

COUNTY OF HENRICO
VIRGINIA

INTER-OFFICE MEMORANDUM

To:	<u>Planning Office</u>	Subject:	<u>POD2021-00137: Tuckahoe</u>
	<u>Henrico County Police Division</u>		<u>Montessori School</u>
From:	<u>Community Services Unit</u>	Date:	<u>April 12, 2021</u>

POD2021-00137:

- Consider building security at this time.
- Use the following best practices as you proceed.

Landscaping Best Practices:

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 4 feet from the ground as the tree matures.

Lighting Best Practices:

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. This will provide good color rendition, help with visibility and reduce contrasts. Metal Halide (white light) is preferred. Color rendition refers to how objects of various colors appear under a particular lamp.
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.

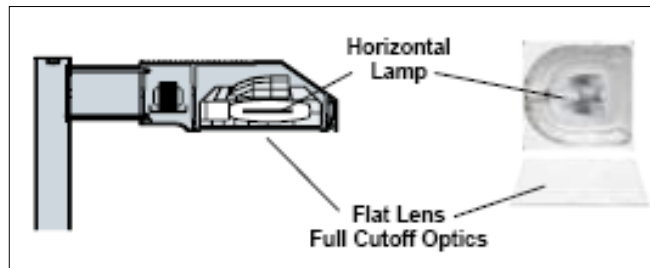


Photo B. Diagram of a full cut-off or concealed source fixture.



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.

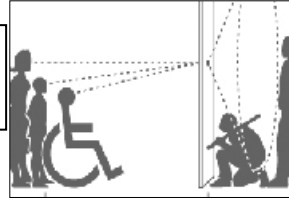
Building Security Best Practices:

12. Provide access control (physical security) on all exterior doors.
13. Equip the exterior entrances with automatic door closers and with self-locking devices that will engage immediately when the door has been closed.
14. The windows should not be tinted, especially at the entrance to the stores, to allow for surveillance opportunities both from within and from outside the building.
15. 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.
16. Utilize non-removable hinge pins or piano hinge/continuous hinge on all exterior doors.
17. The following measures should be in place to increase the security for side, rear or storage doors:
 - a) Metal or solid core
 - b) Metal frames
 - c) Deadbolt locks- egress point: one that employs a thumb turn on the inside of the door
 - d) Reinforced strike plates
18. Advertisements and/or displays should not be located in and around the windows. If advertisements must be used, keep them small in size and locating them along the top of the windows. This will work towards increasing surveillance opportunities from within and from outside.

19. Install a security peephole or one-way window on the rear door. (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.



20. Locate a doorbell outside this rear door for companies to use when making scheduled deliveries.
21. The following signage should be at all entrance doors:
- a) Crime prevention messages such as “Time delay safe”, “Clerk cannot open safe”, etc., should be displayed in a conspicuous location.
 - b) Height tape should be applied to door frames at all exits used for the public to assist with identification of a suspect.
22. A safe room should be developed. A safe room requires a solid core door fitted with a peephole, deadbolt lock, and a telephone located inside the room. Conduct all banking procedures and the opening and closing of register drawers while secured inside the safe room. This room may also provide your employees a safe haven during a crisis situation.
23. Convex mirrors should be installed to allow employees to monitor blind spots and unmonitored areas located inside the building.
24. Install a video surveillance system (VSS) for the interior and exterior of the site.

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 does 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.

Billy Moffett
CPTED Planner