
EXECUTIVE SUMMARY

Technical Report 1 examines the existing lighting system of the Maryland Transportation Authority Police Training Facility. Descriptions of the existing lighting conditions are included. Also, an analysis and critique was performed for the four spaces which will be redesigned in a later portion of this thesis. Design criteria were established for each of the four spaces and the existing design was critiqued based on the newly developed criterion. The four spaces analyzed were a large classroom, the 11,000 square foot shooting range area, the first floor lobby and corridor circulation spaces, and the front exterior façade.

The major design consideration for the classroom and the range is flexibility and control of the lighting system. The circulation spaces and front entrance façade criterion focus more on the appearance of the space, with security being an addition issue for the exterior façade.

Some of the spaces met the design criteria better than others. The façade, for example, met most of the design criteria. The firing range and classroom could include more control and flexibility which is important for the multiple uses of these spaces. Non-uniformity of light and high quality fixtures could add to the appearance of the circulation spaces.

Basic lighting designs were used throughout the space. As a training facility, a high quality visual appearance is not the number one priority for this building. However, a quality environment is not just important to make an impression on visitors, it also has impact on the health attitudes of the everyday users of the space. Therefore, visual appearance should not be overlooked even though it may not be the most critical aspect of design.

Lighting power density (LPD) was also examined for each of the four spaces and compared to the ASHRAE Standard 90.1. The lighting power density for the lobby and corridors was just above the ASHRAE 90.1 space-by-space limit. The three other spaces met or were under the standard's limits.