

SCOPE

- I ↗ 1.1 This practice covers security lighting for plants.
- I ↗ * 1.2 Security lighting shall be provided to the extent specified.
- I * 1.3 Security lighting when required, shall always include all of **Category I** and the applicable items specified of **Category II**:

CATEGORY I	CATEGORY II
Fenced perimeters	Open areas
Unfenced perimeters	Storage and parking areas
Plant and building entrances	Piers and docks
Guard towers	Vital structures
Gate house	Vital buildings
	Tank fields

- I 1.4 **An asterisk (*)** indicates that additional information is required. If a job is contracted, this additional information is furnished in the Job Specification.

SUMMARY OF ADDITIONAL REQUIREMENTS

- I 2.1 **IP 16-5-1, Lighting**, shall be used with this practice. Where requirements conflict, this practice shall govern.

DEFINITIONS

- I 3.1 **Perimeters.** Where the property is fenced, the fence line is the perimeter. Where the property is unfenced, the perimeter is the property line or a building face perimeter.
- I 3.2 **Building face perimeters** are faces of buildings or shelters which are 20 ft (6 m) or less from an unfenced property line.
- I 3.3 **Fenced perimeters** are classified by the clear area outside the fence as follows:

FENCED PERIMETER TYPE	CLEAR AREA OUTSIDE FENCE	
	ft	m
Isolated	> 100	> 30
Semi-isolated	≤ 100, > 60	≤ 30, > 18
Non-isolated	≤ 60	≤ 18

- I 3.4 **Storage and parking areas** include material storage areas, railroad sidings, and motor pools.
- I 3.5 **Vital structures** are structures essential to plant operation such as unsheltered power plants, substations, piers and docks.
- I 3.6 **Vital buildings** are plant buildings and shelters in processing plant or maintenance operations.
- I 3.7 **Glare projection** is light directed across an approach area to prevent someone from seeing into the area.
- I 3.8 **Controlled illumination** is light projected onto a particular area with no spillage onto adjacent areas.

SECURITY LIGHTING CATEGORY I

PERIMETERS

- S 4.1 **Fenced perimeters and building face perimeters** shall be illuminated per the following:

TYPE OF PERIMETER	TYPE OF ILLUMINATION	WIDTH OF LIGHTED STRIP				ILLUMINATION LEVEL ON HORIZONTAL PLANE AT GROUND LEVEL				NON UNIFORMITY LIMIT
		Inside Fence		Outside Fence		Initial		In-Service		MAX/MIN
		ft	m	ft	m	ft candle	lx	ft candle	lx	
Isolated Fenced	Glare Projection or Controlled	25	7.5	200	60	0.3	3	0.2	2	10
		10	3	70	21	0.3	3	0.2	2	10
Semi-Isolated Fenced	Controlled	10	3	70	21	0.6	6	0.4	4	5
Non-Isolated fenced	Controlled	20-30	6-9	30-40	9-12	0.6	6	0.4	4	5
Building Face	Controlled	50	15	50	15	0.6	6	0.4	4	5
		(Total from face of building)								

- S **4.2 Building face perimeters** shall be lighted such that doorways and other recesses are shadow free.
- S **4.3 Perimeter patrol roads** shall be illuminated to an in-service level of 0.2 ft-candle (2 lx) with a non-uniformity limit of 10 and with an initial level of 0.3 ft-candle (3 lx).

ENTRANCES

- S **4.4 Entrance lighting.** Strips on either side of an entrance along a perimeter shall have additional controlled illumination as follows:

TYPE OF ENTRANCE	WIDTH OF LIGHTED STRIP				ILLUMINATION LEVEL ON HORIZONTAL PLANE AT GROUND LEVEL				NON UNIFORMITY LIMIT
	Inside Fence		Outside Fence		Initial		In-Service		
	ft	m	ft	m	ft candle	lx	ft candle	lx	MAX/MIN
Vehicular or Vehicular/Pedestrian	50	15	50	15	1.5	16	1.0	11	4
Pedestrian	25	7.5	25	7.5	3.0	32	2.0	22	4
Any Building or Vital Structure	50	15	50	15	1.5	16	1.0	11	4
	(Total Width from building face or structure)								

GUARD TOWERS AND GATE HOUSES

- O **4.5 Guard towers** shall have a low level of interior illumination to reduce visibility from outside and enable guards to increase their night vision adaptability.
- S **4.6 Guard towers** shall be equipped with floodlights or searchlights to permit spotting of intruders.
- O **4.7 Gate houses** shall be provided with means to maintain a low level of interior illumination as for guard towers.

SECURITY LIGHTING CATEGORY II

- S **5.1 Open areas outside process unit limits** (other than storage and parking areas) shall be illuminated to an in-service level of 0.2 ft-candle (2 lx) with a non-uniformity limit of 10 and with an initial level of 0.3 ft-candle (3 lx). Open areas adjacent to perimeters shall not change perimeter lighting requirements.