

**TOWN OF BOONE  
COMMUNITY APPEARANCE COMMISSION  
MEETING MINUTES  
TUESDAY, APRIL 26, 2022, 5:30 P.M.**

|                                              |                                                                                                                                                   |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>COMMISSION MEMBERS PRESENT:</b>           | Chair Sarah-Davis Cagle and Christy Cook                                                                                                          |
| <b>TOWN COUNCIL LIASION MEMBERS PRESENT:</b> | Edie Tugman-Mayor Pro-Tem and Dalton George                                                                                                       |
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| <b>STAFF MEMBERS PRESENT:</b>                | Jane Shook, Director of Planning and Inspections;<br>Jessica Mitchell, Long-Range/Special Projects<br>Planner and Marlene Crosby, Board Secretary |
| <b>OTHERS PRESENT:</b>                       | Dr. Dan Caton-Appalachian State University and<br>Matt Makdad-New River Light and Power                                                           |

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**CALL TO ORDER**

Chair Sarah-Davis Cagle called to order the meeting of the Boone Community Appearance Commission, held via WebEx, a video conferencing software, on Tuesday, April 26, 2022, at 5:33 p.m.

**ADOPTION OF AGENDA**

Chair Cagle made a motion, seconded by Member Cook, to adopt the agenda as presented.

**Vote:** Aye – All

Nay – None

**The motion passed.**

**APPROVAL OF MINUTES**

Chair Cagle made a motion, seconded by Member Cook, to approve the February 22, 2022, meeting minutes as presented.

**Vote:** Aye – All

Nay – None

**The motion passed.**

**PUBLIC COMMENT**

No individuals requested the opportunity to speak during public comment.

**PRESENTATION: DR. DAN CATON – LIGHTING**

Dr. Caton asked to speak before the Commission and began his presentation (permanently on file) and noted that he is a member of the American Astronomical Society's Committee on light pollution, radio interference, and space debris. He said he is also a member of the North Carolina Section of the International Dark Sky Association.

Discussion ensued on light pollution. Dr. Caton noted that in 2005 or 2006, he had spoken to the Community Appearance Commission about the Apex, North Carolina Code. He mentioned how he discussed with the Town not requiring low-pressure sodium lighting (LPS), a very deep orange street light. He said the problem with LPS lighting is that all colors turn monochromatic such as black, white, and gray; he further stated that this type of lighting presents a security issue.

Dr. Caton explained the problem with LED lights installed by the Town of Boone. Dr. Caton showed several photos of light pollution in the Town of Boone, some of the photos going back 50 years. He pointed out that most existing lighting was not designed or specified, or installed by people who are trained in lighting. He

explained that the current ordinance includes full cut-off fixtures as a requirement. He noted that these lighting restrictions added to the ordinance before building commercial buildings like Zaxbys, Publix, McDonald's, and The Standard of Boone helped reduce light pollution. He explained that full cut-off fixtures are flat on the bottom, and they do not allow light to go up above the horizon and cause light pollution. He explained the value of full-cut off as it is nice lighting, safe lighting, and does not cause excessive glare into peoples' faces.

Dr. Caton explained how the Town is replacing the high-pressure sodium street lights with LEDs at 3,700 Kelvin, according to his measurements, which resulted in a big blue spike in color temperatures with a handheld spectrometer. He compared the reading to color temperatures and in nanometers as in his presentation. He explained that at night, the light shifts, and our sensitivity moves over to the blue color, which is not suitable. The blue light is dangerous to your health, and the glare is discomforting. He gave an example of how hatching sea turtles at Carolina Beach are affected by light, and it involved cooperation with Duke Power in changing the lighting.

Dr. Caton talked about melatonin production in humans and how blue light interferes with it. He said that melatonin is a natural compound produced by the human body. It is also an important antioxidant in the anti-cancer cycle. He said one solution is to use the nightlight setting on all your devices like cell phones and laptops to reduce the blue light.

Dr. Caton talked about a solution for indoor lighting, specifically Phosphor Converted Amber lighting that absorbs the blue in the LED light and remits it as yellow-red. He said there is almost no blue spike with this type of lighting, and the Kelvin temperature is 2,300K. He provided an example of a previous lighting issue with gas station canopies and the result of compliance with the Town standards that reduced the footcandles of canopy lighting at a particular gas station.

In summary, Dr. Caton suggested that the Town of Boone consider using a lower color temperature fixture and checking the LEDs' specifications to get a spectrum and then measure the blue spike. He said the lighting requirements should be below 3,000 Kelvin for commercial businesses. He also suggested that lighting could also be 2,700 Kelvin. He noted that lighting of 2,500 Kelvin might not be economical. He might want to consider a sunset provision for existing non-shielded floodlights.

Discussion ensued on current lighting issues in the Town and buildings of lighting concern, including the Public Works facility used by the Town and near the area of Earth Fare on King Street and Cherry Street.

Ms. Shook thanked Dr. Caton for presenting his information to the Planning Staff and Community Appearance Commission. She explained that the Planning Staff had recently met with Dr. Caton and a lighting design professional, which assisted as the Planning Staff updates the lighting standards.

#### **COMMUNITY APPEARANCE STANDARDS**

Discussion ensued on the lighting standards. Ms. Mitchell gave a brief update on the lighting standards. She said that the Planning Staff started looking at lighting standards to propose language that reflects the best lighting practices. The Planning Staff realized that they needed assistance; as a result, Staff has had meetings with lighting design professionals, Dr. Dan Caton as a dark sky advocate, and local energy cooperatives. She said that the Planning Staff recently met with Mr. Matt Makdad, Engineering Supervisor from New River Light and Power. She said the Planning Staff is scheduled to meet with Blue Ridge Energy on April 27 to discuss lighting. Planning Staff will also continue to work with other Town departments that deal with lighting.

Ms. Mitchell noted that the Planning Staff would keep the requirements for full cut-off fixtures, canopy lighting, and lighting regarding sports fields. She said the Planning Staff would continue to work on the

proposed language by comparing different jurisdictions. She mentioned that language to change regarding lighting includes exempted or prohibited lighting, pole-mounted lights and height restrictions, and the table of activities that regulates footcandles in Article 25.05.03 and Article 25.05.04. She listed items for continued discussion: lighting on parking decks, specifically on top of parking garages, and using Kelvins.

Ms. Mitchell said the Planning Staff is looking at the language in Appendix A regarding the lighting plan. She said we hope to make this information more detailed and easier to understand what is required and how to get more information up-front.

Dr. Caton added to the discussion about floodlights from commercial buildings interfering with driving and issues with glare. He suggested that the pole heights be restricted for this reason. He also stated that if pole heights are lowered, there would be more pole lights for uniform lighting, and if pole heights are higher, more light can spread out. Ms. Mitchell said that the Planning Staff has already considered Kelvins, and they have been discussing them. She also stated that in reference to lighting interfering with driving, language could be considered for lighting to be placed to prevent glare.

The question was asked regarding enforcement of Kelvins with lighting. Dr. Caton replied that a spectrometer is over \$1,000, and apps are available on mobile phones. He mentioned that a spectrometer would be able to measure color temperature.

Ms. Shook discussed why the Planning Staff is looking at lowering the light poles. She explained that people would often put in taller poles to light larger areas; however, the problem is affecting the adjacent property owners because the light is spread out more.

Ms. Shook explained that the Town of Boone Public Works Department installs the street lights in the Town. She also explained that the ordinance applies to development. The Town's installment of street lights is not regulated by the Department or the ordinance. She said that the Town has been working on the new LED lights as part of a sustainability project, and the new LED lights run about 5,000 Kelvin. She said it is her understanding that the Town has already invested in those lights, some lights have been installed, and the fixtures have been purchased for the remaining lights. She said this would be a discussion for Council to move forward with the project. She referenced a conversation with New River Light and Power in which the pole height is between 25 to 30 feet, and the lights are 3,500 Kelvin for commercial lots. The Planning Staff's research from other ordinances showed that other jurisdictions have already reduced their lights to 3,500 Kelvin for their maximum regulating Kelvin. She added that it is still possible that the Kelvin amount could be lower than that within the language.

#### **Commercial and Multi-Family Construction – Community Appearance Standards Review**

Discussion ensued on the Commercial and Multi-Family Construction and Community Appearance Standards Review.

Ms. Mitchell referred to the information on packet page eight of the Commercial and Multi-Family Construction document. She explained that this summarizes the discussion at the last CAC meeting held on February 22, 2022.

Ms. Mitchell referred to packet page nine. She reminded the CAC about the Google Document that she created for the CAC to review and add notes to as they evaluate current design standards in Article 25. She said the CAC was asked to consider the "Pros" and "Cons" of the photos of past projects. Council Liaison Tugman noted that she would be traveling to Columbia and Hilton Head Island, South Carolina, and she would take photos of the design elements. Chair Cagle said she would try to add some "Pros" and "Cons" using the

current standards. She noted a pattern of building design noticeable in viewing the pictures. She further explained that it would be helpful to be more specific in the feedback.

Ms. Mitchell added that color and number of features are discussed often during plan review. She said that the CAC might want to consider these topics while evaluating the current design elements and the previous discussion of minimum standards. Ms. Shook noted that many chain stores have corporate colors and would like to use them, although she is not advocating for corporate colors. She informed the CAC that the Planning Staff had seen some submissions where they wanted to stripe their building with their corporate branding. She said we need to make it clear to applicants how we regulate color, as the ordinance currently references a Sherwin Williams color palette that is no longer available. She said she thought one of the local paint stores would be willing to put a palette together for the Town.

In summary, Ms. Shook suggested that the Planning Staff and CAC evaluate (1) elements that meet minimum requirements, (2) the most economical feature that we can use in a list of acceptable features, (3) a combination of those things that can be used to meet the ordinance requirements, and (4) as we move forward, consider incentivizing features and materials. She explained that this is an initial step as part of community input for the comprehensive plan. She concluded that the evaluation and community input would be considered as we change the ordinance to get the community we want to see in 20 years.

Discussion ensued on the timeline to present information to Council. Chair Cagle asked Ms. Shook what the CAC could do to help speed up their assigned task to be more helpful to the Planning Staff. Ms. Shook stated that she preferred that the CAC continue to work on their assigned task and move at the current pace where they can evaluate the material and give good feedback.

Ms. Shook explained that the Planning Staff is preparing to present to Council a high-level view of the comprehensive planning process in May. She noted that the Planning Commission and the Historic Preservation Commission would also bring value to the comprehensive planning process. She said the Planning Staff is discussing how to coordinate all of the work to get the best work products and the best value for our community. She concluded with giving the CAC another month to review and work on the presented document.

Discussion ensued on the appearance of local buildings, included in the Commercial and Multi-Family document presented in the packet. Council Liaison Tugman noticed the Allen Tate Real Estate looks very different from other buildings downtown. Chair Cagle noted that it has a modern twist, but she does not personally appreciate the completely solid color scheme. She further stated that she prefers variations with different materials or at least different colors of materials, and she likes the modern look. She said her one “con” about the building is that it is all the same color. Ms. Shook pointed out that this building proposal came in after an ordinance change, which allowed the design as it is.

Ms. Shook mentioned the Five Guys restaurant and stated that there were compliments when it was first built. Chair Cagle noted how there is variation in buildings and throughout Town, as it would not be as appealing if there were multiple buildings of the same design in a row. She stated that there is much in between the commercial buildings, such as Public or The Standard. Council Liaison Tugman questioned, based on the conversation, as we move to the next stage of development and the evolution of development, how can we stop the sameness and current developments not being side-by-side. Chair Cagle stated that it was a good discussion.

Based on a question, Ms. Mitchell clarified that the Commercial and Multi-Family document is based on projects looking at permits in the permitting system. She explained that for the project of the parking lot

for members to consider lighting, landscaping, and comparisons to other impervious surfaces or open parking lots.

Ms. Shook said the Planning Staff would provide some suggested changes for lighting standards at the next CAC meeting in May.

**OTHER MATTERS BY BOARD MEMBERS OR STAFF**

Ms. Shook reminded the CAC to look for individuals who might want to serve on the CAC.

**ADJOURNMENT**

Chair Cagle made a motion, seconded by Member Cook, to adjourn the meeting at 6: 42 p.m.

**Vote:** Aye – All  
Nay – None  
**The motion passed.**

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Sarah-Davis Cagle, Chair

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Marlene Crosby, Board Secretary