

COUNTY OF HENRICO  
VIRGINIA

## INTER-OFFICE MEMORANDUM

To: Planning Office Subject: Project Isaac – POD2019-00105  
Henrico County Police Division,  
From: Community Services Unit Date: March 20, 2019

**POD2019-00105**

*<Site Plan Review>*

*Zoning: M-2*

- ☐ Henrico Police Division recommends approval  
☒ Henrico Police Division recommends approval if the requirements in Section I are addressed.  
☐ Henrico Police cannot complete our review at this time as additional information is needed.

**SECTION I. Address the following items in order for Henrico Police to endorse this plan:**

- ☒ Provide new plans with details to address items noted below.  
☐ Provide a response addressing the items and/or stating the intent of the applicant.

**Overall:**

- Please consider submitting a landscape and lighting plan with the next submission.
- As you proceed forward, please use the CPTED best practices noted below.

**Landscaping Best Practices - *No plan submitted***

1. Show light pole locations on the landscape plan in an attempt to avoid conflicts.
2. The location of the light poles in relation to the trees needs to be considered, especially in parking lots and areas along the building's edge. The two should not be located in the same area, as illumination will be reduced as the tree matures.
3. All shrubs and trees should be trimmed to allow for maximum visibility to and from the site and from within the site. Shrubs should have a natural growth habit of no more than 2 ½ to 3 feet, or should be maintained at this height, especially when located along an entrance, walkway or in a parking area.
4. Trees located around the buildings, walkways and parking areas should have a natural growth habit that is a tree-form, non-pyramidal shaped tree. If this cannot be done, the canopy of the trees should be maintained at least four feet from the ground as the tree matures.

**Lighting Best Practices – *No plan submitted***

5. The minimum maintained light level should be no lower than 1.0 foot-candles throughout the parking areas, walkways, building entrance and building edge.
6. The lamps throughout the site should be the same. The emphasis is to have the same color of light (white or orange/yellow) throughout which will provide good color rendition, help with visibility, and reduce contrasts. Color rendition refers to how objects of various colors appear under a particular lamp. Metal halide, LED, compact fluorescent lamps (white light) are preferred.

7. All light fixtures need to be full cut-off. See Photo's A and B for examples of full cut-off wall packs and pole lights.
8. Should post top fixtures be used, these fixtures also need to be full cut-off so that the light will be directed down to the ground, versus horizontally and up in the air. If decorative fixtures are installed, they should have the lamp in the top casing of the fixture so that the light will be directed towards the ground (See Photo C). This will also avoid glare because you don't actually see the lamp. Glare is defined as horizontal light that hinders vision.



Photo A. Shielded wall pack.

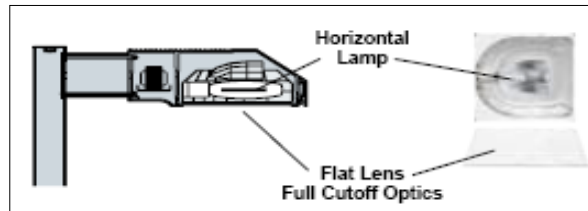


Photo B. Diagram of a full cut-off or concealed source fixture.



Photo C. The white globe visible to the eye in this post top fixture is decorative; the lamp is in the top of the fixture.

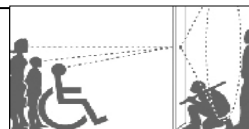
9. Lighting is one of the most economical and effective forms of crime prevention available. For lighting to be effective it must be uniformly distributed so that dark areas and areas of sharp contrast are not created. The Illuminating Engineer Society of North America defines uniformity as "the evenness of the distribution of light on the surface(s)"...which "aids security perception, while reducing the necessity for eye adjustment..." IESNA G-1-03, 5.4.
10. In creating uniform lighting, consider:
  - a) type of fixture
  - b) the height of poles
  - c) the direction of the light
  - d) spacing of fixtures
11. Routine maintenance of the lights is recommended.
  - a) A schedule should be established to review lights to determine if any need replacing.
  - b) Globes should be cleaned periodically to ensure full illumination from the light.
  - c) A program should be established to relamp the complex, also known as *group relamping*. This method reduces cost by minimizing site visits for the purpose of relamping, and it ensures that the lamps being replaced are consistent with all surrounding lamps.
  - d) A program should be established for the trimming and maintenance of tree canopies and other plant materials at or around the light poles so that illumination is not reduced.

#### Building Security Best Practices -

12. Provide access control (physical security) on all exterior doors.
13. All exterior entrances into the facility should be equipped with automatic door closers. The doors should also be equipped with self-locking devices that will engage immediately when the door has been closed.
14. Install full to partial glass doors at locations where surveillance is needed. For service doors, install a reinforced vision panel, one-way window, wide-angle, or security peephole to promote visibility and safety for employees. (See Photo D) A security peephole offers a wider-angle view and the employee can stand at least five feet away from the door to observe the exterior.



Photo D. Example of a security peephole and a detail of the views it can provide.



15. Utilize non-removable hinge pins or piano hinge/continuous hinge on all exterior doors.
16. Convex mirrors should be installed to allow employees to monitor blind spots and unmonitored areas located inside the building.
17. Consideration should be given to installing a video surveillance system (VSS) for the interior and exterior of the site.
18. For those doors and windows with limited to no visibility from the street, consider adding security film to help ‘harden the target’. Cover glass doors and windows within 40” of door locking mechanisms with a security film to prevent penetration. A 6 - 8 millimeter thick film is suggested. Resource options: [www.llumar.com](http://www.llumar.com) and [www.vista-films.com](http://www.vista-films.com). See web sites for a local installer.
19. Provide vision panels or glass doors on interior and exterior entrances, to include stairwell doors.
20. The design and security measures for the interior of a building should consider internal corridors, especially when the building is multi-tenant. Consider the following:
  - a) Interior corridor layout – hallways that do not create blind corners; office doors or spaces with visibility to these corridors – vision panels, glass doors, etc. (See Photo E)
  - b) Single tenant building – provide access control measures at all entrances into the building.



Photo E. The corridor layout can impact lines of sight, limiting and/or maximizing visibility down a hall. Example to the right offers visibility.

The Henrico Police Division supports and implements Crime Prevention Through Environmental Design (CPTED), which is the theory that the proper design and effective use of the built environment can lead to a reduction in the incidence and fear of crime and an improvement in the quality of life.

The following characteristics need to be in place at this site.

1. **Natural Surveillance.** Provide natural surveillance throughout the site, especially to parking areas, buildings, building entrances, walkways, etc. Natural surveillance is the placement of physical features, activities and people in such a way as to maximize visibility.
2. **Natural Access Control.** Provide natural access control throughout the site. Natural access control is the physical guidance of people coming and going from a space by the judicious placement of entrances, exits, fencing, landscaping and lighting. The goal is to guide people where you want them to go and how you want them to get there.
3. **Territorial reinforcement.** Territorial reinforcement is the use of physical attributes that express ownership, such as fences, pavement treatments, art, signage and landscaping. The goal is to promote ownership and pride in where you live and work.
4. **Maintenance.** Allows for the continued use of space for its intended purpose. It also serves as an additional expression of ownership.

While our requirements for the endorsement of the plan do not guarantee a crime-free environment, it is our experience that the application of the concepts of Crime Prevention Through Environmental Design (CPTED) will reduce the opportunity for crime to occur and will enhance the quality of life. Should you have any questions or comments, please contact me at 804-501-5370 or [mof@henrico.us](mailto:mof@henrico.us).

Billy Moffett  
CPTED Planner