sure.

Building 6 is the southern-most
building in the highest area in these three. So the buildings are stepping up one story at a time as they go to the back, the same as these.

MR. LINNUS: And how many low-and-moderate units?

THE WITNESS: This one, Building 6 had four low-and-moderate units.

This building has 21 garages in it, the same -- has a trash room and a number of storage spaces for some of the tenants as well.

CHAIRWOMAN SCHAEFER: You know, you're saying a "trash room."

Page 106

Is it just one trash room per building?
THE WITNESS: Yes, yes.
In that trash room, at the bottom of the chute, it has a compactor in it. Everybody goes to the elevator, the trash room is located at the elevator. Usually you're taking your trash out as you're going out in the morning, so you go to -- as you're going to the elevator, you bring your trash, you throw it in room, then you're onto the elevator.

CHAIRWOMAN SCHAEFER: And is there fear of overflow of the trash?

THE WITNESS: No, trash is totally
managed. It's compacted in the lower levels and it's managed. They determine the volume and they just schedule pickups as needed to manage the volume.

CHAIRWOMAN SCHAEFER: And how often do they pick up?

THE WITNESS: It's relative to the number of dwelling units, the number of trash. I wouldn't know the frequency in volume for this project. That might be an operations question.

MAYOR BALLA: The elevator is where in that photo?

THE WITNESS: They're all located right in the center of the building, so they're easily
accessed from either side. They're sized per code to manage a stretcher and they're sized accordingly.

MAYOR BALLA: In the event of a fire,
you're on the fourth floor, the way out is where the tan area is there?

THE WITNESS: Correct.
So all these stairs, there's stairs on
either ends of the building, those are fully protected.

The corridor, itself, is rated and the unit is rated. Each unit is rated individually, between units and rated from the corridor. Then you exit into a one-hour enclosed corridor down to the stairwell, which takes you down to the ground floor or the exit point.

BY MS. COFFEY:
Q. Mr. Raker, can you just explain to people what "rated" means?
A. Rated, yeah.

All of the walls in these buildings are required to have a fire rating. They're tested, ASTM does testings and they provide ratings for the various types of wall construction and we're required to follow those types of construction.

MAYOR BALLA: My question with regard
to that is what is in the attic, in the top level in the attic in terms of fire protection?

THE WITNESS: I'm going to go back to the section.

BY MS. COFFEY:
Q. So you're looking at A-26? No?
A. No, I'm going to go back, it's like one of the first slides. So this while it's -- it's somewhat diagrammatic.
Q. A-15?
A. This is A-15, I guess, in the -- thank you.
Q. A-15, yes.
A. You'll have these roofs here, and this brings up another point, if you notice in all the elevations, you didn't see any mechanical louvers, which is great, it's not necessarily the most aesthetically pleasing thing to see.

We're able to with the pitched roofs, hide all the mechanical louvers up in the attic. It does a couple of different things.

Not in the attic, but on the roof up in here (indicating). And that does a couple of different things; one, it shields anybody from having to see it and two, it creates a little bit of a

|  |
| ---: |
| Page 110 |

laundry facility?
THE WITNESS: There are laundry in every unit. I'm going to go through the unit plans shortly. I'm going to show you some photographs of typical units that we've done for this developer.

MS. COFFEY: A-28 at this point,
correct, Mr. Linnus?
MR. LINNUS: Do you want to identify A-28, please.
(Whereupon, Sheet A-9, Building 6
Elevations is received and marked as Exhibit A-28 for identification.)

THE WITNESS: A-28 is Sheet A-9 on the submitted set, Building 6 elevations.

And again, the same techniques are used in this building. This building, again, is the upper-most building here on the southern side of the site (indicating).

And the same high-quality materials for this building, same techniques, breaking up the mass of the building so it doesn't appear to be so long and repetitive. You know, we've created a lot of techniques to break that up. You can see some of the balconies located here on these buildings as well. Not every unit gets a balcony, but many of them do.

Page 112
CHAIRWOMAN SCHAEFER: And I will assume at some point in your testimony you're going to show us site exhibits of both directions and --

THE WITNESS: Yes, I save that for the end.

CHAIRWOMAN SCHAEFER: It won't be tonight.

THE WITNESS: Next slide.
MR. LINNUS: It would be A-29. Do you want to identify that, please.
(Whereupon, Sheet A-10, Building 6
Elevations is received and marked as Exhibit
A-29 for identification.)
THE WITNESS: It's Sheet A-10, Building 6 elevations. I'm not going to give any real testimony to this. The building complies. These are substantially similar to the other elevations that I've discussed.

BY MS. COFFEY:
Q. And they're the building ends, correct?
A. Correct.

Next slide.
MR. LINNUS: Do you want to identify
A-30, please.
THE WITNESS: Yes.
(Whereupon, Sheet A-15, Unit Plan is received and marked as Exhibit A-30 for identification.)

THE WITNESS: A-30 is Sheet A-15, unit plan. There are a number of unit plans that I've submitted to the -- in the most recent submission, I think we've gotten almost everyone, not every single unit type, but at least every type is represented in the most recent submission.

The unit plans I'm going to walk through just briefly. Very open living kitchen spaces, usually dual access baths for the bathrooms so that there's a private access from one end and a public access.

In the two-bedroom we would have a master bedroom, which would have private access of it's own bath and then the second bedroom would have a common bath usually in a more less public area of the unit so that they're not walking through the living space to get to their bathroom.

We are showing low and moderate slightly larger -- slightly smaller in size usually grouped around the elevators. All of these units are fully adaptable. Every unit in this complex will be fully adaptable.

Page 114
All the building -- the entire building is adaptable.

MR. LINNUS: If the unit is very low, take a one-bedroom, that would be 680 square feet?

THE WITNESS: It could be. I'm not --
I can't testify --
MR. LINNUS: Is there any very low unit, one-bedroom less than 680 square feet?

THE WITNESS: You know what, I have to look -- I'd have to look on the plan and check that for you. I don't know that 100 percent. I'll have to take a quick --

MR. LINNUS: While you're looking at that, the two-bedroom, if you have a two-bedroom very low, what's the square footage of a two-bedroom very low unit?

THE WITNESS: I have --
MR. LINNUS: As well as moderate.
THE WITNESS: I have to say I haven't
-- on my plan sheets, I have not discerned the very
low from the low. They're all low-and-moderate units and in my mind, the owner can dictate which one is low and/or very low --

CHAIRWOMAN SCHAEFER: So a one-bedroom

THE WITNESS: -- according to the testimony that we gave.

CHAIRWOMAN SCHAEFER: So a one-bedroom low and a one-bedroom moderate are going to be the same size?

THE WITNESS: They could be.
CHAIRWOMAN SCHAEFER: But they might not be?

THE WITNESS: When the building gets engineered, it is possible that something, a structural element makes one slightly smaller than the other.

BY MS. COFFEY:
Q. Is it helpful to talk about what the
smallest one-bedroom affordable unit is and the biggest one-bedroom affordable unit and give that range?
A. Well, yeah, we can do that.

I can talk about the -- yeah, so right
now what we're showing here is -- and I think I pulled these up because they're a little more typical and not necessarily relegated to which one was very low, which one was moderate.

So the one-bedroom low units are going to be in that 600 , upper 600 range. The two-bedroom

Page 116
low-and-moderates are going to be in the upper 900 range.

I'm going to go to the next sheet,
because the next sheet will likely contain, I
believe, a three-bedroom unit.
MR. LINNUS: That would be A-31.
Do you want to identify that, please?
THE WITNESS: It does appear we have a
560 square foot one-bedroom low-and-moderate.
MR. LINNUS: Wait a second, you're
still on A-30, I guess.
BY MS. COFFEY:
Q. Mr. Raker, you may want to go back to

A-13, the cover sheet. I think you have that chart on A-13, which might be the most helpful.
A. Yeah, I don't know that it would be legible.

MR. LINNUS: The cover sheet is A-14.
MS. COFFEY: A-14, thank you.
THE WITNESS: So the smallest
low-and-moderate one-bedroom is 560 square feet. That would likely be assigned as a very low.

MR. LINNUS: And the smallest moderate?
THE WITNESS: The next size up is the 680 square feet that we discussed earlier.

We have one that's 645 square feet and one that is 680 square feet and then 760 square feet.

BY MS. COFFEY:
Q. Those are all dimensions of one-bedroom affordable units?
A. Units.

CHAIRWOMAN SCHAEFER: It's 760? I'm not seeing that here. I see 790.

THE WITNESS: Oh, I apologize, that was
790. It's my eyes and the size of the text on the sheet. I apologize.

So then for the two-bedroom
low-and-moderate units, they range in size and I'll
list those sizes for you. We have 930 square feet.
CHAIRWOMAN SCHAEFER: Fifty.
MR. KELLER: Thirteen.
THE WITNESS: I don't think I'll be
able to see that. It gets blurry when you get close.
So we have 913 for the two-bedroom
low-and-moderate. We have, it looks like 987, 987.
BY MS. COFFEY:
Q. So 967.
A. Is it 967 ?
Q. That's a 6, yeah.

THE WITNESS: Okay. Sorry, I think I

Page 118
need new glasses.
CHAIRWOMAN SCHAEFER: No, 987. That's according to what I have --

MS. COFFEY: Oh, it is an 8. I need glasses.

THE WITNESS: That's 987 for the
low-and-moderate units, the two-bedroom
low-and-moderate units. The three bedroom
low-and-moderate units vary. There's 983 , it looks like 983 -square-foot unit. 1180 -- is that 1183 ?
1163. And what is that, 11 --

CHAIRWOMAN SCHAEFER: It's 1083. THE WITNESS: Yes, 1083.
And, again, those are approximate sizes
because when the building is fully engineered and structural walls go in, they get pushed and pulled, lose a few square feet here and there or gain a few square feet as well.

I'm going to continue on. It's going
to take me a while to get back to my slides.
I'm going to move onto the next sheet.
MR. LINNUS: That would be A-31. You
want to identify that, please, sir.
(Whereupon, Sheet A-16, Unit Plan is
received and marked as Exhibit A-31 for
identification.)
THE WITNESS: This is Sheet A-16 of the submitted set, unit plan.

So in this -- in this I'm showing --
and this is something I did want to talk about a little bit.

We did have some, what we call,
one-bedroom dens. They're smaller units. They're labeled on my sheets as two-bedroom units, because conservatively we want to make sure that we're getting the right number of parking, the right number of -- of -- of sewer load calculations.

However, it is fully intentioned that this space here be marketed not as a bedroom, as a den.
BY MS. COFFEY
Q. You're referring to the two-bedroom 892-square-foot layout?
A. Correct.

And, likewise, for the two-bedroom den unit, the den doesn't have a door on it. And this space we're saying is a two-bedroom with an office. We're not putting a door on it.

However, in our conservative parking calculations, we counted it as a three-bedroom.

MR. LINNUS: Counsel, how are you going to make sure that the dens or the offices that are identified in the project are not used as bedrooms?

MS. COFFEY: So the leases that the applicant intends to use prohibit use of those offices as bedrooms and they actually do occupancy checks to make sure that they're not being utilized as bedrooms and they have a leasing requirement that --

MR. LINNUS: So you'll incorporate that in the lease that someone who is leasing a two-bedroom, plus an office they'll be prohibited from office use -- from --

MS. COFFEY: From bedroom use.
MR. LINNUS: -- bedroom use?
MS. COFFEY: Correct.
MR. LINNUS: As well as the dens?
MS. COFFEY: Same thing, correct.
MR. LINNUS: And that will be in the leases?

MS. COFFEY: It's in the leases,
correct, and they do do occupancy checks to make sure that that's being complied with.

CHAIRWOMAN SCHAEFER: How often do they do that?

MS. COFFEY: I will have to find out for you.

MR. FIORILLA: Would the two-bedroom 892-square-foot unit on the left, you said the bedroom would be marketed -- that that would be marketed as a one-bedroom?

THE WITNESS: Yeah, that one would be marked as one-den.

MR. LINNUS: And for construction purposes, they will not be bedrooms?

THE WITNESS: I'm not sure what you mean for construction purposes.

MR. LINNUS: Are there differences between --

THE WITNESS: I can tell you for occupancy calculations, we'll count it as a bedroom. We always take the most conservative route. BY MS. COFFEY
Q. But, for example, Mr. Raker, there's
not a closet provided?
A. Not a closet provided, no.

MS. COFFEY: And I have an answer for you, Madam Chairwoman, on the frequency of the inspections. I'm told they're done at least once a year.

Page 122
And I also see that you have another question from one of your board members.

MS. PENNETT: Is there a population
number of people that can be living in each of the apartments?

MS. COFFEY: So the applicant's lease
prohibits more than two people per bedroom.
CHAIRWOMAN SCHAEFER: I'm sorry?
MR. LINNUS: Say that again?
MS. COFFEY: The lease only allows two people per bedroom, a maximum of two people per bedroom would be the right way to say that.

MR. SPEENEY: You actually have an agreement with the occupants that they can only have two people per bedroom?

MS. COFFEY: Yes.
MR. SPEENEY: And babies?
MS. COFFEY: A baby is a person.
Oh, no, baby is not a person. Hold on.
The cutoff is 18 months or younger, I'm told.

MR. SPEENEY: Okay, thank you.
MS. COFFEY: I'll have to let -- I have
an 18 month or younger. I'll have to let her know she sneaks by.

THE WITNESS: So the next thing I want to hit on about these units is they're well appointed.

These are all, you know, well-designed, open floor plans, lots of glass, lots of natural light, great amenities. I'm going to take you through some of the --

CHAIRWOMAN SCHAEFER: Before you go to your next slide, which I'm assuming is going to start showing the interiors of these, this is where we're going to break you. I mean, breaking you and stopping.
(Laughter.)
MS. COFFEY: We're going to end testimony for the night.

CHAIRWOMAN SCHAEFER: I'm sorry, it's my bewitching hour.

THE WITNESS: I'm very close to the end.

CHAIRWOMAN SCHAEFER: Yeah, but then we want to open it up to public and I want to be able to refresh their memories for our next meeting. Okay?

So I do want to stop it here. And --
because we're going to get a lot of questions, I'm sure, from the public.

## Page 124

So, you know, I want to give ample opportunity.

With that being said, do we want to
schedule a couple of special meetings? Because we do have another application that has now been put off to March and we will start our March meeting with them.

So I had my board secretary reach out
and right now it looks like either March 10th or 31st would work for a special meeting.

MS. COFFEY: Okay. Let's -- if I -may I poll our folks quickly?

CHAIRWOMAN SCHAEFER: Absolutely.
(Whereupon, a short recess is held.)
MS. COFFEY: We think that the 10th
works. We'd have to double confirm.
One thing that I would ask the board to consider is if we have professionals who are available on the 10th, would you be willing to have us do a pause in the architectural testimony and, for example, have our environmental consultant come and testify that evening or would you prefer that we complete architecture before we move onto somebody else.

CHAIRWOMAN SCHAEFER: Yeah, I would prefer the architect, because we're in the middle of
architecture. I don't want to -- you know, then we're opening it up again to the public isn't able to ask questions because we're only limiting it to that specific testimony. I would prefer that we continue on with architectural so we don't lose our thought pattern. I understand where you're coming from, but...

MS. COFFEY: Okay. We should know in the next little bit whether to be able to confirm whether or not the 10th works. So for now if we can plan for the 10th and we'll let you know for some reason a conflict arises.
Is that acceptable?
CHAIRWOMAN SCHAEFER: That's
acceptable. And then we're going to also -- we're also going to send out an e-mail to everybody for special meeting dates for April and May. And we'll get back to you with that.

But with that being said, your
application, we need to extend again.
MS. COFFEY: We're currently through
March 30th.
CHAIRWOMAN SCHAEFER: March 31st.
MS. COFFEY: Or 31st.
CHAIRWOMAN SCHAEFER: So are you

Page 126
acceptable to moving it now to, say, the end of June?
MS. COFFEY: I'm seeing panic.
CHAIRWOMAN SCHAEFER: I'll move it up to the end of May, but I know that, you know, we're trying to accommodate you as best as we can, but we have other things on our agenda too and we're willing to do special meetings for you guys, but --

MS. COFFEY: We appreciate it.
CHAIRWOMAN SCHAFER: -- I just want to
-- if we get that 500 year storm.
MS. COFFEY: Why don't we plan for the end of May and then we'll take it from there, if that's all right.

CHAIRWOMAN SCHAEFER: Okay.
MR. LINNUS: All right. You're
extending the time within which the board would take action on the application through May 31st, 2020; is that right, Ms. Coffey?

MS. COFFEY: That's correct.
MR. LINNUS: Now, a little issue with
regarding notice, are you coming here on March 10th or not?

CHAIRWOMAN SCHAEFER: She's going to get back to us.

MS. COFFEY: Yeah. So what I would --
yeah, if it's acceptable, we'll plan for March 10th and if for some reason that does not work, we can always send somebody on March 10th to continue it if that's what's required. We don't know for certain whether our architect is available. We're hoping that he can rearrange his schedule to make that work, but we just -- we can't say for sure this evening.

CHAIRWOMAN SCHAEFER: Well, if we can't continue with the architect, I strongly urge the architect be here. If he can't, then we'll move on to something else with you.

But, yeah, let us know, but we'll put you down for March 10th.

MR. LINNUS: So there will be a special meeting on this particular application on March 10th. The intension is to have the architect come back and provide testimony, but in any event, Ms. Coffey will be here with witnesses on March 10th. If that's the case, there will be no special notice, other than the notice of this special meeting that Theresa will attend to.

This will be -- for the public, this will be your notice that there be no further notification by way of certified mail, typical notice.

## Page 128

So March 10th special meeting BNE in these facilities at 7:30.

MR. BUTLER: Madam Chair, may I just
have a comment before you close the record. Bill
Butler representing objector Weldon.
So it looks like BNE is going to be
carried to $3 / 10$ and we're going to continue with the architect.

CHAIRWOMAN SCHAEFER: Unless the architect cannot change his schedule, then we will probably do environmental, is what she said.

MR. BUTLER: Yeah. And you might have a problem with that, but Weldon doesn't. I mean, we don't -- we don't objector to taking witnesses out of turn. You might, but we don't.

CHAIRWOMAN SCHAEFER: I prefer to keep -- thank you. I prefer to keep it all in line.

MR. BUTLER: I understand, I

## understand.

CHAIRWOMAN SCHAEFER: But if we can't, we can't.

MR. BUTLER: All right. Now, on the
10th we're doing architectural and/or environmental. Are we doing traffic on the 10th?
MS. COFFEY: I would think after we
complete those two subject areas, we would next be moving to planning and I think it would be a lot to expect that we would also get traffic in all in one evening.

If things go very efficiently, perhaps we would start on traffic. I would think it would be unlikely.

MR. BUTLER: Okay. Now, on the 31st, BNE has nothing to do with the 31st at this point; is that correct, March 31st?

CHAIRWOMAN SCHAEFER: That's just when they were -- their application was good until. They now have moved that to May 31st.

MR. BUTLER: Okay.
CHAIRWOMAN SCHAEFER: They've extended their time to May 31st. They're going to be in front of us on March 10th and then The Learning Experience is going to be in front of us March 17th, not BNE.

MR. BUTLER: Okay. And March 31st -- 19
CHAIRWOMAN SCHAEFER: Is not -- 20
MR. BUTLER: -- is irrelevant?
CHAIRWOMAN SCHAEFER: We gave them two dates.

MR. BUTLER: Okay. And then they took the 10th, I understand. All right.

Page 130
Thank you very much.
CHAIRWOMAN SCHAEFER: And then we're going to come back to them in March with dates in April.

MR. BUTLER: Okay, thank you.
MS. COFFEY: And, Madam Chair, I'm not sure how all the scheduling will shake out, but it may make sense for the two large applications that you have to alternate, perhaps, between special meetings and regularly scheduled meetings, for example. I don't know if that helps or not, but just a thought.

CHAIRWOMAN SCHAEFER: Well, we'll planning on special meetings for you so that we can --

MS. COFFEY: Keep them regular.
CHAIRWOMAN SCHAEFER: Exactly.
MS. COFFEY: I understand. Thank you.
CHAIRWOMAN SCHAEFER: Okay. Any questions from the board members at this point?

COUNCILMAN MARTINO: Are you cutting it off for --

CHAIRWOMAN SCHAEFER: We're cutting it off.

COUNCILMAN MARTINO: We can't ask any

|  | A-30 (4) | acre (1) | 16;118:14;122:9; | 28:7;39:9;48:5 |
| :---: | :---: | :---: | :---: | :---: |
| A | 112:24;113:2,4; | 58:4 | 125:2,20 | anymore (1) |
|  | 116:11 | acres (14) | agenda (1) | 76:8 |
| A/B (1) | A-31 (3) | 15:9,14,14;18:19; | 126:6 | apartments (1) |
| $87: 16$ | 116:6;118:22,25 | 27:3;28:17;52:6;58:1, | ago (1) | 122:5 |
| A/k/a (1) | A-4 (3) | 3,7;60:14,15,15,17 | 79:15 | apologize (5) |
| 31:9 | 83:15;94:10,13 | across (4) | agreed (1) | 80:6;88:25;97:15; |
| A-1 (4) | A-5 (4) | 49:9;52:7;87:25; | 10:5 | 117:9,11 |
| 89:12,16,19,20 | 19:24;52:13;97:6,9 | 92:10 | agreement (1) | appear (2) |
| A-10 (4) | A-6 (2) | action (1) | $122: 14$ | 111:21;116:8 |
| 10:11,23;112:11,14 | 98:5,8 | 126:17 | ahead (2) | applicable (3) |
| A-11 (5) | A-7 (2) | active (1) | $27: 23 ; 51: 14$ | $41: 10 ; 61: 6,13$ |
| $10: 8,17,20 ; 100: 20$ | $100: 8,11$ | $24: 8$ | $\operatorname{air}(1)$ | applicant (4) |
| $23$ | A-8 (2) | actual (1) | 35:22 | 7:9;15:19;51:16; |
| A-12 (6) | 104:20,23 | 53:17 | alive (1) | 120:5 |
| $36: 15,16,18 ; 62: 17$ | A-9 (2) 111:10,13 | actually (12) | $71: 12$ | applicant's (3) |
| 102:1,6 | $\begin{aligned} & \text { 111:10,13 } \\ & \text { abide (1) } \end{aligned}$ | $\begin{aligned} & 16: 18 ; 26: 11 ; 42: 4 \\ & 44: 23,24 ; 45: 23 \end{aligned}$ | alley (1) 101:10 | $51: 6 ; 71: 11 ; 122: 6$ <br> application (12) |
| A-13 (14) | $\begin{array}{\|c} \hline \text { abide (1) } \\ 48: 13 \\ \hline \end{array}$ | $\begin{aligned} & \text { 44:23,24;45:23; } \\ & \text { 54:16;55:14;64:4; } \end{aligned}$ | $\begin{array}{r} \text { 101:10 } \\ \text { allow (2) } \end{array}$ | application (12) 5:5;6:17;9:5;14:2 |
| 86:25;87:1;91:6;99 | able (6) | 65:16;120:6;122:13 | 9:2;34:14 | 15:11;16:22;17:24 |
| 101:18;102:18,21; | 8:10;108:19; | adaptable (3) | allowed (1) | 124:5;125:20;126:17; |
| 105:11;116:14,15 | 117:18;123:21;125:2, | 113:24,25;114:2 | 41:24 | 127:15;129:12 |
| A-14 (9) | 9 | add (1) | allowing (1) | applications (5) |
| 80:24;81:2;82:8,8, | absolutely (3) | $75: 16$ | $66: 1$ | $\begin{aligned} & 14: 19 ; 17: 6,23 ; \\ & 50: 22: 130: 8 \end{aligned}$ |
| 11;104:8,11;116:18, | 26:23;72:13;124:12 absorb (4) | $\begin{array}{\|c} \text { adding (2) } \\ 39: 13 ; 64: \end{array}$ | allows (3) $87: 21 ; 89: 3 ; 122: 10$ | $\begin{aligned} & \text { 50:22;130:8 } \\ & \text { applied (4) } \end{aligned}$ |
| A-15 (9) | 55:16;59:6,12,13 | addition (2) | Almost (3) | 14:18;15:21;17:12; |
| 86:13,16,18,19; | absorbed (3) | 20:24;55:1 | 42:14;43:21;113:7 | 20:17 |
| 108:10,11,13;113:1,4 | 21:5,23;59:22 | additional (10) | along (14) | apply (2) |
| A-16 (5) | absorbing (1) | 10:6;28:17;51:2; | 11:8,19,21;12:6 | 15:3,24 |
| 89:14,15,17; | 60:15 | 55:24;80:20;81:24 | 29:16;30:6;40:7; | applying (3) |
| 118:24;119:2 | absorbs (5) | 88:19;90:24;97:13; | 44:10;53:2;63:17; | 15:23;16:20;19:3 |
| A-17 (3) | 21:4;59:15,16,18, | 100:3 | 64:21;93:22;98:20; | appointed (1) |
| 86:19;91:15,19 | $\stackrel{20}{\text { absorption (1) }}$ | address (5) | 101:10 | 123:3 |
| A-18 (2) | absorption (1) | 7:16;42:3;49:21; | alternate (3) | appreciate (2) |
| 93:14,18 | 59:3 | 76:3;78:25 | 96:13;103:6;130:9 | 7:5;126:8 |
| A-19 (2) | accent (2) | adequate (1) | always (5) | appropriate (2) |
| 94:8,11 | 92:13;93:11 | 46:25 | 47:5;58:25;59:2 | 15:22;19:4 |
| A-2 (2) | acceptable (4) | adjacent (3) | 121:17;127:3 | appropriately (1) |
| 91:17,20 | 125:13,15;126:1; | 11:6;20:2;78:5 | amenities (2) | 61:2 |
| A-20 (2) | 127:1 | advance (1) | 110:10;123:6 | approved (2) |
| 97:4,7 | accepted (1) | 8:10 | amenity (1) | 37:12;62:18 |
| A-21 (2) | 9:24 | aesthetic (1) | 88:19 | approximate (1) |
| 98:3,7 | access (13) | 99:19 | American (5) | 118:14 |
| A-22 (2) | 35:15;47:9,10;62:8; | aesthetically (1) | $12: 3 ; 37: 4,20 ; 38: 10 ;$ $39: 17$ | approximately (2) |
| 100:6,10 | 88:2,4;90:12,16,17; |  | 39:17 | 12:22;93:25 |
| A-23 (2) | $\begin{aligned} & 113: 12,13,14,16 \\ & \text { accessed (2) } \end{aligned}$ | $\begin{array}{\|c\|} \hline \boldsymbol{a f f e c t ~ ( 1 ) ~} \\ 39: 14 \end{array}$ | $\begin{aligned} & \text { amount (5) } \\ & 14: 17 ; 25: 23 ; 55: 24 ; \end{aligned}$ | $\begin{aligned} & \text { April (2) } \\ & 125: 17 ; 130: 4 \end{aligned}$ |
| $100: 18,21$ $\mathbf{A - 2 4}(\mathbf{2})$ | accessed (2) 90:15;107:1 | 39:14 affective | 14:17;25:23;55:24; 59:22;88:7 | $\begin{aligned} & \text { 125:17;130:4 } \\ & \text { aquifer (1) } \end{aligned}$ |
| $\begin{aligned} & \text { A-24 (2) } \\ & \text { 101:23;102:2 } \end{aligned}$ | accessible (3) | 50:23 | ample (3) | 26:16 |
| A-25 (2) | 89:6;99:25;100:2 | affordable (6) | 9:3;11:9;124:1 | architect (17) |
| 102:16,20 | accommodate (3) | 84:17;95:17;97:20 | and/or (3) | 7:20;40:5;47:21,22; |
| A-26 (3) | 35:7;60:24;126:5 | 115:15,16;117:5 | 76:7;114:23;128:23 | 67:7;77:2,14,17 |
| 104:6,10;108:6 | accomplished (1) | affordables (1) 95:13 | animal (1) | 9,10,16.128•8,10. |
| $\begin{aligned} & \text { A-27 (3) } \\ & 104: 18,21 ; 105: 10 \end{aligned}$ | accordance (2) | again (29) | animals (1) | $131: 1$ |
| A-28 (5) | 34:12;52:1 | 8:15;12:21 | 68:24 | Architects (2) |
| 110:21;111:6,9,12, | according (3) | 19:6;23:6;35:6;41:23; | announcement (1) | 79:2,13 |
| 13 | 61:13;115:1;118:3 | 49:22;52:12,24,25 |  | Architectural (7) |
|  | accordingly (1) | 56:14;64:11;75:4; | annual (8) | 81:1,4,18;82:12; |
| $112: 9,13$ | 107:2 | 86:25;93:6;97:19,21; | 23:14,16,25;24:3; | 124:19;125:5;128:23 |
| A-3 (2) | account (1) | 98:22;103:9,11; | 69:11;70:1,4,7 | architecture (5) |
| 93:16,20 | 85:4 | 109:3;110:9;111:15, | answered (3) | 8:12;79:15,18; |


| 124:22;125:1 | 71:6 | 45:18,21;46:3,9; | besides (1) | 9:25;79:9;81:21; |
| :---: | :---: | :---: | :---: | :---: |
| area (32) | AUDIENCE (1) | 55:25;56:11;66:13; | 73:5 | 85:18;87:1;122:2; |
| 11:3,8,9;12:23; | 66:24 | 68:2,10;101:21 | best (2) | 124:7,16;126:16; |
| 13:1;15:15,16,18; | audited (1) | basins (46) | 19:15;126:5 | 130:20 |
| 18:22;26:15,16; | 24:6 | 16:3,9;18:3;19:8, | better (8) | boards (1) |
| 28:11;29:20;30:1,5,8, | available (8) | 11,12,14,23;20:10,22; | 10:14;18:14;25:10; | 79:20 |
| 13;32:23;33:2,5,6; | 13:25;18:5;37:20; | 21:3,6,7,19,25;22:2,4, | 26:11;30:22;50:17; | bond (9) |
| 34:4;38:12;45:13; | 39:2;51:22;65:15; | 9,17;25:3,9,12;26:12; | 63:14,20 | 73:15,21,22;74:2,2, |
| 60:20;61:8;85:11; | 124:18;127:5 | 27:9;29:9,9,20;31:7, | bewitching (2) | 3,16,25;75:5 |
| 90:10;95:25;105:14; | Avenue (2) | 13,17;32:7,13;42:20; | 77:4;123:17 | bonding (1) |
| 107:5;113:18 | 57:6,11 | 43:1;46:20;52:18; | beyond (1) | 74:8 |
| areas (22) | average (2) | 53:11,12,14,20;54:12, | 71:15 | Bonnie (25) |
| 18:21;20:16;21:5; | 94:2,2 | 21;55:15;56:6;58:24; | big (1) | 6:11,11;7:9;27:18; |
| 29:1,7,8,25;30:4,9; | avoid (1) | 67:11 | 60:6 | 28:2;30:6;37:2,22; |
| 32:9,12;52:15,18,19, | 86:9 | bath (2) | bigger (1) | 39:2,15;42:18;43:2,4; |
| 21;53:4;54:6,7;58:23; | away (3) | 113:17,18 | 78:1 | 44:10;45:8;46:7;47:9, |
| 64:6;90:19;129:1 | 13:14;60:2;102:25 | bathroom (1) | biggest (1) | 12,15;60:21;61:15; |
| $\begin{gathered} \text { rises (1) } \\ 125: 12 \end{gathered}$ | B | 13:20 | 115:16 | 93:3;99:3,9,11 |
| ark (1) |  | 113:12 | 128:4 | boring |
| 31:20 | babies (1) | baths (1) | biologic (1) | borings (2) |
| around (14) | 122:17 | 113:12 | 21:19 | 66:22;67:2 |
| 11:5;15:15,15; | baby (2) | bays (2) | bioretention (36) | borough (11) |
| 52:17,21;54:6;61:21; | 122:18,19 | 98:19,19 | 11:22;16:9,24;17:1, | 23:17;24:1,2;26:17; |
| 62:3;63:18;75:13; | bachelor's (1) | BBRRA (1) | 5;18:3;19:7,8,10,12, | 41:10;48:16;67:22; |
| 78:3,6;98:24;113:23 | 79:14 | 6:13 | 14,23,25;20:10;22:4, | 69:15;70:5,6;75:9 |
| aspect (2) | back (25) | bear (1) | 17;23:4;25:9;27:9; | borough's (3) |
| 16:7;20:7 | 5:2;6:23;7:9;47:5; | 20:18 | 29:20;31:7,13,17; | 24:3;62:18;70:4 |
| aspects (1) | 51:17;52:5;59:23; | become (1) | 42:20;43:13;45:18, | both (9) |
| 89:24 | 62:8;64:1;65:24; | 13:15 | 21;52:18;53:11; | 12:9;19:1;20:22; |
| asphalt (5) | 73:14;85:10;90:9,15; | bed (2) | 54:12;55:11,15,25; | 22:10;61:3;88:11; |
| 53:14;57:16,19; | 101:13;105:16;108:3, | 22:20;43:15 | 56:5;67:11;68:2 | 95:1;98:10;112:3 |
| 58:2,23 | 7;109:2;116:13; | bedrock (3) | Birchwood (2) | bottom (12) |
| assembly (4) | 118:20;125:18; | 40:16,21,23 | 49:15,23 | 20:17,21;21:3,18; |
| 109:10,11,12,15 | 126:24;127:16;130:3 | bedroom (16) | birds (1) | 25:12;43:12;56:11; |
| assigned (1) | bacteria (1) | 83:17;94:21,22; | 27:10 | 68:11;103:17,18,19; |
| 116:22 | 21:10 | 95:3;113:16,17; | bit (13) | 106:3 |
| associated (1) | balconies (1) | 118:8;119:14;120:14, | 7:13;16:9,10;17:2; | Boulevard (2) |
| 35:5 | 111:24 | 15;121:5,16;122:7,11, | 79:10;82:14,25; | 30:8;37:6 |
| assume (1) | balcony (2) | 12,15 | 84:22;98:13;102:24; | Bound (2) |
| 112:1 | 98:19;111:25 | bedrooms (10) | 108:25;119:6;125:9 | 63:6,8 |
| assuming (2) | Balla (20) | 83:21;90:20;94:19, | blasted (1) | boy (1) |
| 8:9;123:9 | 5:23,24;24:15,17, | 20,20;95:4;120:3,6,8; | 48:24 | 49:18 |
| aster (1) | 23;26:1;28:14,19,22; | 121:10 | blasting (8) | break (7) |
| 20:22 | 103:13,18,22;106:22; | beds (1) | 41:13;48:2,3,6,12, | 59:3;92:2,5,8; |
| ASTM (1) | 107:3,25;109:6,12,14, | 83:21 | 16,18;49:8 | 98:17;111:23;123:11 |
| 107:21 | 23;110:1 | beginning (1) | Block (2) | breakdown (1) |
| attach (1) | barriers (1) | 64:22 | 6:11;72:11 | 97:19 |
| 21:17 | 109:18 | bell (1) | blow (1) | breaking (2) |
| attend (1) | base (2) | 10:12 | 38:2 | 111:20;123:11 |
| 127:21 | 103:14,22 | below (4) | blue (2) | breaks (2) |
| attenuate (1) | based (2) | 20:12;26:16;40:24; | 37:1;95:3 | 59:4;98:20 |
| 25:19 | 10:24;60:25 | 52:20 | blueberry (1) | brick (2) |
| attenuated (3) | basic (1) | Ben (1) | 12:17 | 92:12;93:10 |
| 30:2;33:9;58:24 | 14:6 | 42:18 | bluesteam (1) | brief (1) |
| attenuating (1) | basically (2) | benefit (1) | 20:23 | 64:1 |
| 25:22 | 28:15;74:10 | 47:17 | blurry (1) | briefly (2) |
| attenuation (1) | basin (29) | bergamot (1) | 117:18 | 89:24;113:11 |
| 20:5 | 11:22;16:24;17:1,5; | 20:23 | BNE (8) | bring (4) |
| attic (5) | 19:7,25;20:18;21:1; | Berkeley (3) | 5:5;15:5;18:5; | 56:13;81:24;83:15; |
| 108:1,2,20,22; | 22:13;23:4;28:12; | 25:7;27:19;28:4 | 128:1,6;129:9,18; | 106:8 |
| 109:8 | 32:19;33:1,9,10,11, | Berkley (1) | 131:9 | brings (1) |
| attorney (1) | 25;34:17;43:13; | 28:5 | board (10) | 108:15 |


| Brook (6) | 72:6 | 114:22;115:18,19; | 22;105:1,4,24;106:10, | clients |
| :---: | :---: | :---: | :---: | :---: |
| 25:7,8;27:17,19; | bump (1) | 121:15;122:4,14 | 16;110:25;112:1,6; | 24:10 |
| 63:6,8 | 90:18 | 125:10;126:5;127:2, | 114:24;115:3,7; | clippings (1) |
| broomsedge (1) | bunch (1) | 6;130:15 | 117:7,15;118:2,12 | 14:14 |
| 20:22 | 85:23 | cans (1) | 120:24;121:23;122:8; | clock (1) |
| brought (4) | Burn (24) | 96:22 | 123:8,16,20;124:12, | 74:14 |
| 42:19;96:6,8,19 | :11;7:9;27:18; | capacity | 24;125:14,23,25; | clog (3) |
| bucks (1) | 28:2;30:7;37:2,22; | 39:18 | 126:3,9,14,23;127:8; | 33:16,17,19 |
| 45:22 | 39:2,15;42:18;43:2,4; | capturing (1) | 128:9,16,20;129:11, | clogged (1) |
| Buffer (10) | 44:10;45:8;46:7;47:9, | 29:19 | 15,20,22;130:2,13,17, | 61:1 |
| 10:16,21;11:9;13:3 | 13,15;60:21;61:16; | car (1) | 19,23;131:2,5 | close (3) |
| 53:7;63:14,15,17; | 93:3;99:3,9,11 | 60:2 | chance (1) | 117:18;123:18; |
| 64:6;109:1 | Burn/BNE (1) | carried (1) | 32:1 | 128:4 |
| buffering (1) | 6:11 | 128:7 | change (2) | closet (2) |
| 64:4 | bushes (1) | cars (1) | 102:9;128:1 | 121:20,21 |
| buffers (2) | 64:5 | 22:8 | changed (5) | clubhouse (3) |
| 53:1,3 | Butler ( | Case (3) | 11:10;91:24;99:16; | 15:15;52:17,22 |
| build (3) | 8:18;42:5,6,9; | 6:10;44:4;127:19 | 103:2,3 | COAH (1) |
| 23:8;72:6,7 | 128:3,5,12,18,22; | catch (3) | changes (4) | 84:16 |
| Building (129) | 129:8,14,19,21,24; | 28:12;53: | 10:4;11:15;93:22; | code (1) |
| 11:2;20:2;33:11 | 130:5 | catching (1) | 104:15 | 107:1 |
| 37:10,10;40:24,25 | butterflies (1) | 29:6 | changing (2) | coffee (1) |
| 45:11,12;46:6;47:19; | 27:10 | caught (1) | 28:3;92:8 | 33:16 |
| 85:5,23;86:1;87:7,8, | buys (1) | 28:12 | channels (1) | Coffey (95) |
| 10,12,16,22;88:10,14, | 15:21 | Cedar (1) | 61:10 | 6:8,13;7:2,3,5;8:5; |
| 14,16;89:11,13,16,19, |  | 9:14 | charge (1) | 9:8,9,18,23;10:2,13; |
| 23,24;90:6;91:1,3,5,7, | C | ceiling | 87:25 | 13:8;17:3;19:9;25:20; |
| 10,12,17,21,22,25; |  | (2) | chart ( | :23;29:12;36:4 |
| 92:4,7,15;93:9,16,19, | calciu | cement (2) | 116:14 | 38:13;39:25;40:5,9; |
| 21,24,24;94:10,13,18, | 18:6,7,7,10,11,23; | 92:12;93 | check (4) | 51:13,15;64:10;71:7, |
| 24,25;95:6,8,12,17, | 21:22;22:11;30:14, | center (2) | 10:9;43:8;74: | 22;72:3;75:15,17,23; |
| 18,22;96:10;97:6,10, | 21;55:9,10,14,16 | 98:15;106:25 | 114:10 | 76:24;77:7,13;78:7, |
| 11,12,21,24,25;98:5, | calculations (5) | Certain (5) | checked (1) | 10,13;79:5,7;80:2; |
| 9,13,15,18,21,24,25; | 30:21;94:2;119:12, | 21:16;25:14;31:1 | 74:6 | 81:11,16,20;87:13; |
| 99:2;100:1,8,13,20, | 25;121:16 | 64:6;127 | checks (2) | 93:2;95:10;97:17; |
| 24,25;101:7,13,17,19; | call (13) | certainly (1) | 120:7,22 | 99:5;105:8;107:16; |
| 102:1,6,10,12,13,18, | 5:13;32:2;41:2 | 48:17 | chemical (3) | 108:5;109:4;110:3, |
| 23;103:3,20,20,23; | 70:25;71:25;72:1,4, | certification ( | 14:11;21:16;50:11 | 19;111:6;112:19; |
| 104:20,24,24;105:10, | 11,15;73:5;75:4;76:1; | 69:12,22 | chemicals (1) | 115:13;116:12,19; |
| 13,14,19,21;106:1,25; | 119:7 | certified (4) | 21:17 | 117:3,21;118:4; |
| 107:8;109:16;110:9, | called (3) | 15:5;31:7;48:2 | chief (2) | 119:16;120:4,14,16, |
| 13,15;111:10,14,16, | 76:9;86:20;91:20 | 127:24 | 37:13;63:1 | 18,21;121:1,18,22; |
| 16,17,20,21;112:11, | calling (3) | Chair (7) | chloride (9) | 122:6,10,16,18,23; |
| 14,16,20;114:1,1; | 73:6;75:8,2 | 5:4;6:6;42:7;64:10 | 18:6,7,8,10,15,23; | 123:14;124:10,14; |
| 115:9;118:15 | calls (2) | 110:19;128:3;130:6 | 21:22;30:15;55:9 | 125:8,21,24;126:2,8, |
| buildings (59) | 72:9;75:10 | CHAIRWOMAN (122) | chute (5) | 11,18,19,25;127:17; |
| 7:21;15:15;37:16; | came (3) | 5:1,7,10,13;6:7,15; | 96:1,3,3,15;106:4 | 128:25;130:6,16,18; |
| 40:8,19;45:7,10,21; | 22:23;59:25;66:20 | 7:1,4;8:2,14;10:1; | chutes (1) | 131:10 |
| 46:4,18,20;47:24; | Can (68) | 11:17;12:11;22:22; | 96:18 | cold (1) |
| 52:17,21;54:6;57:18, | 7:6;11:18,24,25 | 23:1,22;24:14;30:23; | circle (1) | 22:21 |
| 20;58:3;61:21;62:3; | 15:1,2,7;16:18;18:16, | 31:3;32:15;34:13; | 60:1 | collect (2) |
| 85:3,8,20;86:2,22,24; | 16;22:1;28:24;32:17; | 36:2;39:4,8,23;40:2,7, | circulation (1) | 53:19;71:13 |
| 87:3,3,23,24;88:2,3; | 36:2;40:24;43:15,20; | 10;41:18,21;42:8; | 101:15 | color (6) |
| 89:3,5,25;90:2;92:2; | 47:4;53:5;54:4;65:15, | 48:4,9,22;49:12;57:2, | clarification (2) | 11:11,14;80:19 |
| 94:4,6;98:10,11,23; | 15,19;66:2,10,24 | 11,14;63:22;64:3,14, | 30:11;49:20 | 81:5;103:4,6 |
| 100:12;101:8,14; | 67:7;70:24;72:14,22, | 17,20,25;65:6,14; | clarify (2) | colored (1) |
| 102:5,8,22,24;103:5, | 23;73:18;75:9;76:6,9, | 66:5,8,11,16;69:2,13, | 75:19,23 | 28:11 |
| 7;104:8,12,13; | 15;77:15,17;78:2; | 25;70:11;71:5;72:8, | clay (1) | colors (2) |
| $105: 15 ; 107: 20$ | 79:8;83:4;88:1,4,12, | 13,17;73:10;74:21; | 59:5 | 99:16;103:3 |
| 110:11,14;111:24 | 17;90:6;92:16;93:21, | 75:15;76:19,22;77:3, | clean (2) | combined (2) |
| builds (1) | 21;96:15,16;97:18; | 9;78:12,15;80:1;81:6; | 35:25;45:14 | 17:14;23:25 |
| 26:5 | 99:15;101:1,3; | 82:1;88:21;91:3; | clear (2) | coming (3) |
| built (1) | 107:17;111:23; | 92:15,20;94:23;99:8, | 8:23;87:15 | 25:24;125:6;126:21 |


| comment (1) | 16:19 | 9;128:7 | coverage (2) | days (1) |
| :---: | :---: | :---: | :---: | :---: |
| 128:4 | concerned (3) | continued (1) | 27:5;68:1 | 73:8 |
| comments (4) | 13:5;72:4;86:1 | 6:18 | covered (3) | D-e (1) |
| 9:2,4,5;41:24 | concerns (1) | continues (3) | 56:20;66:21;74:7 | 76:17 |
| commercially (1) | 85:2 | 9:16;76:4;96:9 | covers (1) | dead (8) |
| 13:25 | concrete (3) | continuing (1) | 54:1 | 70:25;71:14,25; |
| commercially-available (1) | 57:16,19;58:2 | 131:11 | create (2) | 72:15,25;73:25;75:7, |
| 31:14 | confirm (2) | contractor (4) | 92:5,8 | 8 |
| committee (1) | 124:15;125:9 | 15:5,22;30:22;34:1 | created (2) | deal (1) |
| 31:6 | conflict (1) | contracts (1) | 101:12;111:22 | 17:14 |
| common (2) | 125:12 | 18:6 | creates (2) | dealing (1) |
| 22:6;113:18 | confused (1) | control (4) | 16:17;108:25 | 18:8 |
| communities (2) | 32:23 | 14:16;19:20;50:12; | creating (2) | debris (1) |
| 15:6;51:8 | connecting (1) | 53:22 | 26:11;61:9 | 35:21 |
| community (1) | 35:14 | controlled (3) | creation (1) | deciduous (6) |
| 39:3 | connection (1) | 14:16;45:16;50:17 | 20:8 | 11:7;12:8,16,22; |
| compacted (2) | 30:5 | convey (1) | credentials (1) | 20:24,25 |
| 96:5;106:13 | connections (2) | 20:13 | 9:24 | decomposed (2) |
| compacting (1) | 37:13;47:16 | cools (1) | cross (1) | 14:14,14 |
| 110:11 | conservation (2) | 22:15 | 56:5 | deep (2) |
| compactor (2) | 20:8;61:4 | copy (3) | crowded (1) | 88:21;103:11 |
| 96:4;106:4 | conservative (2) | 80:7,8;81:9 | 63:12 | degree (1) |
| companies (1) | 119:24;121:17 | Corey (1) | culvert (1) | $79: 14$ |
| 37:14 | conservatively (1) | 66:18 | 53:16 | deicing (2) |
| company (1) | 119:10 | corner (5) | curious (6) | 18:5,9 |
| 72:18 | consider (1) | 11:1;19:25;20:2; | 54:11;66:22;67:10; | delivered (1) |
| competency (3) | 124:17 | 90:19;104:1 | 68:22;69:1,4 | 14:10 |
| 41:4,5,16 | considered (1) | corrected (1) | currently (3) | den (3) |
| complaint (1) | 67:19 | 23:18 | 44:16;79:24;125:21 | 119:15,20,21 |
| 76:3 | considering (1) | corridor (5) | curve (1) | dens (4) |
| complete (2) | 55:23 | 90:17,18;107:10, | 11:5 | 82:24;119:8;120:2, |
| 124:22;129:1 | considers (1) | 12,13 | customers (1) | 17 |
| completed (1) | 45:14 | corridors (1) | 36:13 | dense (1) |
| 24:19 | consistent (1) | 89:8 | cut (1) | 13:2 |
| complex (6) | 38:9 | cost (1) | 17:7 | DEP (10) |
| $30: 7 ; 33: 12 ; 61: 15 \text {, }$ | constantly (1) | 30:20 | cutoff (1) | $24: 4,7,8 ; 29: 22,23$ |
| $24 ; 63: 15 ; 113: 24$ | $23: 21$ | council (1) | $122: 20$ | $35: 24 ; 45: 14 ; 54: 19$ |
| complexes (1) | constraints (1) | 42:22 | cutting (3) | 56:18;61:3 |
| 29:16 | 46:3 | Councilman (18) | 30:4;130:21,23 | department (1) |
| complied (1) | construct (1) | 5:19,20;28:8,15,20; | cycle (1) | 37:13 |
| 120:23 | $40: 25$ | 29:5,13;30:10,16,19; | $20: 5$ | departments (1) |
| complies (3) | construction (6) | 31:1,4;39:4,7,10; | cycles (1) | 63:9 |
| 84:16;93:24;112:16 | 40:18;47:20; | 130:21,25;131:4 | 20:9 | DePARTO (17) |
| comply (7) | 107:23,24;121:9,12 | Counsel (2) |  | $70: 13,13 ; 71: 21,24$ |
| 48:17,18;67:23; | consultant (1) | 79:4;120:1 | D | 72:10,14,25;73:16,19; |
| 83:3;94:5,7;110:14 | 124:20 | count (2) |  | 74:9,17,23;75:11,22; |
| components (1) 22:7 | $\begin{array}{\|l\|} \text { contain (3) } \\ 16: 20 ; 96: 1 ; 116: 4 \end{array}$ | $\begin{gathered} \text { 110:7;121: } \\ \text { counted (1) } \end{gathered}$ | $\begin{array}{\|c} \mid \operatorname{damage}(1) \\ 23: 17 \end{array}$ | dependant (1) |
| composite (2) | container (1) | 119:25 | Damn (1) | 26:4 |
| 11:11,12 | 96:4 | county (3) | 42:13 | depending (4) |
| composition (1) | containers (2) | 96:25;97:1,1 | date (4) | 7:22;76:8,12;88:15 |
| 55:4 | 96:7,17 | couple (8) | 10:20;74:21;86:14; | depends (4) |
| comprehensive (1) | contains (4) | 20:4;31:5;40:3; | 131:12 | 8:8;41:3,16;61:18 |
| 51:23 | 37:4;94:18;100:25 | 42:19;45:22;108:21, | dated (2) | depth (2) |
| concentrate (1) | 110:10 | 23;124:4 | 10:22;77:24 | 40:24;88:24 |
| 60:11 | context (3) | course (1) | dates (3) | derived (1) |
| concentrated (2) | 37:19;44:13;78:2 | 43:18 | 125:17;129:23; | 14:13 |
| 52:17;60:16 | continuation (1) | COURT (6) | 130:3 | describe (1) |
| concentrating (1) 60:20 | 131:9 | $\begin{aligned} & 49: 16 ; 57: 7,10 ; \\ & 76 \cdot 1015: 8 \end{aligned}$ | $\begin{array}{\|l\|} \text { day (4) } \\ 73: 4 ; 74: 10 ; 75: 3 ; \end{array}$ | 89:23 <br> design (14) |
| concentration (1) | continue (12) 5:4;6:16;28:4,6 | cover (7) co,15, | $73: 4 ; 74: 10 ; 75: 3 ;$ $96: 6$ | design (14) 20:3;23:12;29:15; |
| 61:11 | 29:1;34:15;36:3; | 7:17;53:23;80:25; | daylights (1) | 32:4,18;38:8;45:23; |
| concern (1) | 118:19;125:4;127:3, | 81:3;82:11;116:14,18 | 43:17 | 66:23;67:3;84:22,24; |


| 85:5;90:4,5 | discharge (5) | 9:6;14:24;25:6,7,8, | 106:25 | e-mail (1) |
| :---: | :---: | :---: | :---: | :---: |
| designed (12) | 29:22;33:25;43:1; | 23;27:24;28:2,5,6; | eastern (3) | 125:16 |
| 19:18;31:7,17,21; | 45:1;53:20 | 29:10;43:12;60:21; | 27:21,24,25 | emergency (6) |
| 32:11,19;35:7;60:24, | discharged (2) | 72:11;85:3,11;89:9; | ecological (1) | 32:6;33:1;60:9,18, |
| 25;61:2,12;90:2 | 22:16;23:6 | 92:3;96:3,16,19; | 19:17 | 24;61:6 |
| detail (1) | discharging (3) | 99:17,20;107:13,14; | ecology (1) | emptied (1) |
| 11:10 | 45:8;46:7;60:12 | 127:13 | 20:9 | 96:18 |
| detailed (1) | discussed (3) | downstream | economics (1) | enclosed (1) |
| 56:5 | 63:24;112:18 | 19:19;20:15;22:16; | 45:22 | 107:13 |
| detained (2) | 116:25 | 23:6 | ecosystem (1) | end (20) |
| 45:16;46:18 | Discussion (4) | drain (1) | 19:19 | 7:17;9:4;15:3 |
| detention (3) | 5:11;17:2;67:14 | 67:21 | edge (1) | 16:23;17:20;43:16; |
| 46:9,13;101:21 | 100:15 | drainage | 98:16 | 74:11,14;75:2;93:20; |
| determine (3) | discussions (2) | 45:8;54:2 | effective (7) | 99:15;100:12;104:13; |
| 41:5;51:1;106:14 | 10:25;39:16 | drains (1) | 16:21;18:8;22:5,17, | 112:5;113:13;123:14, |
| developed (3) | disease (2) | 35:14 | 20;51:9;54:21 | 19;126:1,4,12 |
| 29:20;30:1;44:15 | 13:14,19 | drawing (9) | efficiency (1) | ends (7) |
| developer (2) | diseased (1) | 26:16;86:15,20,21; | 54:17 | 11:21;19:7;25:8; |
| 73:14;111:5 | 13:15 | 92:24;103:17,17,18, | efficient (1) | 27:17;58:19;107:8; |
| developers (2) | dispersed (1) | 19 | 15:22 | 112:20 |
| 85:22;86:8 | 60:17 | Drawings (2) | efficiently | enforcement (2) |
| development (3) | dispose (1) | 81:1,4 | 129:5 | 70:20;72:4 |
| 21:9;46:25;47:1 | 34:11 | drawn (1) | egregious ( | engineer (11) |
| diagrammatic (1) | dissolve | 92:9 | 76:12 | 7:15;9:24;23:17; |
| 108:9 | 18:10 | drive (3) | egress (1) | 24:1,2;48:23;67:22; |
| dictate (1) | distance (1) | 80:8;99:17,20 | 101:15 | 69:14;70:5;77:15,15 |
| 114:22 | 61:9 | driving (1) | Eight (2) | engineered (2) |
| die (4) | distributed | 60:1 | 62:2;97:22 | 115:10;118:15 |
| 23:18;68:8;71:3; | 91:8 | drop (1) | either (5) | engineering (2) |
| 75:2 | disturbing | 103:8 | 40:22;52:20;107:1, | 8:11;84:24 |
| died (2) | 27:2 | dropped | 8;124:8 | engineers (1) |
| 70:19;73:3 | dive (1) | 98:15 | elegant (1) | 24:11 |
| dies (1) | 82:17 | drops (1) | 103:12 | engineer's (2) |
| 70:21 | diversity (1) | 96:3 | element (1) | 26:17;94:3 |
| difference (4) | 26:13 | dual (1) | 115:11 | English (1) |
| 14:9;64:8;85:20 | divert (1) | $113: 12$ | elements (4) | $25: 21$ |
| 98:10 | 26:6 | duly (1) | $20: 4 ; 82: 17 ; 103: 9$ | enough (2) |
| differences (1) | domestic (1) | $78: 22$ during (3) | 10 elevation (6) | $18: 16 ; 45: 25$ |
| $121: 13$ <br> different (16) | 37:9 <br> donate | $\begin{array}{r} \text { during (3) } \\ 22: 18.2( \end{array}$ | elevation (6) $64: 8 ; 92: 10$ | $\begin{array}{\|l\|} \hline \text { enter (2) } \\ 87: 25 ; 88: \end{array}$ |
| 18:5;20:4,6;24:5; | 70:17;73:2 | dwelling (11) | $103: 14,16$ | entire (10) |
| 35:21;72:17;86:22; | done (21) | 82:15,18,19,20; | Elevations (23) | 15:17;18:20;33:6; |
| 88:15;89:25;92:7; | 8:25;10:24;23:9 | 95:16;97:22;100:25; | 91:18,21;93:17,19, | 37:11;64:9;65:16; |
| 98:19;103:4,6,7; | 24:13;25:19;34:8; | 102:10,14;104:25; | 20;98:6,9,11;100:9, | 73:23;78:4;91:9; |
| 108:21,24 <br> differently (2) | $\begin{aligned} & \text { 45:19;51:7;54:16; } \\ & \text { 67:3;69:19,21;74:4; } \end{aligned}$ | 106:19 dwellings | $\begin{aligned} & \text { 12,13;102:15,19,22; } \\ & \text { 104:9,12,13;108:16; } \end{aligned}$ | $\begin{array}{\|c\|} \hline 114: 1 \\ \text { entirely (1) } \end{array}$ |
| 90:1;93:9 | 77:18;85:1;86:6; | 91:2 | 111:11,14;112:12,15, | 98:23 |
| dimensions (1) | 88:11,17;98:14; | dying (1) | 17 | entirety (1) |
| 117:4 | 111:5;121:24 | 70:23 | elevator (8) | 65:19 |
| DIRECT (3) | door (2) | dynamic (1) | 88:5;101:14;106:5, | entitled (2) |
| 9:17;53:20;79:6 | 119:21,23 | 19:17 | 6,8,9,22;110:11 | 10:15,20 |
| directed (2) | doors (6) |  | elevators (1) | Entity (1) |
| 19:22;53:14 | 99:15,18,23,25; | E | 13:2 | 7:10 |
| direction (2) <br> 27:17;99:11 | $\begin{aligned} & \text { 100:4;101:9 } \\ & \text { doorway (1) } \end{aligned}$ |  | elevator-served (1) 88:3 | environment (2) $16 \cdot 7 \cdot 26 \cdot 12$ |
| directions (2) | $90: 19$ | $116: 25$ | Ellen (1) | environmental (9) |
| 36:14;112:3 | dormant (2) | earth-toned (1) | 5:10 | 8:3,6,13;31:6;46:2 |
| directly (3) | 18:13;22:18 | 11:12 | ELLIS (3) | 56:21;124:20;128:11, |
| 34:23;45:8;46:7 | dormers (1) | easement (3) | 5:6,17,1 | 23 |
| disbursed (1) | 92:5 | 70:16,17;73:2 | else (8) | environmentalist (1) |
| 12:6 | double (2) | easier (1) | $24: 25 ; 26: 7 ; 33: 8$ | 56:23 |
| discerned (1) | 10:8;124:15 | 46:19 | 38:2;39:15;57:2; | environmentally-sensitive (1) |
| 114:20 | down (26) | easily (1) | 124:23;127:11 | 85:6 |


| Eric (1) | except (1) | 38:11;111:1 | few (4) | 83:16;88:5;89:22; |
| :---: | :---: | :---: | :---: | :---: |
| 27:12 | 36:25 | facing (2) | 7:16;49:19;118:17, | 90:8;95:9,9,25; |
| error (1) | excess (3) | 93:3;99:9 | 17 | 101:16;107:4,14; |
| 83:10 | 21:4,10;61:2 | fact (1) | fiber (2) | 109:7,10;123:5 |
| escalating (1) | Excuse (2) | 59:14 | 92:12;93:10 | flow (16) |
| 76:11 | 22:22;85:14 | facts (2) | field (2) | 32:8,11;33:12; |
| Esquire (1) | exhibit (33) | 46:24;54:13 | 52:7;79:17 | 37:19,21;38:3,3,6,15, |
| 6:13 | 10:10,17,20,23; | fading (1) | Fifty (1) | 20,21;39:1,12;53:13; |
| essentially (4) | 19:24;36:15,18; | 69:3 | 117:15 | 60:21;61:11 |
| 29:1;80:19;90:3,10 | 52:13;62:17;77:14, | fair (1) | file (3) | flowing (1) |
| established (1) | 21;81:2;86:16;89:17; | 50:24 | 24:3;56:6;71:4 | 28:11 |
| 54:19 | 91:4,6,18;92:16; | fairly (2) | filed (1) | flows (5) |
| establishment (1) | 93:13,17;94:11;97:7; | 18:22;92:4 | 56:18 | 21:13;27:16,24; |
| 68:1 | 98:6;100:9,21;102:2, | fall (3) | filled (1) | 33:4;39:20 |
| etcetera (1) | 19;104:9,21;111:11; | 17:18;50:1;69:9 | 33:10 | Floyd (3) |
| 58:2 | 112:12;113:2;118:25 | falling (3) | filter (2) | 59:25;60:2,7 |
| evaluate (1) | exhibits (3) | 26:21;29:16;33:6 | 23:5;43:15 | folks (2) |
| 54:17 | 40:4;81:24;112:3 | falls (1) | filtered (4) | 15:8;124:11 |
| evaporates (1) | existing (5) | 30:1 | 20:14;35:23;42:24; | follow (4) |
| 59:22 | 26:2,4;39:21;43:5; | familiar (1) | 45:15 | 9:7;41:10;45:20; |
| even (2) | 46:24 | 59:10 | filters (3) | 107:24 |
| 30:12;98:11 | exit (3) | far (4) | 21:3;33:16,17 | followed (1) |
| evening (12) | 90:13;107:13,15 | 8:9;14:16;23:2; | filtration (2) | 24:7 |
| 7:14;8:1;9:12;42:1; | expect (3) | 41:11 | 33:14,19 | following (1) |
| 49:14;57:5;64:23; | 8:12;71:19;129:3 | fashion (1) | final (1) | 70:15 |
| 65:1;81:14;124:21; | expensive (2) | 85:4 | 47:18 | follows (2) |
| 127:7;129:4 | 45:24;86:8 | fate (1) | find (4) | 9:16;78:23 |
| event (4) | Experience (3) | 13:16 | 11:12;65:10;85:19; | foot (4) |
| 32:14;47:4;107:3; | 6:18;79:10;129:17 | FDC (1) | 121:1 | 40:16;65:9,9;116:9 |
| 127:17 | expert (3) | 37:17 | fine (1) | footage (3) |
| events (2) | 8:20,21;77:1 | fear (1) | 76:7 | 57:15;58:4;114:15 |
| 20:6;44:25 | Expiration (1) | 106:10 | finish (3) | footings (1) |
| evergreen (6) | 6:13 | feed (2) | 73:18;75:18;131:6 | 40:24 |
| 11:7,7;12:15,24; | explain (2) | 29:1;47:5 | finishing (2) | forms (1) |
| 13:18;20:25 | 18:24;107:17 | feeding (5) | 74:19;75:1 | 76:6 |
| evergreens (1) | extend (1) | 17:18,18;28:16; | Fiorilla (3) | forth (1) |
| 12:10 | 125:20 | 29:2;53:25 | 6:4,5;121:3 | 11:24 |
| everybody (6) | extended (1) | feeds (2) | fire (16) | forward (2) |
| $15: 20,21 ; 39: 14$ | 129:15 | 37:9,10 | $37: 10,12,13,14,18$ | 65:20;109:2 |
| $106: 4 ; 125: 16 ; 131: 7$ | extending (2) | feel (1) | $62: 15,16,18 ; 63: 1,1,9$ | four (14) |
| everybody's (1) | 11:20;126:16 | 10:14 | 9;107:3,21;108:2; | 12:14;14:23;46:20; |
| $57: 22$ | extensive (1) | feet (28) | 109:18 | 50:25;51:8;84:7,9,10, |
| everyone (5) | 20:17 | 12:5,14,19,24; | firm (2) | 12;87:2;99:21; |
| 7:6;9:12;83:12; | extra (2) | 40:17;43:12,21;49:4; | 84:23,24 | 104:25;105:6,20 |
| 95:13;113:7 | 60:20;90:20 | 58:5,9;66:13;88:24; | first (16) | four-step (1) |
| everywhere (2) | extremely (1) | 93:25;94:1;97:25; | 8:18;17:1;18:4; | 17:24 |
| 75:9;86:3 | $32: 14$ | 103:24;104:2;110:16; | 27:2;42:5;49:25; | four-story (2) |
| evidence (2) | eye (1) | 114:4,8;116:21,25; | 60:23;65:19;67:15; | 87:2;90:5 |
| 33:24;80:11 | 92:9 | 117:1,2,2,14;118:17, | 71:8;76:1;80:22,24; | fourth (1) |
| exact (2) | eyes (1) | 18 | 92:16;103:2;108:8 | 107:4 |
| 63:5;65:9 | 117:10 | felt (1) | fit (2) | fractured (1) |
| Exactly (4) $12: 2 ; 14: 20 ; 59: 7$ | F | $\begin{gathered} 59: 2 \\ \text { fence (6) } \end{gathered}$ | $\begin{aligned} & 90: 24 ; 91: 12 \\ & \text { five }(3) \end{aligned}$ | $\begin{aligned} & \text { 41:6 } \\ & \text { frequency (2) } \end{aligned}$ |
| $130: 17$ | F | 11:11, fence (6) | five 62:22;72:25;84:13 | $106: 20 ; 121: 23$ |
| EXAMINATION (2) | fabric (1) | 19 | Five-and-a-half (1) | frequent (1) |
| 9:17;79:6 | 43:15 | fertilizer (6) | 58:1 | 50:13 |
| example (4) | facets (1) | 13:23;14:5,6,19; | flatten (1) | front (3) |
| 81:23;121:19; | 38:2 | 17:8,14 | 85:22 | 101:21;129:16,18 |
| 124:20;130:11 | facilities (5) | fertilizers (5) | float (1) | full (2) |
| exceed (1) | 20:3,15;23:11,21; | 21:22;22:7;35:10; | 60:2 | 71:14;80:3 |
| 44:16 | 128:2 | 50:16;51:10 | flood (2) | fully (7) |
| exceeded (1) | facility (5) | fertilizing (1) | 29:3;59:24 | 89:5,6;107:8; |
| 31:19 | 19:16;22:1;23:8; | 17:13 | floor (13) | 113:24,25;118:15; |


| 119:13 | Glyphosate (2) | guarantee (1) | held (2) | 28:7 |
| :---: | :---: | :---: | :---: | :---: |
| fully-looped (1) | 31:8,10 | 13:15 | 23:25;124:13 | hopefully (1) |
| 37:7 | God (1) | guarantees (2) | help (7) | 67:7 |
| function (2) | 78:18 | 71:16,17 | 23:5;36:15;45:4,5, | hoping (1) |
| 21:7;53:11 | goes (12) | guess (11) | 6;63:10;78:18 | 127:5 |
| functions (1) | 19:2;24:18;28:4,5; | 50:10,12;51:20,22; | helpful (3) | Horsehill (1) |
| 53:12 | 32:22;35:2;53:5; | 52:4;56:4,16;63:12; | 17:4;115:14;116:15 | 9:14 |
| further (5) | 74:25;96:2;98:23; | 65:12;108:11;116:11 | helps (2) | hotbox (1) |
| 6:21,25;102:24; | 99:10;106:4 | guests (1) | 98:17;130:1 | 37:4 |
| 105:9;127:23 | Good (10) | 88:19 | hemlock (1) | hour (2) |
| furthest (1) | 9:12;13:20;47:7; | guys (4) | 13:13 | 77:4;123:17 |
| 99:3 | 49:14;52:24;53:1; | 28:17;69:24;73:2; | hemlocks (1) | hours (1) |
| future (2) | 57:5;79:25;80:1; | 126:7 | 13:14 | 67:21 |
| 92:2;131:12 | 129:12 |  | herbicide (2) | housekeeping (1) |
|  | grade (11) | H | 17:17:31:8 | 82:14 |
| G | 26:16;85:8,20,20 |  | herbicides (6) | houses (1) |
|  | $\begin{aligned} & 86: 2 ; 87: 8,22,24 ; \\ & 93: 22 ; 94: 2 ; 104: 16 \end{aligned}$ | habitat (3) <br> 20:8•27•9, 1 | $\begin{aligned} & 23: 2 ; 31: 14 ; 50: 3 ; \\ & 51: 11,21 ; 54: 4 \end{aligned}$ | 63:19 |
| $98: 19$ | graduated (1) | hallway (1) | HERITS (11) | $84: 17$ |
| gables (2) | 79:14 | 90:11 | 48:24;49:5;67:22; | Hue (1) |
| 92:5,6 | graphics (1) | hammer (1) | 68:17,19;69:15; | 66:18 |
| gain (1) | 40:8 | 40:23 | 73:13,18,20;74:13; | H-U-E (1) |
| 118:17 | grass (5) | handle (3) | 75:6 | 66:19 |
| gallons (6) | 14:14;20:23;52:6; | 32:19;46:25;96:14 | hey (1) | Hurricane (1) |
| 38:4,5,15,22,24,25 | 53:4;54:2 | handled (3) | 72:20 | 59:25 |
| garage (12) | grates (1) | 95:23;96:12;101:7 | Hi (2) | hydrant (4) |
| 90:17;91:23;92:17; | 35:16 | handling (1) | 49:14;66:18 | 38:4,25;62:19,21 |
| 99:15,18,23,25,25; | gratification (1) | $102: 5$ | hide (1) | hydrants (6) |
| 100:4;101:9;110:12, | 16:6 | happen (3) | 108:20 | 37:11,18;62:15,16, |
| 23 | grease (1) | 32:6,16,17 | high (4) | 17;63:1 |
| garages (11) | 22:8 | happens (4) | 13:3;18:15;87:7; | hydrocarbons (3) |
| 88:13,22,23;90:3,7, | Great (7) | $22: 10 ; 31: 18 ; 32: 21 \text {; }$ | 88:13 | $21: 10 ; 53: 6,10$ |
| 14;92:18;98:1; | 7:7;33:15;52:23; | $75: 25$ | highbush (1) | hydrologic (1) |
| 105:21;110:13,14 | 53:21;56:13;108:17; | harsh (1) | 12:17 | 20:4 |
| gave (5) | 123:6 | 9:6 | higher (2) |  |
| 8:23;54:12;65:21; | greater (2) | hazel (1) | 11:6;38:20 | I |
| 115:2;129:22 | 15:3;26:13 | 12:17 | highest (6) |  |
| generally (1) | Green (8) | head (1) | 19:15;21:25;64:9; | icing (1) |
| $40: 15$ | $25: 7,8 ; 27: 17,18$ | $49: 6$ | $103: 24 ; 104: 1 ; 105: 14$ | $18: 1$ |
| generated (1) | $52: 15,18 ; 54: 3 ; 94: 15$ | headlight (1) | highlighted (1) | idea (1) |
| 21:8 | greens (1) | 11:4 | 36:25 | 42:23 |
| gentleman (1) | $53: 1$ | healthy (2) | high-quality (5) | identical (2) |
| 49:13 | ground (9) | 71:12;74:15 | 92:11,13;93:12; | 97:11;102:8 |
| George (1) | 11:6;22:14;26:22, | hear (3) | 98:22;111:19 | identification (21) |
| 57:5 | 24;27:7;53:23;54:1; | 7:6;66:10;67:1 | high-tech (1) | $10: 18 ; 36: 19 ; 77: 22$ |
| geotechnical (3) | $90: 8 ; 107: 14$ | heard (1) | $36: 20$ | 81:2;86:16;89:18 |
| $66: 22 ; 67: 2,8$ | groundwater (2) | $6: 20$ | highway (1) | 91:19;93:18;94:12; |
| $\begin{aligned} & \text { gets (15) } \\ & \quad 19: 6 ; 25: 14 ; 63: 12 \end{aligned}$ | $\begin{gathered} 24: 20,23 \\ \text { group (1) } \end{gathered}$ | $\underset{10: 5}{\text { hearing (1) }}$ | hill (1) | $\begin{aligned} & \text { 97:8;98:7;100:10,22; } \\ & \text { 102:3,20;104:10,22; } \end{aligned}$ |
| 67:7;71:19;72:9;74:1, | 103:9 | heat (1) | 28:3 | 111:12;112:13;113:3; |
| 2,6,6,16;90:17; | grouped (1) | 22:12 | historical (1) | 119:1 |
| 111:25;115:9;117:18 | 113:23 | heavier (1) | 54:15 | identified (1) |
| gig (1) | grouping (1) | 50:2 | hit (2) | 120:3 |
| 131:8 | 99:21 | heavy (1) | 60:14;123:2 | identify (22) |
| given (5) | groupings (1) | 45:5 | hitting (1) | 80:15,23;82:8; |
| 6:25;8:17;15:9; | 101:10 | height (14) | 26:22 | 83:21;86:17;89:15; |
| 25:24;42:1 | grow (2) | 7:6;12:5,14,19,25; | hold (3) | 91:16;93:15;94:9; |
| glare (1) | 14:7;16:13 | 65:4;66:13;93:24; | 17:2,19;122:19 | $97: 5 ; 98: 4 ; 100: 6,19$ |
| 11:4 | growth (5) | 94:5;97:25;100:3; | holding (1) | 101:24;102:17;104:7, |
| glass (2) | 16:11,12,17;18:14; | 103:20,23;110:15 | 29:9 | 19;111:8;112:10,23; |
| 90:21;123:5 | 51:4 | Heights (5) | holly (1) | 116:7;118:23 |
| glasses (2) | grub (1) | $25: 7 ; 27: 19 ; 28: 4,5$ | $12: 3$ | illegal (1) |
| 118:1,5 | 17:15 | $92: 9$ | hope (1) | 72:20 |


| impact (5) | 89:2;96:2 | 90:15,17,19;96:3,4; | keeping (1) | latest (1) |
| :---: | :---: | :---: | :---: | :---: |
| 18:1,17;39:19,21; | inspect (1) | 107:13 | 54:7 | 81:18 |
| 40:18 | 68:7 | introduce (3) | Keller (17) | latitude (2) |
| impacting (1) | inspecting (1) | 77:11,16;79:8 | 7:14,23;9:10,12,19; | 8:23;65:22 |
| 29:24 | 69:16 | involves (1) | 10:3;15:7;28:25;36:5; | Laughter (3) |
| impervious (5) | inspection (7) | 20:3 | 38:14;40:12;42:15; | 47:25;56:15;123:13 |
| 27:5;46:1;57:16; | 23:15;33:23;35:16; | ions (1) | 51:15;77:10,23;78:7; | laundry (2) |
| 88:8;89:4 | 69:10,11;73:23;74:4 | 22:10 | 117:16 | 111:1,2 |
| importance (1) | inspections (5) | irrelevant (1) | Keller's (2) | Laurel (1) |
| 18:25 | 23:14;24:9;43:8; | 129:21 | 8:11;9:23 | 12:23 |
| importantly (1) | 69:18;121:24 | issue (8) | kind (8) | lawn (8) |
| 23:7 | installed (1) | 14:15;47:4,15 | 19:14;31:25;43:9; | 14:10;15:14,16; |
| impression (1) | 68:10 | 51:18;61:3;67:24; | 51:17;52:16;53:7; | 17:15,20;21:5;52:15; |
| 59:1 | instant (1) | 71:18;126:20 | 69:11;74:7 | 54:7 |
| Improvement (3) | 16:6 | issues (2) | kitchen (1) | lawns (1) |
| 36:11;62:6;73:24 | instead (1) | 13:13;84:22 | 113:11 | 14:7 |
| I-N (1) | 26:14 | items (5) | knew (3) | layer (7) |
| 49:18 | Institute (1) | 7:16;40:1,3;90:23, | $86: 4,5,7$ | 20:11,11,12;21:18; |
| inches (8) | 79:16 | 24 | Knolls (1) | 23:3;56:12,12 |
| 60:6,8,14,20;61:7, | integrity (1) | J | 9:14 | layered (1) |
| 18;62:2;103:24 <br> include (7) |  | J | L | 11:8 |
| 12:17;21:9;41:12; | 75:20 | Jack (6) |  | 12:21 |
| 48:19;81:7,12,22 | intends (1) | 7:19;77:12;78:11, | labeled (4) | layers (1) |
| included (3) | 120:5 | 12,14;79:1 | 83:17;90:8;101:6; | 25:11 |
| 81:13;97:22;98:18 | intension (1) | January (8) | 119:9 | layout (2) |
| includes (5) | 127:16 | 7:17;10:5;36:7; | laid (1) | 84:25;119:18 |
| 73:24;76:7;81:9; | intention (1) | 40:1;81:17,20,24; | 52:7 | leaf (2) |
| 82:18;102:11 | 8:5 | 82:2 | Lambert (2) | 59:4,15 |
| Including (3) | intentioned (1) | Jersey (11) | 78:21;79:2 | Learning (2) |
| 57:18;58:2;109:23 | 119:13 | 9:15;37:3,20;38:10; | Lambertville (3) | 6:18;129:17 |
| income (2) | intentions (1) | $39: 17 ; 78: 22 ; 79: 3,13$ | 78:21;79:3,13 | lease (3) |
| $84: 9,12$ | 7:25 | 15,21,25 | land (2) | 120:11;122:6,10 |
| incorporate (1) | interconnected (1) | Johnson (1) | 21:8;79:18 | leases (3) |
| 120:10 | 30:7 | 62:12 | landing (1) | 120:4,20,21 |
| incorporated (1) | interested (1) | Johnston (1) | 58:16 | leasing (2) |
| . 81:25 | 6:22 | 78:5 | landscape (1) | $120: 8,11$ |
| increased (1) | interesting (1) | join (1) | 15:5 | least (7) |
| 60:22 | 46:23 | 9:11 | landscaped (1) | 25:10;63:7;74:7; |
| indicating (28) | interiors (1) | joy (1) | 29:8 | 85:5;88:12;113:8; |
| $11: 2,14 ; 33: 3 ; 37: 1$ | 123:10 | 24:5 | landscaping (2) | 121:24 |
| 52:16;85:12;87:3,11, | internally (1) | J-U-B (1) | $73: 24 ; 74: 5$ | leave (2) |
| 12;88:12;90:22;91:6, | 95:23 | 49:18 | Lane (5) | 56:22;110:2 |
| 24;92:19;94:17,22; | interrupt (1) | JUBIN (28) | 49:15,23;66:19; | leaving (1) |
| 95:3,4,25;97:16;99:4, | 44:24 | 49:14,15,23;50:6,9, | 78:21;79:2 | 22:2 |
| 12;101:4,11,13; | interspersed (1) | 19,24;51:12,14,20; | large (4) | left (5) |
| 103:8;108:23;111:18 | 52:25 | 52:2,12,23;53:13,16, | 52:7;92:7;103:11; | 87:6,17;90:8;110:4; |
| individual (1) | interstitial (1) | 21;54:9,22;55:1,6,17, | 130:8 | 121:4 |
| 48:12 | 109:21 | 20;56:4,9,13,16,24; | larger (2) | legible (1) |
| individually (1) | into (60) | 57:1 | 46:3;113:22 | 116:17 |
| 107:11 | 13:22;16:3,3;17:1, | June (1) | last (23) | length (1) |
| indulging (1) | 5;18:10,10;19:22; | 126:1 | 8:16,16,23;10:10, | $98: 17$ |
| 5:2 | 20:14,14;22:9,16; | JUNIN (1) | 24,25;14:22;24:21; | less (5) |
| information (4) | 23:25;25:5;26:24; | 49:18 | 36:23;39:5;49:17; | 44:8;45:2;83:4; |
| $\begin{aligned} & \text { 24:11;67:13;69:23; } \\ & 83: 24 \end{aligned}$ | $\begin{aligned} & \text { 27:7;29:8,10,21;32:8, } \\ & 11,22 ; 33: 2,25 ; 34: 23 \end{aligned}$ | K | $\begin{aligned} & \text { 56:16,17;57:8;63:23; } \\ & \text { 64:15;65:3,18,20; } \end{aligned}$ | 113:18;114:8 <br> level (9) |
| inlets (2) | 35:2,12;37:15;42:25; |  | $66: 19 ; 74: 18 ; 76: 16$ | 19:4;21:25;76:8; |
| 35:14;53:19 | 43:1,3,17,21;44:9; | Katharine (1) | 82:1 | 90:7,8,13,14;96:5; |
| inquiry (1) | 45:8,14,21;46:7,8,20; | 6:13 | late (1) | 108:1 |
| 36:6 | 47:8;53:20,23;55:24; | keep (9) | 66:20 | levels (4) |
| insecticide (4) | 58:24;60:20;62:11; | 59:9;64:21;66:2; | later (5) | 18:16;22:6,6; |
| 13:23;17:8,12,14 | 69:2;76:9;80:10; | 69:3;71:8,11;128:16, | 33:19;55:8;73:3; | 106:13 |
| inside (2) | 81:25;82:17,24;85:4; | $17 ; 130: 16$ | $75: 3 ; 83: 1$ | license (1) |


| 79:25 | 48:7;49:9;71:10; | loud (2) | making (1) | 111:20 |
| :---: | :---: | :---: | :---: | :---: |
| licensed (4) | 88:5 | 8:22;96:16 | 9:5 | master (1) |
| 15:5,21;79:22,24 | lives (1) | louvers (2) | MALE (1) | 113:16 |
| lieu (1) | 72:11 | 108:16,20 | 66:24 | material (14) |
| 13:24 | living (4) | lovely (1) | manage (4) | 13:3;14:25;16:16, |
| light (2) | 19:17;113:11,20; | 73:3 | 15:4;20:5;106:15; | 19;21:2,6,24;34:2,4, |
| 52:15;123:6 | 122:4 | low (27) | 107:2 | 10;55:15;68:9;81:22; |
| lighter (1) | LLC (1) | 13:3;83:2,17,19,20, | managed (2) | 92:9 |
| 11:12 | 7:10 | 22;84:1,5,7,9;85:11; | 106:13,14 | materials (12) |
| likelihood (2) | LM (1) | 88:16;94:24;101:6; | management (3) | 14:12,15;15:23; |
| 43:20;44:7 | 101:6 | 113:21;114:3,7,15,16, | 19:15;23:12;56:19 | 23:5;50:23;92:11,14; |
| likely (2) | load (1) | 21,21,23,23;115:4,23, | maneuver (1) | 93:7,10,12;98:22; |
| 116:4,22 | 119:12 | 24;116:22 | 14:15 | 111:19 |
| likewise (1) | lobby (1) | low- (8) | manhole (1) | matrix (1) |
| 119:20 | 90:16 | 83:11;91:8,10; | 35:15 | 91:13 |
| limited (1) | located (13) | 94:15,21;95:1,2,3 | manner (1) | matter (4) |
| 55:24 | 12:5;37:17;91:6,23; | low-and-moderate (24) | 15:23 | 45:25;61:11;88:4; |
| limiting (1) | 94:22;95:23,24; | 82:21;83:14;94:19, | manual (2) | 131:11 |
| 125:3 | 97:16;99:2;101:19; | 20;97:13,23;101:1,2, | 23:13;70:3 | maximizing (1) |
| line (7) | 106:5,24;111:24 | 3,5;102:9,14;104:25; | manufactured (1) | 27:1 |
| 27:15;46:22;75:6; | location (4) | 105:6,18,20;114:21; | 50:16 | maximum (3) |
| 92:10;98:15;103:14; | 38:24;62:17;88:15; | 116:9,21;117:13,20; | many (12) | 35:4;66:12;122:11 |
| 128:17 | 99:3 | 118:7,8,9 | 15:9,24;49:4;63:1; | may (17) |
| linear (1) | locations (3) | low-and-moderates (2) | 83:20;92:1;95:12,13; | 11:4;16:21;23:3; |
| 92:10 | 37:12,17,21 | 102:11;116:1 | 97:19;105:5,17; | 38:14;41:15;50:22; |
| lined (2) | $\operatorname{logs}(1)$ | lower (3) | 111:25 | 68:8;116:13;124:11; |
| 99:18;101:10 | 40:12 | 47:12;66:14;106:13 | map (2) | 125:17;126:4,12,17; |
| lines (2) | long (2) | lowest (4) | 62:14,21 | 128:3;129:13,16; |
| 92:8;103:11 | 73:16;111:21 | 64:9;90:7;96:5; | Mapleleaf (1) | 130:8 |
| LINNUS (61) | longer (4) | 103:24 | 12:18 | Maybe (2) |
| 6:22;10:10;42:14; | 28:11,16;98:14; | lying (1) | March (20) | 57:25;99:22 |
| 49:21;78:8,16,24; | 101:8 | 75:13 | 6:19,23;124:6,6,8; | Mayor (22) |
| 79:4,22;80:14,22; | look (10) |  | 125:22,23;126:21; | 5:23,24;24:14,15, |
| 82:3;83:19,25;84:4, | 13:22;29:23;40:8; | M | 127:1,3,13,15,18; | 17,23;26:1;28:9,14, |
| 15;85:13;86:12,17; | 72:7;73:3;103:5,7,12; |  | 128:1;129:10,17,18, | 19,22;103:13,18,22; |
| 89:14;91:15;93:14; | 114:10,10 | Madam (7) | 19;130:3;131:8 | 106:22;107:3,25; |
| 94:4,8;96:25;97:4; | looked (2) | 6:6;42:6;64:10; | Mareu (2) | 109:6,12,14,23;110:1 |
| 98:3,25;100:6,18; | 26:19;53:23 | 110:19;121:23;128:3; | 63:17;78:5 | mean (35) |
| 101:17,23;102:16; | looking (6) | 130:6 | mark (3) | 11:23;16:11,13; |
| 104:6,18;105:17; | 44:22;55:3;83:13; | mail (1) | 80:10,14;82:6 | 17:7;19:2;25:23; |
| 110:21;111:7,8; | 91:22;108:6;114:13 | 127:24 | marked (24) | 26:10,22;27:2;29:14, |
| 112:9,23;114:3,7,13, | looks (5) | main (11) | 10:17,19;36:18; | 25;30:3;31:12,14; |
| 18;116:6,10,18,23; | 52:24;117:20; | 37:1,2,23;38:8; | 77:21;80:23;81:1; | 33:1,7,18;38:12; |
| 118:22;120:1,10,15, | 118:9;124:8;128:6 | 46:24;47:8,10,15; | 86:16;89:17;91:18; | 39:17;40:20,21; |
| 17,19;121:9,13; | loop (3) | 53:12;61:21;62:1 | 93:17;94:11;97:7; | 43:25;44:3;47:14; |
| 122:9;126:15,20; | 11:21;47:3;62:11 | mains (1) | 98:6;100:9,21;102:2, | 48:15;51:25;53:9; |
| 127:14 | looped (2) | 36:13 | 19;104:9,21;111:11; | 54:5;58:22;64:17; |
| list (2) | 36:8,13 | maintained (4) | 112:12;113:2;118:25; | 65:9;75:19;121:12; |
| 51:20;117:14 | looping (1) | 23:11,21;55:21; | 121:8 | 123:11;128:13 |
| liters (1) | 38:8 | 70:8 | marketed (3) | means (4) |
| 34:22 | lose (2) | maintaining (4) | 119:14;121:5,6 | 18:8;24:24;101:15; |
| litter (2) | 118:17;125:5 | 30:4;55:3;69:16,18 | market-rate (5) | 107:18 |
| 59:4,15 | Lot (25) | maintenance (14) | 82:20,22;94:19; | meant (1) |
| little (25) | 6:12;8:23;21:2; | 23:13;33:23;34:1,6; | 95:1,12 | 50:20 |
| 7:13;11:25;16:8,9; | 24:22;33:7;44:8;46:1, | 51:16;55:2;68:6; | marking (3) | measured (1) |
| 17:2;20:20;26:25; | 23;55:25;59:14; | 69:11,19;70:22; | 83:10;86:13;89:14 | 94:1 |
| 32:23;59:16;60:16; | 65:21,21,22,23;72:9; | 71:16,18;74:3;96:18 | Martino (19) | mechanical (2) |
| 63:12;79:10;82:13, | 85:21;86:3;87:24; | makers (1) | 5:19,20;28:8,15,20; | 108:16,20 |
| 14,25,25;84:22; | 90:20;91:25;99:14, | 33:17 | 29:5,13;30:10,16,19, | mechanism (1) |
| 90:18;98:13;102:24; | 15;111:22;123:24; | makes (2) | 23;31:1,4;39:5,7,10; | 71:2 |
| 108:25;115:21;119:6; | 129:2 | 10:14;115:11 | 130:21,25;131:4 | meet (1) |
| 125:9;126:20 | lots (4) | makeup (1) | mass (5) | 54:21 |
| live (4) | 18:2,21;123:5,5 | 14:11 | 22:19;92:3,6;98:20; | meeting (28) |


| 6:19;7:16;8:7,16, | 38:5,5,16,22,24,25 | 17:25;76:22,24; | 29:24 | $20: 19 ; 65: 10$ |
| :---: | :---: | :---: | :---: | :---: |
| 23;10:24,25;14:23; | misnomer (1) | 88:18;91:14;101:22; | neighboring (1) | notice (9) |
| 24:21;39:6;56:17; | 31:25 | 102:15;104:4;118:21; | 78:2 | 6:21,25;94:15; |
| 63:23;64:15;65:11, | misspoken (1) | 124:22;126:3;127:10 | neighbors (4) | 08:15;126:21; |
| 13,18,20;67:15; | 38:15 | moved (3) | 63:14;72:23;75:12, | 127:19,20,23,25 |
| 81:24;123:22;124:6, | mistaken (1) | 5:6;101:8;129:13 | 14 | noticing (1) |
| 9;125:17;127:15,20; | 28:21 | moving (4) | New (14) | 70:25 |
| 128:1;131:3,4 | mix (6) | 64:21;65:20;126:1 | 9:14;37:3,20;38:10; | notification (1) |
| meetings (7) | 11:6;12:16;20:17 | 129:2 | 39:16;40:11;68:10; | 127:24 |
| 8:16;65:18;124:4; | 22;82:15;95:1 | MS4 (4) | 78:21;79:3,13,15,21, | November (1) |
| 126:7;130:10,10,14 | mixed-use (1) | 69:5,9,24;70:4 | 25;118:1 | 36:23 |
| meets (1) | 79:18 | much (10) | next (37) | number (17) |
| 61:6 | moderate (11) | 16:16,18;25:13 | 8:6;13:21;17:22; | 18:4;24:9;63:5; |
| melt (1) | 83:2,18,20;84:12; | 57:1;66:14;68:4;86:9; | 49:13;54:10;70:16; | 76:6;82:15;83:14; |
| 18:10 | 94:24;101:6;113:21; | $94: 14 ; 100: 14 ; 130: 1$ | 77:1;83:9;84:19; | $97: 13,19 ; 105: 22$ |
| MEMBER (1) | 114:18;115:4,23; | mulch (1) | 86:11;89:12;90:14; | 106:19,19;109:18; |
| 66:24 | 116:23 | 23:3 | 91:14;93:13;94:7; | 110:13;113:5;119:11, |
| members (2) | moderate-one (1) | multiple (2) | 96:17;97:3;98:2; | 11;122:4 |
| 122:2;130:20 | 95:2 | 36:14;50:4 | 100:5,16;101:22; | numerous (2) |
| memories (1) | moderate-three (1) | municipal (6) | 104:5,17;110:17; | 38:11;79:20 |
| 123:22 | 94:21 | 24:11;71:20,25,25; | 112:8,22;116:3,4,24; | nutrient (3) |
| mention (2) | moderate-two (1) | 72:5;76:9 | 118:21;123:1,9,22; | 18:13;20:8;55:14 |
| 9:4;48:1 | 95:4 | municipalities (1) | 125:9;129:1;131:3,4 | nutrients (8) |
| mentioned (8) | moderate-unit (3) | $24: 6$ | NFPA (1) | $14: 7,10 ; 16: 10,20$ |
| 42:23;44:14;49:24 | 83:11;91:11;94:16 | municipality (1) | 89:7 | 21:4,10,21;55:24 |
| $\begin{aligned} & 50: 10 ; 54: 12 ; 55: 7,8 ; \\ & 56: 17 \end{aligned}$ | $\begin{aligned} & \text { moderate-units (2) } \\ & 91: 9 ; 95: 2 \end{aligned}$ | 71 | NFPA13 (1) | 0 |
| metal (3) | modification | N | night (3) |  |
| 92:12;93:11,11 | 97:12 |  | 8:25;66:2;123:15 | O\&M (1) |
| metals (1) | monitored (1) | name (9) | nine (3) | $70: 3$ |
| 21:10 | 68:23 | 42:3;49:17;57:8 | 12:4;83:5;95:17 | Oakwood (2) |
| meters (1) | monoculture (1) | 66:19;76:16;78:14, | nitrogen (5) | 62:9,12 |
| 37:5 | 26:14 | 25;79:1;98:12 | 14:8,17;16:11;22:6; | objector (2) |
| method (2) | month (1) | native (3) | 55:18 | 128:5,14 |
| 41:9,9 | 122:24 | 13:5,6,11 | nominal (1) | Obviously (3) |
| mic (1) | months (1) | natural (1) | 15:18 | 18:24;19:3;31:18 |
| 66:25 | 122:20 | 123:5 | noncompliant (1) | occupancy (3) |
| microphone (1) | more (29) | naturally (1) | 76:5 | 120:6,22;121:16 |
| 69:3 | 11:24,25;13:4,6,24; | 14:12 | none (2) | occupants (1) |
| middle (2) | 14:18;15:22;16:9,21; | nature (4) | 42:17;46:18 | $122: 14$ |
| 77:6;124:25 | 25:13;29:3;39:1; | 50:18;51:4,5;53:25 | non-point (1) | occurred (1) |
| might (9) | 45:24;46:25;50:13, | near (1) | 20:6 | 60:7 |
| 50:13,21;60:16,17; | 13,17,22;53:24; | 20:1 | normal (1) | occurring (1) |
| 106:21;115:7;116:15; | 59:15;65:21;75:13; | nearly (2) | 99:23 | 32:1 |
| 128:12,15 | 82:25;83:5;99:20; | 97:11;102:8 | north (1) | occurs (1) |
| Mike (1) | 113:18;115:21;122:7; | necessarily (2) | 101:20 | 68:8 |
| 70:13 | 131:1 | 108:17;115:22 | northeast (1) | October (3) |
| milkweed (1) | morning (1) | necessary (2) | 20:2 | 65:11,13;81:15 |
| 20:22 | 106:7 | 16:13;38:23 | northeasterly (1) | off (31) |
| mind (4) | mosquitos (2) | need (14) | 101:20 | 16:2;17:7;18:4; |
| 6:9;59:25;71:9; | 67:18,23 | 14:7,19;15:3;18:24 | northeastern (1) | 21:5;22:8;23:3,18; |
| 114:22 | most (13) | 36:13;45:15;48:6; | 99:6 | 24:24;25:1,5;27:2; |
| minimal (1) | 15:20;18:8,9;23:7; | 50:22;52:5;76:3;83:6; | northerly (2) | 30:4;37:3,9;44:16; |
| 51:1 | 32:25;39:10;66:13; | 118:1,4;125:20 | 11:20;101:20 | 45:2;49:6;52:9,11; |
| minimize (1) | 67:14;108:17;113:6, | needed (3) | northwest (2) | 58:23;60:23;68:8; |
| 17:21 | 9;116:15;121:17 | 51:2;85:19;106:15 | 19:25;30:5 | 72:19;74:1,2,16; |
| minimizing (1) | motion (1) | needles (1) | northwestern (2) | 110:2,4;124:5; |
| 15:24 | 5:4 | 14:13 | 33:3;99:6 | 130:22,24 |
| minimum (3) | Mount (1) | needs (1) | note (2) | offense (2) |
| 20:12;38:23;62:5 | 12:23 | 37:24 | 83:9;91:24 | 42:16;76:12 |
| Minno (2) | Mountain (2) | negative (2) | noted (2) | offer (1) |
| 79:2,12 | 57:6,11 | $18: 17 ; 21: 17$ | 23:19;131:12 | 88:19 |
| minute (6) | move (12) | negatively (1) | notes (2) | office (3) |


| 119:22;120:12,13 | 64:22;66:1;72:12; | outflows (1) | 18:2,21;85:23;88:9, | 21:25;27:5,6;30:16; |
| :---: | :---: | :---: | :---: | :---: |
| officer (7) | 74:25;75:7;91:10; | 32:22 | 18;89:2,2;119:11,24 | 32:1;54:13;67:25; |
| 71:20;72:1,5,9,16; | 104:1;122:10,14; | outlet (5) | part (18) | 68:14,20;83:4,6,25; |
| 75:25;76:1 | 125:3 | 20:14;42:25;43:16 | 17:12,18,24;18:13 | 84:4;114:11 |
| offices (2) | on-site (4) | 17;61:1 | 23:11;27:16,21,24,25; | performance (9) |
| 120:2,6 | 27:11;51:16;86:22; | outset (1) | 33:22;34:5;39:10,17; | 71:16;73:15,21,22; |
| official (1) | 89:1 | 71:17 | 51:22;68:6;70:5,22; | 74:1,2,16,25;75:5 |
| 63:1 | onto (13) | outside (1) | 80:21 | performed (2) |
| officials (1) | 16:24,25;19:6; | 11:1 | particular (5) | 66:22;67:3 |
| 62:18 | 29:16;61:8;77:16; | over (11) | 81:5;91:1;110:13, | perhaps (2) |
| offset (1) | 84:19;100:16;101:22; | 32:7;37:24;38:24 | 15;127:15 | 129:5;130:9 |
| 99:19 | 102:15;106:9;118:21; | 45:6;57:2;60:18;61:5; | particulates (1) | perimeter (1) |
| off-site (1) | 124:22 | 76:25;79:15;85:18; | 21:14 | 29:17 |
| 88:10 | open (15) | 90:9 | P-A-R-T-O (1) | period (1) |
| often (4) | 7:16;8:17,18,20; | overall (4) | 76:17 | 32:3 |
| 16:21;76:7;106:16; | 35:16;40:1,3;41:19, | 27:4;39:18;82:15, | pass (1) | permeability (1) |
| 120:24 | 21;42:4;54:7;75:6; | 16 | 54:7 | 26:23 |
| oils (1) | 113:11;123:5,21 | over-application (1) | past (1) | permeable (3) |
| 22:7 | opened (1) | 16:17 | 79:19 | 25:4,13;26:20 |
| once (7) | 65:21 | overdoing (1) | patience (1) | Permit (2) |
| 17:12,16;49:25; | opening (1) | 19:5 | 80:6 | 24:4;69:5 |
| 50:1,1,2;121:24 | 125:2 | overflow | pattern (2) | permits (1) |
| One (55) | operations (2) | 60:9,18;106:11 | 28:3;125:6 | 72:21 |
| 11:1;13:10,25;20:1; | 23:12;106:21 | overflows (1) | pause (1) | person (4) |
| 21:8;38:21,24;42:22; | opinion (1) | 33:1 | 124:19 | 8:6;51:16;122:18, |
| 43:1;50:2;53:12; | 15:19 | overgrowth (2) | paved (7) | 19 |
| 54:23;56:17;60:7,16, | opportunity (4) | 55:21;56:2 | 16:25;18:20,25 | pesticide (3) |
| 20;62:19,21;71:8; | 9:3;25:10;27:8; | overspray (1) | 19:21;29:7;30:13; | 13:23;17:8;50:4 |
| 74:10,12;75:3,18; | 124:2 | 53:10 | 53:4 | pesticides (3) |
| 77:13;83:4;84:7,8; | opposed (1) | overspread (1) | pavement (4) | 23:2;49:24;51:21 |
| 87:9;88:8;89:23; | 29:3 | 53:3 | 27:4;59:15,17;74:5 | phosphorous (3) |
| 90:18;92:10;93:23; | opposer (1) | overspreads (1) | pay (1) | 14:8,17;55:17 |
| 94:19,21;95:2;97:13; | 8:19 | 16:24 | 71:13 | phosphorus (2) |
| 98:14;105:15,19; | orange (1) | overtop (1) | PB (1) | 16:12;22:6 |
| 106:1;108:7,24; | 90:22 | 33:10 | 6:10 | photo (1) |
| 110:18;113:13; | Orchard (1) | overtopped (1) | PE (1) | 106:23 |
| 114:22;115:11,22,23; | 70:13 | 32:14 | 48:21 | photograph (1) |
| 117:1,2;121:7;122:2; | ordinance (3) | owes (1) | pedestrian (1) | 11:12 |
| 124:16;129:3 | 93:25;94:5;110:15 | 73:1 | 19:1 | photographs (1) |
| one-bedroom (14) | organic (6) | own (4) | pellets (2) | 111:4 |
| 84:7;114:4,8,24; | 13:22;14:5,12,15 | 48:16;69:24;71:11; | 59:4,5 | Physical (1) |
| 115:3,4,15,16,24; | 19;16:19 | 113:1 | penalty (1) | 21:12 |
| 116:9,21;117:4; | organics (6) | owner (6) | 73:7 | pick (1) |
| 119:8;121:6 | 15:1;50:11,11,18 | 68:19;69:17,22; | Pennett (17) | 106:17 |
| one-bedrooms (4) | 18,21 | 76:2,4;114:22 | 5:21,22;11:23;12:2; | picked (4) |
| 82:23;83:5;84:10, | oriented (1) | owners (2) | 13:4,15:25;31:5,11; | 12:8;28:1;96:6,20 |
| 13 | 87:22 | 70:17;72:12 | 33:14;34:9;35:19; | picks (1) |
| one-den (1) 121:8 | otherwise (1) $66: 2$ | $\mathbf{P}$ | 39:11,22;96:11,21; $110: 22 ; 122: 3$ | $\begin{gathered} 96: 9 \\ \text { pickups (1) } \end{gathered}$ |
| $\begin{gathered} \text { 121:8 } \\ \text { one-hour (2) } \end{gathered}$ |  | P |  | $106: 15$ |
| 89:8;107:13 | 23:5;25:15,24 | pachysandra (1) | 19:11 | pictures (1) |
| ones (3) | 26:18;27:18;33:4,24; | 54:1 | people (16) | 49:1 |
| 13:10;91:2;100:16 | 34:3;36:12;37:14; | page (4) | 22:23;42:22;58:18 | pine (1) |
| one-sided (1) | 38:2;41:15;43:1;44:4; | 80:22,24;82:4,5 | 60:4;63:19;70:24; | 14:13 |
| 90:9 | 45:6;52:7;60:25;76:2; | panic (1) | 71:10,12;72:22;75:8; | pipe (3) |
| ongoing (3) | 83:12;87:5;89:10; | 126:2 | 107:18;122:4,7,11,11, | 30:8;46:19;61:15 |
| 23:20;24:12;34:7 | 94:16;95:19;96:6,8,8; | papers (1) | 15 | piped (3) |
| online (1) | 99:14;101:9;105:10; | 96:22 | per (13) | 27:18;29:21;34:22 |
| 5:3 | 106:6,7;107:4;121:1; | paperwork (1) | 38:5,5,15,24,25; | pipes (4) |
| only (22) | 124:7;125:16;128:14; | 69:24 | 75:7;88:14;106:1; | 35:15;44:9;45:24; |
| 9:2;13:10,10;16:24; | 130:7 | parallel (1) | $107: 1 ; 122: 7,11,11,15$ | 53:19 |
| 18:6,7,18;27:2;33:9; | outflow (1) | $87: 23$ | percent (17) | piping (1) |
| 41:22,25;52:20; | 32:11 | parking (9) | 15:17;18:19,20; | 53:17 |


| pit (1) | 95:20;97:5,20;98:4; | 14:9,17;16:12;55:7, | 24:7,12;41:1;76:11 | 37:11;40:13;94:3; |
| :---: | :---: | :---: | :---: | :---: |
| 40:12 | 100:7,19;101:24; | 12 | processes (1) | 121:20,21 |
| pitched (1) | 102:17;104:7,19; | Pote (4) | 17:6 | providing (9) |
| 108:19 | 111:9;112:10,24; | 6:2,3;81:15,19 | product (1) | 7:23;14:6;21:18; |
| pits (3) | 116:7;118:23 | potential (1) | 15:2 | 25:10;26:13;27:8; |
| 26:19;40:16;41:4 | pleasing (1) | 13:19 | professionals (1) | 30:8;37:25;40:6 |
| place (1) | 108:18 | potentially (1) | 124:17 | provision (1) |
| 45:6 | plenty (1) | 74:19 | profile (1) | 70:20 |
| placed (1) | 39:18 | pouring (1) | 40:12 | provisions (2) |
| 54:17 | plopping (1) | 45:5 | program (4) | $35: 25 ; 48: 13$ |
| plainer (1) | 85:3 | power (1) | 17:13;33:23;34:6; | proximate (1) |
| 25:21 | plumbing (1) | 80:3 | 68:6 | 37:18 |
| plan (24) | 95:7 | practices (1) | prohibit (1) | PSI (4) |
| 11:2,16;36:17,23, | plus (2) | 38:10 | 120:5 | 37:24,24;38:18,22 |
| 24;51:9,23;52:5,8; | 75:1;120:12 | practicing (1) | prohibited (1) | public (16) |
| 63:16;69:8;77:20,23; | pm (3) | 79:17 | 120:12 | 8:15,17,21;41:19, |
| 83:16;90:22;113:1,5; | 5:3;77:4;131:12 | pre- (1) | prohibits (1) | 22;42:10;66:17;79:9; |
| 114:10,20;118:24; | point (27) | 48:20 | 122:7 | 80:15;113:14,18; |
| 119:3;125:11;126:11; | 7:10;16:10;17:11; | predation (1) | project (15) | 123:21,25;125:2; |
| 127:1 | 25:14;33:25;34:8,14; | 68:24 | 7:15,20;20:19; | 127:22;131:7 |
| planner (1) | 36:5;41:8,14;48:6; | preface (1) | 24:19;57:17;73:14; | pulled (2) |
| 83:13 | 64:9,9;65:24;83:11; | 14:4 | 75:1;77:1;78:11; | 115:21;118:16 |
| Planners (1) | 87:5;95:19;103:24, | prefer (5) | 82:15,16,18;83:7; | pulls (1) |
| 79:13 | 25;104:2;105:10; | 124:21,25;125:4 | 106:21;120:3 | 89:2 |
| planning (4) | 107:15;108:15;111:6; | 128:16,17 | projections (1) | purpose (1) |
| 7:23;79:18;129:2; | 112:2;129:9;130:20 | prepare (1) | 103:12 | 19:19 |
| 130:14 | pointed (3) | 23:12 | projects (2) | purposes (3) |
| plans (25) | 33:2;94:16;99:14 | prepared (1) | 24:10;38:11 | 67:6;121:10,12 |
| $27: 13,13 ; 36: 22,25$ | pointing (3) | 77:15 | promised (1) | pushed (1) |
| $44: 22 ; 56: 5,8 ; 89: 13,$ | 85:18;86:25;87:7 | present (1) | 77:2 | 118:16 |
| 16,20,22;94:10,14; | points (1) | 65:13 | proper (1) | put (19) |
| 97:6,10;100:21,24; | 35:15 | presentation (3) | $72: 21$ | 25:21;37:19;44:13; |
| 102:2,7;104:20,24; | poll (1) | $80: 8,9,21$ | properly (1) | $52: 5 ; 54: 16,23 ; 67: 20$ |
| 111:3;113:5,10;123:5 | 124:11 | pressure (6) | 18:25 | 70:16,18;74:18; |
| plant (16) | pollutant (1) | 37:20,21,23;38:7, | properties (2) | 85:23,23;86:3;88:9, |
| 16:11;18:13;21:2,6, | 20:7 | 21;39:2 | 78:2,5 | 10;96:15;109:19; |
| 23;22:19;23:17;34:2; | pollutants (1) | pressure-reducing (2) | property (16) | 124:5;127:12 |
| 51:4;55:14,15;68:9, | 21:8 | 37:24;38:1 | 7:11;13:24;15:8,14; | puts (1) |
| 10,16;74:10,11 | pollution (1) | pressures (1) | 28:1;46:2;69:17,19; | 96:3 |
| planted (7) | 20:6 | 39:20 | 70:17,22;71:9,13,19; | putting (6) |
| 12:5,24;20:16,25; | ponds (1) | presumably (1) | 76:2,4,8 | $14: 23 ; 25: 12 ; 60: 18$ |
| 74:15,22,24 | 60:8 | 6:23 | proposal (1) | 86:13;109:21;119:23 |
| planting (4) $12: 20 ; 13: 2 ; 20: 21 ;$ | $\begin{array}{\|c} \text { poor (1) } \\ 59: 8 \end{array}$ | $\begin{aligned} & \text { pretty (2) } \\ & 89: 22 ; 96: 16 \end{aligned}$ | $51: 7$ <br> proposed | O |
| 68:3 | population (1) | prevent (2) | $7: 21 ; 47: 1$ | Q |
| plantings (6) | 122:3 | 17:21;33:20 | protect (3) | qualifications (1) |
| $10: 6,16,21 ; 11: 3$ | portion (4) | previous (3) | $19: 18,21 ; 75: 14$ | 79:10 |
| $13: 18 ; 23: 5$ | 15:8;30:6;33:3; | $8: 24 ; 98: 23 ; 100: 16$ | protected (1) | quality (5) |
| plants (12) | 47:12 | previously (6) | 107:9 | 19:21;20:7;22:2; |
| 13:5,6;16:11,14; | portions (1) | 9:15,19,24;78: | protection (1) | 35:25;46:19 |
| 18:12,16;22:18; | 90:9 | 81:12;99:14 | 108:2 | Quan (14) |
| 55:25;56:3;71:3; | positive (1) | principal (1) | proud (1) | 66:18,18;67:2,5,10, |
| $74: 14,18$ plastics (1) | 21:17 | 79:12 | 84:25 | 17,25;68:12,21;69:1, |
| plastics (1) | possibility (2) | private (2) | proven (1) | 4,7,20;70:9 |
| 96:22 | 13:24;48:2 | 113:13,16 | 22:4 | Q-U-A-N (1) |
| play (1) | possible (4) | privately (1) | provide (14) | 66:19 |
| 90:15 |  | $70: 8$ | $11: 3 ; 13: 18 ; 16: 15$ | quantities (1) |
| please (32) | $115: 10$ | probably (3) | 19:4;22:1;23:16; | $19: 4$ |
| 5:14;9:11;10:6; | post (3) | 13:20;104:2;128:11 | 24:11;27:9;39:19; | quantity (1) |
| 14:2;42:3;49:16;57:7; | 71:16;73:14,21 | problem (3) | 69:23;75:20;80:12; | 19:20 |
| 66:5;76:16;78:9,25; | post-blasting (1) | 42:17;44:22;128:13 | 107:22;127:17 | quarry (2) |
| $79: 8 ; 82: 9 ; 89: 15 ;$ $91 \cdot 16 \cdot 93 \cdot 15 \cdot 94 \cdot 9$. | 48:20 | process (7) <br> $14 \cdot 16 \cdot 17 \cdot 24 \cdot 23 \cdot 20$ | provided (8) | 35:21;49:9 |
| 91:16;93:15;94:9; | potassium (5) | 14:16;17:24;23:20; | 23:4;34:6;36:14; | quarter (1) |


| 33:23 | rating (1) | Redoing (1) | remove (7) | 69:9,22;100:2 |
| :---: | :---: | :---: | :---: | :---: |
| quarterly (5) | 107:21 | 44:2 | 21:8;22:7,9;34:2,2, | required (20) |
| 23:13,19,23,24; | ratings (1) | reduce (4) | 9;40:23 | 23:14,15;32:4;36:1; |
| 70:1 | 107:22 | 25:18;44:24;88:7; | removed (3) | 38:7;48:12;50:13; |
| quick (3) | reach (4) | 89:3 | 55:8,11;68:9 | 54:22;62:5;68:2; |
| 30:10,21;114:12 | 40:15,16;76:2; | reduced (1) | removing (1) | 71:15;83:4;84:1;86:5; |
| quickly (2) | 124:7 | 24:17 | 22:5 | 96:23;107:21,23; |
| 89:22;124:11 | read (3) | reduces (1) | Rendering (6) | 109:18,20;127:4 |
| quite (1) | 65:15,16;66:5 | 22:12 | 10:15,21;36:21; | requirement (2) |
| 13:2 | real (3) | reducing (1) | 77:20,24,25 | 68:14;120:8 |
|  | 30:10;47:17;112:15 | 25:16 | Renewal (1) | requirements (9) |
| $\mathbf{R}$ | really (9) | refer (2) | 7:10 | 23:10;48:13,16; |
|  | 24:22;27:10;41:5; | 77:17;80:18 | rental (1) | 54:3;84:16,17,17; |
| radius (1) | 52:21;74:11;77:17; | referring (6) | 71:9 | 94:5;97:2 |
| 49:3 | 84:25;85:4;95:8 | 19:24;85:15;86:13; | renters (1) | requires (2) |
| railings (1) | rearrange (1) | 87:16;103:17;119:17 | 88:20 | 63:17;70:4 |
| 93:11 | 127:6 | reflect (2) | renting (1) | requiring (1) |
| rain (6) | reason (2) | 85:13,14 | 70:24 | 53:24 |
| 32:3;33:5;60:6,8, | 125:12;127:2 | refresh (1) | rents (1) | re-seeded (1) |
| 14,20 | recall (1) | 123:22 | 71:13 | 68:11 |
| rainfall (1) | 27:5 | regard (3) | repeat (1) | Residential (4) |
| 20:6 | receive (3) | 10:5;47:19;107:25 | 41:23 | 36:10;62:5;79:18; |
| rains (2) | 56:18,19;76:5 | regarding (1) | repetitive (2) | 96:7 |
| 16:2;58:11 | received (23) | 126:21 | 76:12;111:22 | residents (1) |
| rainstorm (1) | 10:16;36:17,25; | regards (1) | replace (3) | 65:23 |
| 58:13 | 70:7;77:21;81:1; | 46:22 | 71:1;72:2;74:1 | residual (1) |
| Rainwater (1) | 86:15;89:17;91:18; | regular (2) | replant (1) | 37:23 |
| 35:19 | 93:17;94:11;97:7; | 29:3;130:16 | 34:4 | resistant (1) |
| raise (1) | 98:6;100:9,21;102:2, | regularly (1) | replicas (1) | 53:24 |
| 78:8 | 19;104:9,21;111:11; | 130:10 | 82:7 | resolution (1) |
| raised (1) | 112:12;113:2;118:25 | regulations (3) | replicate (1) | 30:25 |
| 98:16 | recent (2) | 48:18;52:1;83:3 | 80:16 | resolve (1) |
| Raker (17) | 113:6,9 | rehash (1) | report (14) | 33:21 |
| 7:19;78:11,13,14, | recently (1) | 7:12 | 23:16;24:1,3;39:25; | resource (1) |
| 14,19;79:1,1,8;95:11; | 63:8 | relate (1) | 51:17;70:2,4,7;71:4, | 20:8 |
| 97:18;105:9;107:17; | recess (2) | 30:9 | 23;72:1,22,23;73:1 | respond (1) |
| 109:5;110:18;116:13; | 92:7;124:13 | relates (1) | reported (1) | 73:7 |
| 121:19 | recessed (1) | 26:2 | 71:19 | response (4) |
| R-A-K-E-R (1) | 99:14 | relative (1) | REPORTER (5) | 5:12;41:20;56:18; |
| 78:13 | recesses (1) | 106:18 | 49:16;57:7,10; | 76:21 |
| random (1) | 92:8 | release (2) | 76:15,18 | responsible (1) |
| 85:4 | recharge (3) | 50:12,17 | reporting (4) | 24:2 |
| range (6) | 24:21,23;27:7 | released (3) | 13:21;70:6,23,24 | rest (1) |
| 12:19;104:2; | recharging (1) | 73:23;74:4,6 | reports (4) | 8:10 |
| 115:17,25;116:2; | 24:24 | relegated (1) | 23:19,23,23,24 | restaurant (1) |
| 117:13 | recognized (1) | 115:22 | represent (1) | 60:3 |
| ranges (1) | 19:16 | remain (1) | 24:6 | restore (1) |
| 38:4 | record (12) | 22:17 | representation (1) | 34:3 |
| rare (1) | 9:25;52:14;77:16; | remaining (3) | 84:15 | retain (1) |
| 32:14 | 78:10,25;85:13,14; | 27:6;83:7;100:4 | representative (1) | 25:12 |
| rate (11) | 86:12;87:15;93:2; | remediate (1) | 26:18 | retaining (8) |
| 21:24;25:19,22; | 95:11;128:4 | 43:10 | Represented (2) | 11:20,21;52:20; |
| 44:18,19,24;45:1,16; | recourse (1) | remediation (1) | 6:12,113:8 | 58:17;65:4;66:12; |
| 50:12;54:13,18 | 75:4 | 54:24 | representing (1) | 85:24;86:3 |
| rated (11) | recreation (1) | remedy (1) | 128:5 | retention (3) |
| $89: 8,9 ; 107: 10,11,$ | 54:8 | 44:1 | represents (1) | 29:8,9;67:11 |
| 11,12,18,19;109:10, | recycling (6) | remember (3) | 8:19 | returning (1) |
| 10,11 | 96:11,12,14,19,20, | 33:5;63:4;77:3 | requested (1) | $7: 15$ |
| rates (2) | 21 | remind (1) | $37: 12$ | re-vegetate (1) |
| 38:21;51:4 | Redevelopment (2) | 15:8 | requests (1) | 34:5 |
| rather (4) | 6:11;63:16 | removal (4) | 81:23 | review (2) |
| $53: 5 ; 54: 1 ; 75: 20$ $80: 10$ | redo (1) | $21: 24 ; 41: 9 ; 54: 13$ | require (6) | 51:22;67:15 |
| 80:10 | 44:5 | $18$ | $25: 17 ; 45: 3 ; 46: 18$ | reviewed (1) |


| 36:10 | room (10) | samples (1) | 28:17 | set (13) |
| :---: | :---: | :---: | :---: | :---: |
| reviewing (1) | 95:22,24;96:19; | 86:6 | seasonal (1) | 36:24;56:8;82:12; |
| 7:20 | 1:14;105:22,25; | sand (5) | 90:23 | 86:20;89:20;97:10; |
| revised (1) | 106:1,3,5,9 | 20:11;25:11;43:22 | seats (1) | 98:9;100:24;102:22; |
| 36:23 | rooms (2) | 6:12;59:6 | 22:23 | 104:12,24;111:14; |
| revision (1) | 95:20;96:1 | Sandy (2) | Second (6) | 119:3 |
| 82:1 | roundabout (1) | 59:25;60:7 | 5:8,9;20:19;110:18; | seven (1) |
| ridge (2) | 20:1 | sanitary (1) | 113:17;116:10 | 62:23 |
| 27:15;103:22 | Roundup | 48:25 | secretary (1) | several (3) |
| right (39) | 1:9 | save (2) | 124:7 | 8:16;33:18;43:12 |
| 7:6;15:25;24:25; | route (2) | 45:22;112: | Section (13) | sewer (5) |
| 28:13,22;33:13;35:3, | 27:13;121:17 | saw (1) | 36:12;56:5,10,21; | 28:2;29:21;43:4; |
| 17;44:17;60:9,10; | row (1) | 43:19 | 86:20,21;87:1,2,2,16; | 48:25;119:12 |
| 63:13,20;65:2;68:21; | 99:17 | saying (13) | 88:14;108:4;109:8 | shade (1) |
| 73:16;75:22;77:13; | RSIS (1) | 14:4;19:2;26:22; | sections (4) | 12:10 |
| 78:9;81:19;85:11; | 38:7 | 28:9,10;30:24;59:9; | 87:6;88:12,13;92:7 | shading (3) |
| 91:6;92:19;94:22; | rude (1) | 70:21;81:7,11;87:15; | sediment (4) | 12:8;75:12,21 |
| 95:25;102:16;103:15; | 64:18 | 105:25;119:22 | 43:19,21;44:8,9 | shadow (3) |
| 106:24;115:19; | rule (2) | scale (2) | sedimentation (1) | 92:8;99:16;103:11 |
| 119:11,11;122:12; | 30:1;4 | 59:2;78 | 33:24 | shake (1) |
| 124:8;126:13,15,18; | rules (9) | SCHAEFER (119) | seed (1) | 130:7 |
| 128:22;129:25;131:2 | 9:7;19:16,20;25:17 | 5:1,7,10,13;6:7,15 | 20:17 | shallow (1) |
| right-hand (1) | 34:12;45:2;65:25; | 7:1,4;8:2,14;10:1; | seeing (6) | 40:21 |
| 87:18 | 67:21,23 | 11:17;12:11;22:22 | 55:3;99:20;101:9; | Sheet (47) |
| ring (1) | run (8) | 23:22;24:14;30:23 | 102:24;117:8;126:2 | 36:22;80:25;81:4; |
| 10:12 | 22:13;23:3;32:24 | 31:3;32:15;34:13; | seeks (1) | 82:11;83:12,15 |
| $\boldsymbol{r i p}(2)$ | 43:1;44:10;45:15,17; | 36:2;39:4,8,23;40:2,7, | 5:4 | 86:19,25;89:16,20; |
| 40:22;44:4 | 58:23 | 10;41:18,21;42:8; | seems (1) | 91:17,20;93:16,20; |
| rivulet (1) | running | 48:4,9,22;49:12;57:2, | 13:5 | 94:10,13,14;97:6,9; |
| 60:17 | 44:16;53:6 | 11,14;63:22;64:3,14, | seepage (1) | 98:5,8;100:8,11,20, |
| rivulets (1) | runoff (15) | 17,20,25;65:6,14; | 26:24 | 23;102:1,18,21;104:8, |
| 61:9 | 16:1;22:13;25:17, | 66:5,8,11,16;69:2,13, | seeps (1) | 11,17,20,23;111:10, |
| Road (24) | 18,19,22;26:4;34:19; | 25;70:11;71:5;72:8, | 22:14 | 13;112:11,14;113:1, |
| 6:11;9:14;11:21; | 44:15,18,19,25;45:16; | 13,17;73:10;74:21; | Self (1) | 4;116:3,4,14,18; |
| 27:18;28:2;30:7;37:3, | 53:2,19 | 75:15;76:19,22;77:3, | 70:23 | 117:11;118:21,24; |
| 6,22;39:2,15;42:18; | runs (7) | 9;78:12,15;80:1;81:6; | self-absorbing (1) | 119:2 |
| 43:2,4;44:10;46:7; | 16:2;24:24;25:1,5, | 82:1;88:21;91:3; | 21:21 | sheets (4) |
| 47:9,16;61:16;62:8; | 6,15;95:7 | 92:15,20;94:23;99:8, | self-interest (1) | 83:10;102:6; |
| 93:4;99:3,9 | S | 22;105:1,4,24;106:10, | 71 | 114:20;119:9 |
| 11:5;19:7;29:7 |  | 114: | 72:19 | 108:24 |
| roadways (4) | safe (1) | 117:7,15;118:2,12 | send (3) | shift (1) |
| 18:2,21;22:8;33:8 | 55:10 | 120:24;122:8;123:8, | 23:22;125:16;127:3 | 98:12 |
| rock (8) | safety (3) | 16,20;124:12,24; | sense (1) | short (2) |
| 18:14;41:4,6,6,16; | 19:1,2,5 | 125:14,23,25;126:3, | 130:8 | 61:8;124:13 |
| 53:1;86:7,8 | salt (5) | 14,23;127:8;128:9,16, | separate (1) | shortly (1) |
| rocks (1) | 18:15;22:9;23: | 20;129:11,15,20,22; | 46:4 | 111:4 |
| 53:5 | 30:12,20 | 130:2,13,17,19,23; | separated (2) | show (10) |
| Roll (1) | salting (1) | 131:2,5 | 109:7,11 | 11:10,13,18;17:21; |
| 5:13 | 18:25 | SCHAFER (1) | sequencing (1) | 58:18;84:4;92:16,21; |
| rolled (1) | salts (1) | 126:9 | 17:10 | 111:4;112:2 |
| 96:8 | 18:2 | schedule (4) | Serbian (3) | showing (6) |
| Ron (1) | same (33) | 106:15;124:4; | 12:7;13:11,17 | 81:8,13;113:21 |
| 49:14 | 12:25;13:18;14:6 | 127:6;128:10 | series (1) | 115:20;119:4;123:10 |
| roof (16) | 16:20;26:8;27:12; | scheduled (3) | 53:18 | shown (6) |
| 29:6;34:20,21; | 29:1;36:24;50:1; | 96:8,20;130:10 | serve (1) | 11:3;54:20,2 |
| 35:14,19,24;36:1; | 77:25;90:3;93:6,6,10, | scheduling (1) | 39:2 | 62:17;77:25;81:22 |
| 45:13;92:5,6;94:2; | 10;95:5;96:10,13; | 130:7 | serves (2) | shows (3) |
| 98:15;103:2,8,14; | 98:23;100:3,15; | schemes (2) | 34:18;90:1 | 56:11;78:4;86:21 |
| 108:22 | 101:7;102:6;103:1,5; | 103:4,6 | service (3) | shrub (1) |
| roofs (4) | 104:14;105:16,22; | screening (2) | 38:12;39:19;110:12 | 12:24 |
| 92:13;93:11; | $111: 15,19,20 ; 115: 5$ | 11:4;75:20 | serving (1) | shrubs (7) |
| 108:14,19 | $120: 18$ | scrubbing (1) | 37:11 | 11:7,8,24;12:16,23; |


| 20:25;64:5 | 100:16 | 127:3 | 5:25;6:1;31:16,23; | 8:22;64:1,22 |
| :---: | :---: | :---: | :---: | :---: |
| shut (1) | sky (1) | Someone (3) | 32:10,18,21;33:13; | state's (1) |
| 9:6 | 26:21 | 31:6;57:2;120:11 | 34:16,19,22;35:1,4,8, | 19:20 |
| side (34) | slide (18) | sometimes (4) | 17;40:11,15;41:1,12, | static (1) |
| 30:12;85:11;86:24; | 80:10;82:5,5;84:20; | 68:12;88:16;96:15, | 17;122:13,17,22 | 92:10 |
| 87:6,6,8,9,10,11,17, | 86:11;87:7;91:14; | 16 | spell (3) | stay (1) |
| 18;88:1,2,4,13,16; | 94:7;97:3;98:2;100:5, | somewhat (2) | 49:16;57:7;76:15 | 13:14 |
| 89:12;91:23;92:16, | 15,17;104:5;110:17; | 103:7;108:9 | spelled (2) | stepping (1) |
| 19,21,25;93:3,8; | 112:8,22;123:9 | somewhere (4) | 36:12;66:19 | 105:15 |
| 98:24;101:20,20,21, | slides (11) | 24:24;26:7;73:1 | spend (2) | still (15) |
| 21;102:25;104:15,15; | 80:11,15,15,16,18, | 104:3 | 94:14;100:14 | 14:6;22:19,19,20; |
| 107:1;111:17 | 19,20;81:25;82:4; | soon (1) | spillway (3) | 29:17,18;30:7,9;33:9; |
| sides (1) | 108:8;118:20 | 67:8 | 32:7;33:2;61:6 | 43:25;47:1,8;54:3; |
| 87:14 | slight (3) | sooner (1) | spillways (1) | 59:15;116:11 |
| sidewalk (3) | 97:12;98:12;102:9 | 33:18 | 60:24 | stone (3) |
| 16:25;72:19;74:5 | slightly (5) | sorry (15) | Spingler (3) | 20:12;43:15,22 |
| sidewalks (2) | 88:15;90:1;113:22, | 22:25;27:22,23; | 5:15,16;6:10 | stop (2) |
| 18:21;19:1 | 22;115:11 | 31:21;44:23;61:23; | split (1) | 77:6;123:23 |
| siding (2) | slope (1) | 64:16;66:20,20; | 90:4 | stopping (1) |
| 92:12;93:11 | 87:23 | 78:12;88:24;105:4; | spot (2) | 123:12 |
| silt (1) | slopes (2) | 117:25;122:8;123:16 | 50:8;77:8 | storage (4) |
| 59:5 | 85:10;93:22 | sort (4) | spring (1) | 90:21;101:12; |
| siltation (1) | sloping (2) | 29:3;75:18;98:17; | 17:18 | 105:22;110:12 |
| 43:9 | 85:9;86:4 | 103:9 | SPRINGLER (1) | store (2) |
| similar (1) | slowing (1) | sound (1) | 5:9 | 15:21;90:23 |
| 112:17 | 25:23 | 109:1 | sprinkler (2) | stories (4) |
| similarly (1) | small (3) | sounds (1) | 37:15;109:20 | 87:11,12,17,18 |
| 17:6 | 18:22;59:21;92:4 | 33:15 | sprinklered (3) | storm (14) |
| single (1) | smaller (5) | sourced (1) | 89:6,7;109:22 | 20:5;29:21;31:22, |
| 113:7 | 91:12,25;113:22; | 14:13 | spruce (3) | 25,25;32:2,5;35:7; |
| sit (1) | 115:11;119:8 | south (1) | 12:7;13:11,17 | 43:3;44:9,25;60:25; |
| 22:24 | smallest (4) | 12:9 | square (16) | 61:23;126:10 |
| site (65) | 91:7;115:15; | southern (1) | 57:15;58:4,5,9; | storms (2) |
| 15:17;18:18,19,20; | 116:20,23 | 111:17 | 114:4,8,15;116:9,21, | 45:5;60:6 |
| 19:22;20:1,2;23:3; | smoke (1) | southern-most (1) | 25;117:1,2,2,14; | stormwater (11) |
| 25:17,18;26:5;27:3,6, | 109:18 | 105:13 | $118: 17,18$ | 19:15,16,20;23:8, |
| 15,16,21,24;29:17; | sneaks (1) | Southwestern (1) | stack (2) | 10,11;24:4;28:1; |
| 30:6;33:3,6;36:10,25; | 122:25 | 99:7 | 95:4,6 | 29:15;67:6;69:5 |
| 37:7,8,11;38:8;40:4; | SNYDER (9) | space (6) | stairs (2) | story (2) |
| $44: 15,15,17 ; 45: 2$ | 5:15,17,19,21,23, | 100:1,2;109:23; | $107: 7,7$ | 93:23;105:15 |
| $49: 4 ; 51: 18 ; 56: 8$ | 25;6:2,4,6 | $113: 20 ; 119: 14,22$ | stairwell (1) | straight (1) |
| 58:19;61:12;62:5; | Sodium (5) | spaces (12) | 107:14 | 109:15 |
| 64:8,9;69:8;73:24; | 18:15,15;22:10; | 88:10,18;89:2,2; | stairwells (3) | stranger (1) |
| 77:20,23;78:3,4,6; | 55:7,12 | 90:18,21;100:4; | 89:9;90:12,13 | 70:24 |
| 84:22,24,24;85:3,6,9, | soil (18) | 101:12;105:23; | standard (3) | stream (3) |
| 11,22;86:4,24;87:8, | 20:11;21:18;22:20; | 109:22;110:12; | 37:3;38:9;99:24 | 27:25;29:18,25 |
| 25;88:18;91:9; | 25:3,11,14;26:17; | 113:12 | Standards (6) | street (1) |
| 102:25;103:7;111:18; | 34:3;40:12;43:22; | Speak (1) | 36:11;41:10;54:21; | 47:10 |
| 112:3 | 51:3;56:10,11;59:11, | 69:2 | $61: 6,13 ; 62: 6$ | streets (1) |
| sites (1) | 12;61:4;67:4,5 | special (10) | standard-size (1) | 78:6 |
| 21:9 | soils (3) | 124:4,9;125:17; | 100:2 | stretch (1) |
| six (4) | 26:19,19;59:8 | 126:7;127:14,19,20; | standing (2) | 12:15 |
| 62:23;63:7;94:20; | solid (5) | 128:1;130:9,14 | 72:10;79:25 | stretcher (1) |
| 110:5 | 21:24;34:12;41:6,7; | species (1) | start (6) | 107:2 |
| size (6) | 54:13 | 12:18 | 9:5;10:3;61:9; | strongly (1) |
| 61:14;113:22; | solids (3) | specific (5) | 123:9;124:6;129:6 | 127:9 |
| 115:5;116:24;117:10, | 21:4,9,14 | 11:25;75:12,13; | starts (1) | structural (2) |
| 13 | soluble (1) | 82:17;125:4 | 74:14 | 115:11;118:16 |
| sized (2) | 18:9 | specifically (1) | state (9) | structure (5) |
| 107:1,2 | solution (1) | 75:14 | 24:10;42:3;48:18; | 20:14;42:25;43:16, |
| sizes (2) | 18:14 | specify (1) | 52:1;70:6;78:24; | 17;61:1 |
| 117:14;118:14 | somebody (4) | 13:13 | 79:21,24;83:3 | studies (2) |
| skip (1) | 72:11,19;124:22; | Speeney (23) | statement (3) | 22:5;54:20 |


| stuff (3) | 21:3,9,14,24 | tenants (2) | three- (1) | 47:11,18,22;48:1,7, |
| :---: | :---: | :---: | :---: | :---: |
| 16:2;35:21;70:21 | swear (1) | 90:23;105:23 | 87:2 | 11,19;49:2,7 |
| style (1) | 78:16 | tend (1) | three-bedroom (4) | total (7) |
| 11:13 | switch (1) | 13:14 | 84:8;101:2;116:5; | 12:15;21:24;89:1; |
| subject (4) | 95:9 | term (1) | 119:25 | 91:2;95:13,16;97:19 |
| 15:10;78:3,4;129:1 | switchgrass (1) | 41:7 | three-bedrooms (3) | totally (1) |
| submission (5) | 20:23 | terms (7) | 83:6;84:11,14 | 106:12 |
| 80:20,21;94:3; | sworn (3) | 15:9;17:10;40:1; | three-story (9) | touch (1) |
| 113:6,9 | 9:15,19;78:22 | 68:15;69:10;75:24; | 86:23;88:1,1;90:4, | 89:24 |
| submit (1) | synthetic (7) | 108:2 | 5;92:22,25;99:9,10 | towards (7) |
| 70:4 | 14:5,11,20;15:20; | test (3) | throughout (3) | 11:22;25:6,7;27:17; |
| submitted (18) | 50:15,23;51:10 | 26:18;37:21;41:4 | 21:1;24:10;91:9 | 28:4;93:3;99:9 |
| 24:1;81:5,12,21; | system (30) | tested (2) | throw (2) | town (6) |
| 82:12;83:10;86:20; | 25:2;28:2;29:15,21; | 38:4;107:21 | 85:22;106:9 | 70:16,18;71:1; |
| 89:20;97:10;98:9; | 33:14,19;34:24;35:1, | testified (2) | thumb (1) | 72:22,23;73:1 |
| 100:24;102:6,22; | 13,13,20;37:7,15; | 14:22;79:20 | 80:8 | township (3) |
| 104:12,24;111:14; | 38:7,9,23;39:13,18; | testifies (1) | tie (1) | 69:5,23;96:24 |
| 113:6;119:3 | 43:4;45:9,17;46:8,13, | 78:22 | 47:12 | townships (1) |
| sub-portion (1) | 23;47:3,5;56:12; | testify (4) | tied (1) | 69:21 |
| 37:8 | $61: 19 ; 89: 7 ; 109: 21$ | 9:16;82:4;114:6; | 45:13 | township's (1) |
| substantially (1) | systems (5) | 124:21 | Tier (1) | 69:9 |
| 112:17 | 19:17;22:16;36:11; | testifying (1) | 24:3 | toxic (2) |
| sudden (1) | 55:22;61:12 | 82:7 | times (5) | 16:18;18:16 |
| 39:12 |  | testimony (21) | 14:23;15:24;30:20; | toxicity (1) |
| sufficient (3) | T | 7:23;8:11,12,17,24; | 50:4;96:20 | 56:2 |
| $\begin{aligned} & \text { 38:6;39:1;46:24 } \\ & \text { suit (1) } \end{aligned}$ | talk (17) | 41:25;42:11;63:23 64:23;66:2;67:15; | titled (2) 89:12;100:24 | traditional (1) 103:12 |
| 45:20 | 7:13;14:1;16:8; | 78:16;82:25;112:2, | TLE (1) | traffic (4) |
| Suite (2) | 17:4;19:10,12;30:22; | 16;115:2;123:15; | 6:23 | 60:1;128:24;129:3, |
| 9:14;78:21 | 36:6;48:12;56:23; | 124:19;125:4;127:17; | today (8) | 6 |
| summertime (3) | 82:14;84:21;88:6; | 131:6 | 8:9;10:22;25:1,5; | transcript (1) |
| 17:13,15;50:5 | 92:2;115:14,19;119:5 | testing (3) | 27:11;28:4;29:22; | 65:16 |
| supersedes (1) | talked (3) | 54:24;67:4,5 | 45:2 | transcripts (2) |
| 10:23 | 24:21;53:2;64:4 | testings (1) | today's (2) | 65:15;66:6 |
| Supplemental (2) | talking (8) | 107:22 | 10:20;86:14 | transition (1) |
| 10:16,21 | 7:11;10:4;15:10,13; | tests (2) | together (3) | 13:20 |
| supposed (1) | 35:10;64:5;70:1; | 51:3;54:16 | 30:9;103:9,10 | $\boldsymbol{\operatorname { t r a p }}$ (1) |
| 70:18 | 87:14 | Thanks (1) | told (2) | 53:8 |
| surcharging (1) | talks (1) | 56:24 | 121:24;122:21 | trapped (1) |
| 37:15 | 36:12 | Theresa (1) | tolerant (1) | $22: 14$ |
| Sure (32) | tall (1) | 127:20 | 12:10 | traps (2) |
| 12:1;14:3;24:7; | 12:11 | thinking (3) | Tom (2) | 21:14;53:9 |
| 30:17;67:18,23;68:7, | taller (1) | 17:9;43:24;53:6 | 48:23;73:12 | trash (23) |
| 17;71:7;73:19;75:17; | 99:23 | thins (1) | tonight (5) | 95:19,22,23,24,24; |
| 79:11;80:17,17;81:3; | $\boldsymbol{\operatorname { t a n }}(1)$ | 53:25 | 6:17;7:9;9:1;65:20; | 96:1,2,3,6,7,19; |
| 82:10;83:13,23; | 107:5 | third (1) | 112:7 | 101:14;105:22,25; |
| 95:15,15,21;102:4,13; | $\boldsymbol{\operatorname { t a p }}$ (1) | 83:16 | took (3) | 106:1,3,5,6,8,11,12, |
| 105:12;119:10;120:2, | 37:3 | Thirteen (1) | 85:4;103:25;129:24 | 19;110:11 |
| 7,22;121:11;123:25; | tapping (1) | 117:16 | $\text { top }(8)$ | travels (1) |
| 127:7;130:7 | 39:15 | though (3) | 11:20;32:8;49:6; | 49:8 |
| surface (8) | technical (1) | 28:25;81:7;98:11 | 91:23;103:14,17; | treat (7) |
| 16:25;22:12;26:17, | 19:13 | thought (7) | 108:1;109:7 | 31:8,13;45:25;46:4; |
| 20;57:16;58:17;88:8; | techniques (6) | 17:3;40:11;60:2; | topic (1) | 50:8;52:19;93:8 |
| 89:4 | 92:1;93:6;103:1; | 61:23;72:7;125:5; | 13:21 | treated (5) |
| surfaces (4) | 111:15,20,23 | 130:12 | topography (1) | 15:16;18:23;30:2; |
| 18:25;19:7,22;46:1 | Technology (1) | thoughts (1) | 104:15 | 52:19;93:9 |
| surrounding (1) | 79:16 | 59:24 | topography-wise (1) | treating (2) |
| 85:7 | telling (1) | three (17) | 64:8 | 15:13,19 |
| surveys (1) | 73:6 | 15:13,14;21:11; | TOSCANO (30) | treatment (7) |
| 48:20 | tempt (1) | 52:6;74:8,19;75:3; | 42:17,18,22;43:5,7, | 15:9;17:4;20:7; |
| survivability (2) | 13:16 | 86:23;87:1,3,12,18; | 18,23;44:1,6,11,14, | 21:12,16,20;50:2 |
| 68:4,14 | tenant (2) | 94:21;97:24;99:21; | 19,21;45:4,11,19; | treatments (5) |
| suspended (4) | 96:2;99:17 | 105:14;118:8 | 46:5,11,14,16,21; | 18:5;50:14;51:1,2,8 |


| treats (2) | tying (1) | 5;102:10,10,14,14; | 106:6;113:12,18,22 | view (3) |
| :---: | :---: | :---: | :---: | :---: |
| 35:24;53:10 | 47:8 | 104:25,25;105:2,7,18, | Utility (2) | 11:2;95:14;104:1 |
| tree (5) | type (9) | 20;106:19;107:12; | 36:17,23 | vinyl (1) |
| 70:25;71:25;72:2, | 13:18;53:7;54:23, | 109:1;111:5;113:23; | utilized (1) | 92:13 |
| 15;75:13 | 24;84:3,3;87:16; | 114:21;115:24;117:5, | 120:7 | violation (3) |
| trees (20) | 113:8,8 | 6,13;118:7,8,9;119:8, |  | 73:6;76:6,9 |
| 11:7;12:9,15;20:24, | types (4) | 9;123:2 | V | virtue (1) |
| $\begin{aligned} & 25 ; 59: 3 ; 64: 5 ; 70: 19 \\ & 23 ; 71: 3,14 ; 72: 25 ; \end{aligned}$ | 12:2;86:22;107:23, $24$ | $\begin{array}{\|c} \text { university (1) } \\ 54: 20 \end{array}$ | vacuums (1) | $\begin{gathered} 24: 19 \\ \text { visible (1) } \end{gathered}$ |
| 74:10,11,14;75:2,7,8, | typical (3) | Unless (2) | 33:17 | 99:18 |
| 11,20 | 111:5;115:21; | 50:7;128:9 | valve (1) | vision (1) |
| triangle (1) | 127:24 | unlikely (1) | 37:25 | 52:6 |
| 59:11 | typically (5) | 129:7 | valves (1) | volume (19) |
| trickle (2) | $13: 12,12 ; 71: 18$ | unwanted (1) | 38:1 | $24: 18 ; 25: 16,18,23$ |
| 29:4,10 | $72: 4 ; 76: 1$ | 16:17 | valving (1) | $26: 4,8 ; 29: 3 ; 31: 16,18$ |
| truck (2) |  | up (69) | 37:4 | 19;32:1,24;35:4; |
| 96:8,9 | $\mathbf{U}$ | 8:4,17,18,21;9:10; | van-size (1) | 45:25;58:12,19; |
| true (3) |  | 13:3;15:3;16:23; | 100:1 | 106:14,15,20 |
| 45:7;51:15;59:7 | UHAC | 17:21;19:7;22:23; | variable (1) | voluminous (1) |
| truth (3) | 84:16 | 25:8;27:18,18;28:1; | 41:7 | 20:20 |
| 78:17,18,18 | ultimate (1) | 33:10,19;37:6;40:16; | varies (2) |  |
| try (3) | 44:3 | 41:19,22;42:3,4,10, | 61:17;88:14 | W |
| 19:13;77:5,7 | under (6) | 19;52:5;56:14;58:19; | variety (1) |  |
| trying (5) | 24:3;59:1;62:5; | 61:18;65:21;67:7; | 11:3 | Wait (1) |
| 15:4;52:5;58:18,21; | 69:9,19;88:10 | 70:15;72:1,12;74:18; | various (3) | 116:10 |
| 126:5 | under-building (1) | 80:3,22;83:15,16; | 22:5;24:10;107:23 | waiting (1) |
| tuck-under (1) | 88:9 | 85:20,23;87:24;88:5; | vary (4) | 56:18 |
| 90:3 | underdrain (8) | 92:5;95:5,7;96:6,9, | 15:1;88:23,24; | walk (4) |
| turn (3) | 25:2,15;42:23,24; | 20;98:18,20;99:16, | 118:9 | 71:24;72:14;73:4; |
| 92:5,6;128:15 | 43:11,21;44:8;56:12 | 18;101:10;104:15; | vegetation (7) | $113: 10$ |
| two (38) | underdrains (1) | 105:15;106:17; | 21:13,13,15,20; | walking (2) |
| 10:25;19:8,22;24:5; | $20: 13$ | 108:15,20,22;109:19, | 22:15;68:1;71:11 | 70:25;113:19 |
| 29:8;31:23;37:21; | underground (11) | 23;111:20,23;115:21; | vehicles (1) | wall (4) |
| 38:21;43:1;45:7,10; | $34: 17,24 ; 35: 1,12$ | $116: 24 ; 123: 21 ; 125: 2$ | $11: 5$ | 11:20,21;66:13; |
| 46:4;47:16;53:11; | $13,15,20 ; 45: 17,24$ | $126: 3$ | vehicular (1) | $107: 23$ |
| 59:24;74:19;83:17; | 46:8,13 | uphill (1) | 19:2 | walls (7) |
| 86:22;87:11,17; | underlain (1) | $92: 19$ | velocity (3) | 52:20;65:5;66:14; |
| 89:10;90:20;94:18, | 20:11. | upon (2) | 60:22;61:3,5 | 85:24;86:3;107:20; |
| 19,19,20;101:15; | underlying (2) | 26:4;88:15 | vendors (1) | 118:16 |
| 102:5;103:4,5; | 25:3;59:8 | upper (2) | 18:7 | wants (1) |
| $108: 25 ; 122: 7,10,11$ | underneath (1) | 115:25;116:1 | version (4) | 71:22 |
| $15 ; 129: 1,22 ; 130: 8$ | $92: 25$ | upper-most (1) | 81:5,15,17,20 | Warren (1) |
| two-and (1) | understandable (1) | 111:17 | versions (1) | 57:12 |
| 86:23 | 44:12 | Urban (1) | 80:19 | washed (3) |
| two-bedroom (16) | unexcavated (1) | 7:10 | VETTER (44) | 16:25;21:5;22:9 |
| $82: 24 ; 83: 7 ; 113: 15$ | 90:10 | urge (1) | 57:5,6,9,13,15,20, | washes (1) |
| $114: 14,14,15 ; 115: 25$ | uniform (3) | 127:9 | 25;58:4,8,11,16,25; | 21:22 |
| 117:12,19;118:7; | 14:24;15:23;50:17 | use (15) | 59:9,17,20,23;60:11; | Wasko (2) |
| 119:9,17,20,22; | unit (32) | $16: 11 ; 18: 7 ; 51: 25$ | 61:14,20,24;62:2,7, | 79:2,12 |
| 120:12;121:3 | 83:17;84:3,3,8; | $66: 24 ; 76: 7 ; 77: 12,14$ | 11,14,19,24;63:3,6,8, | waste (2) |
| two-bedrooms (5) | 89:10;97:14,16; | 92:1,1;103:1;120:5,5, | 19,22;64:2,7,12,16, | 34:12;57:22 |
| 82:23,24;84:8,10, | 98:12;107:11,11; | 13,14,15 | 19,24;65:2,8,12;66:4, | watch (2) |
| 13 | 110:22;111:3,3,25; | used (6) | 7,10,15 | 65:19;66:6 |
| two-hour (1) | 113:1,4,5,8,10,19,24; | 16:10;18:2;22:11; | V-E-T-T-E-R (1) | Watchung (2) |
| 89:9 | 114:3,8,16;115:15,16; | 29:10;111:15;120:3 | 57:9 | 48:8;60:1 |
| twos (1) | 116:5;118:10,24; | users (1) | viable (1) | water (52) |
| 91:2 | 119:3,21;121:4 | 39:21 | 13:23 | 18:9;19:21;20:7,13; |
| two-split (1) | units (52) | uses (2) | viburnum (2) | 21:12;22:2,15;24:17; |
| 97:24 | $38: 2 ; 82: 16,19,19,$ | 15:6;18:6 | 12:18,18 | 25:13;26:5,6,8,24; |
| two-story (3) | 20,21,22;83:7,8,14; | using (7) | video (2) | 27:12;29:7,10;33:7; |
| 88:2;90:4;99:11 | 90:12,19,20,25;95:1, | 15:20;17:20;18:12, | 65:19;66:6 | 34:21;35:24,25,25; |
| two-year (1) | 5,12,16,17;97:13,19, | 14;30:12,14;51:10 | videoing (1) | $36: 1,11,13,14 ; 37: 1 \text {, }$ |
| 74:3 | 22,23;100:25;101:1, | Usually (4) | 65:18 | 21,23;38:8;39:13; |


| 42:25;45:14;46:19, | 16:7;19:19;20:17; | 59:7,13,19,21;60:10, | 22;32:2;49:25;50:2,4; | 118:12,13 |
| :---: | :---: | :---: | :---: | :---: |
| 22;47:8,10,15;53:25; | 33:11;42:23;49:1; | 23;61:17,22,25;62:4, | 1:8;73:3;74:12; | 10th (17) |
| 58:12,16,19,22;59:4, | 51:23;52:5;78:17; | 10,13,16,23,25;63:4, | 121:25;126:10 | 124:8,14,18; |
| 4,6;60:3,12,16;61:10, | 109:16 | 7,16;65:10;66:12; | years (10) | 125:10,11;126:21; |
| 20,23,25 | whomever (1) | 67:4,6,12,20;68:5,17, | 31:23;33:18;43:2 | 127:1,3,13,15,18; |
| waterfall (1) | 71:22 | 25;69:6;70:3;79:4,23; | 73:17;74:8,19;75:3,3; | 128:1,23,24;129:17, |
| 61:8 | Whoops (1) | 80:5,17;81:3,9,17; | 79:15,19 | 25;131:8 |
| waterline (2) | 97:15 | 82:3,10;83:23;84:2,6, | younger (2) | 11 (2) |
| 36:7;70:18 | who's (4) | 18;85:16;86:19; | 122:20,24 | 91:2;118:11 |
| way (15) | 7:14,15;71:3,3 | 88:23;89:19;91:5,20; | Yup (2) | 1163 (1) |
| 15:22;37:15;45:20; | wide (1) | 92:18,23;93:5,19; | 51:14;110:6 | 118:11 |
| 61:10;62:7;67:20; | 60:19 | 94:6,13,25;96:12,23; |  | 1180 (1) |
| 85:11,19;95:5,6 | widely ( | 97:1,9;98:8;99:2,10, | Z | 118:10 |
| 96:13;104:1;107:4; | 15:1 | 24;100:11,23;101:19, |  | 1183 (1) |
| 122:12;127:24 | width (1) | 25;102:4,21;103:16, | zero (1) | 118:10 |
| ways (5) | 88:23 | 19,23;104:4,11,23; | 59:18 | 12 (4) |
| 21:11;88:8;89:10; | wildlife | 105:3,6,19;106:2,12, | Zone (3) | 18:19;40:16;91:2; |
| 96:13,13 | 4:18;26:3,7 | 18,24;107:6;108:3; | 6:13;63:14 | 102:11 |
| weather (2) | willing (2) | 109:9,13,17,25;110:2, | zoning (7) | 12-inch (4) |
| 22:21;68:24 | 124:18;126 | 24;111:2,13;112:4,8, | $71: 20 ; 72: 1,5,8,15$ | 20:12;37:2,23; |
| weed (1) | windows (1) | 14,25;113:4;114:5,9, | $75: 24 ; 76: 1$ | 46:24 |
| 53:22 | 92:13 | 17,19;115:1,6,9; |  | 13 (7) |
| weeds (3) | Wine (1) | 116:8,20,24;117:9,17, | 0 | 12:15;83:25;84:4 |
| 17:17,19,21 | 60:3 | 25;118:6,13;119:2; |  | 13;89:7;101:1;102:14 |
| welcome (3) | winter-storm | 121:7,11,15;123:1,18 | 0 (1) | 13-and-a-half (1) |
| 35:18;49:11;56:25 | 17:4 | witnesses (2) | 59:2 | 18:20 |
| Weldon (3) | wintertime (2) | 127:18;128:14 | 07927 (1) | 14 (5) |
| 8:19;128:5,13 | 18:12;22:18 | wondering (2) | 9:15 | 60:6,8,14,20;61:7 |
| well-designed (1) | witch (1) | 52:25;53:22 | 08530 (1) | 140 (2) |
| 123:4 | 12:17 | wooded (2) | 78:22 | 37:23;38:21 |
| wells (5) | within (24) | 26:14;61:8 |  | 142 (1) |
| 24:18;26:3,7,15,15 | 15:2;21:14;22:1 | woods (6) | 1 | 82:23 |
| well-treated (1) | 28:10;29:19;30:1; | 59:1,2,14;60:14,1 |  | 15 (4) |
| 22:3 | 35:22;37:7,8,15;38:2, | 61:10 | 1 (16) | 12:25;28:17;43:24; |
| westerly (1) | 7,8,11,12,23;49:4; | words (1) | 32:1;40:16;45:11; | 61:17 |
| 27:16 | 60:21;61:18,24; | 32:10 | 46:6;66:13;89:13,16, | 15-and-a-half (1) |
| western (2) | 67:21;68:1;91:12 | work (9) | 19;90:6;91:3,5,17,21; | 27:3 |
| 27:16;102:25 | 126:16 | 66:23;67:3;69:21; | 92:15;93:16,19 | 15-inch (1) |
| wetland (10) | without (5) | 73:9;85:8;86:2;124:9; | 1,550 (1) | 61:20 |
| 29:16,25;30:4,5; | 13:19;16:12;19:2,5 | 127:2,6 | 38:4 | 15th (1) |
| 32:9,11;33:2,5,12; | 57:20 | worked (2) | 1,635 (1) | 36:23 |
| 56:19 | witness (218) | 51:9;84:23 | 38:5 | 17 (1) |
| wetlands (9) | 8:20;10:19;11:19; | works (3) | 10 (16) | 6:19 |
| 16:4;25:5;28:16; | 12:1,3,13;13:7;16:8 | 61:11;124:1 | 6:12;12:5,13;30:20; | 17th (3) |
| 29:10,18,22;32:23; | $17: 11 ; 23: 1,24 ; 24: 16$ | 125:10 | $59: 2,3 ; 60: 13,15,15,$ | 6:23;82:2;129:18 |
| 46:1;85:7 | 20;25:1;26:10;29:14; | worried (1) | 17;65:9;66:18;73:16; | 18 (4) |
| What's (11) | 30:14,18;31:9,12,20, | 56:1 | 77:4;83:6;84:10 | 94:18;98:1;122:20, |
| 24:17;44:1;49:3; | 24;32:13,17,20,25; | worry (3) | 10,000 (1) | 24 |
| 62:4,8;67:25;71:2; | 33:22;34:11,18,21,24; | 13:19;35:5;55:20 | 38:25 | 182 (1) |
| 73:9;103:13;114:15; | 35:3,6,12,18,24; | worst (1) | 10:07 (1) | 57:6 |
| 127:4 | 36:20;39:16,24; | 44:4 | 131:12 | 184 (1) |
| Whenever (1) | 40:14,20;41:3,14; | wrapped (1) | 100 (4) | 82:19 |
| 48:24 | 42:13,16,21;43:3,6, | 43:14 | 9:14;30:16;68:20; | 185 (1) |
| Whereupon (23) | 14,19,25;44:3,7,13, |  | 114:11 | 42:18 |
| 10:15;36:17;77:20 | 18,20,23;45:10,13,23; | X | 100-foot (3) | 19.01 (1) |
| 80:25;86:15;89:16; | 46:10,12,15,17;47:7, |  | 63:14,17,20 | 6:12 |
| 91:17;93:16;94:10; | 14,21,23;48:15; | XYZ (1) | 100-year (4) | 19.02 (1) |
| 97:6;98:5;100:8,20; | 49:11;50:3,7,15,21; | 72:18 | 31:22,24;32:2;35:7 | 6:12 |
| 102:1,18;104:8,20; | 51:6,19,24;52:10,13; |  | 105 (1) | 19-01 (1) |
| 111:10;112:11;113:1; | 53:9,15,18;54:5,18, | Y | 78:21 | 6:10 |
| $\begin{aligned} & \text { 118:24;124:13; } \\ & 131: 11 \end{aligned}$ | 25;55:5,13,19,23; 56:7,10,22,25;57:18, |  | $\begin{gathered} 107(2) \\ 89 \cdot 1 \end{gathered}$ | $\begin{gathered} \text { 1-inch (1) } \\ 58: 13 \end{gathered}$ |
| whole (10) | 24;58:1,6,9,14,22; | 14:23;17:12,16,20, | $1083 \text { (2) }$ | 1's (1) |


| 93:24 | 93:25 | 87:4;103:24;104:20, | 983-square-foot (1) |  |
| :---: | :---: | :---: | :---: | :---: |
| 2 | $\begin{aligned} & \text { 34-and-a-half (2) } \\ & 94: 1 ; 97: 25 \end{aligned}$ | $\begin{aligned} & \text { 24,24;105:10,13,19; } \\ & \text { 111:10,14;112:11,15; } \end{aligned}$ | $\begin{aligned} & \text { 118:10 } \\ & \mathbf{9 8 7}(\mathbf{4}) \end{aligned}$ |  |
| 2 (10) | 63:9 | 6,000 (2) |  |  |
| $\begin{aligned} & \text { 45:12;46:6;94:10, } \\ & \text { 13;97:12;98:5,9,11; } \end{aligned}$ | 4 | $38: 15,23$ $\mathbf{6 0 0}(\mathbf{2})$ |  |  |
| 100:8,12 |  | 115:25,25 |  |  |
| 2/18/2020 (1) | 4 (15) | 645 (1) |  |  |
| 77:24 | 12:24;20:2;87:3; | 117:1 |  |  |
| 20 (9) | 100:20,24,25;101:17, | 680 (4) |  |  |
| 27:5;38:18,22; | 19;102:8,12,13,18,22; | 114:4,8;116:25; |  |  |
| 43:24;79:15,19;83:4, | 104:8,12 | 117:2 |  |  |
| 5;88:24 | 400 (1) | 6-inch (1) |  |  |
| 2019 (1) | 71:3 | 20:11 |  |  |
| 36:24 | 40-acre (1) |  |  |  |
| 2020 (2) | 27:3 | 7 |  |  |
| 82:2;126:17 | 41 (1) |  |  |  |
| 21 (2) | 15:10 | 7 (1) |  |  |
| 105:21;110:13 | 41-acre (1) | 15:17 |  |  |
| 22 (6) | 18:18 | 7:30 (2) |  |  |
| 25:8;28:3,5,6; | 42 (1) | 128:2;131:8 |  |  |
| 36:22;66:13 | 82:22 | 7:45 (1) |  |  |
| 23 (1) | 45 (4) | 5:3 |  |  |
| 91:1 | 103:23;104:24; | 72 (1) |  |  |
| 230 (1) | 105:1;110:15 | 67:21 |  |  |
| 82:18 | 46 (2) | 7402/7403 (1) |  |  |
| 240 (1) | 70:13;82:20 | 6:12 |  |  |
| 31:11 | 46,000 (1) | 760 (2) |  |  |
| 24-hour (1) | 58:5 | 117:2,7 |  |  |
| 32:3 | 4-feet (1) | 790 (2) |  |  |
| 25 (3) | 60:19 | 117:8,10 |  |  |
| $\begin{aligned} & \text { 49:15,23;88:24 } \\ & \mathbf{2 5 0 , 0 0 0 ( 1 )} \end{aligned}$ | 5 | 8 |  |  |
| 58:9 |  |  |  |  |
| $26(3)$ | 5 (11) |  |  |  |
| 82:23;95:16;97:21 | $6: 12 ; 12: 24 ; 102: 1,7,$ | $12: 5,13 ; 118: 4$ |  |  |
| 27 (1) | 8,10,19,22;103:21; | 80 (4) |  |  |
| 83:8 | 104:9,12 | 27:6;37:24;78:21; |  |  |
| 2-and-a-half (2) | 5:21-5.3 (1) | 79:2 |  |  |
| 12:19;75:2 | 36:12 | 85 (1) |  |  |
| 2-foot (3) | 500 (1) | 68:14 |  |  |
| 20:10;25:11,11 | 126:10 | 892-square-foot (2) |  |  |
|  | 500-year (2) | 119:18;121:4 |  |  |
| 3 | 32:5;59:24 | 8-inch (1) |  |  |
|  | 50-foot (2) | 61:25 |  |  |
| 3 (13) | 63:15,17 | 8-inches-plus (1) |  |  |
| 11:2;43:21;97:6,10, | 54 (4) | 32:3 |  |  |
| $\begin{aligned} & \text { 21;98:5,9,11,25;99:2; } \\ & 100: 8,12,13 \end{aligned}$ | $\begin{aligned} & 9: 14 ; 100: 25 ; 101: 1 ; \\ & 102: 14 \end{aligned}$ | 9 |  |  |
| 3/10 (1) | 56 (2) |  |  |  |
| 128:7 | 102:10;104:2 | 90 (2) |  |  |
| 3/31/20 (1) | 560 (2) | 21:25;54:13 |  |  |
| 6:14 | 116:9,21 | 900 (1) |  |  |
| 30 (2) | 57 (1) | 116:1 |  |  |
| 65:9;73:8 | 12:22 | 913 (2) |  |  |
| 30th (1) | 5-and-a-half (4) | 83:17;117:19 |  |  |
| 125:22 | 18:19;27:4;58:3,6 | 930 (1) |  |  |
| 31st (10) |  | $117: 14$ |  |  |
| $\begin{aligned} & \text { 124:8;125:23,24; } \\ & \text { 126:17;129:8,9,10,13, } \end{aligned}$ | 6 | $\begin{array}{\|l} \mathbf{9 6 7}(\mathbf{2}) \\ 117: 22,23 \end{array}$ |  |  |
| 16,19 | 6 (16) | 983 (1) |  |  |
| 34 (1) | 12:19;33:11;36:22; | 118:9 |  |  |

