

**Street scale** is an important factor in determining the appropriate configuration of street light fixtures. Broad avenues require fixtures of a different scale from narrow side streets, because the arc of light created by a source varies with its height from the ground. Very wide streets may also require that the light source be extended further over the roadbed. Getting light back onto the sidewalk, on the other hand, requires a pedestrian fixture at a lower height.

**Photometric analysis** is an important means of determining the appropriate spacing of light fixtures to ensure that light is spread evenly where it is needed.

## OTHER FACTORS

### **A. Street Character**

Special conditions relating to street character are also important considerations in determining an appropriate fixture. Qualities such as the architectural or historical character of the building or park edge, the existence and density of a tree canopy, and the degree of ambient light are all factors. Each of these characteristics can strongly impact the effectiveness and appropriateness of various light fixtures and must be included in the analysis of lighting concepts.

For instance, if the main use of the street is to channel a rapid flow of traffic (e.g. a highway or major arterial), the recommended light level would differ from that of a low-traffic residential street – which should in turn differ from a pedestrian-oriented downtown street. Street lighting that is implemented as part of an overall streetscape design in conjunction with other elements, such as benches, bus stops, and waste receptacles, will reflect the pedestrian-oriented quality of the street, and can potentially enable the off-street area (sidewalks, plazas, pocket parks) to be more conducive to pedestrian and merchant activities.

### **B. Compatibility and Coordination**

The choice of light fixtures must meet the community's

preferences, based on the character of the street and surrounding neighborhood. Factors to consider include number of luminaires per post (single, double, or lighting standards with three or more); materials, colors, and finishes; and historical or contemporary style. Finally, in order to design the street as a public space, light fixtures should be conceived of as part of a coordinated line of amenities – not pieced together from a variety of incongruous components. They should appear compatible with litter receptacles and other street furniture. In addition, different light fixtures that serve different purposes should relate to one another as part of a family of fixtures. This means that, in a given family, each of the fixture components (base, pole, luminaire) should have stylistic compatibility, while varying in form according to functional requirements. In addition, items that are attached to the fixtures (signs, signals, signal box, etc.) should coordinate in appearance, and the systems for attaching them should be integrated as parts of a whole, rather than being sloppily fastened on as an afterthought.

### **C. Existing Conditions**

Ultimately, every situation has a different set of variables, and the light levels must be considered for each specific location. In addition to dealing with the characteristics described above, lighting levels and an overall lighting plan must be derived from a number of existing conditions (listed below), with other desired factors also taken into account.

- street width
- sidewalk width
- path width (in parks or plazas)
- typical height of buildings
- number, placement, and types of trees
- types of paved surfaces
- roadway geometries
- length of the block

## ARE THERE SECONDARY FUNCTIONS FOR LIGHTPOLES?

- **Individual pole decorations or banners:** These can utilize single or double attachments to the post. The luminaire height may effect the length of a side banner, which typically may hang as low as 9'. (So, for instance, a 3' to 4' banner could be hung below a 13' luminaire.) Attachments should be carefully detailed to complement the lighting style and materials.
- **Street-spanning banners or decorations for holidays or special events:** Span-wires to support accessory street ornamentations must be located at least 15' to 30' above street level. The height must be sufficient to clear automobiles and trucks, while also relating to the surrounding height of buildings and/or the character of open spaces. Note that street-spanning banners are not allowed by all city codes, and careful attention must be paid to wind loads and attachments.
- **Planters:** Best is either a non-irrigated, hanging planter or an irrigated model with an enclosed pipe within the light pole
- **Additional electrical capacity** may also be needed to assist in street, tree, and/or event lighting.

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