MINUTES
SUBCOMMITTEE ON OUTDOOR LIGHTING STANDARDS
(PUBLIC WORKS AND TRANSPORTATION COMMITTEE)
Council of the County of Maui
Council Chamber
January 24, 2002
CONVENE: 9:01 a.m.

PRESENT: Councilmember Michael J. Molina, Chair
Councilmember Charmaine Tavares, Vice-Chair
Lee Altenberg, Member
Richard Chong, Member (In 9:10 a.m.)
Mike Maberry, Member
Warren McCord, Member

EXCUSED: Hannah Bernard, Member

ABSENT: None.

STAFF: Gary Saldana, Legislative Analyst
Karean Zukeran, Committee Secretary
Michelle Anderson, Executive Assistant to
Councilmember Nishiki

ADMIN.: Gregory J. Garneau, Deputy Corporation Counsel
Department of the Corporation Counsel
Joe Alueta, Planner VI, Department of Planning
Howard Hanzawa, Civil Engineer IV, Land Use

and

Codes Administration
Greg Nakao, Electrical Engineer IV, Land Use

and

Codes Administration
Cary Yamashita, Assistant Engineering Project Manager, Department of Public Works and Waste

Management
Patrick Matsui, Planning and Development Division, Department of Parks and Recreation
Kal Kobayashi, County Energy Coordinator
Captain Lawrence Hudson, Department of Police

Captain George Fontaine, Department of Police
Captain Clayton Tom, Department of Police
OTHERS: Steve Sutrov
Bill George, Renaissance Wailea Beach Resort
Rob Hoonan, Director of Engineering, Grand Wailea Resort; Maui Hotel Association
Barbara Sinclair
Kahu Charles K. Maxwell
Brian Ige, Dowling and Company
Kelvin Dang, Executive Director, Safe Community of Maui Inc.
Lynne Woods, President, Maui Chamber of Commerce
Randy Nakama, Maui Electric Company Inc.
Randy Piltz, Piltz Electric
Neal Shinyama, Maui Electric Company Inc.
Additional attendees (4)

PRESS: None.

CHAIR MOLINA: (Gavel.) Subcommittee on Outdoor Lighting Standards meeting for January 24th is now in session. For the record, we have in attendance and we welcome -- Okay. The Chair will call for a recess to check on our equipment. (Gavel.)

RECESS: 9:01 a.m.

RECONVENE: 9:02 a.m.

ITEM NO. S-OLS 1: SUBCOMMITTEE ON OUTDOOR LIGHTING STANDARDS (Misc.)
CHAIR MOLINA: (Gavel.) The Public Works and Transportation Subcommittee on Outdoor Lighting Standards is now back in session. For the record, we have in attendance and we welcome to our second meeting Councilmember Charmaine Tavares, who will be serving as the Vice-Chair. We have Dr. Lee Altenberg. Mr. Mike Maberry of the University of Hawaii representing the Outdoor Circle, Maui Branch. We have Warren McCord. Excused today is Hannah Bernard from the Maui Ocean Center. And on his way representing the Illuminating Engineering Society of America is Mr. Rick Chong.

Good morning, members.

COMMITTEE MEMBERS: Good morning.

CHAIR MOLINA: You look all bright-eyed and enthusiastic, ready to take on the challenges that lay before us today. Before we commence, we have public
testimony. And those wishing to testify should sign up at the secretary's desk. The testimony shall be limited to three minutes. An additional minute to conclude will be granted subject to the discretion of the Chair. If your testimony is not completed, an additional three minutes will be given to you after all others have been heard. Testifiers are requested to state their name for the record and indicate who they are representing. And to help minimize any disturbances that may occur during the meeting, we ask that you please turn off all pagers and cellular phones or set them to the silent mode. So with that, let's begin our testimony for today. First to testify I would like to call upon Steve Sutrov, to be followed by Bill George.

MR. SUTROV: Good morning. My name is Steve Sutrov. I am representing myself today. And also I have been working with this ordinance with the Ad Hoc Group for Outdoor Lighting, Maui Outdoor Lighting Standards. Also I'm on the Board of Directors...
I just have a few comments. I would just like to say that in working with this -- in researching this ordinance, we checked into a lot of different communities and states that are doing the same thing or have done similar things as far as enacting ordinances for their communities. Some of them have been through a -- done because of emotional outcries for getting their night sky back or their vistas of their lakes that are -- their rivers, their mountains, and very rural areas where light is becoming an increasing problem with more urbanization into their areas. Some were done for reasons for -- to protect scientific research and native habitats and endangered species. On Maui it seems to be a combination of all of those. We're in a very unique situation here.
We have a very small community. Actually, the state of Hawaii is actually a very small community when it comes to our night sky. When we have see photos from the observatories in Mauna Kea and we can see pollution from Kihei and we can see pollution from Oahu in the night sky and it's a problem here. Where light has no real boundaries, it can travel thousands -- hundreds of miles very easily. Where light has no real boundaries, it can travel thousands -- hundreds of miles very easily.

And it travels very easily. And so the main
concerns are -- in the ordinance is full cut-off lighting, which is probably our number one key goal. As long as all -- all fixtures, street lights and all parking lot lights and residential lights get on the same plain of a full cut-off fixture where light shines down and not up and not out and being a trespass problem, that's number one.

Number two is low pressure sodium whenever you can use it to use it. For the observatories mainly who will not be able to operate without low pressure sodium in the future because of the intense white light going up into the atmosphere and polluting their instruments. Also for the wildlife, which the low pressure sodium, the yellowish light, the one-spectrum type light, that that is more acceptable for sea turtles and night-flying birds. It does not affect them as much as white light.
Those two reasons alone, Maui should definitely, like other communities --

MR. SALDANA: Three minutes.

MR. SUTROV: -- in the -- as other communities in the same situation with observatories and protecting their wildlife, nighttime endangered species, namely, have incorporated low pressure sodium. Low pressure sodium is not an accepted -- a widely accepted means of lighting because police don't like it because of no color rendition and the lighting engineers don't like it because they can't really do pleasing settings for their clients. And so there's some real adversaries there, but we need it for observatories, for scientific, military, and for our -- our environmental reasons for our sea turtles and our night-flying birds.

Thank you very much.

CHAIR MOLINA: Okay. Thank you, Mr. Sutrov.

Members, any questions for Mr. Sutrov at this time? Hearing none, thank you.

Before I recognize Mr. George, I would like to recognize the hardworking staff that's in attendance today. We have the Corporation Counsel
Mr. Greg Garneau and our Legislative Analyst Mr. Gary Saldana. And taking notes today for the

subcommittee is Committee Secretary Karean Zukeran.

Now I would like to call upon Mr. Bill George to give his testimony, to be followed by Mr. Rob Hoonan.

MR. GEORGE: Aloha, Chairman Molina; aloha, Councilmember Tavares; and aloha, subcommittee members. My name is Bill George. I'm speaking as a private citizen today. I was present at a Maui Hotel Association Environmental Committee meeting on Tuesday, this past Tuesday, January 22nd. The Ad Hoc Committee -- Maui Committee for Outdoor Lighting Standards presented the proposed Outdoor Lighting Standards for Maui County. I agree that Maui County does have many poor examples of exterior lighting. I also agree
our community can be better educated and do a
better job at our exterior lighting.

International Dark Sky Association has
been promoting ordinances and codes to control
outdoor lighting pollution. A few quotes from their
position on lighting ordinances.

Quote: "To ensure that effective and
well written codes are adopted, we are developing a
comprehensive standard code that can be used by
any agency... To ensure its universal acceptance, we
are involving key organizations and industry members
so that there is no argument that our Standard
permits safe and effective lighting..." End quote.

Quote: "In the meantime, should you plan
to strongly participate in local code development, we
and recommend that you obtain technical assistance
do not simply adopt one of the many codes that appear on our site." End quote.

Quote: "Another option is to wait until we complete our worldwide lighting standards and use it as a guide to do it right." End quote. This lighting standard by them is forecasted to be released in the immediate future. Last July they said it would be sometime at the end of 2001 or early part of 2002.

I continue. We would not want to be in the position that San Diego is finding itself in of possibly recanting a good, environmentally sound lighting standard because it did not foresee a few serious problems which could have been avoided with the involvement of, quote again, "key organizations and industry members..." And examples of public entities such as police departments, fire departments, et cetera.

I learned that the County of Maui adopted
Chapter 901 Street Lighting Standards on October 18th, 1999. If this standard was enforced, the Ad Hoc Committee at our meeting on Tuesday agreed up to 80 percent of the problem would be solved. The deadline for existing lighting standards is October 18th, 2004 to be in compliance. This is 32 months away and 80 percent of the problem would be solved with existing administrative rules. I propose we make this 80-percent reduction in outdoor lighting pollution happen under existing Chapter 901, disseminate a brochure on exterior lighting to everyone about the problem and solutions, and this would include retailers, which was also a problem with the Ad Hoc Committee. But if we were to educate these people with a brochure, I'm pretty sure that a lot of people would fall in line if they knew the Committee -- the community was behind it. And all of this should be done while awaiting a worldwide model ordinance from the International Dark Sky Organization. And then
we got that ordinance, we could review and make adaptations -- adaptations for Maui and I think we would all as a community be better off. Mahalo for your time and patience.

CHAIR MOLINA: Thank you very much, Mr. George.

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Questions from the Subcommittee? Mr. Maberry.

MR. MABERRY: Yes, sir. Did you speak to anyone at Dark Sky, or did you just get your information from their web page?

MR. GEORGE: It was off the internet, all off the internet.

MR. MABERRY: Thank you.

CHAIR MOLINA: Okay. Thank you.

Dr. Altenberg, you had a question?

MR. ALTENBERG: Not at this time.

CHAIR MOLINA: Oh, okay. Thank you very much.

Thank you, Mr. George.

And the Chair would like to remind if --
any resource personnel that's been invited for today's session. We would ask that you please come and take a seat up here as long as seats are open and available.

Next we have to testify Rob Hoonan, to be followed by Barbara Sinclair.

MR. HOONAN: Aloha, Chairman Molina, Councilwoman Tavares. I'm here to speak. I am Rob Hoonan, Director of Engineering at the Grand Wailea Resort. I'm also a member of the Maui Hotel Association's Engineers Environmental Group. On Tuesday we did meet with the group of individuals that are putting the lighting ordinance before you. I would like to say that, first of all, I commend them for their attention to this problem. I do agree that there's some serious problems with types of lighting out there and the way we do lighting. I think there
needs to be, though, some common sense applied to this ordinance.

Frankly, I am very concerned from the security standpoint of our resorts here on the island. We have situations that oftentimes are corrected or at least deterred by lighting. We have recently at our property redone our beach front lighting. It was permitted last year. We were very careful in our selection of lights. In fact, I believe in a presentation that we saw the other day that several of the lights that were actually exhibited were lights that we had put in. The concern is that at nighttime specifically at the Wailea beach in front of our property there is oftentimes gathering of individuals that, frankly, aren't doing the right thing down there. And without light there, it's very hard to discourage them. It's very hard to see them. It is, in fact, a dangerous situation.
I do believe that this ordinance does, frankly, reach a little too far in that it does only stipulate that down lighting or lighting that frankly, shines straight down can be used. That, won't help us at the beaches here on Maui. Extremely dangerous situation. Also on our property we are very concerned about safety and risk management in regards to people slipping, falling, those type of situations. We need to be able to address those situations with common sense solutions that make sense from an esthetic standpoint as well as a safety standpoint.

Thank you.

CHAIR MOLINA: Okay. Thank you, Mr. Hoonan.

Questions? Mr. Maberry.

MR. MABERRY: Yes, sir. Am I to understand that at this time your property is intentionally shining lights off of your property on to public property?

MR. HOONAN: No, Mr. Maberry, you're -- that's incorrect. What we do have is along our property we did put four lights out there that if there is a situation, we may go down and turn them on. We do not turn them on every night. They're only used when
is a situation. Frankly, there's times there's

several -- up to 100, maybe 200 people on the

beach with certain parties. I was a young man myself

one time, I enjoyed going to the beaches, but, frankly,

what's happening down there sometimes is a very,

very dangerous situation. This does shine a

light on it and actually correct the situation. They

actually disperse at that point and illegal

activities that go on down there are actually

curtailed.

MR. MABERRY: Follow-up, please, sir. So the -- you

are admitting, though, that light that is

generated from your property is falling outside the

boundaries of your property; is that correct?

MR. HOONAN: We do shine a light -- if there's a

situation, at our discretion, we do turn a light

on to the situation, yes.

MR. MABERRY: Thank you.
CHAIR MOLINA: All right. Thank you, Mr. Maberry. Committee members? Dr. Altenberg.

MR. ALTENBERG: To follow up on that and also drawing upon what you were saying during the meeting with the hotel association, the -- one of your complaints is that there's not adequate policing provided by the County for the public beaches; is that correct?

MR. HOONAN: No, I did not make that comment, doctor.

can't speculate on that. That is something for the Police Department to speculate on. It is something that I believe is a concern of they can't be everywhere at all times. What we, frankly, want to do with this lighting is at times, if we see a situation develop, we would like to discourage and then turn those off as appropriate.

MR. ALTENBERG: So, in other words, you find yourself in the situation of -- where activities on the
beaches are impeding the activities of your --

business and you find yourself having to

take enforcement or deterrent actions on your

independently of the police, is that correct, in

order to protect the -- your business?

MR. HOONAN: In a -- I guess your statement is

However, you know, what I want to say is,

one of the assumptions that we -- that I heard

the other day was that any good security

would understand that lighting does not deter

I find that, frankly, in -- in the business

1976, I don't agree with that point. That's why

here to say that I believe that -- that the

does deter some crime. Will it stop it all?

don't believe it's an end-all, cure-all for

everything. However, I do believe that this
ordinance, if we did not have any of those lighting -- those types of lighting down there we would use on a temporary basis for my specifically -- I do not speak for the others -- think that we, frankly, could have a liability not only on our property, but also the County possibly might on the beaches. The police are always there when we need as much as they can be. I think they can the -- the issue of coverage better than I can. MR. ALTENBERG: I guess I'm trying to clarify that the situation that you're describing is that are occasions when the activities on public land say are compelling your resort to -- to alter lighting situation on the public land to order; is that correct?

MR. HOONAN: To deter. To deter illegal activities or that type of situation, yes.

MR. ALTENBERG: So, in other words, because of the -- you would feel was an inadequate security of the public beaches, the Grand Wailea is
take its own action with respect to the public
beaches; is that correct?

MR. HOONAN: I guess that's a fair statement. I would
say
that I do -- I'm not at this point criticizing
any

of the Maui Police Department. I believe that
do a terrific job. I'm just saying that this is
big island. Frankly, at times they can't be
everywhere. And if we can deter some crime or
type of situation or illegal activities by a
being on, it sure stops it before it happens.

MR. ALTENBERG: Thank you very much.
CHAIR MOLINA: Okay. Thank you very much.

Members, any other questions for Mr. Hoonan?

Hearing none, thank you very much, Mr. Hoonan.

MR. HOONAN: Thank you.

Next to testify we have Barbara Sinclair,
to be followed by Kahu Charles Maxwell.
And before we proceed with testimony, the
Chair would like to recognize Mr. Richard Chong, Subcommittee member. Thank you.

MS. SINCLAIR: I'm Barbara Sinclair. I'm representing myself. I live at 417 Liholiho Street here in Wailuku. My family moved there in 1941. It's actually up on a hill and I have got a wonderful crow's nest view of from Haiku to Wailea, all up the crater, et cetera. When we moved there there were approximately 12 twinkling lights down there over Kahului. So as I look out from my window now, it's a mass of lights. I am glad this is being addressed. What I see is some very bright light shining from Maui Lani driving range in the evening and right in front of my house some 160 huge white lights over a baseball field. This is baseball season, but there are no games being played right now. Last night, for instance, from -- at 6:00 p.m. the lights went on. It was not dark yet. And
went off at 9:00. And what I observed from my house was four or five players practicing hitting balls and talk story, whatever. My concern is not only the bright lights when no games are being played, but the expense to us as taxpayers for these huge 160 bright lights shining for a few, four or five privileged people to practice a few batting shots at night.

So I am sorry I missed the first meeting so I don't know what was talked about as far as different kinds of lights, but what stands out are these very white, bright lights. And if they're necessary, I guess they're necessary, but I question the cost.

Thank you. Oh, any questions?

CHAIR MOLINA: Thank you.

Members, any questions for Ms. Sinclair?

Mr. Chong.

MR. CHONG: Ms. Sinclair, are you against any nighttime...
athletic activities?

MS. SINCLAIR: No, I'm not. But I wonder why four or five people can go down there and just bat balls at, you know, 160 bright lights shining on them. I am not opposed to games at all, but this has been a problem in the past, too. And sometimes people would be gone at 9 o'clock and those lights would be on till 11:00 and they're very bright. And I did call and complain. And I was told, well, there's one man that goes around and turns all the lights off. But it has been remedied because they're not on till 11:00 anymore. So I just think it's a big expense for four or five privileged people.

MR. CHONG: Point taken.

CHAIR MOLINA: Okay. Thank you.

Okay. Our final testifier today is Kahu Charles Maxwell. If there's anybody else in the gallery that would like to testify, you have an opportunity now to come up and sign up at the secretary's desk.

MR. MAXWELL: Mr. Chairman, Councilwoman Molina (sic),
members of this Committee, my name is Charles Kauluwehi Maxwell and I come from Pukalani. My testimony this morning would -- I would like to center it not on aesthetics, even though I agree with some of the statements that were made. I was a policeman for 15 years and lighting is used as a deterrent, but there is ways to control it. But when I -- when -- I would like to tell you about how the lights affect our spiritual and cultural workings here in Hawaii. We were brought up to feel that the darkest time of the night, pokane -- Every month there's one day -- two, almost two days, that there is no moon, and that night is called pokane. And historically this is the night that the spirits walk from the top of the mountain to the ocean and back throughout the night period. We never used to talk about this because it was talked only amongst our families,
even till today, people know what pokane is, Hua Hele Po is called the night marchers. And that is our mooieolo, our stories from ancient times, and it's still spoke about today. And, in fact, as a Kahu I was asked to bless many houses who are non-Hawaiians who experience things that happen in the night. As a practitioner, I am still practicing our cultural religious -- you know, our religious practices even though I am a Christian minister. But we -- we bury remains, usually do this by going into the ocean to hiuwai, to cleanse ourselves. And so that is done in complete darkness. In fact, sometimes it's done without even having our clothes on. It's a cultural thing. We go in places where there's no light in Makena, if it's in Lahaina. So all of these things, I
you know, we talk about sharks and everything,
when you're doing cultural religious things,
not important. The focus is on a spiritual
basis.
So the light really affects us as Native Hawaiians in practices that we have done and doing today. So --
100 percent. And even the beaches does not have be lighted at night by the hotels. That's the biggest pollution, I think. And even for a -- coming from a cultural side. Thank you so much.
17 CHAIR MOLINA: Thank you, Kahu.
18 Committee members, any questions? Dr. Altenberg.
19 MR. ALTENBERG: Question for Kahu Maxwell. I am wondering for Hawaiians living in places like Kahului or Kihei that where you can't see many of the constellations
MR. MAXWELL: You know, you know, thank you for that question because, yeah, it does. We do burials right at Maui Lani, One Thousand Acres there, and you know, you cannot see the constellation because we're right in the middle of Kahului and it's obliterated. So we just got to -- by memory, we got to know where to face, where to chant, where to do our spiritual things, practices that we do. And, yes, it does affect us immediately. We got to go -- When we're in Lahaina out in the -- you know, the Ritz Carlton or places like that in Hana, it's not too bad, but it does affect us immensely. CHAIR MOLINA: Okay. Thank you very much, Dr. Altenberg.
none and the Chair will close testimony effective at 9:28. Thank you very much, members and testifiers.

. . . END OF PUBLIC TESTIMONY . . .

CHAIR MOLINA: Today we would like to focus -- if you turn to your draft ordinance, like to focus on sections .070, lamp standards; Section .080, luminaire standards; and Section .090, luminaire mount standards. And if time permitting, the Chair would like to revisit matters that we discussed at our first meeting on January 17th, and these include sections .040 on definitions, Section .050 on general exemptions, and Section .060 on Outdoor Lighting Standards Committee. Now, the Chair is under some time constraints and would like to end preferably by 11:15 at our -- maybe our third meeting we can have an extended or longer meeting if that is to be the case.
So with that, we did focus on the first six sections of the draft bill back on January 17th. I would like to first announce, before I proceed, the Chair has invited various resource personnel from the Public Works and Waste Management; Howard Hanzawa for the Land Use and Code Administration or Director as his representative; Greg Nakao, the electrical inspections supervisor; and Cary Yamashita, Engineering for Public Works. And representing the Department of Planning we have Joe Alueta. And from the Department of Parks and Recreation we have Mr. Pat Matsui. And from the Police Department we have Captain George Fontaine, Captain Clayton Tom, and Captain Lawrence Hudson. The County Energy Specialist in attendance today is Kal Kobayashi. The Chamber of Commerce representative we have up front here is Lynne Woods.
The Chair did invite from the Maui Hotel Association Terryl Vencl. I don't see her at this time. I know she's a very busy lady. From the Safe Community of Maui, Incorporated we have Kelvin Dang. And from Maui Electric Randy Nakama. And Brian Ige from the perspective. From the commercial lighting industry we have also invited Randy Piltz. And from the hotels and so forth, Bill George and Rob Hoonan. So let us proceed and commence with today's first review of the draft bill. And let us start with Section .070, lamp standards. At this time the Chair would like to ask for some comments from the Corporation Counsel first on this section. Mr. Garneau, if you may proceed.

MR. GARNEAU: Yes, thank you. When I was reviewing this section, I -- I did have one comment that sort relates to another issue that we brought up in last meeting. But with regards to this section,
noted that it does include any kinds of exceptions.

And so I was -- wanted to ask the Committee generally whether they're anticipating how this will be implemented, whether there will be a plan reviewer, whether there's going to be any kind of, you know, grandfathering included here, how it will relate to how the Committee is expected to function.

That was my main question on this one.

CHAIR MOLINA: Okay. Again, could you clarify that again?

This is in Section .070 under lamp standards?

MR. GARNEAU: Right. You know, it says -- for example, under Section B it says that mercury vapor lamps are expressly prohibited and then it goes on to say that the installation, sale, offering and so forth. Is that -- is there plans to, for example, have any kind of grandfathering or what to do with existing inventories if this is implemented? Also, if...
they're expressly prohibited, are we going to add a clause that says, you know, except for upon review by the Committee? You know, because we had talked about -- briefly having the Committee be able to make some exceptions where they're necessary. So I noted that's something we were going to take up at the next meeting. And I was going to respond to in writing to those procedures, but it kind of impacts the section, too.

CHAIR MOLINA: Okay. Members, are we all clear about Mr. Garneau's concerns with letter B? Any comments on that? Mr. McCord.

MR. MCCORD: In the flood of paper that has been coming interesting ones was this Villosa County Land Development Code.
And I noticed in that that they did have a program for a replacement program. And I don't see any replacement program in our draft. Obviously we have some of these lights out there that are not in conformance with this particular program and there has to be some sort of a replacement if we're going to reduce their impact. I think that's -- part of it would be rather than just allowing them a grandfather, we have to put in some kind of a replacement program be it a year, two years, three years, whatever, to replace these as they become either obsolete as far as having burned out or replaced because they're offending.

CHAIR MOLINA: Okay. Thank you, Mr. McCord.

Dr. Altenberg.

MR. ALTENBERG: Well, in the section on existing lighting, was Section 130, basically what was proposed is that a five year from the date of -- that the which would become effective, a five-year period in
to replace existing lights that were not in compliance. So that -- it was not a program per se, but a -- simply a five-year time to depreciate existing items. So perhaps some attention would need to be paid to, for example, existing inventories of stores, that kind of thing where that's applicable. Or some kind of language -- other language could be adopted with respect to dealing with existing lights as a replacement program as you mention. But we haven't got to that section yet.

CHAIR MOLINA: Okay. Thank you, Dr. Altenberg.

Mr. Garneau, does that section address concerns from Section .070? Would that suffice?

MR. GARNEAU: Well, when we get to that section, I would expect then that .070 we would have to include some reference so that people reading that would know that there's some procedure. So I do think it's a good idea, though, to have some kind of program procedures for implementing. And I was wondering if, Mr. McCord, would it be possible that you
forward to me or to the Council Committee Chair
a

a copy of the Villosa County example so I can look
at

it? I mean, that would be helpful.

CHAIR MOLINA: Okay. All right. Thank you, Mr. Garneau.

At this time the Chair would like to ask
any

other resource --

MR. MABERRY: Mr. Chair.

CHAIR MOLINA: Oh, I'm sorry. Go ahead, Mr. Maberry.

MR. MABERRY: Yes, sir. I would kind of like to check
on

something here and perhaps ask Mr. Chong to

but one of the reasons I believe that the -- the

Committee recommended strictly prohibiting

vapor lamps is because of their poor performance

how they continue to draw as much energy as

their output continues to decline and we felt that

were enough other options that still provided

the same color rendition.
MR. CHONG: Chair, may I respond?

CHAIR MOLINA: Proceed, Mr. Chong.

MR. CHONG: Mercury vapor as a lamp source is basically not specified. In most projects today metal halide is a lamp of choice because of its better color rendition and it is a more efficacious source, meaning it's more energy efficient. What you would be dealing with here is obviously then people who already have mercury vapor luminaires. I'm not when we get to the replacement of existing light fixtures, I'm not so sure mandating a time period is correct to force public to spend money. County maybe, public not necessarily. If you're about a mom-and-pop operation who's -- can't to buy a new floodlight and comply with the that may be asking a little bit too much.
to consider. Maybe it's grandfathered in and if the luminaire has to be replaced because it's corroded or whatever, then you have to comply. And we can talk about that more when we get to that section of the code.

CHAIR MOLINA: Okay. Thank you, Mr. Chong.

MR. MABERRY: Thank you very much for your comments. I believe the intent there was along those lines and -- but in order to provide some way to control that, we were prohibiting the sale.

MR. CHONG: Then there needs to be distinction between if a person has a luminaire and lamp just burns out, that is not a reason to make a person change the luminaire. The lamp is the least expensive part. I think we need to allow the retailers to sell the lamps to these people who don't have to change their luminaires. And, again, it's a -- there needs some referencing between this section and replacement of existing. I understand your intent. I am not against it. We don't specify mercury vapor
luminaires. It's not an acceptable source to us.

CHAIR MOLINA: Okay. Thank you very much, Mr. Chong and Mr. Maberry.

At this time the Chair would like to ask --

Oops. Sorry about that. Mr. McCord.

MR. MCCORD: I'm sorry, I'm a nontechnical guy when it comes to luminaires and lamp standards. Can't a mercury vapor be replaced with a low sodium light fixture and not have to change the luminaire?

CHAIR MOLINA: Okay. If there's Mr. Chong or any of our resource people who would like to respond to Mr. McCord's question, I will yield the mike to you.

MR. CHONG: Sorry. I don't expect you to be a techie.

A low pressure sodium lamp is big, long, whereas a mercury vapor lamp is a small little bulb. So there's no possible physical way you could take a low pressure sodium lamp and insert it into a mercury vapor luminaire. It would not fit.
are very few -- there are some manufacturers who can making metal halide replacement lamps that you can put into a mercury vapor luminaire and even run the same ballast, so there are options, but there's no way to go from mercury vapor to low pressure sodium.

CHAIR MOLINA: Okay. Thank you. So, Committee members, any other questions at this time? Mr. Altenberg.

MR. ALTENBERG: I guess it seems like a lot of these questions have to do with existing lights, but, I mean, the main purpose of this section would be dealing with future lights. So let's make sure we don't leave any questions about that -- about that aspect unanswered.

CHAIR MOLINA: Okay. Thank you, Dr. Altenberg. Okay. All clearance from the Subcommittee
members to -- for me to proceed and ask for
from our resource people on this particular
Okay. At this time the Chair would like to ask
of our resource people if you have concerns
Section .070, lamp standards at this time.
We have Mr. George.
MR. GEORGE: About that Section D, instead of saying
permits the sale, lease or purchase of any
vapor light or lamp, in Section D could we just
say -- Hello. Back can hear now? Sorry.
In Section B, instead of saying that
expressly prohibiting the sale, lease or
any mercury vapor light fixture or lamp, if it
to just say mercury vapor light fixture, the
would be replaceable to these mom or pop stores
to help the community. Or we could always say
there's -- they should look into the possibility of retrofitting to a better bulb. But, like I --

Mr. Chong said, that you wouldn't be able to put the LPS into that fixture.

CHAIR MOLINA: Okay. Members, any comments to that?

MR. MCCORD: I'm kind of wondering how many --

CHAIR MOLINA: Mr. McCord.

MR. MCCORD: I'm sorry.

CHAIR MOLINA: Go ahead.

MR. MCCORD: -- how many of these kinds of fixtures we're talking about? I was under the impression that most of these high pressure mercury lamps were used on the streets and in, you know, big parking lots, that kind of thing. You know, I can't imagine too many small little places having these kind of fixtures. I can't imagine it being too big a problem.

CHAIR MOLINA: Mr. McCord, anyone from the resource personnel would have some type of data as to how many of these mercury lamps may be out there? That -- I know it's hard to keep track of that, but it's -- is that something --

MR. CHONG: I'll just make a comment.

CHAIR MOLINA: Go ahead, Mr. Chong.
MR. CHONG: Mercury vapor lamps are available from 100-watt R-type lamps that you would find in landscape lighting, floodlighting, up to 400-watt big floodlights that you would see in a parking lot or ball field lighting. So there's -- there's a wide range. So it may be more in use than you --
you really see.

CHAIR MOLINA: So, in other words, it may be hard to really calculate how much of -- have

MR. CHONG: Yeah. I don't think anybody is going to that kind of data.

CHAIR MOLINA: Okay. Dr. Altenberg.

MR. ALTENBERG: If I understand right from Mr. Chong, it is possible -- always possible to replace a vapor lamp with a metal halide lamp when it burns out; is that correct?

MR. CHONG: It's not always possible. Unfortunately,
The lighting industry makes products where they can make money and -- and unless there's a large market for people replacing mercury vapor lamps with metal halide lamps, you're not going to find it. And if you're in that little niche that -- the small percentage, you change -- either you buy the same mercury vapor lamp again if you can find it, or you replace the luminaire in kind.

CHAIR MOLINA: Okay. All right. Thank you, gentlemen.

Okay. Is there any other questions or concerns regarding Section .070 at this time? Seeing none, members, we shall now move -- Oops. Excuse me, Dr. Altenberg.

MR. ALTENBERG: The -- it's Section .070 is where the mention of the standard of low pressure sodium is put into this code. So I know that that -- the Police Department has expressed concern about that
a particular issue, so it seems like this would be a good time to hear from them about their concerns.

CHAIR MOLINA: Okay. Good suggestion, Dr. Altenberg. Can I call a representative from the Police Department up to one of the hot seats here. We have Captain Fontaine to respond to your question, Dr. Altenberg.

MR. FONTAINE: Thank you, Mr. Chairman. As the Department has expressed I think throughout the entire presentation of this ordinance is our concern about color rendition as it pertains to low pressure sodium lighting. And we have made this point and time again that low pressure sodium lighting in public areas has a limited color spectrum which has been acknowledged throughout this. And because of its limited spectrum, our -- our officers and
general public will not be able to properly identify color in this environment. We have also made known that this could potentially have negative effects in police would not be able to identify suspects' clothing or a vehicle or potential witnesses giving inaccurate accounts of color during an investigation.

There is also concerns about low pressure sodium as a psychological deterrent. Obviously this does have uses in a limited sense where you want to discourage people from gathering and utilizing low pressure sodium lighting where people would congregate, for like a badly lit park, for example, but I think it's general use overall is not an appealing type of lighting to be under. And I personally experience this in cities like Long Beach, Big Island, being under -- personally under this type of lighting. It's not a -- it's not a pleasant light. There's been arguments that the spillover from commercial lighting will provide enough balance to the LPS lighting. I haven't seen any research, and please correct me if I'm wrong, that there has been studies to show that -- that
spillover commercial lighting in low pressure sodium lit areas will be enough to balance out the color.

But I think the thrust of this ordinance is to eliminate this spillover commercial lighting. We're talking about light trespassing, we're talking excessive commercial lighting. So if we're doing that on one hand and doing low pressure sodium on the other, the argument of spillover becomes an issue that I just never have seen any data on whether or not there's an acceptable amount of spillover that we're going to allow to offset this color rendition issue. So those are our basic concerns regarding LPS.

We have contacted the Police Department over in Hilo to ask them how it is and, you know, their comment says yes, it is a problem with color
rendition. Is it a problem with the officers now?

Most of them have gotten used to it or have grown up in that lighting because it's been there in existence for a time, have gotten used to having to deal with that as an issue of not having lighting. But, you know, when all the vehicles start looking the same color and everybody starts looking the same, it becomes a real problem. Do we issue, you know, color swatches to all the officers to have people identify color under a lighting and point it out with identification, I don't think that really makes sense.

I can see us doing fully shielded lighting on our high pressure sodium lights. That makes sense and I think the Department would fully support that. I think we fully support the whole notion of...
reducing light pollution. I think this is a thing. But we really need to take a look at the side of the house.

Thank you.

CHAIR MOLINA: Thank you, Mr. Chong.

MR. CHONG: I may be a little long. Just for your information, low pressure sodium becomes the luminaire -- or the lamp of choice -- And I'm going to speak a little bit for the astronomers here, so you can correct me if I'm wrong -- because low pressure sodium light is monochromatic, meaning it has one specific wave length of visible light. And that's why if your car or your shirt underneath light isn't that exact same wave length, it turns to a shade of gray or black. And that's why the astronomers like it, is they can filter out that wave length so that it doesn't obscure their observations and leaves the rest of the visible spectrum for their viewing. And I think that's a basic explanation of why LPS is preferred as an
outdoor lighting source. You can overlight with LPS, you can light trespass with LPS. Okay.

One point made.

Low pressure sodium is the luminaire or lamp required in San Diego by their ordinance. And what I have heard, and I may not be completely correct, they -- their Police Department and other people are looking to change that ordinance to get rid of the low pressure sodium requirement for the very reason you just spoke. Their -- they cannot tell color, so they cannot identify victims, crime -- scenes. It becomes a problem. San Diego has a one of the counties that had an early on -- had an ordinance similar because of their Mt. Palomar proximity. Okay. Low pressure sodium, low pressure light sodium as a bare lamp is the most efficacious source that is commonly used. Not commonly, but available. It is a large lamp. When you put it in a light fixture or luminaire, it loses -- its
efficiency comes down drastically and it is not as efficient as the bare lamp number. So because it's such a large source, to optically design a luminaire that efficiently uses it, the luminaire would have to be very large. There are very -- again, going back to the lighting industry only makes products where there's money to be made. There are very few manufacturers who make low pressure sodium luminaires because there isn't a market for it. We've -- I'm in the design community and we've dealt with the Big Island ordinance for almost 20 years now and it is a battle to effectively light spaces on the outdoors with low pressure sodium because the least lamps -- one, there aren't any luminaires, at least decorative luminaires. Say for the resort
who wants to put in something with some aesthetic value to it, it's a historical looking light fixture, there aren't any available. So you limit a lot of people in what they can do. I'm not against shielding. I'm not sure protecting the environment. I'm -- just make everybody understands when we stick low pressure sodium into this ordinance, what the ramifications are to everybody involved, the Police Department, the resort people. You need to understand that. Another thing, we -- as a designer, when we design parking lots, we like to use metal halide. And the reason is metal halide in some studies recently because of its high color rendering and ability to increase visibility, quote, unquote, people, including most of your customers at like shopping centers, feel much more safe under metal
halide than they do under high pressure sodium.

Same level of lighting, it's just -- it's just a comfort feel. So we have gone to that type of lighting, fully shielded. We're not using luminaires necessarily that are not -- I mean, Maui Mall was our project. We replaced high pressure sodium luminaires with metal halide, fully shielded, because of what I just said.

So these are some things we need to keep in our back of our minds. High pressure sodium is acceptable, I mean, if that's the law, we would work with it, fully shielded, but I -- low pressure sodium, there's lots of issues with low pressure sodium.

CHAIR MOLINA: Okay. Thank you, Mr. Chong, for giving us that perspective.

Mr. McCord, to be followed by Dr. Altenberg.

MR. MCCORD: Mr. Chong made an interesting point in a few minutes ago. And it took me a few minutes try and figure out just exactly how to use it. He said that these mercury vapor lights come in all wattages from 50 to 400. Obviously the whole purpose of this thing is to try and reduce the
polution, and so maybe somewhere -- and I know this complicates it a little bit, but maybe what we need to do is talk about -- you know, not worry too much about the 50-watt high super -- high pressure, but talk about the 400 watt in this thing. And we don't -- we just, you know, make a blanket statement. Maybe we need it to have some sort of a gradation scale and work on the high wattage and not worry about a little, you know, 50-watter at some mom-and-pop store.

CHAIR MOLINA: Thank you.

Dr. Altenberg.

MR. ALTENBERG: A question for Mr. Chong. When we drafted the low pressure sodium standard, we clearly recognized that it has the problem with color rendition and that there are circumstances where that would cause problems for people's businesses, you know, in particular. So we tried to put in
under sections -- Section .070, No. 1 specific exemptions for the LPS requirement. Do you think those are adequate or properly crafted to ameliorate the problems where they would be most common to lack of color rendition?

MR. CHONG: I do -- and I missed that section, I'm sorry. I had to leave the meeting last -- a couple weeks ago. I do think there needs to be more exceptions or when we cover specific design issues, like recreation and things like that, that a little more leeway be given to other lamp sources and not dictate LPS as the de facto lamp and we can't use it -- use anything else otherwise. That's what that's the worry. I mean, we're really -- going to shoe horn the entire design community and property owners into a very limited resource as
as light fixtures and all the other issues of esthetics and color rendition, for example. And this is a problem with the Big Island code. There is no mention in any of these codes about lighting in pools, water features, things like that. Is there anything to be said? You need to leave lights on in pools for safety at night so that you can identify where that body of water is, but it also -- if your body of water or pool is large enough, it provides light into the atmosphere. Nobody makes low pressure sodium pool lights, I'm sorry, so, you know, it -- your hands are tied. Most pool lighting is incandescent. But that's that's a good example of where we need to put as an exception. I don't think the property owners or the County want to get into the legal ramifications of telling the owners they've got
CHAIR MOLINA: Okay. Thank you, Mr. Chong.

Members, at this time are there any questions for Captain Fontaine from the Police Department?

Okay. Mr. Maberry.

MR. MABERRY: Yes, sir, but I would like to start it with another point. Since we are at a disadvantage of not having Member Hannah Bernard here or Dr. Fern Duvall to use as resources, I'm going to just repeat what I have been told, recognizing I'm not an expert. But my understanding is that in addition to the benefits to astronomy, it's also beneficial to the animals because of the way their eyes work, not having the full spectrum of light. So that leads into this -- into this question regarding -- You mentioned that LPS is used as a deterrent in some jurisdictions. Areas where they have people congregate and they don't want them to there, they have used them. Would that perhaps benefit say the gentleman who testified earlier regarding the resorts? If they were to instead of using whatever source they may be using, if
were to use LPS on the beach, which would have supposedly less impact on the animals, would that -- would that provide that deterrent factor that they're trying to achieve? I don't think that I could answer that, specifically because I am not really familiar with how their lighting setup is at the Grand Wailea in terms of what they're trying to accomplish with the deterrence. I can speak generally, though, this particular type of lighting is suitable for areas where you wish to deter people from being at. Whether that's appropriate for Grand Wailea, I cannot really say because I haven't gone and done an assessment from the police perspective of
not that would be a recommendation we would make

them. And if that was something that they were

interested in having us look at, you know, we

assign a community police officer to go out and
do -- we do crime prevention through
design assessments for anyone in the community

we would be able to provide not only lighting

recommendations, but also security access, et

cetera. But in -- there are specific areas

might be appropriate -- if we were having a

of congregation of juveniles or et cetera, that

would be appropriate.

MR. MABERRY: Okay. To follow up, sir.
individuals when they look at each other

this light that may assist in that type of a
deterrent.

MR. FONTAINE: In the jurisdictions of -- where they

used

in

specific

because

course,

always

the

like,

kind of

pressure

would go

it's

it, like -- for example, like Van Nuys Boulevard

Los Angeles, they're having a problem with kids
cruising on the street and hanging out at

areas where they utilized it. And it was very
effective in deterring the kids from there

basically all the cars looked alike and, of

the kids were cruising, so, you know, it's

the next guy's. Well, all the cars looked alike

especially because of the color. Women's red

lipstick turned black. Women basically looked

you know, vampires, Night of the Living Dead

stuff, so no woman wants to be under low

sodium lighting. And in those particular

circumstances they tend to move off and go into

areas which are more appealing lighting and

there or dissipate. But in that limited sense
very effective for that.

CHAIR MOLINA: Okay.

MR. MABERRY: Separate question, sir. You've had a little more opportunity since the first time we met to look at this -- at this proposed ordinance, if just out of curiosity, if it wasn't for the low pressure sodium issue, are there any other major law enforcement issues that you see with this particular proposed ordinance?

MR. FONTAINE: In its entirety, we also have concerns as it intends to utilize sensor technologies to turn on security lighting as needed and it seemed to be somewhat restrictive in that sense. And adding it as another point of failure in a security lighting system. So although I think that the bill would be appropriate in encouraging people to utilize
technologies, understanding that motion sensors typically have to be maintained and cleaned. There's also problems with misalignment on motion sensor type of technology lighting, and issues where the light just doesn't come on because it's not properly tuned or it's too sensitive and comes on every time a bird flies by or a cat walks by on a driveway or whatever.

And, finally, with the bill which has been a concern which I don't know if it has been addressed -- I've been assigned to Molokai so I didn't come to your other meeting and they have asked me to come back on this one to speak -- the issue of how the penalties for the -- and violations on these ordinances would be enforced. So who is going to police this? Is the Police Department going to be doing that? Are we going
set up a separate light police that's going to go around and issue citations? And how is that enforcement issue going to be addressed specifically as to who is going to enforce this bill?

CHAIR MOLINA: Okay. Mr. Maberry, I know you have a couple more questions. Can I --

MR. MABERRY: No, sir.

CHAIR MOLINA: Oh, that is it?

MR. MABERRY: Thank you.

CHAIR MOLINA: Okay. Let me ask Vice-Chair Tavares if she has any comments at this point.

VICE-CHAIR TAVARES: Yeah. I heard on the radio this morning what the police concerns were and one of things you didn't mention was the turning off of lights after business hours. It somehow got filtered in there as a concern that the Police Department had. Have you had a chance to think about that, that one, or was that an original concern of yours? Turning off lights -- I think it
MR. FONTAINE: Well, that is obviously a concern of ours. I didn't make that specific suggestion and I'm not sure of whether or not perhaps maybe the chief had added that one in as a concern.

VICE-CHAIR TAVARES: Okay.

MR. FONTAINE: I came in from Molokai and I grabbed this file from him and didn't really have a chance to discuss that with him specifically this morning. But obviously interior lighting and lighting of establishments inside is also a concern. You know, lighting is a very good way for us to be able to identify when people are not supposed to be in stores or if we have an ongoing burglary in progress and this type of thing or we have congregating occurring behind buildings, you know. I even speak example, of the situation being new to Molokai, for one of the parks up there in Maunaloa has an issue with juveniles that are congregating in park up there. And, you know, the decision of,
well, we should just turn off the lights so the

kids don't go and hang out there, you know, that

makes sense. No, that's not the right answer. The

want lighting -- Darkness is a friend to people who

and to do naughty things in the dark like drinking

So, smoking dope and doing all kinds of bad stuff.

you know, we like to have lighting and have

things lit up because it's good for our officers, it's

for their safety as well as the general public.

VICE-CHAIR TAVARES: Thank you.

CHAIR MOLINA: Okay. Thank you, Vice-Chair Tavares.

Before proceeding with any more questions from

the police, the Chair again would like to remind the

particular Subcommittee to keep our focus on this

section, .070. The discussion has been

enlightening, no pun intended, but however I

would like to --

VICE-CHAIR TAVARES: Not.

CHAIR MOLINA: -- keep our focus here. We can
We are -- seem to be straying out into a different area at this point. So, again, I would like to keep our questions focused just to Section .070, which may relate to the mercury vapor lamps or roadways within the rural or agricultural areas and so forth.

Again, if there is any questions or no questions at this point, I would like to maybe move on to .080. Mr. Chong.

MR. CHONG: And I'm sure Hannah will correct us. Let me get this straight. The turtles are not affected by low pressure sodium?

CHAIR MOLINA: Has anybody --

MR. CHONG: I mean, if I took -- if I took a slew of pressure sodium lamps and lit this beach up so I could have a barbecue and a concert, the turtles would still come and mate?
CHAIR MOLINA: Is there anybody who would like to respond to Mr. Chong's inquiry?

MR. MABERRY: I would like to -- simply just to state that's not exactly what I meant. What I was saying is that obviously if you -- with too much light it is too much light.

MR. CHONG: Well, yeah.

MR. SUTROV: But I was saying that type -- from what I understand, that type -- and, again, I hope somebody over the next couple of meetings comes and straightens this out, I'm sure she will, it was my understanding that that was an acceptable light source as compared to the others because of the -- the stars are, of course, the full spectrum of light, and what the hatchlings look for is the stars out over the ocean and they go out into the water. And
the foam, I think there's something to do with reflection on the foam. And if I remember this correctly, maybe someone else knows better, but LPS was better from that standpoint because it not the full spectrum of light.

MR. CHONG: But I think ideally she would prefer to keep the beach dark?

MR. SUTROV: Totally dark. I'm sure that would make her happy, yeah. Make the turtles happy.

MR. CHONG: We have to be careful here.

CHAIR MOLINA: Thank you, Mr. Chong.

MR. MCCORD: Right. I was just wondering if Rob couldn't you do your security situation without the high sodium and use the low sodium thing for this deterrent that you're talking about?

MR. HOONAN: Yes, we could. I think that that's an option.

CHAIR MOLINA: Excuse me, Mr. Hoonan, could you come up to the lectern and respond to Mr. McCord's question.

MR. HOONAN: The answer is yes. We're happy to embrace any technologies and have as a -- as they have emerged. And we would work that way, yes, we
CHAIR MOLINA: Okay. Thank you, Mr. McCord.

At this point, members, before I recognize Dr. Altenberg, I would like to take down your recommendations for any changes to this particular section to help our staff with compiling this information. So with that, Dr. Altenberg.

MR. ALTENBERG: Clearly lack of color rendition you can imagine a lot of scenarios in law enforcement where you're trying to identify things by color where you could imagine it would be a problem. But the question of, you know, in actual practice, in the whole scope of law enforcement activities, what fraction would that -- of those activities would be impinged by the lack of color rendition? So I've been trying to find out what the experience of police departments that have been operating under environments where low pressure sodium has been.
And so two communities that have had it for over ten years are Tucson, Arizona and San Diego, California.

So I -- in this past week I contacted Sergeant Mark Delasoti of the San Diego Police Department Community Relations Department and -- to try to find out if there were any reports that the Police Department had issued in the current -- because City Council is currently considering a proposal by the Mayor to revert back to metal halide acorn lighting for the city. And what Sergeant Delasoti sent me, the most recent report that has been issued by the Police Department was from the original assessment of the low pressure sodium question back in 1982 in which the effect of low pressure street lighting on law enforcement was summarized as follows: "With regard to the effects of low
pressure sodium on law enforcement, the consensus was that there is no conclusive evidence that either high or low pressure sodium lighting has a negative impact on law enforcement. Most indicated that colors were more difficult to see with low pressure sodium, but that did not pose a major problem, especially after a period of adjustment." So, you didn't know, I -- I regret that their -- that they didn't provide a more recent report on that, but this seems to be what the police are making available in regards to this issue. So I am wondering if it is conceivable to Lieutenant Fontaine that some of these, you know, imagined difficulties, hypothetical problems of law enforcement might in practice not have a major effect based on what other police departments are reporting.
MR. FONTAINE: I haven't had an opportunity to look at the study or report that you have, nor had an opportunity to speak with the same individual. You know, we police in a different kind of geographical type of scenario. Our cities are made up differently than in that, so, you know, we're not comparing apples to apples. I am not sure on their lighting standards whether or not they allow more commercial lighting, perhaps, in theirs. I saw some pictures in one of your presentations showing, you know, commercial lighting that was offset or spilling over into the low pressure sodium that was providing, I guess, a limited amount of rendition from that spillover type of scenario. So I can't say for certain whether or not that would be, but I pose this question: We go to this great expense and we do this and it is a problem. And we already know that the color rendition is a problem with this type of lighting, you know. And one of our officers gets hurts or it becomes an issue
the public because we have gone into this

full well that the color rendition is a problem. Are we going to accept that liability? And are

really doing a service to the community by doing

I mean, you know, we put our hand in the fire,

we get burned, maybe we don't. We already know

the fire is hot. You know, do we do that? And

think that's a question that the community and

this -- and everyone else here will decide, not

certainly not me. But I bring this to your

attention so that you're well aware of that fact

that it may be. And I can't say for certain if

is going to be a major impact or not. Maybe it

won't and we'll be lucky, but we do know that

is an issue.

CHAIR MOLINA: Okay. Thank you, Captain Fontaine.

Members, at this time the Chair would
call for a short break. In the meantime, please write down or if you can respond when we come back from the break your suggested recommendations for Section .070. We shall reconvene at 10:20.

(Gavel.)

RECESS: 10:11 a.m.

RECONVENE: 10:23 a.m.

CHAIR MOLINA: (Gavel.) Public Works and Transportation Subcommittee on Outdoor Lighting is now back in session. Thank you, members, for your indulgence today, and resource personnel.

The Chair would like to recognize Mr. Piltz, who will be representing the commercial lighting industry as a resource person. And I don't know if we have -- I guess we have a seat available.

Mr. Piltz, we are asking all the resource people to come up to the front to make you more accessible to our Subcommittee members.
Members, we left off on Section .070 and get your recommendations for any changes to the this section of the bill. Before that -- before broke there was a comment or concern from Mr. George, so I shall yield the microphone to Mr. George.

MR. GEORGE: Yes, in the paragraph one --

CHAIR MOLINA: Mr. George, could you turn the -- Okay.

MR. GEORGE: Paragraph one, I was -- my recommendation would be to maintain a light safety and security as an E, adding E in there, light safety and security. This would solve a lot of concerns about people, example, outside the hospital, able to put in rendition and life safety and security to the ambulance, et cetera, et cetera.

And the other question that I would have is: In reading outdoor sales and eating areas, if were to talk about a resort area, the whole is almost an eating area at times. Would this exempt the hotel grounds under that -- As an
example, Outrigger Hotel has a luau function
on the ocean right there on their property, and
a fairly large area, probably about two and a
third acres. Maybe Steve would be able to tell
how big it is. But that's a question that comes
is that included in there? And if not, you
recommend something for that type of reasoning.
CHAIR MOLINA: Okay. Staff, did you get the
all the information from Mr. George with regards
to his recommendations?
Okay. Mr. George, again, could you go
again just in brief synopsis of what you just
so our staff can record that.
MR. GEORGE: Adding E to that paragraph, having a life
safety and security concerns section. And also
question to the Committee would be does outdoor
sales and eating areas include resort areas,
restaurants, et cetera.
CHAIR MOLINA: Okay. Thank you.
Before the Chair proceeds, there is a suggestion made by our Vice-Chair, should we want or choose to, we would like to ask the people with so-called technical expertise if they would like meet prior to our next session to come up with additional changes or recommendations. I think would be helpful to this Committee in expediting matters as far as other recommended changes because many of us who are nontechnical are like, you know. I just somewhat in another world, you know. I you folks know the nuts and bolts of the lights itself. So if maybe say Mr. Chong, Mr. George, and maybe Mr. Piltz and whoever else --

?: Dr. Altenberg.

CHAIR MOLINA: -- who are technically inclined would to meet prior to the next meeting and maybe give your recommendations to Captain Fontaine or his
local group before the next meeting, that I believe may be helpful. So this is something for you to take into consideration after we go on with proceedings here.

And we had a question. I believe, Mr. McCord, you had your hand up?

MR. MCCORD: No.

CHAIR MOLINA: Or was it Dr. Altenberg?

VICE-CHAIR TAVARES: No, Mr. Chair, I was trying to include the doctor and --

CHAIR MOLINA: Oh, yes. Of course. And a member of the Ad Hoc Committee, Dr. Altenberg, yes.

VICE-CHAIR TAVARES: As part of that group that would separately to really refine this part -- this

section. Kind of bearing in mind what some of the concerns were that were raised. Instead of all us trying to put our input, you know, let the technical people kind of work on some of this and then present it to Captain Fontaine for his
comments and then to the Committee members for their comments, also, you know, prior to the next meeting so that we could really act on it. And then talk with our attorney, too, Corp. Counsel about the write-up of it for presentation. I think that would help speed the Subcommittee's work along.

CHAIR MOLINA: Okay. Thank you, Vice-Chair Tavares.

We had a request from Mr. Howard Hanzawa from Land Use for comments on Section .070. Mr. Hanzawa.

MR. HANZAWA: Thank you, Mr. Chairman. As a representative of the Department of Public Works

--

you

CHAIR MOLINA: You have the mike cover there. There go. We're low on resources here so we're conserving.

MR. HANZAWA: Thank you, Captain Fontaine.

Yeah. As a representative of the Department of Public Works, I would like to ask the Committee were derived. And I would be concerned that these maximum wattages may not allow enough lighting
intersections. I'm referring to sections .07 C and D. So I would like to pose that question to the Committee.

CHAIR MOLINA: Okay. Thank you, Mr. Hanzawa.

DR. ALTENBERG: Yeah, I was the one who came up with those numbers and that was based on the efficiency improvements of the two features. One going from high pressure sodium to low pressure sodium, which is -- uses 70 -- only 70 percent of the wattage, as a conservative estimate, to provide the same amount of lumens coming out of the bulb. And then going from the current unshielded luminaires to fully shielded luminaires, which also provide a -- only 70 percent of the -- of the wattage because you're not sending light up into the sky. Those are the efficiency values from the International Dark Sky Association which they obtained from engineers. So that's the source of these numbers. So these
wattages are to provide the same amount of illumination as is currently provided once these efficiency improvements are made. So the intent is not to diminish the light on the ground from what is currently being used for street lights, but with the efficiency improvements, these wattage limitations will basically preserve the same amount of light on the ground.

CHAIR MOLINA: Okay. Mr. Hanzawa.

MR. HANZAWA: Yes. Not having any experience in illuminating engineering, what are the corresponding values as far as wattages between, you know, what's used now and LPS? I do know like a 60-watt bulb just sufficient for me to read by, but if it calls be for 50-watt LPS at an intersection, would that really sufficient enough to light up that intersection? Maybe this should be posed to Mr.
CHAIR MOLINA: Okay. You must have read my mind, Mr. Hanzawa. Okay. Mr. Chong.

MR. CHONG: Let's take a step back. When you design lighting for highways and streets and intersections, there are specific guidelines for that, Highway standards, County standards, of min to max, min average foot candle readings, et cetera, et cetera.

And that should always be your target, no matter what the light source you're going to use, whether it's low pressure sodium, high pressure sodium, mercury vapor. And using -- if you're going to say low pressure sodium this wattage is equal to wattage high pressure sodium, an exercise should have been done to see if those target values can be met with equipment that is readily available from the manufacturers. I made a statement earlier
low pressure sodium as the bare lamp is looked
at
raw lumens coming out of the lamp, you know,
there's
out
total amount of light for the nontechies coming
of the light bulb is the most efficacious light
source compared to all the other standard light
sources. But once you take that bare lamp and
you
put it in a luminaire housing, the efficiencies
go
out the door. So if you're going to compare and
efficiencies,
just use raw lamp lumen percentages as
that's rather incorrect. And an exercise in
calculation should be done to take the luminaire
performance included, everything included, and
the
sodium
luminaire, and do a comparison high pressure
low
which you use in an intersection compared to a
and
pressure sodium luminaire that would replace it
as
see if you can meet the target values for safety
required by Highway standards. That's the
exercise
that should be done to avoid any, again, legal
ramifications, some lawyer coming out -- I mean,
whenever there's a car accident, we get the call
from the lawyer that says, hey, can you -- we
need
some
an expert witness. Can you come out and take
light readings for us? And they're looking at levels and max and mins and things like that in the area. So you need to make sure that -- we need to make sure as a Committee and the County needs to make sure that whatever -- if we're going to just do a cookbook thing here, we better be sure that it will provide the light levels that are required by Highway standards and County standards.

CHAIR MOLINA: Okay. Thank you, Mr. Chong and Mr. Hanzawa. Members, first of all, any recommended changes to Mr. Hanzawa's concerns or, Mr. Hanzawa, do you have any recommendations for this section at this time?

MR. HANZAWA: Mr. Chairman, I -- we have a representative from our Engineering Division here, Cary Yamashita, and maybe Cary would like to come up and maybe
CHAIR MOLINA: Okay. At this time, as we await Mr. Yamashita to come up, I saw Mr. Piltz's hand go up. I believe you wanted to comment on the discussion between Mr. Chong and Mr. Hanzawa. Proceed, Mr. Piltz.

MR. PILTZ: I just concur with Mr. Chong's comment that I'm saying is that I concur with him and that every light fixture manufacturer produces -- there's a photometric that's come out with each fixture. And this photometric is how the light source reaches ground level. And I think we have to be sure the light levels that are obtained and within IAS standards. So I think we should also make that when we go from one fixture to another, the photometrics concur and the light levels are
CHAIR MOLINA: Thank you, Mr. Piltz. Before I go to
Kahu Maxwell, Mr. Yamashita, your comments.

MR. YAMASHITA: Yes. We also do agree that some
studies should be done to -- to actually determine what
kind of illumination we do get at the ground level.
Yeah, we may be pressed with some litigation if
we do have accidents in the evenings hours and we
fully agree with that, also.

CHAIR MOLINA: Thank you, Mr. Yamashita.
Kahu Maxwell, proceed. To be followed by Dr.
Altenberg.

MR. MAXWELL: Yeah. I wanted to add in that from a
nontechnical standpoint and the amendment for
the areas color rendition is needed to preserve the
effectiveness of the activity, I think we're all

here and why this Committee and why this
was -- was formulated was to control light that
not used for the activity. It is like the old -
like the hotels having activities by the ocean,
they illuminate the whole entire beach front and that
goes out to the sea and that affects the animals
within. Well, Mr. Maberry, Member Mike Maberry
showed me during the break a stadium that was
concentrated, the light was concentrated in the
stadium proper and it did not go out of the
And I think if we can find ways -- We're worried
about different types of lights. If we can find
ways to shade the lights, the lights, the
the lights, I think then we would solve the
of illuminating everything except the activity
it was meant for.

Chair Molina: Thank you, Kahu Maxwell.

Dr. Altenberg.

Mr. Altenberg: To follow up on -- I'm sorry, I forget
your name.

Chair Molina: Cary Yamashita.

Mr. Altenberg: Cary?

Mr. Yamashita: Yes.

Mr. Altenberg: His comment. Well, the question is:
Do we have to create -- do this experiment
I would imagine that it's already been done for vendors that are selling these low pressure street lights that surely we must -- there must documentation out there as to the wattages what levels of foot candles or lumens on the et cetera. And I suggest that we should attempt get ahold of that documentation.

CHAIR MOLINA: Mr. Yamashita, can you provide that for Committee?

MR. YAMASHITA: Yes. We'll do some research and try get that information.

CHAIR MOLINA: Okay. Thank you.

Vice-Chair Tavares, to be followed by Mr. McCord.

VICE-CHAIR TAVARES: Yeah. I think only when it comes this road -- the roadways and the -- yeah, the sections C and D, that perhaps we should be
rather at the foot candles requirements on the areas
than looking at the wattage of the bulbs. So
if you specify the foot candles that is
minimum or max, then whoever the engineers are
are designing it can design it properly with the
equivalent. And I'm sure these tests have been
done already. You know, what do I know about
lighting? The most I know about lighting has to do with

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1 lighting. As Parks Director I was charged with
improving lighting at the football stadium, the
baseball stadium, the gymnasium and the swimming
pools. And I did manage to contact some folks
that I had met at a conference to come in who were
the lighting specialists. And I think that might be
one that designed the -- the field that you were
talking about where there's such a high concern
about light -- spill lighting, you know, in
like neighborhoods where there are fields and things

that and things that that lady was talking about
earlier. There are foot candle requirements by
different types of play. Recreation has one
high school has another level, college has
level, pros have another level. Our gymnasium,
example, was lit all the way to pro, but it's
when you turn the lights on that happens. We
different lighting levels in that gym so that
can light it appropriately for whatever the use.
But it always was focussed on foot candles and
realizing that lights will diminish in
over time so that you have got to be able to hit
so that at its least efficient mode, it's still
meeting the minimum requirement for the foot
candles. So, you know, maybe we should look at
foot candles being the requirement rather than wattage or the size of something, volts or luminaires.

CHAIR MOLINA: Okay. Thank you, Vice-Chair Tavares.

Mr. McCord.

MR. MCCORD: In the spirit of this withhold ordinance I really would like to see a graduation standard placed into and as we leave .07, let's talk about .130 for a second and put something in there on the graduation standards. Mike has made a comment - I said something about let's not worry about the little 50-watters, that they weren't as important. He says, well, yeah, they'll put in one 50- and if that doesn't do it, they'll put in 2 up to 50. So we need to have some graduation scale as the wattage that these things create so that we can put a graduation scale that meets the spirit of the law without infringing on the rights of the small businesses or even the big businesses. So I would like to see .130 expanded. That's a heads up for later on.
22 CHAIR MOLINA: So noted, Mr. McCord. Thank you.
23 Mr. Chong.
24 MR. CHONG: Councilmember Tavares, you know quite a bit
25 about lighting, so don't downgrade your experiences.

Going -- and expounding on what he just said, Dr.
the
addressed
areas
where we don't worry about, like you said, the
50-watters or there's a -- so I think we're
going to
be moving towards that in the later sections,
allowing a light per tree or "x" amount of
lumens
the
community a little more leeway using small
wattage
lamp sources. So that's just -- it's something
already in the back of our mind.

CHAIR MOLINA: I think it's a good concern to bring up,
especially when the holidays approach and we start to see a lot more lights all over the place.

Okay. Any other suggestions or recommendations for Section .070 at this time?

Okay. Hearing none, again, I would like to ask that Mr. Chong and any of our other technical experts, if they can get together prior to the next meeting to come up with additional recommendations or changes, I think this will be helpful to the Committee’s goal of expediting matters and again getting involved a member of the Ad Hoc Committee and also Captain Fontaine or a police representative. So with that --

VICE-CHAIR TAVARES: Mr. Chair.

CHAIR MOLINA: Yes sir. I'm sorry, Madam. Ms. Tavares.

VICE-CHAIR TAVARES: Perhaps you could -- if any of us think of something later on, after the meeting, we could send that concern or that comment to Mr.
Saldana and then he could get it to -- you know, I would be willing to meet with this other Committee, kind of coordinate that as a subcommittee of the Subcommittee.

CHAIR MOLINA: The Chair would be most grateful if you would. Thank you.

VICE-CHAIR TAVARES: A subcommittee of the Subcommittee and see if we can work these sections out in light of what has been discussed. And then if Mr. Saldana can get that information to me, and then when we meet, we can hash it out, you know, amongst ourselves and come up with something that we could present to the Committee.

CHAIR MOLINA: Okay. The Chair is very receptive to that.

Okay. Thank you.

Okay. Let's move on to our next section, .08 -- I'm sorry. Mr. Hanzawa.

MR. HANZAWA: One last comment -- one other comment before we leave .070. I'm sorry. I would like to ask
whether this proposed ordinance would apply to State roadways, also, or State highways?

CHAIR MOLINA: Dr. Altenberg, if you would like to comment on that.

MR. ALTENBERG: It was the hope that it would apply to all lights within the boundaries of Maui County from whatever jurisdiction. So I am not familiar in terms of the powers of County regulations and the State, so I defer.

CHAIR MOLINA: Okay. Mr. Garneau, would you like to comment?

MR. GARNEAU: I would like to. Yeah, it certainly does raise constitutional issues and so -- Sorry -- might be one thing that perhaps the Committee Chair can transmit to me to look up as well because I'm certain it impacts -- you know, any time that a County passes any ordinance that affects State's rights, you have to have explicit authority to do that. So I would have to look at and see whether the State has promulgated any rules or statutes
cover this already. And if they have, it
probably
preempts our local ordinance.

CHAIR MOLINA: The Chair will definitely look into
that,

Mr. Garneau. Thank you.

Mr. Maberry.

MR. MABERRY: Just to follow up on that, I'm kind of
curious, we have a street lighting standard now
and
it seems like I have seen on State highways that
they are doing the Band-Aid approach of some of
the
shielding. Is that something that Maui County
is
paying for on the State luminaires, or what's
the --
level.

This must have been addressed already at some
Can anyone respond?

CHAIR MOLINA: Anybody care to comment on Mr.
Maberry's
question? Mr. Yamashita.

MR. YAMASHITA: Yes. We do have a Street Lighting
Committee that reviews requests by the public to
And either shield -- install shields or add lights.

we've been doing that within the Committee. We

meet once a month. And we do go out as a group to

review requests made by the public.

CHAIR MOLINA: Proceed, Mr. Maberry.

MR. MABERRY: To follow up, I guess my concern is,

okay, I recognize that you're doing that, are you taking

action on street lights on State highways that

was installed supposedly by funds that were provided

through the State?

MR. YAMASHITA: No. No. Just within the County

jurisdiction.

CHAIR MOLINA: Okay. I see a hand first coming from

Dr. Altenberg. And, Subcommittee members, if

there's no objections, we have Mr. Sutrov from the Ad Hoc

Committee who would like to lend his expertise

after Dr. Altenberg. Are there any objections to

that? Okay. Dr. Altenberg, followed by Mr. Sutrov.
question, on Kekaulike those on?

who paid for the little aluminum skirts that are the highway -- Kula Highway near the King School? That is, I guess, State highway and lights there are mandated by the State Highway Department. Somebody put those skirts on there. What -- who put them on and why were they put on?

Does anybody know?

Mr. Yamashita or Mr. Hanzawa.

No.

Anybody? Kahu Maxwell?

That was put in by Everett Dowling at request of the Kula 200 people.

So Everett Dowling was able to change State street lamps -- I mean, the highway street lamps?

Well, I think -- I know I was privy to meeting when the Kula Community Association asked for -- or it was a meeting that we met, I think,
Chair Molina: Gentlemen, I would like to give Mr. Ige a chance to respond as a representative of the Dowling Company.

Mr. Ige: Let me just clarify the situation. Those street lights were required by State Highways. When we did get some complaints from some community members, we called State Highways and they, in turn, called Maui Electric to put in those shields.

Mr. Altenberg: Thank you.

Chair Molina: So Maui Electric. So Mr. Nakama would like to comment on that or confirm that for the record?

Mr. Nakama: Okay. What Mr. Ige said was true.

Chair Molina: Okay. All right.

Mr. Ige: Thank you.

Chair Molina: Just want to make sure all our bases are covered, everything has been shielded.

All righty. Mr. Hanzawa, have your concerns been answered to this point?

Mr. Hanzawa: Yeah. Well, after we get Mr. Garneau's
CHAIR MOLINA: Okay. Good suggestion.

And, Mr. Sutrov, if you could come up to the podium, please.

MR. SUTROV: Yeah. My name is Steve Sutrov. In the research I was doing in relation to the State of what their responsibility would be is that their -- when they get an order like, let's say, from Dowling area, the State puts -- tells them what is required by Federal and State standards as far as what kind of lighting is needed, but that just pertains to type of lighting, like Mr. Chong was saying, that hits the ground. The type of fixtures that are
being used can be mandated by the County as far as luminaires -- poles, luminaires, and lamp height.

All the requirements pertaining to as far as State and Federal standards, I understand, is how much light has to be in a certain area of the certain stretch of roadway. And also in regards to the lighting up at the Dowling project, I think that was actually put in by Mr. Dowling, required by State, and paid for by Kamehameha School, so -- and shields were put on by Maui Electric by concerns of the citizens that were being impacted by the lighting.

CHAIR MOLINA: Okay. Thank you very much, Mr. Sutrov, for your insight on that matter.

Members, any other final questions regarding Section .70. Okay. And, again, for the record, Vice-Chair Tavares will organize a meeting
all the techies to give us additional recommendations for this section, and the Chair most definitely appreciates your efforts in that area.

Okay. Moving on to Section .080. Okay. Starting with Section A, Nos. 1, 2 and 3, Mr. Garneau, do you have any comments?

MR. GARNEAU: No, I don't on this section.

CHAIR MOLINA: Okay. Hearing no comments from Mr. Garneau, any of the resource personnel have comments thus far? If it's the resource people's preference, would you like a minute or two to review the item? We could take a brief recess to give you a chance to look over this section.

Subcommittee members, I assume you have gone through this section prior to the meeting.

Okay.

MR. ALUETA: All the sections?

CHAIR MOLINA: No, just from sections 1, 2 and 3. Yeah.

On -- for letter A. Section A, numbers 1, 2 and 3.

Okay. We have no comments from the
Corporation Counsel. I see Mr. Piltz's hand up followed by Mr. George. Proceed, Mr. Piltz.

MR. PILTZ: This Item No. 3, point 3, on the sensor activated lighting, that's kind of nebulous because when you say sensor, most people think of being motion sensors, but most of the sensors used in the roadway lighting and street lighting are photocells which are on at dusk and off at dawn. So we should -- if we want to be specific, we need to identify that more specifically.

CHAIR MOLINA: Okay. So you're suggesting we need more specific language with regards to sensor.

MR. PILTZ: Well, that would be, you know, either photocells for on/off day and evening, evening and morning.

CHAIR MOLINA: Okay. Committee Member Maberry, do you have a comment or response to Mr. Piltz?

MR. MABERRY: I'm just curious. You understand that this is a comprehensive lighting ordinance, public and private, and I think -- I understand that you're saying be more specific, but I just wanted to be
clear that you did understand that.

MR. PILTZ: That's correct.

MR. MABERRY: Okay.

MR. PILTZ: But when you're talking sensor, you can --

have got to be a little bit more specific than that.

MR. MABERRY: Okay. Thank you, Chair.

CHAIR MOLINA: Okay. Dr. Altenberg. And Vice-Chair, a response to Mr. Piltz? Okay. Dr. Altenberg, proceed.

MR. ALTENBERG: I guess the provision that the light only go on five minutes after being activated by the sensor would make it clear that it was a motion sensor that was being envisioned, so -- but I welcome the suggestion for more specific language on that.

CHAIR MOLINA: Okay. Vice-Chair Tavares.

VICE-CHAIR TAVARES: Yeah. My comment was that the activated lighting should be shielded, also. I
mean, we have got sensor-activated lighting at my mom's house that activates floodlights that up the entire driveway out to the road. So, you know, rather than be talking about how the light comes on and off, you know, focus the attention specifically on the light itself and the qualities of that light, where it's going more than how turned on and off. I mean, I don't -- I don't -- maybe I don't understand what was behind this part.

CHAIR MOLINA: Okay. I believe Dr. Altenberg would like to respond to that question.

MR. ALTENBERG: The reason that this was exempted from any sensor shielding requirements was that because the lighting is not on for an appreciable fraction of the nighttime under expected -- you know, expected conditions, the -- the absolute contribution to
glow would be negligible. However, there is the concern about light trespass, so, I mean, if somebody's sensor lighting goes on and your next door neighbor and the light, every time it -- a cat goes by your neighbor's house, suddenly their light is shining in your bedroom window, clearly that's -- that is a problem of light trespass, so that --

VICE-CHAIR TAVARES: It's covered somewhere else.

MR. ALTENBERG: Well, the additional language there of provided it is located in such a manner as to prevent direct glare and lighting into properties of others or into public right-of-way. So, in words, you don't have to have an absolute shielding requirement which has to do with the geometry of the fixture beyond the issue of actual light trespass itself. And I don't know if that's -- addresses your question.

VICE-CHAIR TAVARES: Yeah. If that's not a concern, you're saying, what's contributing to the glow,
know, I can see that. But just understand that there are -- there are lights that will go on will shine directly, you know, up in the sky. Some people don't bother to aim their stuff well or don't maintain it so that when the bracket starts to wear out, the lights, you know, change position. And, you know, if we wanted to continue to monitor what's going up in the sky, then maybe even something as small as this should also come under, you know, some kind of shielding standards. That was just my concern. But if -- you know, here's the experts here, so I would defer to you folks.

CHAIR MOLINA: Okay. So noted, Ms. Tavares.

Okay. We had Mr. George who had a comment.

Proceed.

MR. GEORGE: In that same section --

CHAIR MOLINA: Mr. George, could you use the microphone.

Thank you.

MR. GEORGE: Yes. Under that same paragraph, No. 3, the says, as last sentence on the first -- on page 5, it
recommend to prevent direct glare. I would try and
that we change that terminology to direct illumination and/or glare. The reason being is
I tried to find a definition for direct glare and I could not find any. So I would say direct

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1 illumination and/or glare.
2 CHAIR MOLINA: That's a good point. You brought that up at our last meeting that was a concern as to how do we define what glare is. Thank you.
3 Members, any other questions or comments, recommendations for subsection A, numbers 1, 2
4
5
6
7 3? Okay. Mr. Chong.
8 MR. CHONG: Dr. Altenberg, on paragraph A, fully shielded luminaires, does that apply to ball field lighting?
9
10 MR. ALTENBERG: That was the intent, yes, and I think it would as the code is written.
11
12 MR. CHONG: Clarify for me, then, if we were to do a
job for Maui County, would we be able to use the same type of luminaire that currently light the parks that Vice-Chair used in her projects when she was head of the Department of Parks and Rec.? In other words, these are metal halide floodlights can be aimed and have to be aimed -- understand sports lighting it's not just horizontal illumination that's important. Just as vertical illumination. You cannot see a moving ball, especially a hardball like a baseball, if do not have vertical illumination, and somebody get hurt. And there are distinct standards from the Sports Lighting Committee, from the Illuminating 82 Engineering Society on lighting for ball fields and every type of outdoor activity out there, including driving ranges and whatnot. So I'm just wanting
make sure we're not going to be limiting ourselves here.

CHAIR MOLINA: Okay. Dr. Altenberg.

MR. ALTENBERG: In the -- the --

MR. CHONG: They are fully shielded. They look like --

(inaudible).

MR. ALTENBERG: Application of the luminaire standards to sports fields was done with -- having learned about the -- There's a company called Soft Lighting Systems that installs sports fields that are fully shielded. So that it is certainly something that can be done and can be -- we could -- we could contract to do it right now. And typically they use for Little League fields poles that would be 65-feet high to get the vertical illumination that you were asking about. For larger fields, the poles go up to 85-feet high. But these are all fully shielded there's very little light trespass outside of the park itself. Now, that's something that floodlights, no matter how you aim them other than the straight down, they will cause up light. And so the intent is to basically it would not allow
floodlights to be used for field lighting, but can provide field lighting to be fully shielded.

MR. CHONG: I'm looking at Mike Maberry's pretty picture here and I'm sorry you folks can't see it. I'll turn it around so you can kind of see it. This is an example of I guess a baseball field that is illuminated with fully shielded luminaires. Having done a fair share of outdoor lighting facilities, I -- this is possible given the size of the park. I think if you start to get to larger parks, let's say Maui War Memorial Stadium for football, that you wouldn't be able to get the proper light output or pattern of light out from a fully shielded luminaire that would -- there's going to be a limitation.
This is a smaller field, more like a Little League field, where the poles can be relatively close to all the action. But you start to put stands and everything else in the way and there's limitation just so when a luminaire is fully shielded. There's much light you can get out past that horizontal plain. The optics just -- I mean, unless you start hanging the lamp below the luminaire and then it's not a fully shielded luminaire anymore. And

why we take floodlights, like in the other picture, traditional floodlights, and they're aimed up at an angle to not only cover the vertical illumination, but also cover areas across on the other side of the field to give you that vertical illumination and cross lighting so you have depth perception and things like that.

CHAIR MOLINA: Okay. Thank you, Mr. Chong.
MR. CHONG: I don't -- you know, this is obvious, but I think there are going to be limitations if we regulate it completely to fully shielded lighting.

CHAIR MOLINA: Okay. Dr. Altenberg.

MR. ALTENBERG: In my conversations with a representative of Soft Lighting Systems they said they have had jobs for what they called a Babe Ruth stadium. Is that a technical term that you're familiar with?

MR. CHONG: Babe Ruth is Little League.

MR. ALTENBERG: Babe Ruth is Little League.

MR. CHONG: Basically. It's a level of age that the kids play in.

MR. ALTENBERG: Uh-huh. So I did not ask specifically are there fields that you are unable to -- to contract for because of their size, but I think that's a question that we should pose to find out if there are limitations about what currently is available.
CHAIR MOLINA: Thank you, Dr. Altenberg.

Mr. George.

MR. GEORGE: When I did talk to people in San Diego, the question that I put before the Subcommittee is simply was Jack Murphy Stadium -- how I can say, an exemption to the rules that they had there and what kind of illumination do they have there right now presently?

CHAIR MOLINA: Okay.

MR. ALTENBERG: Excuse me. Was that a question for me?

MR. GEORGE: Yeah. The San Diego Jack Murphy Stadium where the San Diego --

CHAIR MOLINA: Chargers.

MR. GEORGE: -- football teams used to be.

CHAIR MOLINA: I think it's called --

?: It's not called the --

MR. GEORGE: Yeah, you're right. Anyway, the San Diego professional football field, what kind of lighting exception, were they made an exception for that level of play?

MR. ALTENBERG: I have no idea. You would have to find that out.
CHAIR MOLINA: Could we get information on that? I think that would be helpful. Mr. Chong.

MR. CHONG: Another comment. The Big Island ordinance does not restrict the usage of these types of lights or unshielded floodlighting for sports lighting. They limit the amount of time that the lights are on. And I guess there -- the observatory's compromise was if the lights are off by 10:00 p.m. or 11:00 p.m., that's when they're doing -- and I am -- you can correct me if I'm wrong, but that's when they feel they can do most of their observations, after that time. And it wouldn't restrict their work on the top of the mountain if the sporting event was allowed to occur no matter again, the lights are off by a specific set of time.
would think that might be a better compromise than saying -- and it's another exception thing where we say completely unshielded lights are not allowed over a certain wattage.

CHAIR MOLINA: Okay. Thank you, Mr. Chong.

Mr. Maberry, followed by Dr. Altenberg.

MR. MABERRY: Just a point of information. Just for record, it was a compromise. As soon as it gets dark the astronomers start working until it gets bright in the morning for them to work anymore.

CHAIR MOLINA: Okay. Dr. Altenberg.

I guess I would just add that there's a lot of people have come to me and complained light trespass from the sports fields into their homes. People that live within a half mile or so of, for example, Kalama Park. And so I think light trespass issue coming from public sports
fields is also a concern and that becomes a problem as, you know, before the lights out at the field. So that's why the shielding issue was raised, you know.

MR. CHONG: I understand. I understand. But I think there's -- there's lots of people in the community that benefit from park usage at night, and we cannot deny that.

CHAIR MOLINA: Okay. Mr. Maberry, followed by Dr. Altenberg.

MR. MABERRY: I absolutely agree. And I don't think that Lee is suggesting is that the people not be allowed to utilize the facilities at night. I think he's suggesting is that probably what we need to try to move toward is staying up on current technology and having some incentive to utilize that new technology to reduce the impact instead of just going by the status quo or what we put up at such I
think that's sort of what he's moving toward, you know, ultimately, is trying to reduce the impact. And I shouldn't speak for him, but, you know, what we have shared.

CHAIR MOLINA: Okay. Thank you.

DR. ALTENBERG: I've heard numerous complaints about light trespass from say King Kekaulike School. These were just put up a couple years ago, these lights. Instead of the current way they set it up, and this company -- they would have put in fully shielded lights and nobody would be complaining. So the question is these are avoidable problems and that we failed to avoid. We could have avoided it just with the proper choice of contractor, but we didn't. So clearly something needs to be done so that we utilize the technology that's there so that can have sports lighting at night and it not be a problem for people that are not on the field.

CHAIR MOLINA: Okay. Thank you, Dr. Altenberg.
The Chair would ask for any comments from the Parks Department on this. MR. MATSUI: Yeah. We agree with the concerns about light pollution to neighboring properties. And for our newer projects, I guess the industry has gotten a lot better and so we've been using fixtures that, you know, don't spill out so much. One of the ways is getting taller light poles so the angle gets you know, you're pointing more straight down than horizontally. One of my concerns is, you know, when you pass the ordinance, we have a lot of facilities that were designed or built 20 years ago or even years ago and the cost for complying is going to really high.

CHAIR MOLINA: Mr. Matsui, rest assured before we even -- this ordinance even passes, we'll address those
Members, the Chair did state earlier he wanted to complete today's proceedings at 11:15, so at this point I would like to ask the Corporation Counsel, now, we had discussed about a subcommittee to a subcommittee. Is there concerns regarding the Sunshine law on that if there's more than two or three members meeting?

VICE-CHAIR TAVARES: It's a working group.

CHAIR MOLINA: Meeting outside of, you know --

MR. GARNEAU: The point is just to transmit what you have come up with today and to talk about certain things.

At the next meeting it will all be considered?

VICE-CHAIR TAVARES: Right.

MR. GARNEAU: Kind of -- yeah, I think that would be okay.

You're not doing much different than what you have already been doing, which is communicating your concerns prior, which become part of the binder,
CHAIR MOLINA: Okay. I just bring that up because we have potentially three subcommittee members meeting with resource personnel. And, of course, as you know, with the Sunshine law anything more than two people, concerns are raised about that. So thank you for your clarification on that.

Members -- and, oh, speaking of which, I would like to ask the Vice -- before I let you have your say, would you mind taking on subsection .80.

VICE-CHAIR TAVARES: If this was related, I was going to suggest that we devote section --

CHAIR MOLINA: I didn't mean to add more work to your Committee, but if you could do that as a favor to me, I would appreciate it.

VICE-CHAIR TAVARES: Yeah. I think that makes sense.

The other thing I was going to ask if anybody had contacted Musco Lighting, M-U-S-C-O, who's the sports lighting company specialist in sports lighting? Because they have lit some of those
professional stadiums and they also did one
in Japan, they lit a raceway, you know, an oval
track, and in the middle of someplace where
were screaming about spill lighting. So I think
ty they have got some experience in this area, too.
We
might ask them for some help with some of the
questions. They're the ones we worked with at the
Parks Department when I was there. They were
very, very helpful.

CHAIR MOLINA: Okay. Musco Lighting. And this is a
company that's from --

VICE-CHAIR TAVARES: It's in Iowa.

CHAIR MOLINA: Iowa. Okay. All righty.

VICE-CHAIR TAVARES: Mr. Matsui has the contact
numbers or

address.

CHAIR MOLINA: Okay. All right. I think that's a
perfectly good suggestion that we can take into
consideration.

Mr. Garneau.

MR. GARNEAU: Yes, thank you. I just want to ask, Ms.
Tavares, with regards to the working meeting,
MR. GARNEAU: So since I was the one that was asked to prepare this, is it possible that I be included then?

VICE-CHAIR TAVARES: Oh, yes.

MR. GARNEAU: Yeah, okay.

VICE-CHAIR TAVARES: I thought you understood that.

?: She was volunteering you.

CHAIR MOLINA: All right. Just for the record, this subcommittee working group will be made of -- up of Vice-Clair Tavares, Subcommittee Member Chong, and Subcommittee Member Altenberg. And resource personnel Mr. George, Mr. Piltz -- Is there anybody else I should be including? Captain Fontaine. Maybe is there anybody from, say, Maui Electric who would be interested? Are you available for
Mr. Nakama -- or I'll just leave that open at this time. Okay. I think we have a good working group as it is.

Go ahead, Captain Fontaine.

MR. FONTAINE: I would love to participate, but being I am assigned to the Molokai District, it may be difficult for me to come back and attend those meetings and put an additional expense on the County to do that.

CHAIR MOLINA: Okay. Is there anybody -- recommendations for somebody from here that could be a representative from the Police Department to working group?

MR. FONTAINE: I hate to speak on behalf of the Chief of who -- which representative he would want to send. Maybe a letter addressed to -- asking from a representative and then he could decide
either the other two captains or the Assistant Chief would be willing to be involved with that.

CHAIR MOLINA: Okay. So noted. Thank you, Captain.
Okay. So for the record, these are the members of the working group. If there's any other -- Dr. Altenberg.

MR. ALTENBERG: I seem to recall that Mike Maberry was mentioned originally. Is that correct?

VICE-CHAIR TAVARES: Yeah.

CHAIR MOLINA: Was he? Sorry.

VICE-CHAIR TAVARES: You did.

CHAIR MOLINA: I don't recall, but that would make two, three, four Subcommittee members.

?: I won't go.

MR. MABERRY: Well, keep in mind I still have to fly in, so -- I'm not a Maui resident, sorry.

CHAIR MOLINA: So maybe Mike could be a --

VICE-CHAIR TAVARES: Where are you?

MR. MABERRY: Honolulu.

VICE-CHAIR TAVARES: On Honolulu.
to you
you
this?
to
the
February
place.
We're
as
go
2:00 or
your
availability? Mr. McCord.
that
to
not work?
that
meeting time at 10 o'clock. Am I correct, Mr. Saldana?
MR. SALDANA: Yes, we did, but we still have plenty of
time to post and, you know, we can modify that.

CHAIR MOLINA: Okay. So we could modify that.

Members,

any comments on that?

?: I agree. 9:00 is better.

CHAIR MOLINA: Everybody would like 9:00?

?: Yeah. I have to get back to Oahu.

?: Fine by me. And the afternoon.

CHAIR MOLINA: Okay. We'll go to start time of 9:00

for Wednesday, February 6th.

Now, as far as the time for the meeting, any

interest or concerns about going up till 2:00
day? Mr. Maberry.

MR. MABERRY: No, sir, but if I may, before we get too

far, I would like to ask the Chair's permission,

I would like to invite Professor Wainscoast, who is

an astronomer, to serve as a resource person at the

next meeting. I'll bring him in from the Big

Island, if that's all right, sir.
CHAIR MOLINA: Okay. Professor Wainscoat.

MR. MABERRY: Wainscoat.

CHAIR MOLINA: And he is an astronomer at which observatory?

MR. MABERRY: At the University of Hawaii 2.2 meter. Last name is spelled W-A-I-N-S-C-O-A-T, first name Richard.

CHAIR MOLINA: Okay. Do you have a contact number that staff can --

MR. MABERRY: I provided the staff the information already, sir.

CHAIR MOLINA: Oh, you did. Okay. Thank you. And also we will be inviting somebody from the -- I think was it the DOT that one of the members mentioned earlier?

?: Yes. State Highways.

CHAIR MOLINA: State Highways. Okay. All righty. So does 2 o'clock sound okay for the Committee on -- from 9:00 till 2:00? Any objections? Any members have to leave early
day?
I may, depending on flight schedules.
Okay. So, again, the Chair is looking
meeting time from 9:00 to 12:00 and reconvening
o'clock, if needed, till 2:00. I would like to
in a little bit more time for this next meeting.
Okay. So with that, are there any
announcements? Vice-Chair Tavares.

Yeah, I have an announcement. I
we were talking about getting something prepared
the next meeting, but I don't think I'll be able
have a meeting prior to the February 6th meeting

with the working group. We go into our Council
meeting next week so that shoots the whole week.
But if you're going to continue on in the
then it wouldn't be necessary for us to have our
stuff finished before you can go on to the next
section. So if, you know, if I can get together
with the other folks on the Committee and try to
find a time that we all can meet and then not be so worried about getting it forward at the next meeting, if that's all right with you.

CHAIR MOLINA: Yeah, I see. From the Chair's perspective, I see no problems with that. Okay. Is that clear to all the working subcommittee group members?

Okay. Any other announcements? Hearing none, the Chair thanks you all for your participation. This meeting is adjourned.

(Gavel.)

ACTION: DEFER

ADJOURN: 11:18 a.m.
CITY AND COUNTY OF MAUI

I, Sandra J. Gran, Certified Shorthand Reporter for the State of Hawaii, hereby certify that the proceedings were taken down by me in machine shorthand and was thereafter reduced to typewritten form under my supervision; that the foregoing represents to the best of my ability, a true and correct transcript of the proceedings in the foregoing matter.

I further certify that I am not attorney for any of the parties hereto, nor in any way concerned with the cause.

DATED this 11th day of March, 2002, in Maui, Hawaii.

_________________________
Sandra J. Gran
Hawaii CSR 424
Notary Public for Hawaii
My Commission Expires: 5/14/04