PA Schedule 18 – Technical Requirements: Appendices Execution Version

RFP No. 201-2014 B PA So The City of Winnipeg Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass

Appendix PP – AT Path Recommended Illumination



TABLE 2
Recommended Illumination
(Values in lux)

	Average Conditions		Special Conditions ¹	
	Avg. Maintained Illuminance Levels Horizontal Levels (E Avg.) ²	Horizontal Avg. to Min. Average	Min. Maintained Avg. Vertical Levels (E Avg.) ³	Avg. to Min. Ratio
Walkway Class				33.55
Sidewalks along streets by Area Classifications*				
Commercial	10	4:1	20	5:1
Intermediate	5	4:1	10	5:1
Residential	2	10:1	5	5:1
Park Walkways &				
Class I Bikeways	5	10:1	5	5.1
Pedestrian Tunnels	20	4:1	55	5:1
Pedestrian Overpasses	2	10:1	5	5:1
Pedestrian Stairways	5	10:1	10	5:1

*AREA CLASSIFICATIONS

- a) **Commercial**—A business area of a municipality where ordinarily there are many pedestrians during night hours. This definition applies to densely developed business areas outside, as well as within, the central part of a municipality. The area contains land use which attracts a relatively heavy volume of nighttime vehicular and/or pedestrian traffic on a frequent basis.
- b) Intermediate—Those areas of a municipality often characterized by moderately heavy nighttime pedestrian activity such as in blocks having libraries, community recreation centers, large apartment buildings, industrial buildings, or neighborhood retail stores
- c) **Residential**—A residential development, or a mixture of residential and small commercial establishments, characterized by few pedestrians at night. This definition includes areas with single homes, town houses, and/or small apartment buildings. Certain land uses, such as office and industrial parks, may fit into any of the above classifications. The classification selected should be consistent with the expected nighttime pedestrian activity.
- There are conditions and situations which may suggest that increased vertical illuminances are appropriate to increase the perception of safety and reduce criminals' opportunities to operate under the cover of darkness. Vertical illuminances can improve facial recognition, recognition of peripheral elements and peripheral movement, and minimize deep shadows when compared to simply designing toward horizontal illuminance criteria. In densely populated areas, areas where nighttime activity is intermittent throughout the entire night, areas where architectural configurations provide opportunities for significant shadows, where narrow/deep entryways are frequent, where dense and high (1.2 meters; 4 feet and higher) landscaping occurs for great stretches, where pedestrians are likely to be alone and on a recurring schedule (e.g., shift workers walking to bus stops, walking home), where crime has been recorded as a community problem and/or where community officials predict future nighttime disturbances (based on anticipated future land use and development), consideration should be given to invoking the "Special Conditions" criteria.
- ²Values measured or calculated at ground level.
- ³Values measured or calculated (1.5 meters; 5 feet) above pavement, in both directions, parallel to the direction of travel on the walkway or bikeway.