

**CITY OF NEWARK  
DELAWARE**

**PLANNING COMMISSION  
GREEN BUILDING CODE WORK GROUP  
MEETING MINUTES**

**January 22, 2019**

**3:30 p.m.**

Present at the 3:30 p.m. meeting were:

**Chairman:** Will Hurd

**Members Present:** Jeremy Firestone  
Rob Jadick  
Stacy McNatt  
Tim Poole  
Reid Rowlands

**Members Absent:** George Irvine  
Ben Prettyman  
Vacancy (Conservation Advisory Commission)

**Staff Present:** Mary Ellen Gray, Planning and Development Director

Mr. Will Hurd called the Green Building Code Work Group meeting to order at 3:40 p.m.

**1. INTRODUCTIONS**

Mr. Hurd: Okay, so everyone who said they were attending, is attending. Everyone who gave no response is not here.

Mr. Reid Rowlands: It doesn't mean they're not attending.

Mr. Hurd: Sometimes it does and sometimes it just means they didn't look at the email.

Mr. Tim Poole: If they're late, we probably shouldn't depend on them.

Mr. Rowlands: No, that's true.

Mr. Hurd: Alright . . .

Mr. Rowlands: Did I miss the note not to print this out?

Mr. Hurd: No, because we didn't have a note. I think Tim pointed out that at letter size it was really tiny . . .

Mr. Rowlands: That is true.

Mr. Hurd: Which I didn't realize when I produced it, so Michelle very kindly made it big and now it's . . .

Mr. Poole: Well, it was designed at 11 x 17 so it should be printed at 11 x 17.

Mr. Hurd: This is true. I think I probably just, when I made the PDF, it was just default set up to letter size.

Hello everyone. One new arrival, well [inaudible]

Mr. Rob Jadick: I apologize . . .

Mr. Hurd: Just a brief introduction.

Mr. Jadick: Sure. Thanks for having me. I'm Rob Jadick and I'm with Bancroft Construction Company. I'm serving in the capacity of a project executive for Bancroft. I've been with Bancroft for the past, it will be 20 years this year in various capacities. I was a project manager, shifted over to business development, director of marketing for a while, and now a little bit more integrated into the project level as PX. I've actually run projects that have been LEED-certified as project manager within the State of Delaware, so I do bring that up close and personal administrative project management history and hopefully it will be of help as we go through this.

Mr. Hurd: And Stacy, welcome.

Ms. Stacy McNatt: Hi, how are you?

Mr. Hurd: Fine. Do you want to do a brief introduction because I think this is your first time here?

Ms. McNatt: Sure, yes.

Mr. Hurd: Or do you want to settle first for a few seconds?

Ms. McNatt: No, I'm fine. Stacy McNatt. I'm on the Planning Commission for District 3. I also am a professional engineer and I work for New Castle County government as a civil engineer that deals mostly with construction management and repair of [inaudible] parks and stormwater management facilities as well as the, in residential and non-residential locations.

Mr. Hurd: Okay.

Ms. McNatt: Any questions on that?

Mr. Poole: Do you want to introduce all of us to them?

Mr. Hurd: We could do that too, because you don't know who we are.

Mr. Poole: Tim Poole. I'm Code Enforcement with the City.

Mr. Jeremy Firestone: Jeremy Firestone. I used to be on the Planning Commission and I'm also a University of Michigan, excuse me, Delaware . . .

Ms. McNatt: What, are you moving?

Mr. Firestone: I've got a couple degrees from there. I'm a University of Delaware professor and I work mostly on wind power related aspects. More on the policy analysis side.

Mr. Rowlands: And I'm Reid Rowlands, longtime resident, or now ex-resident, I guess, just north . . .

Mr. Hurd: Borderline resident.

Mr. Rowland: Very border. I can see Delaware. I have a building supply company, World Class Supply, mostly involved in the Passive House movement. I bring the Passive House element. I'll keep pushing that.

Mr. Hurd: I'm Will Hurd, as you know, Planning Commission Chair and architect interested in sustainable design since the middle of my college career.

## 2. CHAIR'S REMARKS

[Secretary's note: Chair's remarks occurred after approval of the November 27, 2019 and December 18, 2018 Green Building Code Work Group meeting minutes.]

## 3. MINUTES OF THE NOVEMBER 27, 2019 AND DECEMBER 18, 2018 GREEN BUILDING CODE WORK GROUP MEETINGS

Mr. Hurd: Two orders of housekeeping that we just need to get rid of before we get into things, and that is approval of the minutes from the November 27 meeting and the December 18 meeting because we didn't have a quorum then. Motion to approve?

Mr. Poole: I'll make a motion.

Ms. McNatt: I'll second.

Mr. Hurd: We're approving both, too.

Ms. McNatt: I second both.

Mr. Hurd: Is everybody good? Alright, all approved.

MOTION BY POOLE, SECONDED BY MCNATT THAT THE MINUTES OF THE NOVEMBER 27, 2018 AND DECEMBER 18, 2018 GREEN BUILDING CODE WORK GROUP MEETINGS BE APPROVED. MINUTES ARE APPROVED BY ACCLAMATION.

Mr. Rowlands: That means we each reviewed the 37 pages . . .

Mr. Hurd: Yes, we did.

## 2. CHAIR'S REMARKS:

Mr. Hurd: Alright so naturally we jumped around a little bit. I have very brief Chair's remarks just because, I don't know, there's a lot, when I was reading the minutes for the last month's meeting, there were a number of threads that were kind of churning in there and I wanted to kind of summarize how I saw the conversation was leading. I think there's still support or reasonable support for having separate residential and commercial paths in the Energy Code amendments that we do, unless we see something that's truly new on that. I think there was support to shift the residential code down from I think it's currently five units in a subdivision to like three. A three-unit subdivision or more would fall under our purview of the enhanced energy code and shift the commercial building size from 25,000 to 10,000 square feet. The goal being to try to capture a larger percentage of what's getting built in the City. And in terms of the Code itself, I think that the general thrust seems to be that there would be two ways that you could satisfy the Code. One is through a stretch code provision where we set a percentage, and 20% seems to be where people are sort of settling, so 20% better than the current IECC, verified by a third-party entity. At the moment that mostly seems to be HERS, especially for residential. I don't know if there is a commercial, or if HERS is commercial-based as well. Or if there is a . . .

Mr. Rowlands: I don't know.

Mr. Hurd: So, that's something we have to look into. Is there a similar commercial-based energy evaluation process . . .?

Mr. Poole: ASHRAE 90.1.

Mr. Hurd: Yeah, but who evaluates?

Mr. Rowlands: How do you verify?

Mr. Poole: [inaudible] your record.

Mr. Hurd: Okay, so maybe that's, there's a certification through that process. And then there would be a checklist of items and that's what the bulk of today is going to be covering, that the designer/developer/building can select from. The main difference from what we have now to what we would be proposing would be, one, we'd assign minimum points for the main categories that we're looking at and we would, this is worth of what I pulled out, assign perhaps a percentage as well. If we say, because we're really feeling like energy is really important, we're going to say maybe 50% of the points you provide us have to be in the energy category. Instead of going any 25 that you feel like, which leads people to kind of pick and choose the easier ones and try to force people down a couple of paths.

Then, on top of this would be essentially what's the enhanced energy path that would support the site plan approval development process, which has currently a provision that says you have to be LEED-certified. LEED-certified is the enhanced energy criteria that we're looking to have included in the site plan approval, and to say alright, if we're allowing people a stretch path, what's that percentage above IECC code base that we're looking for and/or is it like LEED silver or it is Green Globes something. You know, basically pull a couple of third-party criteria to say, you know, LEED silver is going to also be a stretch of code and we'll accept that as a comparable thing. Or, again, we have a checklist and maybe this time there's a secondary column for the extended effort that says, okay, it's a really efficient furnace or it's a really efficient [inaudible] or you've actually got onsite renewable energy. Things that we wouldn't want to necessarily have in the initial checklist because it really is a push beyond a 20% kind of gain.

So, that's kind of how I saw last month. Does that kind of jive with people?

Mr. Rowlands: Can I ask a point of clarification?

Mr. Hurd: Absolutely.

Mr. Rowlands: This is the Green Building Code Work Group.

Mr. Hurd: Yes.

Mr. Rowlands: But yet some of your [inaudible] were purely energy. And if we are purely energy, then it kind of moves away from the LEED points system or we restrict it to just energy portions of LEED.

Mr. Hurd: I think the sense from the first meeting was that energy was the key component that we wanted to make sure that the Green Building Code addressed. And when I say Green Building Code, I mean the code amendments that the City makes to the Energy Conservation Code. So, within that realm, I think we wanted to be sure, we wanted to say that whatever path that people go down, we need to make sure that it's addressing energy heavily.

Mr. Rowlands: Right, so we're not just focused as a group on the energy codes here?

Mr. Hurd: Right. Well, so, we're looking at the energy code . . .

Mr. Rowlands: [inaudible]

Mr. Hurd: Well . . .

Mr. Rowlands: Or should we be?

Mr. Hurd: It's a starting point but within that our energy code amendments currently have material checklist, I mean points, and resource points and indoor air quality points, and even site selection points. So, it's a jumping off point. It says conservation [inaudible] but it's also conservation of resources, conservation of, and I guess at the time indoor air quality is kind of a . . .

Mr. Rowlands: It was on there, yeah.

Mr. Hurd: But it's not really a conservation thing but it's falls under that.

Mr. Rowlands: If you're conserving it kind of comes in automatically.

Mr. Hurd: It comes in with everything else, right.

Mr. Rowlands: I mean personally I would put it on just because that's my focus so that's why I would be pushing it.

Mr. Hurd: Right.

Mr. Rowlands: But I need to know where we're going. If it's purely energy, then . . .

Mr. Hurd: No, I think the sense of the committee at least before is that it's energy, it's resources, and it's indoor air quality are the three things we want to be sure that these amendments address. That said, energy is the bulk of the things that we felt needed to be addressed.

Mr. Rowlands: And when you talked stretch code, that's just energy, period.

Mr. Hurd: That's a good point. It is. So, we . . .

Mr. Rowlands: So, if we go that path, we're eliminating . . .

Mr. Poole: But we could offer options where we have either you get stretch code plus some other thing . . .

Mr. Rowlands: Right.

Mr. Poole: The stretch code where we get 20% on energy and then we have to get some other sort of for some other sort of benefit for the other resource management.

Mr. Rowlands: That may be possible, I mean that's definitely possible, but is it possible to do it? If you go stretch, you're HERS or ASHRAE or some third-party, and now you have to find another third-party for the other one? Wouldn't that make it too complicated/

Mr. Poole: Well, again, what I'm hearing is that we could offer a few different options for people to select from. Either you get the stretch plus, whatever that plus is, or we go with LEED silver or something like that. Or, we meet the checklist.

Ms. McNatt: And then we choose what we, we meaning we propose, not choose, but we propose an alternative points system or checklist that says, okay, you have to meet all of these.

Mr. Poole: Or you have to meet, we're going to give you this many points for this, or this many points for that, and you have to get to 25 or 30 or 50, whatever the points work out that we're going to approve, as the third path, or as the first path.

Mr. Hurd: Right.

Ms. McNatt: And then, sorry, to follow up on your question, or we could also say of this grouping, because they're all in groupings, so you have to do, if you do the checklist, 30% of the checklist has to be energy, 20% of the checklist has to be site design and conservation, or whatever, and the third is resources. You could do it that way, as well.

Mr. Hurd: Right. I think there were a couple of things that were being talked about and I think, to me, I don't want to go too far in supporting like specific numbers attached to this until we've kind of broken the checklist down some. But there was a sense of there wanted to be a minimum amount of work being done in each of the groups or areas. Plus, some way of kind of keeping the balance such that there is twice as much work being done to address energy as there is resources or something. But something so that people don't go, well, I did my six energy points and now I'm going to go do water. It's like well that's nice but it's still not . . .

Mr. Poole: Say we need to get to thirty points. You have a minimum of ten points here, five point here, and 5 points here. The other ten you can find your own within the criteria.

Mr. Hurd: But with a sort fixed ratio.

Mr. Firestone: They're electives.

Mr. Poole: What?

Mr. Firestone: They're electives.

Mr. Hurd: Electives, exactly.

Mr. Jadick: I think it's important to maintain that flexibility because by selecting some, I think you're going to be at a disadvantage to choose others that might be on that list naturally.

Mr. Hurd: Yeah.

Mr. Jadick: You know, they almost cancel themselves out. So, as this gets developed, we need to keep that flexibility in mind.

Mr. Hurd: But I think what you were pointing out, and I hadn't really picked up on this when I was first thinking about it, if we say that you can either do our checklist or a stretch goal of 20%, that only is energy because energy is envelope and energy usage really. And it does not address resources and indoor air quality, which are two areas that we wanted to have addressed. So, it may be a conversation post this to go, is the 20% improvement in energy performance enough for us to kind of ignore the other two for buildings?

Mr. Poole: Go with thirty or forty.

Mr. Hurd: Or do we push it and say, okay, you're off the hook for material, for resources and such but, guess what, your energy has to be 30% better?

Mr. Poole: Yeah, because if everybody is settling at twenty and we want beyond what everybody else is doing and we're going to say, okay, you're going to get to ignore this, then you have to be that much further in the stretch code.

Mr. Firestone: The, I guess the question though is, I mean you could have one of the two listed as the default and one listed as the alternative. I mean if we want to drive people more towards one, then we list it as . . . rather than having them as just pure you can either do A or B, you can say you do A unless you make the case for doing B.

Mr. Hurd: Right.

Mr. Poole: My thought on that was we currently have a checklist and I think if we're going to develop something that's our own concept, then we should have that as first option and then have the stretch code or the LEED whatever standard as the alternative paths, because those are also the ones that are going to be the most costly for the third-party verification. Whereas the checklist can all be done in-house. You will do this, you will do this, you will do this, and there won't be any additional cost to the person building the building beyond the cost of whatever measures you put in.

Mr. Firestone: I mean it's going to be important to get that percentage right.

Mr. Hurd: Yeah.

Mr. Firestone: You know, the trade-off is effectively the trade-off coefficient.

Mr. Hurd: Right. But the challenge is that most of the codes or standards, I mean LEED is probably the only one that addresses all of these areas with some level of, I mean, materials and conservation and such.

Ms. McNatt: Sorry to interrupt but what is the stretch code?

Mr. Hurd: So, the stretch code is a conceptual thing where you just say our energy code requires you to be some percentage, and fifteen to twenty is where a lot of municipalities have settled, better than the code default.

Ms. McNatt: Okay.

Mr. Hurd: But that's all they say.

Ms. McNatt: Okay.

Mr. Poole: And your engineer has to calculate how much energy that house is going to use in a given year assuming that it's normal temperature, it's normal this and that, this is how much energy will be used by that house in a year for heating, cooling, lighting, everything. And then you have to better that by 20%.

Ms. McNatt: Is it only energy related?

Mr. Hurd: It generally is, yes. Because there isn't . . .

Mr. Rowlands: The bottom line is energy related, but it has to do with air tightness, reducing thermal . . .

Ms. McNatt: Okay.

Mr. Rowlands: Things like that.

Mr. Hurd: And this is mostly because the Energy Conservation Code really just addresses energy and the thermal envelope.

Ms. McNatt: But just to clarify, the LEED addresses all of the other things that we're looking at?

Mr. Hurd: Right. But so does Green Globes to some extent. So, does the . . .

Mr. Poole: Green Construction Code.

Mr. Hurd: The Green Construction Code . . .

Mr. Rowlands: Living Building Challenge.

Mr. Hurd: Yeah, I'm not going to bring that up.

Mr. Rowlands: Not going there, are you?

Mr. Hurd: Not even going to talk about that.

Ms. Mary Ellen Gray: The what?

Mr. Hurd: The Living Building Challenge.

Mr. Rowlands: The Living Building Challenge.

Mr. Hurd: It looks to have a building basically be a completely self-contained environment where everything that it consumes is recycled and produced back in and everything is onsite.

Mr. Rowlands: It's a healthy environment.

Ms. Gray: So, the bio-dome . . .

Mr. Hurd: Not quite that but there's very much the . . .

Mr. Rowlands: In materials, you can't use PVC in these buildings?

Ms. Gray: What do you use?

Mr. Rowlands: It's pretty hard to do.

Mr. Hurd: Yeah, that's why . . .

Ms. Gray: Sorry. Thank you for . . .

Mr. Firestone: I think it would be good if this thing wasn't static. So, you know, where if we pick something and we're somewhat picking it based on what we think is reasonably achievable now, but if we write this in such a way that it gets more stringent over time . . .

Mr. Rowlands: That's the beauty of stretch codes though.

Mr. Hurd: Right.

Mr. Rowlands: As the standard code comes up in a couple of years tougher, it's 20% above that.

Mr. Firestone: Right.

Mr. Hurd: It makes the line heading toward net zero faster.

Mr. Firestone: Right, but the points . . .

Ms. McNatt: But you're not going to ignore all this other stuff, are you?

Mr. Hurd: That's what we're trying to figure out.

Mr. Firestone: The points system is not necessarily going to change. I mean part of the reason we're here is because what we did, you know, what was done seven or eight years ago has become standard practice rather than exceptional practice. And . . .

Mr. Hurd: The challenge with the written checklist is that it's a static set of criteria that would need to get reevaluated as sort of the baseline standards shift.

Ms. McNatt: Why? Why can't you just say one of the checklist items is the stretch code for energy or whatever you're going to do, and that could be one of the checklist items and then you can still add . . .

Mr. Hurd: If we write the checklist effectively, we might be able to do that. We might be able to say we're looking for either a certain percentage of say material, or you know that is a certain percentage better than . . .

Ms. McNatt: Because you know where my world sits.

Mr. Hurd: Yeah.

Ms. McNatt: I appreciate energy, but I also think that site design [inaudible] are also part of this whole idea.

Mr. Hurd: Right, and so there are some things that it's just like that's flat-out a better idea to do and we should always just have that be something we do. And then the other thing could be, you know, wall insulation at some percentage more than the code's defined minimum that will always come up.

Mr. Firestone: Well, I guess I'm inclined to go with the stretch code as the default and the other one you can meet, you know, initially by showing XX points. But over time, you're going to have to document that you're doing effectively equivalent performance.

Mr. Poole: But that's also a significant shift in policy of what these are.

Mr. Firestone: Yeah, I . . .

Ms. McNatt: I just don't agree with that at all. I believe we can incorporate it into a checklist item as an item to be addressed, but I don't think it should be the only item. I think that the checklist could provide other items to be addressed, as well.

Mr. Hurd: Part of what came up last month was also . . . or maybe it was the first month . . . the challenge with things like stretch codes is that they require verification, which is an additional cost to the developer, constructing owner or person or whoever. So, the reason that a checklist is something we want to offer is because that is completely in-house, handled by the City and evaluated internally, at effectively no additional cost to the owner.

Mr. Poole: And particularly for single family homes where you're under the residential code where you don't have to have an architect, or you don't have to have an engineer. The only thing that you need that's third-party verification on single-family homes right now is your envelope and duct tightness test which again, for \$200 you can have a HERS rater come out and do both of those items and you don't have to have a design professional design that. You can simply just meet the prescriptive requirements for the code.

Mr. Hurd: I think we generally agree that a single-family home is never going to fall under this set of code because that's not the market that we're trying to shift. But someone building a development with ten homes is the person that we want to hit because that's ten units that we can . . .

Mr. Rowlands: See, I would disagree with that. We should be hitting every building. But you can't hit a single-family residence with an additional cost. It just makes it . . .

Mr. Hurd: Right. Well and I think we may . . .

Mr. Poole: We're reducing it down to three lots on a subdivision . . .

Mr. Rowlands: Oh, we're coming down, I know.

Mr. Poole: That's, you know . . .

Mr. Rowlands: But single-family homes we're not making better and we should be.

Mr. Hurd: But here's the things, we're building hardly any single-family homes in the City. If we were New Castle County, oh yeah, because that's the bulk of what's going to happen. But there are very little empty lots with a home going in on them. I think that's fair to say, correct?

Mr. Poole: A few infill lots but mostly you're getting three to five or twenty lot subdivisions.

Mr. Hurd: Right. We're seeing the redevelopments and we're seeing that kind of stuff, which that's the bulk of what's happening and that's the bulk of, to my mind, what we're trying to address here.

Mr. Rowlands: So, we're lowering the commercial square footage, why not just include all commercial?

Mr. Hurd: We could. I don't know that there's much being . . . I mean, 10,000 is a pretty low number.

Mr. Poole: Yeah, you would, again . . .

Mr. Rowlands: Then just take out 10 and say it's commercial.

Mr. Hurd: Right. I don't have a reason . . . I'm only trying to summarize our conversation last month and one of them was it's currently 25,000 square feet.

Mr. Rowlands: Right.

Mr. Hurd: That seems a little big because there's a lot of stuff coming in underneath it. Just driving here, the building that's going to replace the bank building in the Park N Shop is 10,500. It's like I want that to be under the code.

Mr. Poole: But the bank that's going to be proposed at Newark Shopping Center I think is 5,900.

Mr. Rowlands: And that should be in there. We should be . . .

Ms. McNatt: Why not like 5,000? Five thousand is tiny.

Mr. Rowlands: Why not just commercial?

Mr. Hurd: I have known . . .

Mr. Rowlands: It's easy.

Ms. McNatt: I don't know.

Mr. Hurd: I mean that's why we're here is to say . . .

Mr. Rowlands: It gets down to a 300 square foot and then you're adding costs . . .

Mr. Poole: What about accessory buildings? I mean something that's not a primary place of business but meanwhile they're adding a guard shack. Let's not get crazy.

Mr. Rowlands: No, no, I agree with you.

Mr. Jadick: That's a good point.

Mr. Rowlands: So, just new construction?

Ms. McNatt: Do you have a number of building permits, like, do we know the number of building permits for commercial in the last year? Do you know what I mean?

Mr. Poole: We issued also 1,800 permits, but that includes heater replacements and roofs . . .

Ms. McNatt: Right, I'm just thinking commercial.

Mr. Poole: We could get that information, but I don't have it here.

Ms. McNatt: Right. No, no, I just mean . . .

Mr. Hurd: Would square footage be an easy thing to pull off of that? Or would you actually have to pull the permits to look at the number?

Mr. Poole: I don't know with the reporting. I'd have to get back to you.

Mr. Hurd: Okay. I think for me, if we can pick a number that covers 80% of the construction that say took place last year, that's a starting point.

Mr. Poole: I think 10,000 is definitely going to capture at least 80% of new construction commercial buildings.

Mr. Firestone: I think it should drop down though to everything. I mean, we should be forward-looking. We don't have to capture everything in 2019, but by 2025, we may want to capture all commercial buildings and any single-family inflow. I mean, again, this constant revisiting of things is, to me, not . . .

Ms. McNatt: Do you think the size of a shed or even a guard shack will cover that? I'm just curious. I really don't know.

Mr. Firestone: I mean it really depends on, you know, if . . .

Mr. Hurd: If it's under 1,000, I almost think it's not worth it.

Mr. Firestone: If you're trying to move towards net carbon zero then . . .

Ms. McNatt: Is that our goal?

Mr. Firestone: Everything counts.

Mr. Rowlands: Yes, it's my goal.

Ms. McNatt: Is that the City's goal?

Mr. Rowlands: What is the goal of this? To save the world, right?

Mr. Hurd: Well, yes.

Mr. Firestone: Yes.

Mr. Rowlands: We're running out of time.

Mr. Firestone: Or at least Newark.

Mr. Poole: But, again, if we're dropping the number of residential lots to about, a little bit more, or 60% of what we currently require it at, and we're dropping the commercial square footage to 40% of what we're currently doing, that's a lot of progress. And, again, while, yes, we'd like to by 2030 be at net zero, it's not 2030 now.

Mr. Firestone: But we're not going to be at net zero in 2030. I mean we've got all the existing structures. The question is how do you handle new construction. And I agree that we want to, for a single-family home, you want a phase-in period, but it doesn't seem to be crazy, and maybe 2025 isn't the right year, but you know to have a time period when new construction, regardless of its size or use, will meet these standards which are not net zero anyway. And it gives people a lot of time to figure out and to build. I mean, presumably, City Council could always revisit it if they decide it's too onerous. But otherwise we're going to be in the same position as a city in five years . . .

Mr. Hurd: Or six or seven.

Mr. Firestone: Revisiting and how do we deal with these other units. And it seems to me . . .

Mr. Jadick: You just want to make sure that they're as achievable, you know, and they're not, this isn't running counter to the success of this if you're diving down below 5,000 square feet. I'm just looking at trying to make sure that success is achievable here and maybe looking at it more from the builder's aspect. If you're getting into something that's 420 square feet, how much of the list is no longer applicable and so we have another task to really tackle to make sure that you can infuse all of that to get to always be able to be successful regardless of the size.

Mr. Hurd: Right.

Mr. Rowlands: That's a good point. I see a lot of commercial buildings going up – five, ten, fifty, whatever, a thousand square feet – that could be built to net zero at no extra cost if they knew how to do it. When you get down in scale to four or five hundred, it's very hard. You're going to pay a premium.

Mr. Jadick: And what I don't want to do is walk out of here with something that's, I don't want to say guaranteed to fail but . . .

Mr. Rowlands: Yeah, right.

Mr. Jadick: You can do the best work in the world here at this table and then you're not able to implement it.

Mr. Hurd: Yeah, and I think there's two thoughts sort of this, Jeremy. One is sort of addressing the thing that complicates our work here in terms of its adoption and sort of the political thing is that the only reason we're here is because essentially the Planning Commission said the current LEED criteria that is being used for evaluation is very old and they're getting by, they're calling it LEED certified on really easy stuff and we should try to make the code catch up. It's not like Council came in and said we want to make this city a forward-looking, you know, we want to be ahead of things. So, there's a part of me that says let's not push it too far forward because I don't know that anyone is going to accept it. That said, if we don't push it past a certain point, the Council is not going to take it further. If we said we're going to do something that hits 80% of the buildings, they might go, yeah, okay, and leave it there. If we push it to say all commercial buildings and someone says, whoa, whoa, whoa, what about this, maybe they pull it back to 80% and we . . .

Mr. Poole: Or maybe they defeat it and it doesn't come back.

Mr. Hurd: Or it dies completely.

Ms. McNatt: Okay, so let's find the sweet spot and make it happen.

Mr. Hurd: So, there's always that, there's the we're trying to look forward and yet still get it to pass now. But I was also thinking when you were talking in terms of square footage, there may be a way to come at that to say, for projects between zero and five thousand, it's a small number of points. Between five and ten, it's more ten and twenty-five, so that the bar goes up a little more the bigger the building is.

Mr. Poole: There's got to be some point where it's not applicable. There just has to be because you can't have somebody doing a small project on their property and they just can't do it because now they have to get an engineer involved and spend \$10,000 on getting our LEED checklist for a project that's going to cost \$10,000.

Mr. Hurd: I agree.

Mr. Poole: So, at some point we have to draw the line and we have to be realistic.

Ms. McNatt: That leads to a question. As part of the City's code, is there a certain building square footage that needs engineer designs or architectural designs? Because I know in the county, a certain, I'm going to say a shed of 420, let's say, is oh, you don't need an engineer's plan, you just . . .

Mr. Poole: According to the . . .

Ms. McNatt: I don't know if there's something similar.

Mr. Poole: According to the Building Code, all commercial projects have to have a design professional in charge. However, we waive that on simple commercial projects except where waived by the building official. And we do waive that on simple projects. You know, if somebody wants to put in a shed on a commercial property or some small accessory building, we waive that requirement.

Ms. McNatt: Okay, here's another question and maybe this is trickier. What size commercial building triggers parking?

Mr. Poole: Any new use . . .

Ms. McNatt: Any new use.

Mr. Poole: Has a parking requirement in the Zoning Code.

Ms. McNatt: So, it doesn't matter what size square footage of the building, it's just the change in . . . I'm trying to figure out if there's a trigger of a building size that requires . . .

Mr. Hurd: Some extra level of . . .

Ms. McNatt: Yes, some extra level. So, like you can say as a building official, okay, a shed doesn't need parking, so it's doesn't need land development, so therefore it doesn't need . . .

Mr. Poole: It's not a use, it doesn't have any parking requirements.

Ms. McNatt: Correct, so I didn't know if that would be the trigger or something like that.

Mr. Firestone: What's your history of waiving?

Mr. Poole: What's our history of waiving?

Mr. Firestone: Yes.

Mr. Poole: As far as new buildings?

Mr. Firestone: You know, roughly what size is causing, below what size do you typically waive?

Mr. Hurd: When do you stop waiving?

Mr. Poole: Typically, when it's a significant new structure. I mean if it's, did we require it when they put a new guard trailer out at the GE? Yes, we did. We got some designed plans. But they were simple and quick, and the architect looked at them for five minutes and didn't do anything like this. And that's probably a \$500 or \$1,000 consult with your engineer, as opposed to, again, to do a stretch code analysis for that building, I don't know how much the engineer would charge.

Ms. McNatt: Yeah, that seems a little ridiculous.

Mr. Hurd: And maybe the other way to go at this is to say there's an energy usage number over which we're going to require this. So, you could say, well, a guard shack is only going to pull so much power or something, so its energy budget is so many watts per square foot or watts per building or something, and say . . .

Mr. Poole: Who is calculating that?

Mr. Hurd: I don't know.

Mr. Poole: That engineer, again.

Ms. McNatt: Right. And that's where I'm trying to say if there's a trigger in the code because you've got to keep it simple enough that people, like, you are going to achieve compliance and do this . . .

Mr. Hurd: Right.

Ms. McNatt: Versus hindering the process and making it . . .

Mr. Poole: Again, if you want to go down to 5,000 instead of 10,000, that's a realistic number and you're not going to have one building in a year that doesn't make 5,000 square feet. There's literally very few that are going to be anything significant that aren't going to be the 5,000 square feet. Ten thousand, you're probably not going to have that many, but you might have a couple.

Mr. Rowlands: So, can we try to put forth, okay, our commercial code kicks in at 5,000 square feet and let's think about it for a month and come back and say, okay, yeah . . .

Mr. Hurd: And maybe if you're able to pull permits and just see where the square footages fall.

Mr. Poole: I'll see if we can run on 2018's numbers. If we can figure out what square footage building permits were issued. I don't know how easy that report is to generate because I don't run the reports.

Mr. Hurd: Right.

Mr. Rowlands: Yeah, but that's just looking at what was applied for to be built. At what point does it get too expensive to do for a 2,000 square foot? Probably. For a 5,000, no, let's make them do it. Maybe we should do 10,000.

Mr. Poole: Right.

Mr. Hurd: And I think we can look to you a little bit on this, too, Rob, to sort of say when . . . it's also a question of just sort of saying what's the size building that you're going to have an engineer, architect, or someone engaged in the process anyway. Not to say . . .

Mr. Rowlands: Five thousand sounds like a good . . .

Mr. Hurd: At 5,000, I mean, someone is involved.

Ms. McNatt: Well that would capture, for example, that bank, right? That's a free-standing structure . . .

Mr. Poole: Yeah, that's a free-standing . . .

Ms. McNatt: A free-standing structure with employees in it and offices and . . .

Mr. Poole: And meanwhile it's at 5,900 I think was the . . .

Mr. Hurd: And maybe there's an occupancy number. Maybe it's like more than two or three people. Because a guard shack is two, right?

Mr. Poole: Yeah, but a 10,000 square foot warehouse is . . .

Mr. Hurd: Oh, right, one, yeah. Never mind. And, again, you're asking sort of the developer to lie to you to say it's only got three occupants.

Mr. Poole: Well, there's the minimum number of occupants you can assign per square footage in the Building Code.

Mr. Hurd: I think we're trying to reduce the loopholes, cover as much as we can, and not make it too onerous to the people trying to do the work. You know, the challenge of course that people always say is the more expensive we make it to build in Newark, the more people are going to build just on the outside edge of Newark.

Ms. Gray: There's always that pushback, right? We can't build affordable housing because it's too expensive.

Mr. Firestone: Yeah, but people want . . .

Ms. Gray: I'm just telling you what is being said.

Mr. Hurd: I know.

Mr. Firestone: Water and sewer. I mean that's why people keep asking to annex and their properties are much more valuable . . .

Ms. McNatt: It's not the, I don't agree that's the only reason. The other reason is because sometimes the City's codes are more lax on resource protection and other things is why they also want in.

Ms. Gray: Well . . .

Ms. McNatt: In certain locations.

Ms. Gray: The City should be more dense because they have the infrastructure. So, we should be encouraging more density.

Mr. Hurd: Right.

Ms. McNatt: But you should also have additional resource protection as well.

Ms. Gray: Absolutely, but the county should have higher levels of protection if you want to protect more land and the City should be encouraging . . . it's a balance.

Ms. McNatt: I would agree that there's a balance.

Ms. Gray: It's a balance to reach.

Mr. Hurd: And I'm trying to be cognizant of all the various factors that are pushing around on this thing or will be pushing on this when it comes out without trying to make it like, say, basically let's enact something that everybody who wants to build here is going to be okay with, because that's not entirely our target market. So, let's try to balance it. And I'm sure that there will be a lot of conversations when it gets to Planning Commission and again when it gets to Council.

Ms. McNatt: Can I ask another question?

Mr. Hurd: Sure.

Ms. McNatt: Is right now the focus on every commercial building, I'm going to say 5,000 square foot, every commercial building over 5,000 square feet would have to do this?

Mr. Hurd: Yes.

Ms. McNatt: There's not an opt-out option?

Mr. Hurd: No, it is in the enacted amendments to the International Energy Conservation Code. So, that's what you've got to meet.

Ms. McNatt: But it's not right now.

Mr. Poole: Right now it's anything over 25,000 square feet or any major subdivision which would be more than five lots.

Ms. McNatt: Okay.

Mr. Hurd: Has to meet those.

Ms. McNatt: Is required. Got it.

Mr. Hurd: Otherwise you go down the normal path of . . .

Mr. Rowlands: Has to meet this code.

Mr. Hurd: Has to meet the . . .

Mr. Rowlands: It still has to meet 2015 . . .

Mr. Hurd: It still has to meet the 2012. Currently it's 2012.

Mr. Poole: It has to meet the 2012 International Energy Conservation Code and the LEED amendments to that, which are based on the 2009 LEED v3.

Mr. Hurd: Right.

Ms. McNatt: Got it.

Mr. Rowlands: But that's size-wise. Any commercial has to meet the Energy Code.

Mr. Hurd: Correct.

Mr. Poole: Yes, and any residential house has to meet the current 2012 Energy Code.

Mr. Hurd: Right. So, I still think that we're still looking at too passive a residential and commercial, because residential three stories are less townhome kind of thing, there's a different construction methodology, there's a different equipment usage, you know you have individual units, you have that kind of stuff. Commercial you have integrated systems, you have other things going on, more [inaudible], so I think we do want to maintain those separate.

Mr. Rowlands: At one point we were going to, I know we just briefly talked about hearing from a HERS rater.

Mr. Hurd: We did talk about that.

Mr. Rowlands: That would be really helpful to get his input. How much does it cost? What do you have to do?

Mr. Hurd: Was that something you were going to do?

Mr. Poole: I was going to try to reach out to the Northeast Energy Partners, and I reached out to him, he returned my message like a month later and basically said I haven't forgotten about you, I just haven't gotten back to you yet. And he still hasn't gotten back to me yet.

Mr. Rowlands: As soon as you asked me that, I was like maybe I was because I know Andrew McDowell is a HERS rater and he may very well want to come down to just give a short presentation on HERS ratings.

Mr. Hurd: I think if we're looking at stretch code and . . .

Mr. Rowlands: Yep. I will reach out and get an answer to that.

Mr. Hurd: Okay, so let me put that down.

Ms. Gray: I was writing your name next to it.

Mr. Rowlands: I wrote it down this time, so I'll do it.

4. **REVIEW OF CONCEPTS LIST FOR ENERGY REDUCTION, RENEWABLE ENERGY, RESOURCES, AND INDOOR AIR QUALITY**
5. **SELECTION OF CONCEPTS TO BE INCLUDED IN POINTS CHART**

[Secretary's note: Agenda items 4 and 5 were combined for discussion purposes.]

Mr. Hurd: Alright, so I'd like to go through the concepts list here and then maybe we can come back to the idea of either this month or next month as we're trying to think about the format of the code, the code structure, how we address stretch codes and whether . . . how do we address the things that the stretch code concept doesn't seem to address? Because that would be the resources, indoor air quality and such, because that's not covered in standard code.

Alright, so what I did here, looking at the spreadsheet, I took the LEED credits spreadsheet that Tom had put together for Planning Commission when we were first looking at the 2000, well the v4 LEED. Because he said basically here are the credits as they are in the new LEED and here is how they kind of map up to the credits that we had used before. But what we're doing here is instead of, we're not looking so much at the credit as we're looking at the concept. That's the third column. And what I've done, the first column tells you where I've gotten this

information from. So, there's the LEED New Construction, which is what's for commercial. There's the Swarthmore checklist, which is in the packet. There's the International Green Construction Code.

Ms. McNatt: So, SWAT is the, what did you say SWAT was?

Mr. Hurd: The city of Swarthmore in Pennsylvania . . .

Ms. Gray: Oh, it's a city.

Ms. McNatt: City of Swarthmore.

Mr. Hurd: Basically, did a simplified checklist of essentially concepts, and it's in the materials that went out this month and I think last month, as well. And basically, the way they did it is they said for every point you get up to I think 50 points, you get a percentage off your building permit. So, if you get 50 points, your building permit costs half as much. That's their methodology. But it was one way of looking at sort of saying, it's not a very big town, but here's sort of one way of sort of saying we wrote out own little checklist of things we want people to hit without causing them to go look at LEED, go look at this, go look at that. It's like these are the things we want you to hit, but very scattershot because they're just saying, hey, any 50.

Ms. McNatt: And LEED NC is our current?

Mr. Hurd: This is version 4. So, NC is New Construction, which is the one that affects commercial buildings. And there are subsets of the New Construction LEED code for different building types, and I'm not even getting into that. And for the residential, it's LEED for Homes. When you get to page 7 it's the residential, and that covers LEED for Homes things. And, again, Swarthmore, and then from there, the other thing I'm looking at is the ICC 700, which is the National Green Building standard which is designed for residential. The Green Construction Code leans heavily on the ASHRAE 90.1 standard for energy and such.

Alright, and I don't know if it makes sense to just go down the list and have people kind of go, like take a poll on each one as like which ones do we want to include? Like, which ones do you think are important to address or even which ones do we think are going to be challenging, and I'm looking to you, Tim, challenging for you to evaluate on the design end from a set of drawings as opposed to evaluating it in terms of at completion and such. So, looking at what we did the first time through. We want a concept that you can, that's easily explained that you can look at and go, yes, you meet that concept and check it off. Unless anyone has other thoughts of how to review this.

Mr. Rowlands: No, I think that's fine. I mean just as an example I think you'll come down if you go line-by-line, to me you'd come to LED bulbs and I think that's almost not applicable or in a year or two it won't be because . . .

Mr. Hurd: And that's the other thing . . .

Mr. Rowlands: So, it might be good to hit each one . . .

Mr. Hurd: Like the Swarthmore code is old.

Mr. Rowlands: Yeah.

Mr. Hurd: And, so, there some things here that, you're right, you're going to go, we do that already.

Mr. Rowlands: Right.

Mr. Poole: Not to mention, at this point, with the Energy Conservation Code and the lighting requirements, with compact fluorescents going by the wayside for the most part, that number is getting lower and lower.

Mr. Rowlands: Correct.

Mr. Hurd: Okay. So, optimizing energy performance, which kind of goes along with our performance of 20% minimum above code. That's sort of the stretch code. In LEED, it's a sliding scale between, and I don't have the numbers in front of me, but it's essentially a sliding scale of percentage of improvement over a baseline.

Mr. Rowlands: Which you get 1 to 19 points.

Mr. Poole: And it's roughly 1 point for every 5%.

Mr. Hurd: So, I think that for our, certainly, we want to keep that as a concept we want to have in there.

Mr. Rowlands: But currently we're asking for a 2% increase.

Mr. Hurd: Ten percent, I think. Two points for 10%. That current City Code is what's currently in the Code, which we're working off of version 3.

Mr. Firestone: Could we instead have you get 1 point for every 5%?

Mr. Hurd: Well, I don't want to assign points just yet. I want to just sort of say is this a concept we want to keep?

Mr. Firestone: In or out.

Mr. Hurd: In or out.

Mr. Firestone: Okay.

Mr. Hurd: Because then we'll have a small list and we can come back and say is this something we want to really . . .

Mr. Firestone: How do we want to monetize it?

Mr. Hurd: Hit on this or do we want to just kind of have it optional stretch, stretch plus.

Mr. Firestone: Okay.

Mr. Hurd: Enhanced commissioning currently is kind of included although I'm not sure how does that . . .

Mr. Poole: Well, enhanced commissioning has typically in commercial buildings, it's training the maintenance folks how to property set and maintain all the equipment. It happens a lot on University buildings and mostly nobody else pays for it because you basically have to pay for the manufacturer of the equipment to come and train your people how to property operate it.

Mr. Hurd: Okay.

Mr. Poole: And maintain it.

Mr. Hurd: Right.

Mr. Firestone: Shouldn't you just be required to do that? I mean why would you get points for doing . . .

Mr. Hurd: It does seem like a thing that the owner could choose to say . . .

Mr. Firestone: For giving you points for learning how to maintain the equipment that you have.

Mr. Poole: Yeah, but having the manufacturer come and teach you how to maintain it to the highest possible efficiency is different than making sure somebody reads the instructions.

Mr. Rowlands: So, it would be my guess that we offer 2 points for that now . . .

Mr. Poole: Maybe we'll lower the amount of points.

Mr. Rowlands: If only the University may have applied for those 2 points . . .

Mr. Poole: No, I've had a couple of other projects that have done that. But its not an easy one to get.

Mr. Rowlands: Right.

Mr. Hurd: I'm going to put that as a . . .

Mr. Rowlands: I would vote it out, then.

Mr. Hurd: Okay, why don't we just take it out and make life easy. Enhanced refrigerant management, that's just I guess it has to do with how the refrigerant is added in.

Mr. Poole: It's almost, with the changes to the refrigerant management, it's almost gone by the wayside.

Mr. Rowlands: It's now required.

Mr. Poole: Well, no, there's different . . .

Mr. Firestone: Although [inaudible] is not onboard with the most recent amendments and we might include compliance with the Kigali amendments.

Ms. Gray: The what amendments?

Mr. Firestone: Kigali.

Ms. Gray: That's a cool name. Kigali.

Mr. Poole: Again, we can leave it in and we can work on where they need to be with it.

Mr. Firestone: Assuming they can get the, I'm assuming they'll be able to get the, you know, it probably will go into place when the next president comes onboard.

Ms. Gray: Is it like . . .

Mr. Firestone: You know, they're just sort of anti-international so they don't want to sign up for anything, but there is actually a large portion of the business community that wants to get in on the manufacturing of these HCFCs, the next generation of HCFCs and they want to be able to compete in international markets.

Ms. Gray: And this will help?

Mr. Firestone: They're likely that we will come into compliance but . . .

Mr. Hurd: Okay, we'll keep that. Maybe that's a stretch. Okay, measurement and verification of the building consumption is currently not in the City Code because it's a post-occupancy thing.

Mr. Poole: Again, post-occupancy are [inaudible] the Certificate of Occupancy.

Ms. McNatt: Yeah, that's your golden ring.

Mr. Firestone: Yeah.

Ms. McNatt: There's nothing after it.

Mr. Poole: So, anything that's going to happen after that is really something that, what's the point? They can sign up for it today and they can cancel it the day after they get it.

Ms. McNatt: Yeah, you can't prove it because you can't go and verify it.

Mr. Hurd: Okay, so let's drop that one. Tankless domestic water heaters.

Mr. Rowlands: Well, back up to that, if they go down the performance path . . .

Mr. Hurd: Well, that's not what we're covering here.

Mr. Rowlands: I know but if they did, which they could now in some regards to Code, I mean we should be verifying it.

Mr. Poole: Yeah, but we're not going to verify it a year later. They're going to verify it before the building opens.

Mr. Rowlands: I know but they can make that thing say what it wants to.

Mr. Hurd: Well and even the HERS is going to come onsite and say this is what it's doing at this point in time.

Mr. Poole: But what it's going to be doing a year from now . . .

Ms. McNatt: Or two or five . . .

Mr. Rowlands: I know but I'm talking about just modeling it through computers to get things approved. Then I would like to see verification if they go that route.

Mr. Hurd: Got you.

Mr. Firestone: Yeah, but do we have the personnel as far as time to dedicate to have ongoing verification?

Mr. Poole: The other part about that is what's our hammer?

Mr. Hurd: Right.

Mr. Poole: What's the enforcement mechanism? Are we going to take their CO away? That's never going to happen.

Mr. Firestone: Some sort of fine.

Mr. Hurd: Right.

Ms. McNatt: You're not going to keep people out of their houses or their buildings, businesses.

Mr. Hurd: Right.

Mr. Rowlands: You double their electric rate.

Mr. Poole: Get that one through.

Mr. Firestone: A civil fine.

Mr. Hurd: Okay, tankless domestic hot water heaters. I would say, yes, we should encourage that.

Mr. Poole: Particularly in . . .

Ms. McNatt: Is that covered by anything else on the list already?

Mr. Hurd: What?

Ms. McNatt: Is it covered by anything else on the list already?

Mr. Hurd: No, because I tried not to double up unless it was to show that two systems have a similar thing going on.

Ms. McNatt: So, for example, under water reduction, like water use reduction appliances?

Mr. Rowlands: No, that wouldn't hit this one.

Mr. Poole: It's a little bit on efficiency as far . . .

Mr. Rowlands: It's not about water usage.

Mr. Poole: But not water usage.

Mr. Hurd: Tankless is really more about energy, the energy spent to keep the water hot when it's not being used.

Ms. McNatt: Okay.

Mr. Rowlands: Now, I would like to add a column . . .

Mr. Hurd: Okay.

Mr. Rowlands: Heat pump water heater.

Mr. Hurd: Okay.

Ms. Gray: Heat pump water heaters.

Mr. Hurd: That's a good point.

Ms. Gray: Okay.

Ms. McNatt: So, that's going to be another line?

Mr. Hurd: Yeah . . .

Ms. McNatt: Or was it going to be . . .

Mr. Hurd: Because a heat pump water heater is a tank system. It gets its heat from a heat pump on the top that heats the water.

Ms. McNatt: Right, right. I'm sorry, but in my mind how I think of checklists is like one is, what do you call it, water energy. There would be a line water energy and the option is tankless water heaters or heat pumps, and you get maybe 1 point . . .

Mr. Rowlands: Yeah, whatever.

Mr. Hurd: Right, so there may be some rewriting of this to say domestic hot water energy use.

Ms. McNatt: Right.

Mr. Hurd: And there's the tankless, there's the heat pump, there's the on-demand hot water switching which has . . .

Ms. McNatt: And you get a point if you do one.

Mr. Hurd: Some things like that.

Ms. McNatt: I'm just . . .

Mr. Hurd: No, that's fine. We'll keep that in there.

Mr. Poole: Occupancy sensor recirc pumps.

Mr. Hurd: I don't think that's kind of the hot water switch, but I'll throw that in.

Ms. McNatt: Did you say oxygen sensor?

Mr. Poole: Occupancy sensor.

Ms. McNatt: Occupancy sensor. I'm sorry.

Mr. Poole: One of the neater things I've seen happen is that when the occupancy sensor notices somebody in the bathroom, then it kicks on the recirculator pumps that now there's hot water at the bathroom. But meanwhile if nobody is in the bathroom for 12 hours, that recirc pump doesn't run.

Mr. Hurd: Okay. The general thing of efficient appliances.

Mr. Rowlands: What does that mean?

Mr. Poole: It means you're Energy Star rated.

Mr. Hurd: It probably means Energy Star.

Mr. Rowlands: Okay.

Mr. Hurd: I mean I'm taking this from Swarthmore.

Mr. Rowlands: I don't think that needs to be in there anymore almost.

Mr. Poole: It's not something that you're not already buying.

Mr. Rowlands: Right, as with the next one.

Mr. Hurd: Right, so we're going to strike efficient appliances and LED bulbs. Energy efficient lighting controls. That would be probably occupancy sensors, I don't know, dimming control, and other things like that.

Building envelope requirements, and this is where we're talking about complying with the ASHRAE 90.1 standards. I haven't looked completely at 90.1 on whether there's a range.

Ms. McNatt: Can we do that?

Mr. Hurd: You mean like right now?

Ms. McNatt: No.

Mr. Poole: Now, that's what we require. Most of the time when they're doing building envelope calculations that the engineer submits to us, they're done on ASHRAE 90.1.

Mr. Hurd: Okay, so we want to have something for building envelope requirements. We'll just have to flesh out the language maybe to see if there's a range.

Permanent shading of windows, I thought that was an interesting one that the Green Construction Code threw in there.

Mr. Poole: That's also in our current LEED requirements.

Mr. Hurd: Shading of windows?

Mr. Poole: Yes. It's in there.

Mr. Hurd: Okay. HVAC equipment, complying with 90.1 Ventilation controls . . . I'm going to read this and if anyone says let's take that one out and discuss it, you can shout out. Duck leakage tests . . .

Ms. McNatt: Is that already required?

Mr. Poole: It's required when you're outside of the building thermal envelope. But if you're inside, it's not.

Mr. Hurd: Right. And I will apologize that I only wrote sort of a shorthand from the Code.

Mr. Rowlands: I was about to say, it just says you have one, you don't have to pass or fail?

Mr. Hurd: Well, I'm sure there's a range. And, actually, I don't know if that's inside envelope. Yeah, if it's outside the envelope, certainly the duct leakage is a critical item. That's insulation.

Mr. Rowlands: And we could just require you don't put ducts outside the envelope.

Mr. Hurd: And I think that comes up later.

Mr. Rowlands: That's pretty standard in my realm.

Mr. Hurd: Oh, yeah . . .

Mr. Rowlands: We just don't go there.

Mr. Hurd: In Passive House for sure, right.

Mr. Poole: Right, but meanwhile that means that nobody can put one in the attic or that nobody . . .

Mr. Hurd: Commercial you're more likely to have it going up through the [inaudible] or things like that.

Mr. Rowlands: Commercially, I mean, yeah, but in a residence . . .

Mr. Hurd: So, when we get to residences we can say make sure we have ducts inside the envelope in the residential section.

Exhaust air energy recovery, enhanced duct insulation, lighting power alliance. So, that kind of gets to an energy budget to say this is the amount of energy you're allowed to put into lighting.

Mr. Rowlands: Do you need to go there at all with all LEDs anymore?

Mr. Hurd: I don't know.

Mr. Poole: Again, you get a certain amount of watts per square footage for lighting and most of the time we get figures that are better than 10% better than Code. But meanwhile if somebody has halogen or metal halide or sodium lights . . .

Mr. Rowlands: Yeah, they're off the charts.

Mr. Poole: Then suddenly they need that. And there might be a fixture or two that's a specialty fixture that really affects that because when most of them have to be LED, you don't have a whole lot of wiggle room. So, if you have one or two specialty light fixtures, you can run into a problem.

Mr. Hurd: So, we'll hold that for the moment. Alright, resources. Reuse of the building, always a good thing. So, there's two levels of reuse in LEED. One is maintaining the existing walls, floors, and roof, and one is additionally maintaining the interior non-structural elements. Are we okay to hanging onto those? Okay.

Construction waste management, always a good thing. This one, because everyone hit it, the Swarthmore code is looking for 75-100% of the construction waste management being diverted from landfills. Green Construction Code, the minimum is 50% of construction waste can't go to a landfill. That strikes me at least as a good starting point.

Mr. Poole: And that's where we are now, is 50%.

Mr. Hurd: So, we can decide if we want to push that or if that's one that gets . . .

Ms. McNatt: And that's how they get 2 points, with 50%?

Mr. Poole: Yes.

Ms. McNatt: Or is it over 50%?

Mr. Poole: Typically, they get that around here for demolition. Whatever they demolish they typically send and get sorted and that's an easy way for them to get . . .

Mr. Rowlands: But this is only for new construction.

Mr. Hurd: Yes.

Mr. Poole: Yes, but if you tear down a building, that's part of the process.

Mr. Rowlands: I know it's part of the process but is it part of these 2 points?

Mr. Poole: Yes, it is.

Mr. Rowlands: It says construction.

Mr. Poole: For your redevelopment of your site . . .

Mr. Hurd: Divert construction and demolition debris from disposal in landfills.

Mr. Rowlands: Oh, it does say demolition. Sorry. Okay.

Mr. Hurd: And it's work that's done before the CO is issued . . .

Mr. Rowlands: Yeah.

Mr. Hurd: So, the Building Department still has some attachment. Swarthmore adds the idea of a deconstruction plan. Deconstruction being a way to take the elements out of the building more efficiently in terms of efficient for reuse, not necessarily efficient for the removal. But if you take the building apart more carefully, it's easier to divert the pieces to various places, recycle, salvage and such.

Donation of the deconstructed materials . . .

Mr. Poole: I don't know if we want to give points for the deconstruction plan but maybe we'll give them points for the donation of materials at a certain point depending on how much they donate.

Mr. Hurd: Okay. How does everyone feel about that?

Mr. Rowlands: That's almost, to me, the deconstruction plan.

Mr. Hurd: Yeah.

Mr. Rowlands: I mean if you're going to demolish and then sort so it doesn't hit the landfill is one thing, but your plan is to tear up all the hardwood floor and get it out to reuse it somewhere . . .

Mr. Hurd: You have a deconstruction plan. You look like you had a thought, Rob.

Mr. Jadick: I mean in the projects that I've done that we were shooting for LEED Silver or LEED Gold, what-have-you, this is one that is easy for a construction manager or general contractor to really take hold of and to knock out of the park. I would think that in saying that, you would want to encourage that. Maybe even offer a scale where there's additional points at a higher level, much like Silver to Gold. You know, we started off at a project for Astra Zeneca on Concord Pike years ago that started off Silver and we ended up achieving enough points to get it to Gold and a lot of that was by the amount of construction debris that we were able to recycle and divert. And I just think that with a good, solid plan and getting on top of that early, that should be something that we look to incentivize.

Mr. Hurd: Right.

Mr. Poole: Right. I'm just saying do we need to give credit on both ends of that, where we're giving them point for construction waste management and we give them points for donating something to a reseller, do we need to give them points for the plan, as well?

Mr. Hurd: Well, that's because Swarthmore and LEED are separate things.

Mr. Poole: Right.

Mr. Hurd: It may be that the concept of taking and giving items to a reseller would fall under the waste management because it's like when we're talking about recyclable materials, reusable materials, you know, basically any way that it goes and fed not into the waste stream.

Mr. Poole: But I think that if you're donating them to a reseller, that's something that those materials are immediately reused. They're not processed again. So, that's . . .

Mr. Hurd: Okay, yeah.

Mr. Poole: So, that's where I'm saying we should, I would look for a sliding scale for that and not giving anything for the plan.

Mr. Hurd: Okay, so we'll keep the donation of deconstruction materials its own item, separately.

Materials reuse, and I think that's typically within the building, within the project. Using materials with recycled content, that's kind of a no-brainer. Swarthmore breaks it down further as you can see, looking for recycled content in carpeting, deck material, sheathing, fiber-cement siding, roofing, wall insulation and ceiling insulation. Do people feel we need to get that granular or do we just need to set up a percentage for recycled content? The one thing I like for Swarthmore is that they're kind of drilling down to say there are areas, there are materials that we want to see you use recycled content in. And, instead of saying 20% and it's all in the roof or something like that, you're kind of saying the siding has to be, the carpet has to be . . .

Mr. Poole: Well, the question is, do we want to make them get a certain percentage of numerous things or do we want to give them less points for each individual thing? So, I think it's easier just to give them less points and identify each individual thing.

Mr. Hurd: Also easier for you.

Mr. Poole: Yes.

Mr. Rowlands: Well, that's important.

Mr. Hurd: Which is a factor. It's absolutely a factor. Okay, so we'll keep the itemized recycled content. Do we want to drop the generalized recycled content?

Mr. Poole: I think so.

Mr. Hurd: Okay.

Mr. Poole: So, then we don't give the big credit, but we give individual small credits.

Mr. Hurd: That might be even easier for you that you're not sitting there calculating percentages. And then it's a question of percentage of what? By weight, by dollar . . .

Mr. Poole: Right.

Mr. Hurd: Pick a metric.

Mr. Poole: As opposed to this carpet is the carpet we're using. It's got this percentage of recycled content. It hits the checklist.

Mr. Jadick: Exactly. I agree.

Ms. McNatt: Is there anything missing from this list for recycled content? I don't know.

Mr. Hurd: Is there anything that's coming . . . what are the major elements that tend to have recycled content?

Mr. Rowlands: Recycled content . . .

Mr. Hurd: I mean we've got carpeting, we've got deck material . . .

Mr. Rowlands: There's a lot of recycled steel going into new stuff.

Mr. Hurd: Steel, there you go.

Mr. Rowlands: Concrete can be used. I mean you may just buy your concrete and it's got recycled content to it.

Mr. Hurd: Okay.

Mr. Rowlands: I don't know about drywall.

Mr. Hurd: I don't know. Rob, have you seen anything that's . . .

Mr. Jadick: No, it's definitely worth taking a deeper look into though.

Mr. Hurd: Okay.

Mr. Poole: Yeah, if we've got a checklist and we give them a point for each one, like you said, and then we figure out what our minimum number of points is at the end . . .

Mr. Hurd: Okay. Regional materials, how important do we feel about this?

Mr. Firestone: What's the definition of regional?

Mr. Poole: Within 500 miles.

Mr. Hurd: So, there's, yeah, LEED is a pretty broad . . .

Mr. Poole: That's what LEED says right now, within 500 miles.

Mr. Rowlands: I would like to drop that totally.

Mr. Hurd: Okay.

Mr. Rowlands: My group did an analysis on importing European windows and because shipping containers were so efficient, there was a lower carbon footprint to buy European windows than . . .

Mr. Jadick: Than ship it four states away.

Mr. Firestone: It's the same thing with getting some of the European wines versus the California wines.

Mr. Rowlands: So, it's really 500 miles . . .

Mr. Poole: Where you get that the most is your lumber.

Mr. Hurd: Yeah.

Mr. Poole: If your lumber is coming from Oregon, it's coming on a train from Oregon. If it's coming from western Pennsylvania, it's using less energy to get it here.

Mr. Rowlands: Not necessarily. Trains are very effective though.

Mr. Poole: But it's coming on a train either way.

Mr. Rowlands: Well it could be a truck from western Pennsylvania to here costs more environmentally than a train from Seattle. I don't know.

Mr. Hurd: Yeah.

Mr. Poole: But that's where we get the regional materials submitted these days for people that are complying with that. It's typically their lumber.

Mr. Firestone: Five hundred miles seems way too far.

Mr. Hurd: That's been an ongoing criticism of LEED is the range of things.

Mr. Jadick: Is that only part of the description that we should be looking at though? I mean we've been talking about transportation costs. I'm just reading this a little bit deeper. Maybe supporting the use of indigenous resources, does that have any weight beyond . . .

Mr. Hurd: I don't know.

Mr. Jadick: I mean is that just a good practice to . . .

Ms. McNatt: Buy locally? Sorry.

Mr. Hurd: The problem is . . .

Mr. Jadick: Five hundred miles isn't exactly local, right?

Mr. Hurd: Well, but some of the things you could say, like, if I'm going to buy this product, while it may come from a local distributor, there's no one in the area that makes this product. You know, drywall or something. But . . .

Mr. Rowlands: Granite countertops.

Mr. Hurd: Right, they're all coming from this, you know, so there's a point at which you sort of go, if I'm going to use this product, there's no way I can make it regional.

Mr. Jadick: Absolutely.

Mr. Rowlands: But then there could be an alternative product. Don't use granite countertop, use something else.

Mr. Hurd: Yeah. I personally always felt that this was one of those pushing the envelope a little further kind of items because it addresses energy and resources and sustainable things, but it's so multi-faceted it's very difficult to evaluate it at times for the benefit. So, I would be okay with either dropping it or pushing out to the stretch thing to sort of go, if you want to go to the next level, fine, let's talk about really focusing on local materials.

Mr. Jadick: You know, from a contractor's point of view, I have to ask is the view worth the climb on this one?

Mr. Hurd: Yeah, which is why I'm thinking if we do want to keep it, because there is some value to it conceptually, is it the thing we push to the stretch plus kind of code?

Mr. Jadick: Sure.

Mr. Hurd: To sort of go, alright, you really want to make the building the next level . . .

Mr. Jadick: I think that's a great point. Sure.

Mr. Poole: Here again, we can weight it however we want.

Mr. Poole: Right. For the moment, I'm going to say it's a plus item and see how that works because we don't have enough things pushed out to the plus item level.

Mr. Rowlands: Energy. Energy is way up there.

Mr. Hurd: Well, energy can always go plus. Rapidly renewable materials or bio based. That's your strawboard and your bamboo . . .

Mr. Poole: Bamboo.

Mr. Hurd: Okay, so we're keeping that. Reclaimed lumber. Certainly, a good thing.

Mr. Rowlands: Yeah.

Mr. Hurd: It doesn't show up very often I'm sure in some places but . . .

Mr. Poole: Mostly, in my experience, where we get the reclaimed lumber is for some sort of ornamental purpose.

Mr. Rowlands: On top of drywall.

Mr. Jadick: Yes.

Mr. Hurd: Right.

Ms. McNatt: We're going to give points for ornamental purposes?

Mr. Hurd: It went in the building. They bought it and put it in there. So, at least they're not buying it from Honduras or Brazil or something and . . .

Mr. Poole: Barnwood.

Mr. Hurd: Like barnwood, yeah.

Mr. Poole: You've got some of that at Taverna. You've got some of that at the . . .

Ms. McNatt: Does it have to be . . .

Mr. Rowlands: Yeah, but does that just go on top of drywall?

Mr. Poole: No, it's, well, at Taverna it did. At One Easton it was used as separators in their clubroom as the separators for the booths.

Ms. McNatt: Does it have to be local?

Mr. Hurd: No, that's a separate . . .

Ms. McNatt: Okay, just curious.

Mr. Hurd: Yeah, they don't always combine those two things. Certified wood, are we still seeing value in that? I guess yes.

Mr. Poole: Yep.

Mr. Hurd: There's a back side.

Mr. Poole: Again, that's another one that's easy. It's from a manufacturer that has a certified factory that says we get all our lumber from our own tree farms.

Mr. Hurd: Okay, so we'll keep that. Optimal value engineering framing techniques. The challenge for that that's an additional document, essentially, that they have to prepare for you to read.

Mr. Poole: Trusses or pre-built walls. It happens all the time.

Mr. Rowlands: This is advanced framing?

Mr. Hurd: Yeah. Okay, so if you're seeing it, then we'll keep it.

Mr. Poole: Yeah, it's trusses and pre-built walls. That way you get very little scrap from the factory because they trim this length off of the board and the computer . . .

Mr. Rowlands: Okay, that's optimal value engineered framing.

Mr. Poole: Right.

Mr. Rowlands: That's not advanced framing onsite.

Mr. Hurd: Correct. I don't think we have advanced framing in here.

Mr. Rowlands: No. I mean that's fine but maybe we should though. But the optimal value engineered framing techniques are a good thing.

Mr. Hurd: Yeah. I see advanced framing showing up more in like single-family homes and that really depends on the builder.

Mr. Poole: And then you're looking at the verification part of that.

Mr. Hurd: Right.

Mr. Poole: Who is checking it?

Mr. Hurd: Yeah.

Mr. Rowlands: But if it's a truss . . .

Mr. Hurd: A truss is a truss, yeah.

Mr. Poole: Right, but the advanced stuff onsite . . .

Mr. Rowlands: Oh, yeah, yeah. Advanced framing, that's a different animal.

Mr. Poole: Right, that's all I'm saying.

Mr. Rowlands: But you should almost be able to look at a plan and you're going to see that in residential . . .

Mr. Hurd: I mean you're going to see the rafter hit the stud . . .

Mr. Rowlands: Someone says we're going to use advanced framing and you'll look at it and say, yeah, it is.

Mr. Hurd: It might require some training for inspectors to stop to not go, where's my doubles, where's my triples, where's my . . . anyway, using oriented strand board in the subfloors and the wall sheathing. I think that seems okay.

Mr. Rowlands: No.

Mr. Hurd: No?

Mr. Poole: Most of it, that's what you see in floors mostly.

Mr. Hurd: Okay.

Mr. Poole: And sheathing, you're more likely to see OSB per for sheathing than any other product because OSB is \$6 and plywood is \$21.

Mr. Hurd: Good point.

Mr. Poole: Seems like easy math.

Mr. Hurd: Alright, so we'll drop those two. Any value to finger-jointed studs? Do we see those a lot?

Mr. Poole: The only place I've seen them is on pole barns. And that's on the [inaudible].

Mr. Jadick: I hardly ever see them.

Mr. Hurd: Okay, I'll drop it. Engineered lumber, though, keep that because that's your [inaudible] and things.

Mr. Rowlands: I don't know that we should give points for that. I mean that's going to be an engineer or someone that says you should use an [inaudible], and that's what we want.

Mr. Poole: Well, yeah, but the wood I-joist as opposed to . . .

Mr. Hurd: As opposed to a 2 x 12.

Mr. Poole: What?

Mr. Hurd: As opposed to a 2 x 12.

Mr. Poole: Right.

Mr. Hurd: Because there's some places where you go, to make this thing work, I'm going to use an I-joist and sometimes you go, it's a span I could do with a 2 x 12.

Mr. Rowlands: Right.

Mr. Hurd: But how do we tell the difference?

Mr. Poole: Either they're using the engineered lumber or they're not.

Mr. Hurd: Well, let's hang onto that for the moment but maybe it's at a low point.

Mr. Rowlands: Then let me ask then, why is it good to use an engineered over . . .

Mr. Hurd: Efficiency.

Mr. Poole: So, why is it good to use an I-joist over a 2 x 12?

Mr. Rowlands: Yeah.

Mr. Poole: Because of the amount of, to get a 2 x 12, it takes a lot more wood than it takes to build a wood I-joist that will span twice as far.

Mr. Hurd: Because the I-joist is using . . .

Mr. Rowlands: No, I understand what they are and all, but . . .

Mr. Poole: Meanwhile, you're using a lot less wood.

Mr. Hurd: It's a resource question.

Mr. Rowlands: You're using scrap wood as opposed to virgin grown wood.

Mr. Hurd: Right.

Mr. Poole: Plus, it uses smaller, more rapidly renewable wood than large hardwood trees.

Mr. Jadick: Something that would take to get a 2 x 12 out of . . .

Mr. Poole: Right, you have to have a 15-inch caliper tree to get a 2 x 12 out of it, whereas to get a 2 x 3 on the top and bottom of an I-joist, you don't need quite nearly as much.

Mr. Rowlands: And to pay for the 2 x 12 as opposed to engineered might be less anyway?

Mr. Poole: The 2 x 12, yeah, but again, if you're looking at 2 x 12s or 2 x 10s versus the engineered lumber, the engineered lumber is going to be cheaper, but the insulation cost is going to be a little bit higher.

Mr. Hurd: Right. You have to do it slightly different.

Mr. Rowlands: I'm just questioning why we should have it in here if it's between one or the other . . .

Mr. Poole: Because it's environmentally friendly for the resource end of it. That's where we're at is resources.

Mr. Rowlands: Okay, and I'm not convinced of that, and I say that just for your own education and my own interesting point. I had a forestry person give a seminar on United States forests. And here we had this many forests and the industrial revolution comes along, and we dropped quite a bit. And then it's been level ever since. And she's saying buy more lumber. We're managing them now, we know what we're doing. It's all good, you should buy them. We've got jobs, we're growing them, we're not reducing the forest whatsoever. So, I don't know that it is . . .

Mr. Hurd: A resource issue?

Mr. Rowlands: Maybe.

Mr. Hurd: Okay.

Mr. Rowlands: Anyway, that was one good hope out of a seminar we all went to but . . .

Mr. Hurd: Well, I'll put that as a thing to look into. Structural alternatives to wood. I don't know if that means metal instead of wood or what entirely that's supposed to mean.

Mr. Jadick: Use wood whenever you can over steel.

Mr. Hurd: I think we can strike that.

Mr. Rowlands: Structural alternatives to wood.

Mr. Poole: Steel or concrete, which are both less environmentally friendly.

Mr. Rowlands: Yeah, why would you want to use steel or concrete over wood when you're trying to save the world?

Mr. Hurd: Yeah, but here's a good one, structural insulated panels. Always a good thing.

Mr. Rowlands: No, it's not.

Mr. Hurd: Usually a good thing.

Mr. Rowlands: All the [inaudible] foam?

Mr. Hurd: Airtight, structural.

Mr. Rowlands: Foam? There are better ways, cheaper ways to do it than that. That's just my take.

Mr. Hurd: We're trying to enlarge and bring more people into this. Water efficient landscaping, always a good thing. Everyone seems to think so, and the Green Construction Code does as well.

Mr. Rowlands: It's listed twice.

Mr. Hurd: That's because I had LEED and Green Construction Code.

Mr. Rowlands: Oh, okay.

Ms. McNatt: Well, I have a comment on this.

Mr. Hurd: Sure.

Ms. McNatt: Not this one, but when we get to the, go ahead.

Mr. Hurd: Irrigation design. I think that just has to do with efficient layout or either . . . no?

Ms. McNatt: No, I think with that we should add a line item where irrigation design you can do rain barrels or cisterns that collect rainwater from rooftops and then you can use it to irrigate the plants versus tying into public water.

Mr. Hurd: Okay, so onsite . . .

Ms. McNatt: So, utilizing the onsite rainwater.

Mr. Jadick: That wouldn't fall anywhere else?

Ms. McNatt: I didn't see it specifically.

Mr. Hurd: That's fine.

Ms. McNatt: If we happen to hit, I'm more than happy to . . .

Mr. Hurd: I mean it almost could fall under water use reduction, possibly.

Ms. McNatt: But that's typing into the actual . . .

Mr. Hurd: That's more things, yeah.

Ms. McNatt: So, irrigation design would include that.

Mr. Hurd: That's fine.

Ms. McNatt: That's just where I thought we could put it. And I think it's important.

Mr. Hurd: And that's also assuming that they're going to do irrigation. I almost want to say sometimes if you design a system that doesn't require irrigation at all, that's worth something possibly.

Ms. McNatt: Yeah, so maybe it's not under irrigation. Maybe we call it something else. But I think if they're using some type of capture system, which means it's not running off . . .

Mr. Poole: Like rain gardens.

Ms. McNatt: Right, rain garden or rain barrel. It's not running off. It's being collected and used, so you get a point for collecting and use.

Mr. Poole: And I think there's some of that further back.

Mr. Hurd: There may be.

Ms. McNatt: I looked but . . .

Mr. Poole: Okay, well again, certainly if it's not back further, then we want it in.

Ms. McNatt: Yeah, I do. I think it's important.

Mr. Hurd: Water use reduction. LEED has it as sort of general term. Green Construction Code breaks it out into maximum flows for fixtures and appliance usage. I'm almost tempted to go with the Green Construction Code's sort of breakdown into specific, you know, there's a maximum flow rate for fixtures, there's a maximum water usage for appliances. Swarthmore's thing, what they're saying is basically is if you don't performance design, and they have basically six levels of 10,000 gallons a year, I think it's a year, over your baseline, so every 10,000 gallons that you don't use in the building, you get a point.

Ms. McNatt: That's a performance standard. How do you prove that?

Mr. Poole: I think that . . .

Mr. Hurd: We can drop it. I'm just saying it's in their plan.

Ms. McNatt: Yeah, I know.

Mr. Poole: I'm thinking that if we reduce the flow for fixtures to a certain point and based on the number of fixtures as a percentage, like a stretch code, that's more where we want to be with that because it's a lot more easily verifiable in the design phase.

Mr. Rowlands: We'd have to do some homework on what's available.

Mr. Hurd: Yeah.

Mr. Poole: No, if you have this many toilets and you have this many urinals and you have this many lavatories and you reduce each of those by a certain percentage and get to 10% less water usage based on the number of fixtures, then . . .

Mr. Rowlands: How is the number of fixtures reducing those going to change . . .

Mr. Poole: Because if you're allowed to have one gallon per minute in a lavatory and you have twenty of them in your commercial building and you instead install half-gallon permanent fixtures . . .

Mr. Rowlands: Absolutely.

Mr. Poole: Then we're saving on that fixture. But meanwhile you're still using 1.6 gallons per flush on the toilets and 1 gallon per plus on the urinals.

Mr. Hurd: So, look at it as an aggregate, basically.

Mr. Poole: Right. That's how we are currently doing it.

Mr. Hurd: And it's probably easier to look at it that way.

Mr. Poole: Yes.

Ms. McNatt: So, we'll do a breakdown of some sort on that one. The fixture thing.

Mr. Poole: Yeah. As opposed to the annual water savings and calculations.

Mr. Hurd: Yeah, that's fine. Water conservation in the HVAC. Basically, it's not using potable water for single use cooling and some other features, which I think seems like a fine thing to encourage.

Mr. Firestone: Yes.

Mr. Hurd: Indoor air quality. Outdoor air delivery monitoring. So that's just monitoring the air coming in, I think, the ventilation system. So that may be CO<sub>2</sub> monitoring as well. Increasing ventilation . . .

Mr. Rowlands: What does monitoring that do?

Mr. Hurd: So, I don't know if it's this one . . .

Mr. Rowlands: If you fall below it shuts the system down or . . .

Mr. Hurd: Well in some places they'll say instead of following the standard rates of ventilation which is like saying we have maximum occupancy . . .

Mr. Poole: Orange Theory Fitness did that.

Mr. Hurd: Okay . . .

Mr. Poole: They have a carbon dioxide sensor in their gym . . .

Mr. Rowlands: Inside?

Mr. Poole: Inside.

Mr. Rowlands: Oh yeah, and that . . .

Mr. Poole: And if it hits that, then the ventilation kicks on. And if it doesn't hit that, then the ventilation stays off.

Mr. Rowlands: But what about outdoor air delivery monitoring?

Mr. Hurd: Well that's, it's the fresh air delivery. It's saying we don't deliver fresh air . . .

Mr. Rowlands: You're not monitoring outdoor air . . .

Mr. Hurd: No, we can't do that.

Mr. Rowlands: Well, you could but why?

Mr. Hurd: Right, can't clean that.

Ms. McNatt: It would be nice if we had a way to do that.

Mr. Hurd: So, it's, you know, CO<sub>2</sub> and fresh air, so that's a good thing, which of course is in direct competition with the increased ventilation credit.

Mr. Poole: Right.

Mr. Hurd: Which says basically bring more air in.

Mr. Poole: Well, the increase ventilation is about indoor air quality and putting ventilation in places like copy rooms and places like janitors' closets where typically, where your contaminants are coming from, and we're ventilating those spaces, and then we have to ventilate the rest of the spaces less.

Mr. Hurd: Okay. That would seem fair. Okay and then LEED gets into this a lot, I think more than anyone else. Actually, more than all the other codes. So, construction indoor air quality management plan during construction and before occupancy. Those have to just do with sealing things and, like sealing the ducts and then flushing the building and such.

Mr. Jadick: I think that promotes a best practice of building cleanliness throughout the process.

Mr. Hurd: Absolutely.

Mr. Jadick: It's very easily documented.

Mr. Poole: Yeah, during construction we didn't give a credit for it before but meanwhile the before occupancy flush where you basically get everything flushed out and you get fresh air in the whole building, that we did give credit for.

Ms. McNatt: Yeah, is it redundant to do both? I don't know.

Mr. Hurd: No, because one is an actual during-construction process as opposed to . . .

Ms. McNatt: If you already have to do it at the end, are you just getting an extra point because at the end it has to be cleaned anyway?

Mr. Hurd: Well, Rob, when you're thinking, during construction . . .

Mr. Jadick: It's usually been one or the other. Either during or at the end.

Ms. McNatt: My question is wouldn't we want it clean at the end, period.

Mr. Hurd: Yeah, so we'd probably want to hold that one and maybe drop the during construction.

Ms. McNatt: Or maybe that's the plus point or extra point. Maybe. I don't know.

Mr. Hurd: I'll write it down.

Mr. Rowlands: If you're doing it during construction, it could get you . . .

Ms. McNatt: Well, my theory is that, well, some contractors, you know if you don't force them to do it at the end, a lot can happen between maybe 50% and the end, so at what point do you make them do it?

Mr. Hurd: Okay, low-emitting materials.

Mr. Rowlands: I think it's becoming less important.

Mr. Hurd: I was just going to say I think LEED may be pushing this beyond what is . . .

Mr. Rowlands: LEED may have pushed it to a point where now it's accepted and common practice.

Mr. Poole: I think just the public outcry against off-gassing has been what's driving the market because basically if you're paint stinks less, then you're going to spend a little bit of extra money on that. And now the manufacturers have noticed and they're not even really doing a whole lot of the . . .

Mr. Rowlands: Well, it's not just them noticing. They're being forced into it.

Mr. Firestone: Right, so is it standard practice and I don't think it should be.

Mr. Hurd: I mean clearly the LEED version 4 thinks that there is still more to be done on it, but I don't know if they're pushing the last 5% out of this or . . .

Mr. Poole: And again, we can weight things . . . we're looking at setting up our points system and we can weight stuff to where if they're looking in indoor air quality and they need to get a certain number of points, this is where they can get them but meanwhile . . .

Mr. Hurd: But they don't get a lot of them.

Mr. Rowlands: But low-emitting materials, this is what you buy these days.

Mr. Poole: Not always. I've had some projects that haven't made it.

Mr. Rowlands: Really?

Mr. Poole: Yeah. Again, depending on what the architect picks for their carpeting or for their paints or for specific . . .

Mr. Rowlands: Carpeting is an issue, that's for sure. But paints and floor finishes, in general . . .

Mr. Jadick: I don't think it's . . .

Mr. Poole: I'm still saying that not everybody . . .

Mr. Jadick: Where you might think it might be.

Mr. Poole: Gets it.

Mr. Rowlands: Maybe.

Mr. Hurd: Okay.

Mr. Poole: Again, it's very common now but there's still value there to be had.

Mr. Hurd: Okay, then let's hang onto it.

Ms. McNatt: But maybe we can do a scale of some sort.

Mr. Hurd: Well it may be that you don't get a lot of points out of it.

Ms. McNatt: Right, you don't get 4 . . . I mean that's a lot of points.

Mr. Hurd: Well, yeah.

Ms. McNatt: If you did them all.

Mr. Hurd: You'd have to do them all, yeah. Are we seeing much in the way of composite wood and agrifiber products? Is that something we want to be encouraging?

Mr. Poole: Well, there's an awful lot of manufactured flooring going in these days.

Ms. McNatt: Is that engineered flooring? Are we talking about that?

Mr. Hurd: Okay, we'll hold onto that then.

Mr. Rowlands: That's not agrifiber though.

Mr. Hurd: And/or.

Mr. Rowlands: Yes, but I don't think you're seeing much agrifiber.

Mr. Hurd: There was a spate of it back when it was first coming on. It was like straw board and panels and things.

Mr. Poole: We get cork and bamboo.

Mr. Hurd: Yeah, straw just never caught on. Indoor chemical and pollutant source control. That seems to be something we've had before. How do you judge that?

Mr. Poole: Again, that's where you're putting the ventilation in specific areas where you're expecting contaminants.

Mr. Hurd: Okay, so maybe that's . . . controllability of systems. We like that. Controllability of systems for thermal, we like that I think, generally. Thermal comfort design and I guess verification is the one we're probably going to have to drop. Daylight and views is good. And then the last, renewable energy, we have onsite which I think is a stretch.

Ms. McNatt: They don't get points, we're not giving them points now, right?

Mr. Hurd: They're not getting points now.

Mr. Poole: And I think we should put it in.

Mr. Rowlands: I think we should.

Mr. Firestone: Oh, yeah, definitely.

Mr. Hurd: Do we want it in the base or do we want it in the stretch?

Mr. Rowlands: Well you can't stretch it because there's no code that says . . .

Mr. Hurd: Well I mean, sorry, the base or the plus? The site plan approval level?

Mr. Poole: I think we could have it in both.

Mr. Hurd: Okay.

Ms. McNatt: Is this like solar?

Mr. Poole: Yeah.

Ms. McNatt: Okay.

Mr. Firestone: Yeah.

Mr. Poole: Solar, wind power . . .

Ms. McNatt: Right, some other use . . .

Mr. Firestone: Effectively solar though.

Mr. Hurd: Effectively solar, yeah.

Mr. Poole: Yeah, there's not much wind power these days.

Mr. Firestone: Geothermal heat pump.

Ms. McNatt: Okay. Then we have to decide what number to give it.

Mr. Hurd: Green power we have to kind of . . . no, the City has green power.

Mr. Poole: Yeah, we have green power but also the other thing that we might want to look into there would be things like car chargers and . . .

Ms. McNatt: Charging stations? Electric charging stations?

Mr. Poole: Yeah, charging stations.

Mr. Hurd: That's covered, at least it's covered in the site selection and development section but . . .

Mr. Firestone: But what if someone wants to come in and build it at STAR and they want to assign a corporate PPA?

Ms. McNatt: What's that?

Mr. Firestone: Power Purchase Agreement. So, they're going to assign one, I mean you have to work through it with the City and all this, you know . . .

Mr. Poole: That's what they're doing at the Millcroft building. That's one of the ways that they got points because they're assigning a green power contract.

Mr. Hurd: Okay.

Mr. Firestone: Because you can only, if you have a big building with a lot of labs, say, or any kind of facility that's a real demand use of electricity, you're not going to be able to do it with your panels alone. Not unless you paneled all of STAR Campus.

Ms. McNatt: Every square inch.

Mr. Firestone: So, you know, if you really want to, you'd rather have them do onsite, but you should get some credits if you're . . .

Ms. McNatt: Got it.

Mr. Hurd: Okay. Site selection development has always been a, I don't know, I don't want to say controversial but it's the one I find hardest to fit into the Code that we're kind of looking at. I know that we currently are giving points in site selection things and I don't . . .

Mr. Rowlands: Do we need it?

Mr. Hurd: So, part of my question is do we want to still hang onto those things?

Mr. Poole: I think we need to add somethings and maybe de-emphasize some.

Ms. McNatt: I agree.

Mr. Poole: Like if we could de-emphasize the alternative transportation, being within ¼ mile of the bus route, but meanwhile give some credits for brownfield redevelopment . . .

Ms. McNatt: I agree with that 100%.

Mr. Hurd: Okay. That's fine. So, we'll kill . . .

Mr. Rowlands: What brownfields do we have?

Ms. McNatt: Well, the contaminated water over by, or the contaminated sites over by . . . there's a whole map. DNREC issues it and it will tell you all the brownfield spots.

Mr. Rowlands: But we have a bunch?

Ms. McNatt: We have some.

Mr. Poole: We have enough that if they get cleaned up and redeveloped, it's a good thing.

Ms. McNatt: Yes, and you want to be . . .

Mr. Rowlands: But if they're going to do it, they're getting financial aid from the state . . .

Mr. Poole: It doesn't matter. It's still benefiting us.

Mr. Rowlands: Oh, no, I know.

Ms. McNatt: Yes, that is true. Sometimes they can apply for financial aid to assist them to either clean it up, cap it, do whatever . . .

Mr. Hurd: Getting a point or two from our thing is not what's going to drive someone to develop brownfield. But if they do develop a brownfield, we want to give them a credit.

Mr. Rowlands: So, if it's not going to drive them to do it, why are we just giving the point away? They're going to do it because they've already been [inaudible], not because of this point, if that's what you just said.

Mr. Hurd: Well . . .

Ms. McNatt: But it's actually saying, hey, if you, developer, go look at a brownfield site and I get a point for it and it helps my LEED, that would be a good thing.

Mr. Poole: Or 5 points for it.

Mr. Rowlands: Is that going to make or break their decision? They're going off the federal government rebates . . .

Mr. Poole: No, but if they're spending a lot of money on clean-up and that, and meanwhile we give them 5 points for it because we feel that it's got a lot of value to the community to clean up that brownfield site, and now they don't have to get 5 points somewhere else that could cost them more money . . .

Mr. Jadick: Agreed. I think you hit it right there. That's probably the . . .

Mr. Hurd: So, maybe that's a bigger point item than currently. I don't know quite what they mean by site selection. I think in the LEED sense, site selection is a lot of like not on greenfield . . .

Mr. Rowlands: I'm sorry, can we back up a bit. I don't quite follow that. You've got a developer looking at a brownfield site, he's going to make this decision based on federal rebates or whatever he can get out of it. Is he going to look . . .

Mr. Poole: Or access to I-95.

Mr. Rowlands: Oh, I'm on the fence but I see 5 points from Newark, so let's do it? And if he's not seeing 5 points, and that will make or break let's do it, all we've done is given 5 points that he now has to get from somewhere else if we're not giving him 5 points.

Ms. McNatt: But you're getting a water, not water, you're getting a quality of life benefit. You're getting . . .

Mr. Rowlands: No, I'm not . . . I understand that.

Mr. Hurd: But are we encouraging, is that something . . .

Mr. Rowlands: Are we just giving it away is what I'm saying?

Mr. Hurd: Are we effectively encouraging that or is it just rewarding . . .

Mr. Firestone: We're probably effectively giving away a point but it doesn't, I mean . . .

Mr. Hurd: Or two, or, we'll figure out the . . .

Mr. Firestone: If it's a small amount, if it's only 1 out of a bunch, then I think it's okay . . .

Mr. Rowlands: Okay.

Mr. Firestone: But we should recognize we're effectively just giving away a point.

Mr. Hurd: It shouldn't be so many points that they can be done for the rest of the things probably I think we want to maybe say. I was going to say we probably want to drop, we could probably drop the LEED site selection credit, though we'd have to look into that a little more, because that's a lot about, as I recall . . .

Ms. McNatt: I'm sorry, which one are you on?

Mr. Hurd: The top of the line.

Mr. Firestone: Which one?

Mr. Hurd: Site selection.

Ms. McNatt: I'm sorry. Okay.

Mr. Hurd: Because I know that LEED pushes a lot of like no greenfields, and we don't have really any effectively any greenfields left to really have to worry about that.

Ms. McNatt: But this is one of the ones where I was how the heck do we get 5 points when the max is only 1.

Mr. Hurd: That I don't know.

Ms. McNatt: Isn't that the one that we were like how, there's a couple of those.

Mr. Poole: When it was developed, they had a lot more.

Ms. McNatt: Oh, there was a higher number available . . .

Mr. Poole: Right. Through LEED.

Ms. McNatt: Okay, so I'm okay giving a 1 in this case, or reducing the 4 to a 1, period.

Mr. Poole: Well, we're going to get into values later.

Ms. McNatt: Oh, okay.

Mr. Poole: Right now, we're just what's going to be on the chart.

Ms. McNatt: I like it on the chart.

Mr. Hurd: Is site selection a criteria we want to reward people for or is that something that's going to happen otherwise?

Ms. McNatt: Yes, I think it's important.

Mr. Jadick: I think so.

Mr. Firestone: Do we have some that we want people to avoid in this City?

Ms. McNatt: Say that again, sorry.

Mr. Jadick: You're encouraging.

Mr. Hurd: That you want them to avoid, you mean?

Mr. Firestone: To avoid development of inappropriate site. What inappropriate sites do we have?

Mr. Hurd: The golf course.

Ms. McNatt: What? Hahaha, yeah.

Mr. Firestone: Yeah, but it depends on your view.

Mr. Poole: But that does fit into there.

Mr. Firestone: If you think of it as infill, then that's not an inappropriate site. So, you know . . .

Mr. Hurd: I'm going to say we're going to keep that and I'm going to see if we can clarify that language about sort of what kind of sites we're looking to do. I like the one for the Green Construction, no building on sites lower than 5 feet . . . this one is worded weirdly . . .

Ms. McNatt: Well, it is because you can't, in the City of Newark you can't. You can't build 5 feet below the . . . I think that's the Code.

Mr. Hurd: No, no, no. So, the site has to be . . .

Mr. Poole: Five feet above the . . .

Mr. Hurd: You can't build on a site that is 5 feet above the flood elevation.

Ms. McNatt: Oh.

Mr. Poole: You have to be at least 5 feet above.

Mr. Hurd: The wording is a little weird, I know.

Ms. McNatt: Well, when you have a stream that goes right through the darn town, I don't think that . . .

Mr. Hurd: And that might be hard. But I think that their point here was to say, even when you say . . .

Mr. Firestone: Which flood?

Ms. McNatt: But you're also regulated . . .

Mr. Poole: Base flood elevation.

Ms. McNatt: But you're also regulated by FEMA in those areas that have floodplain, so . . .

Mr. Poole: Yeah, well, in Newark you can't build in the floodplain, period.

Ms. McNatt: Period. Yeah.

Mr. Poole: But this is saying okay you can't build within 5 feet of elevation of a floodplain.

Ms. McNatt: That pushes . . . that's my point. Having a stream that goes through the City, it pushes development way far away from, because . . .

Mr. Hurd: It does.

Ms. McNatt: You're beyond, those elevations in some cases could be hundreds of feet away, so I don't think it's necessary.

Mr. Hurd: We could conceivably reword that to just say all buildings, you know, the lowest level has to be 5 feet above flood elevation.

Mr. Poole: Yeah, but if you're on a site where if you move your building from here to here and you get it from being 4 feet above flood elevation to 6 feet above flood elevation, just by where you put it on the site, why wouldn't we give them a point for that?

Mr. Firestone: Well . . .

Mr. Hurd: I'm just saying we could expand that to say it's not just the grade elevation but just to say we want the bottoms of buildings . . .

Mr. Firestone: Yeah, but if you build your apartment the way everyone builds their apartment and they put parking down below, then are they going to get it? I mean . . .

Mr. Hurd: I mean, yeah, most of the townhomes are typically done that way. But commercial doesn't . . .

Mr. Poole: But, again, if you're not building within 5 feet of the flood elevation, that's a positive thing.

Mr. Hurd: It is.

Mr. Firestone: Okay.

Mr. Hurd: Let's hang onto it and we can beat that up a little more because I'm looking at the time and going, we're running out of time. So, we may have to come back and do residential next month because I do have to get out of here.

I was going to say we could probably kill the development density and community connectivity. Because that's essentially building in the city.

Mr. Firestone: Agreed.

Mr. Hurd: That is definitely a giveaway. I do like the compact building footprint.

Mr. Firestone: Yep, agreed.

Ms. McNatt: That's one to keep.

Mr. Hurd: Brownfield development. It sounds like there's some agreement on killing the public transportation access.

Mr. Poole: I think we reduce it but . . .

Mr. Hurd: Reduce it maybe. Okay. Don't reward it as heavily?

Mr. Poole: Right. Because right now it's 6 points and I've gotten a lot of feedback that that's not the way it should be.

Mr. Firestone: What do they get credit for? Being near the bus station?

Mr. Poole: Being within ¼ mile of a bus route.

Mr. Hurd: Usually it's three, like three stops.

Mr. Firestone: I don't think it should be in here. Hardly anyone takes the bus.

Mr. Hurd: And the thing is if you include UD's bus . . .

Mr. Firestone: Yeah . . .

Mr. Poole: And except for students . . .

Mr. Hurd: There's nowhere in the City that's not within three . . .

Mr. Firestone: Yeah, I think this is just . . .

Mr. Poole: Millcroft is because they tried, they argued over and over because they cancelled, DART cancelled the bus up Possum Park Road three years ago and, let me tell you, I heard a lot of whining that there were 6 points that they had to leave on the table.

Mr. Jadick: I bet.

Mr. Firestone: So, they should get no, I don't think they should get any points.

Mr. Poole: I disagree.

Ms. McNatt: I think lowering it, because you want to promote it, but I don't know that you want 6 points.

Mr. Poole: Particularly when you have a student population where we're trying to get them to not bring cars.

Mr. Firestone: But every single thing that they're building for the students, almost everything that they're building, they're going to get points.

Ms. McNatt: No, no no. I lived in a community, I have moved, that has no good bus access and I would have clearly abused it. And I have lots of students illegally renting in the community that have a lot of cars. So, if there was a bus stop . . .

Mr. Firestone: Is there an apartment building there?

Mr. Hurd: No, it's townhomes.

Ms. McNatt: No, townhomes.

Mr. Poole: But we're talking about . . .

Mr. Firestone: This is commercial.

Mr. Rowlands: We're talking about future buildings, too.

Ms. McNatt: But there are future buildings because there's the City of Newark Charter High School there. There's a . . .

Mr. Hurd: There's industrial type of things.

Ms. McNatt: Industrial use there.

Mr. Hurd: If there was public transit there, that would be a good thing.

Ms. McNatt: Yeah. I'm sorry that that's my example.

Mr. Hurd: No, okay.

Mr. Jadick: I think it's a good thing. It's worth . . .

Mr. Poole: But that's a real-world example in the City.

Ms. McNatt: It is.

Mr. Firestone: I think it's a giveaway.

Mr. Hurd: Well, so maybe we can drop the points or constrain the definition enough that it's not completely a giveaway.

Mr. Poole: And we all don't have to disagree with everything.

Ms. McNatt: That's correct.

Mr. Poole: We just have to come to a consensus.

Mr. Firestone: Agreed.

Mr. Poole: We don't have to agree to everything. We can come to a consensus where most of us agree.

Ms. McNatt: Agree to agree or agreed to disagree. That can happen too.

Mr. Hurd: I generally prefer consensus over voting because that means you don't have people sort of going my voice is never heard, blah, blah blah. Alright, anyway, bicycle storage and changing rooms, always awesome.

Ms. McNatt: Yeah, but can we talk about that because I think that, you know, this whole promoting bicycles is great but when you have 500 bikes chained up to one bicycle rack . . .

Mr. Hurd: Oh yeah.

Ms. McNatt: Like a mountain o' bikes is kind of a little crazy.

Mr. Hurd: So, this one is less about bike racks because bike racks are in the Code. This is talking specifically about storage and changing rooms. So, like if this was a commercial property . . .

Mr. Firestone: Like you bike to work and then there's a place to change.

Mr. Hurd: You bike to work, can lock the bike up in a room, change and shower and go to work. Residential gets, I think, because this doesn't make sense for residential . . .

Ms. McNatt: But what is that out there?

Mr. Firestone: What do you mean?

Ms. McNatt: That mountain o' bikes that happen out here in a commercial location.

Mr. Firestone: Oh, you're talking about right next to City Hall?

Ms. McNatt: Yeah, right in front of our building. Like right there.

Mr. Poole: Yes, they put those bike racks up and then the next day there were bikes stacked on top of bikes there.

Ms. McNatt: Yeah.

Mr. Hurd: But who is biking and chaining and where are they going?

Mr. Poole: They're going next door to all these apartment buildings because there's not enough bike racks there.

Mr. Hurd: Ah, so it's a bike rack issue.

Mr. Poole: Yes.

Mr. Hurd: So, this isn't bike racks . . .

Mr. Poole: Which meanwhile we require bike racks in every new development.

Mr. Firestone: Yeah.

Mr. Rowlands: But what do you require a . . .

Mr. Hurd: It's a percentage of . . .

Mr. Poole: It's a number based on number of parking spots required.

Mr. Firestone: But we're talking about commercial and you're saying residential . . .

Ms. McNatt: No, no no, this is a commercial area. Right here, a commercial area.

Mr. Hurd: I know.

Mr. Poole: But again, that could . . .

Mr. Firestone: But this is . . .

Mr. Poole: Be depending on the use.

Mr. Firestone: This is focused on changing rooms so that you can bike to work, you've got to be, it's 95 degrees and you need a place to change out of your . . .

Mr. Hurd: If the City wanted to do like another building, if they provided basically indoor storage for the bikes . . .

Mr. Jadick: Is that what that is, though?

Mr. Hurd: Well, bike storage. I've seen it sometimes that it's like . . .

Mr. Jadick: I thought bike storage specific to this was simply a bike rack.

Mr. Hurd: I think it can be a bike rack but it could also be those little lockers that like, because if you're talking about train stations, people really like the individual bike lockers that you can put the bike in and lock the whole thing up.

Ms. McNatt: Maybe we should clarify what this really means.

Mr. Poole: But, again, if it requires the storage and the changing room, that's . . .

Mr. Firestone: There's not going to be many . . .

Mr. Rowlands: That's going to be an expensive point.

Mr. Poole: Right.

Mr. Hurd: But it also really applies, it applies to like . . .

Mr. Jadick: Based on square footage, yeah.

Mr. Hurd: Governmental buildings, you know, less to retail possibly, and certainly not to apartment buildings because you're coming . . .

Ms. McNatt: If it promotes the less mountain o' bikes in a commercial setting, I'm for that.

Mr. Hurd: So, one thing I wrote on the side is I wrote bike racks because we could possibly put in there to say if you're providing a percentage of bike racks above Code, there's a value in that. The low-emitting fuel-efficient vehicles, that's usually about preferred parking. And then there's the charging facilities.

Ms. McNatt: And that's the charging. We wanted to give a point for that, or some points.

Mr. Firestone: Yes, the charging facilities.

Mr. Poole: Charging facilities and even those . . .

Mr. Hurd: Preferred parking is sort of the way that it's been addressed in other things.

Mr. Firestone: My view is that we should require charging facilities for buildings that are over certain size.

Mr. Rowlands: May be.

Mr. Firestone: It shouldn't be optional. You should have to start putting in this infrastructure.

Mr. Rowlands: But how many square feet would you . . .

Mr. Firestone: I don't know. I don't know what the number is but I . . .

Mr. Poole: Well we can weight it with points. Again, if we're trying to encourage that . . .

Mr. Firestone: I'm saying it should just be required.

Mr. Poole: It should be mandatory and it should be an amendment to the Building Code.

Ms. McNatt: Alright.

Mr. Hurd: Keep in mind also this is all commercial and there's going to be less, commercial only kicks in for like a residential building over three stories, so like an apartment building would kick in, but commercial facilities, I guess you would want that for commercial, like an office building.

Mr. Firestone: Oh yeah.

Mr. Hurd: Right. Yeah, yeah.

Mr. Poole: But not so great for the shopping center.

Mr. Firestone: No, shopping centers should put it in too

Mr. Rowlands: It encourages people to shop there.

Mr. Firestone: You know . . .

Mr. Hurd: Right, I shop there because I can charge my car while I'm getting stuff and then come back out.

Mr. Rowlands: And however much demand it is now, it's going to be more next year and the year after.

Mr. Hurd: Right. Alright, parking capacity is probably one we can't get into in this Code because that's in zoning and we're working on that.

Ms. McNatt: So, it's coming off this list?

Mr. Hurd: I'm going to take that one out, parking capacity.

Mr. Poole: Where are we at?

Mr. Hurd: Halfway down the page.

Mr. Poole: Oh, okay, I see it. Sorry.

Mr. Hurd: Site development, protect and restore habitat. We could maybe talk about a percentage.

Ms. McNatt: I'd like to keep that one in. I think that's a good one to keep.

Mr. Poole: And we've a couple of occasions where that has happened and been beneficial.

Mr. Hurd: Okay.

Mr. Poole: And a couple of really nasty wetlands that got cleaned up and look really good now.

Mr. Hurd: Retaining, Green Construction Code talks about retaining native plants and also talks about planting additional trees. I think those are things that we could look and figure out how to work them in.

Mr. Firestone: Yep.

Mr. Hurd: Maximizing open space may or may not really fall under this since that sort of hits the site plan approval process. It focuses on open space.

Mr. Firestone: Didn't we also have the less than 10% criteria already? We did something about occupy less than 10% of the site and you got a point.

Mr. Hurd: There was compact building footprint which was lot coverage less than the maximum. This would be more about maximizing the open space and development. So, I'm saying that that site, the maximize open space I think we address currently through site plan approval. And I don't know if we . . . somewhat?

Mr. Poole: I don't know, I mean I think, again, if somebody wants to put more open space in the City, that's a positive thing and we should give them a little credit for it.

Mr. Hurd: Okay.

Mr. Firestone: How is that different than compact building? I mean I don't want people double . . . first you build a compact building and then you also get credits for having open space.

Mr. Poole: Where did we get credit for a compact building?

Mr. Hurd: At the top.

Mr. Rowlands: It was there. I saw it somewhere.

Mr. Firestone: Anyway, those two can somehow be combined. That's all I'm saying.

Mr. Hurd: Yeah. Okay, so we may have to pick one over the other. Stormwater.

Ms. McNatt: Here's my love and I think 1 point, we can talk about that later, but I think that quantity control is different than the requirement of what state requirements already are, and it's addressing the conveyance system itself and making sure it has the capacity, or other things . . .

Mr. Hurd: Okay.

Ms. McNatt: And I think that this should be included and the points system can be discussed later.

Mr. Hurd: Okay, so we're looking for something that's plus the Code in some ways.

Ms. McNatt: There could be some that, like a one or stuff like this could be required not like a 1 credit but if you do additional things, you can get the extra . . .

Mr. Hurd: Right. I will say that in some of my thinking about the site plan approval process, especially as it relates to redevelopment, the criteria that it makes sense to me to be looking at in terms of redevelopment is improved or better stormwater management and such.

Ms. McNatt: Conveying it, controlling it, upgrading it . . .

Mr. Hurd: Because that comes into play more in redevelopment than it does in new development. So, whether that really falls into here or falls into something else, we'll get that in there. Heat island effect non-roof . . .

Ms. McNatt: You're jumping. Quality control.

Mr. Hurd: Oh, quality, yes.

Ms. McNatt: The state regs don't require necessarily the maximization of infiltrating water first and I think that if they do that, you get a better quality better when you're infiltrating the water versus holding it and then discharging it . . .

Mr. Hurd: Okay.

Ms. McNatt: So, I think that there's a benefit that's above and beyond.

Mr. Hurd: So, infiltrate versus contain.

Ms. McNatt: Yep.

Mr. Hurd: Okay. Then we have heat island effects. There are two different ways of looking at it here, the LEED and the Green Construction. One is talking about reducing the heat island effects and one actually sets up a solar radiation, I think it was a reflective index for paving and for concrete.

Ms. McNatt: I do like the permeable pavers. Are we there yet? No, sorry, we're jumping.

Mr. Firestone: I like the IgCC.

Mr. Hurd: Yeah, I think giving it a number helps.

Mr. Firestone: And the permeable pavers and some more . . .

Ms. McNatt: It doesn't have to be pavers. It could be anything permeable. It can be asphalt, concrete. Now . . .

Mr. Hurd: Permeable asphalt or concrete.

Ms. McNatt: Right, but one is more heat island benefit than the other but permeable is one . . .

Mr. Hurd: I think we should certainly encourage that. And then we have the roof heat island which continues on the other page so, again, the Green Construction Code is a little more specific in terms of reflective indexes and, of course, a credit for a vegetated roof.

Ms. McNatt: Yes, I think that should be one.

Mr. Hurd: I agree. Light pollution, I don't, I guess we're currently giving them a credit, no, we're not giving them a credit. What's people's experience with light pollution, light trespass and such? Do the current codes seem to address this at all effectively?

Mr. Firestone: I mean the biggest . . .

Mr. Poole: Sight lighting.

Mr. Firestone: Is the City lights.

Mr. Poole: There are certain sight lighting requirements in the Zoning Code.

Ms. McNatt: That protects uses like commercial adjacent to residential . . .

Mr. Poole: Yes.

Ms. McNatt: Seventy-five percent something, there's that requirement.

Mr. Poole: Yes, it's about lux at the property line.

Ms. McNatt: Okay.

Mr. Hurd: So, it doesn't so much talk about light going up or light glare, which is what LEED is addressing. This is more of a quality and comfort, I think, item and it's a question of whether we want to hold that or dig into that. Silence.

Mr. Rowlands: Nobody is an expert on light here.

Mr. Firestone: The whole eastern seaboard has so much light pollution that you can't really see the night sky anyway although the eclipse was quite nice.

Mr. Hurd: Let's drop that for the moment.

Ms. Gray: Where did you go for the eclipse?

Ms. McNatt: I saw it at my house.

Ms. Gray: Did you go somewhere?

Mr. Firestone: No, I looked up through my skylight.

Ms. Gray: No, I did too. We didn't go anywhere.

Mr. Rowlands: From my house, I could see the glow of Newark.

Mr. Hurd: Yeah.

Mr. Jadick: I'm sorry, Will, were you considering striking that one?

Mr. Hurd: Yes.

Mr. Rowlands: Which one are you dropping?

Mr. Hurd: Light pollution.

Mr. Poole: Light pollution reduction. It's a verifiability issue.

Mr. Hurd: And it's a bang for the buck kind of issue, too. Innovation in design is kind of sticking around here whether we want to, that's very much a LEED-specific kind of thing. But conceptually it's a way of sort of saying there's some points on the table if you can come to us and demonstrate that you're doing something that we didn't talk about.

Mr. Jadick: Yeah . . .

Mr. Hurd: That has a value.

Mr. Jadick: Thinking outside the box.

Mr. Firestone: Yeah.

Mr. Poole: I mean if we're going to put an option to get LEED silver, then they could get it that way.

Mr. Hurd: Yeah.

Mr. Poole: If they're looking at that.

Mr. Hurd: Because that tends to be where it gets in . . .

Mr. Rowlands: If they're getting LEED silver to get this innovation in design, they're getting a whole lot of these other points already.

Mr. Poole: Right.

Mr. Hurd: Yeah, exactly.

Mr. Firestone: I mean I'm not opposed to people thinking out of the box and coming up with good things and they're equivalent or better.

Mr. Jadick: I mean I've seen it . . .

Mr. Rowlands: I mean if I come to you and say I'm going to build a Passive-certified, is that out of the box?

Mr. Hurd: Well, I think the Passive-certified would fall into the ultimate path for the checklist.

Mr. Rowlands: Right, but if it's an innovative design, I'm already capturing most of these anyway.

Mr. Hurd: I see what you're saying, yeah. Yeah, okay, we'll hold onto it for the moment.

Mr. Rowlands: I mean if you can define innovative . . .

Mr. Poole: Well, like I said, are we going to keep it or are we going to strike it?

Mr. Rowlands: I'm not sure what innovation in design means.

Mr. Poole: Either we need to quantify it or we need to strike it.

Mr. Hurd: Right.

Mr. Rowlands: Qualify a completely [inaudible] design that has nothing to do with these other points, give it to them. That's cool.

Mr. Hurd: Yeah, it's the quantifying it to be able to say, yeah, that's worth 5 points.

Mr. Firestone: I mean I guess you sort of should think about this because it makes your job more difficult but it could . . .

Mr. Poole: Again, we need to quantify it so that it's enforceable or we need to skip it.

Mr. Rowlands: Skip it.

Mr. Poole: If it's going to be on the checklist, it needs to be quantifiable.

Mr. Firestone: Let's skip it. Let's skip it.

Mr. Hurd: We'll leave the quantification to the LEED HERS. And then the last one, which I always thought was a gimme and I am quite willing to drop is the LEED accredited professional, which really only comes into play if we follow a LEED . . . well, it made sense when this was a LEED-based system. When we're now not in a LEED-based system . . .

Mr. Poole: These days this is much more mainstream than it used to be . . .

Mr. Rowlands: How about if you put a HERS rater in there instead?

Mr. Hurd: Well that would, if you say you're going to do the stretch, I mean that's part of the verification of the stretch code.

Mr. Rowlands: I know. This eases their pain because they're getting a point because they have to hire a guy.

Mr. Hurd: But if they do the stretch thing, they're not using the checklist possibly. If we use that method . . .

Mr. Poole: If we want to go to third-party verifier, then okay we'll give them some points for third-party verification but not necessarily just because they have one person on the design team that spent 8 hours in a LEED class.

Mr. Rowlands: Oh, I agree with LEED.

Mr. Firestone: Third-party verification would be worthwhile.

Mr. Rowlands: Yeah, and that's where the HERS rater would come in.

Ms. McNatt: I have to run. Sorry.

Mr. Hurd: You have to go?

Ms. McNatt: Yeah, I only have a babysitter until 5:30.

Mr. Firestone: I've got to go, too.

Mr. Hurd: That's fine. I think we did . . .

Mr. Rowlands: We did this page and that's a good place to stop. So, we're leaving this out, right?

Mr. Firestone: Yes.

## 6. GENERAL PUBLIC COMMENT

[Secretary's note: There was no public comment.]

## 7. ITEMS FOR NEXT MEETING

Mr. Hurd: Okay, so I'm going to write us a third-party verification and we can figure out how that . . .

Mr. Jadick: If they're seeking LEED accreditation, they're going to . . .

Mr. Hurd: Right. If you go the LEED path, that's all captured in there. If you go stretch code, HERS is capture and so . . .

Mr. Poole: And I'm thinking if we do the stretch code, then maybe we can do stretch code plus one selection from here and one selection from here and one selection from here.

Mr. Hurd: That's what we have to kind of figure out.

Ms. McNatt: See you next meeting?

Mr. Hurd: Yeah.

Ms. McNatt: When's our next meeting?

Ms. Gray: February 5. Tuesday the 5<sup>th</sup>.

Ms. McNatt: Nice to meet everybody.

Ms. Gray: Thanks, Stacy.

Mr. Rowlands: I'll come back next month with an idea of stretch code code reduction. Sounds better, right? Take Passive House standard and reduce that standard by 20%.

Mr. Hurd: Oh, okay.

Mr. Rowlands: I don't know if it works, I'll do some thinking.

Mr. Hurd: I'm going to rewrite the . . .

Mr. Poole: Are we adjourned?

Mr. Hurd: The meeting is basically adjourned, yes.

Mr. Poole: I just wanted to have that on there for Michelle.

The Green Building Code Work Group meeting adjourned at 5:29 p.m.

As transcribed by Michelle Vispi  
Planning and Development Department Secretary

### Attachments

Exhibit A: [Green Building Code Concepts List](#)