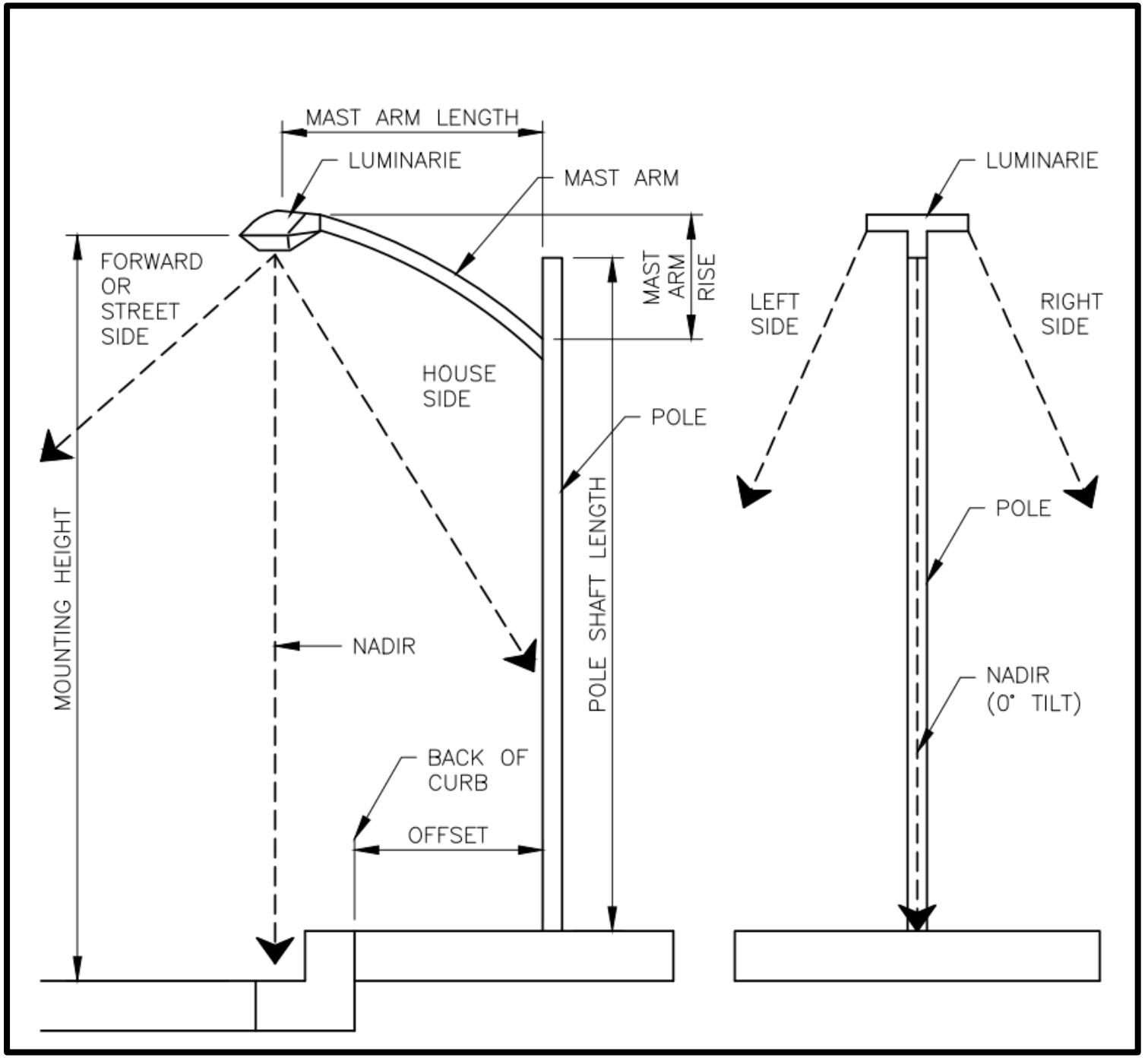
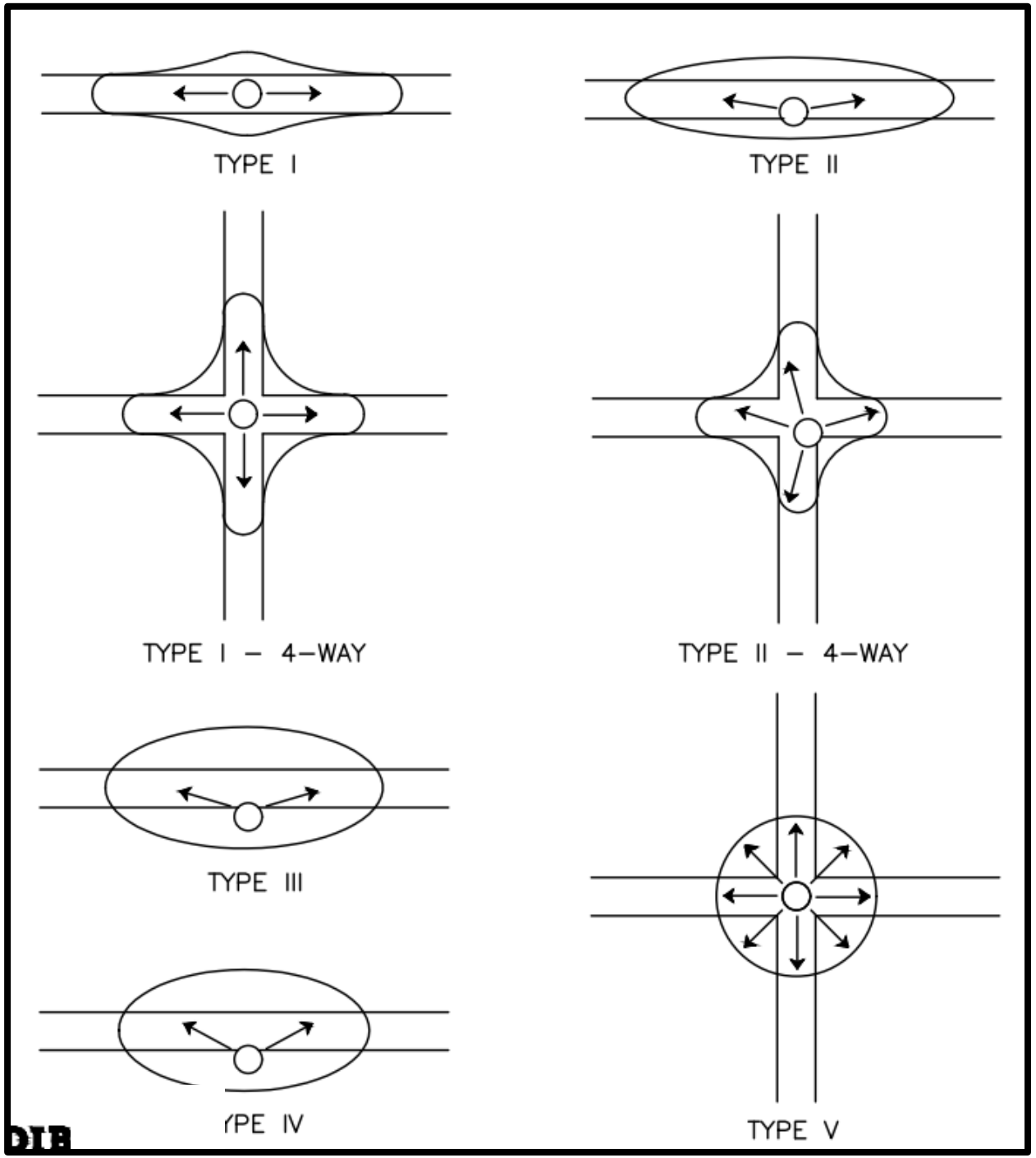
Roadway or Street Lighting Design Aids

Note: The use of these design aids is not prescriptive unless noted as such. They are intended to provide examples and samples of how a lighting design is to be approached in the City of Glendale.



Roadway Lighting Configuration Terms And Definitions.

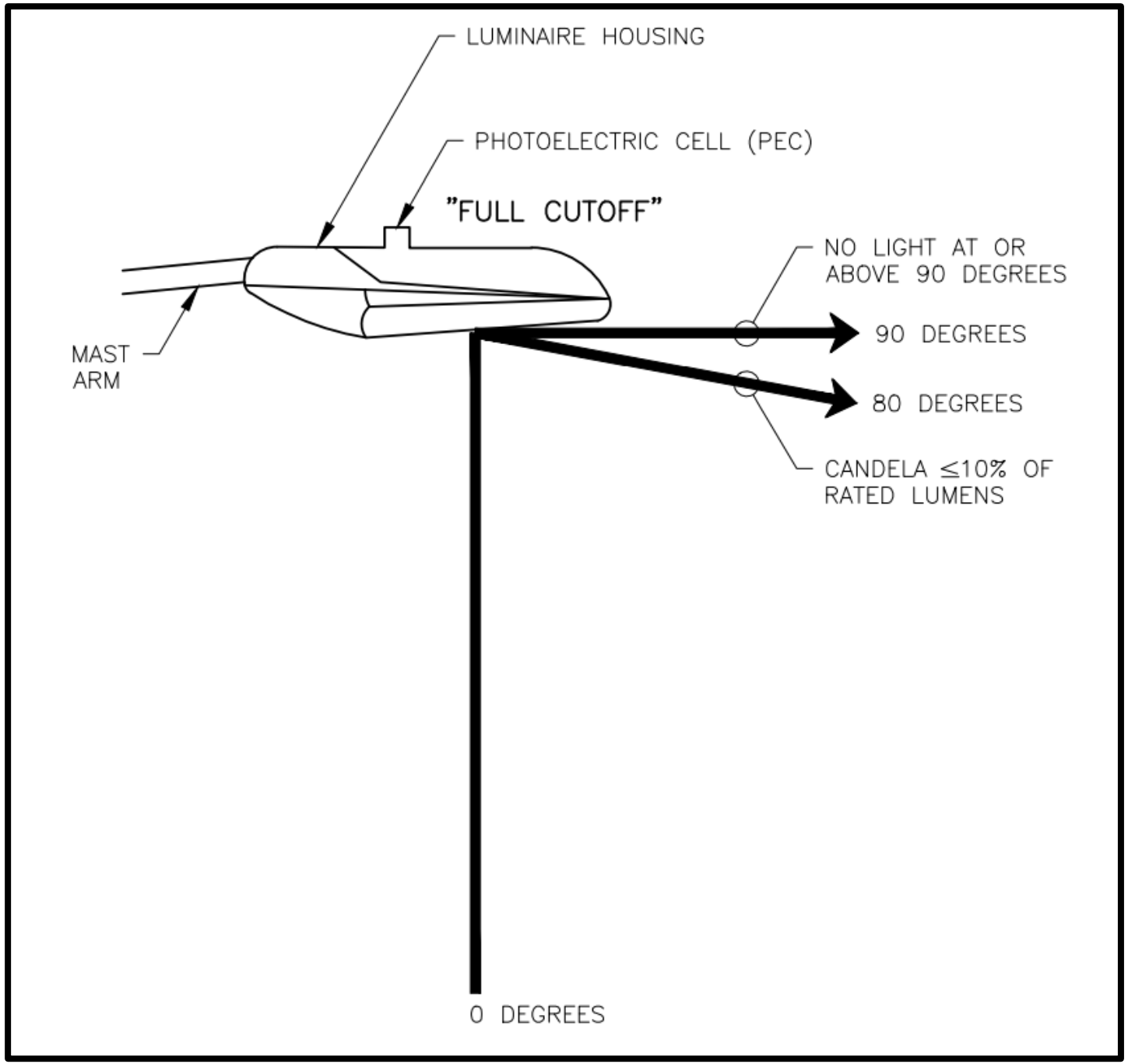
All lights should be mounted flat and level without any tilt.



Typical Roadway Light Distribution Types.

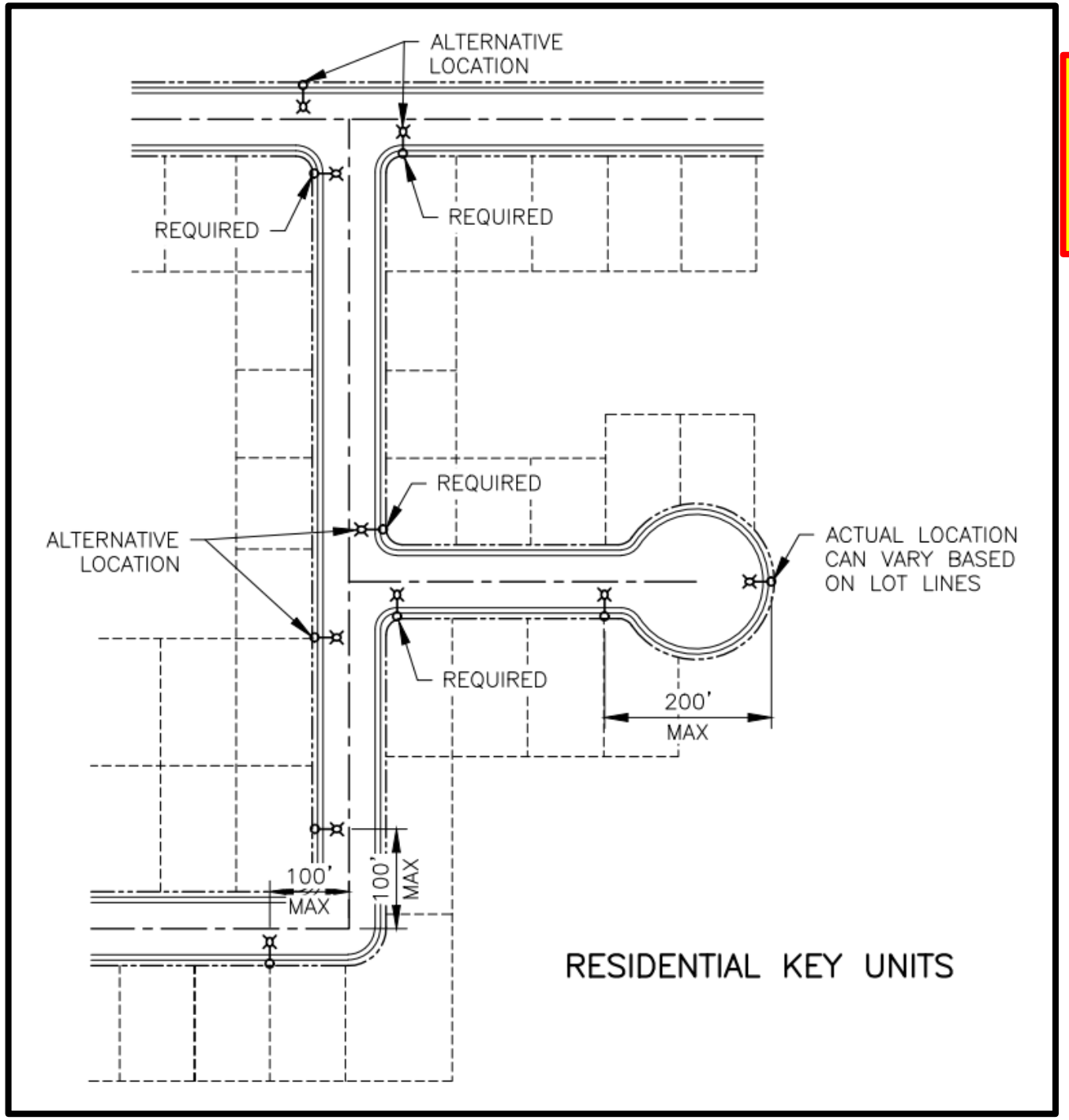
Types to be used by Glendale are Type II and III.

Type II for local and collector streets and Type III for arterials and intersections



Full Cutoff or
Zero Uplight
Per BUG Rating.

Typically, all lights used in Glendale should be full cutoff.

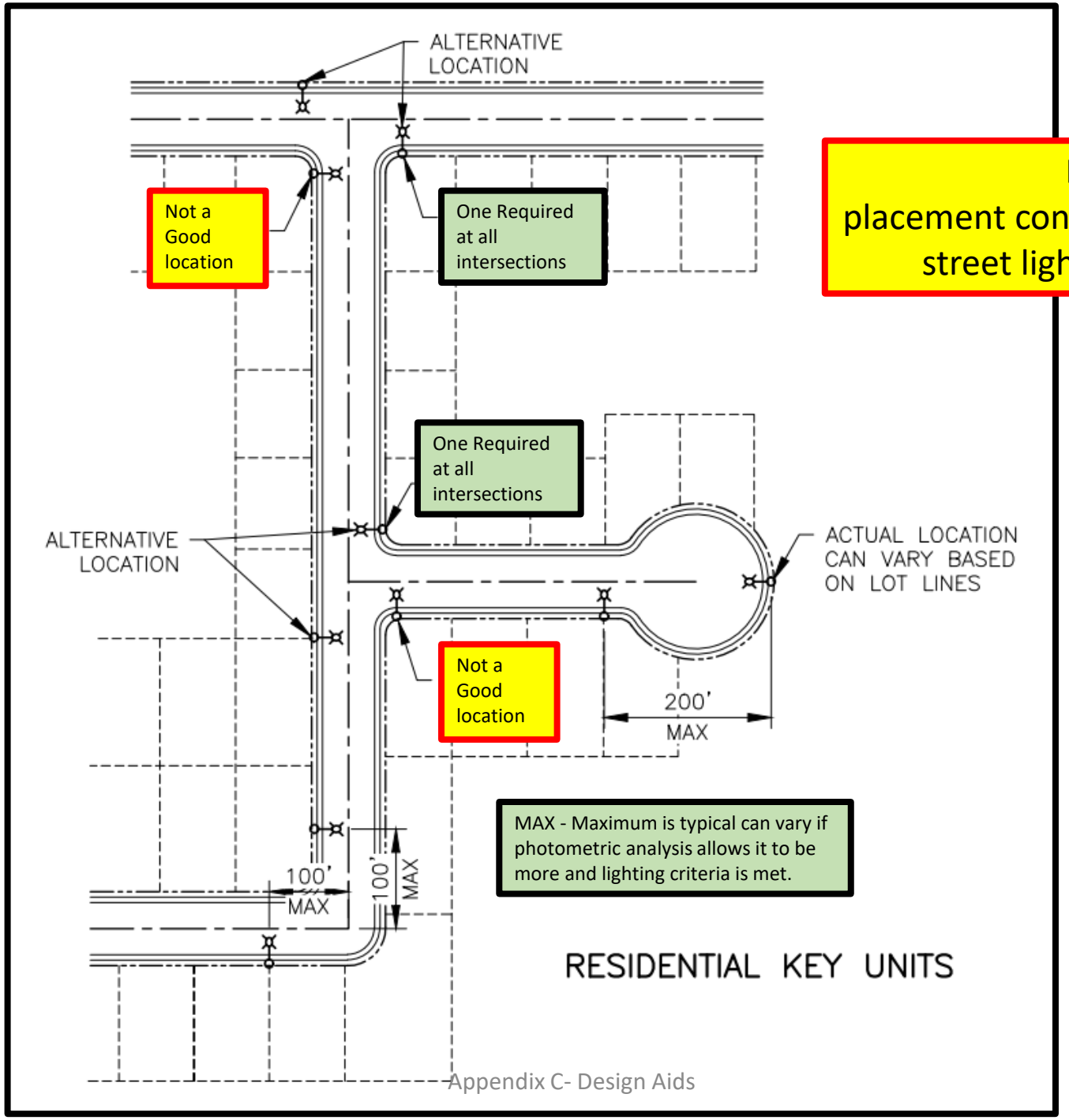


This graphic is per the previous Streetlighting Manual.
See next slide for additional application information.

Typical Pole Locations
For Glendale

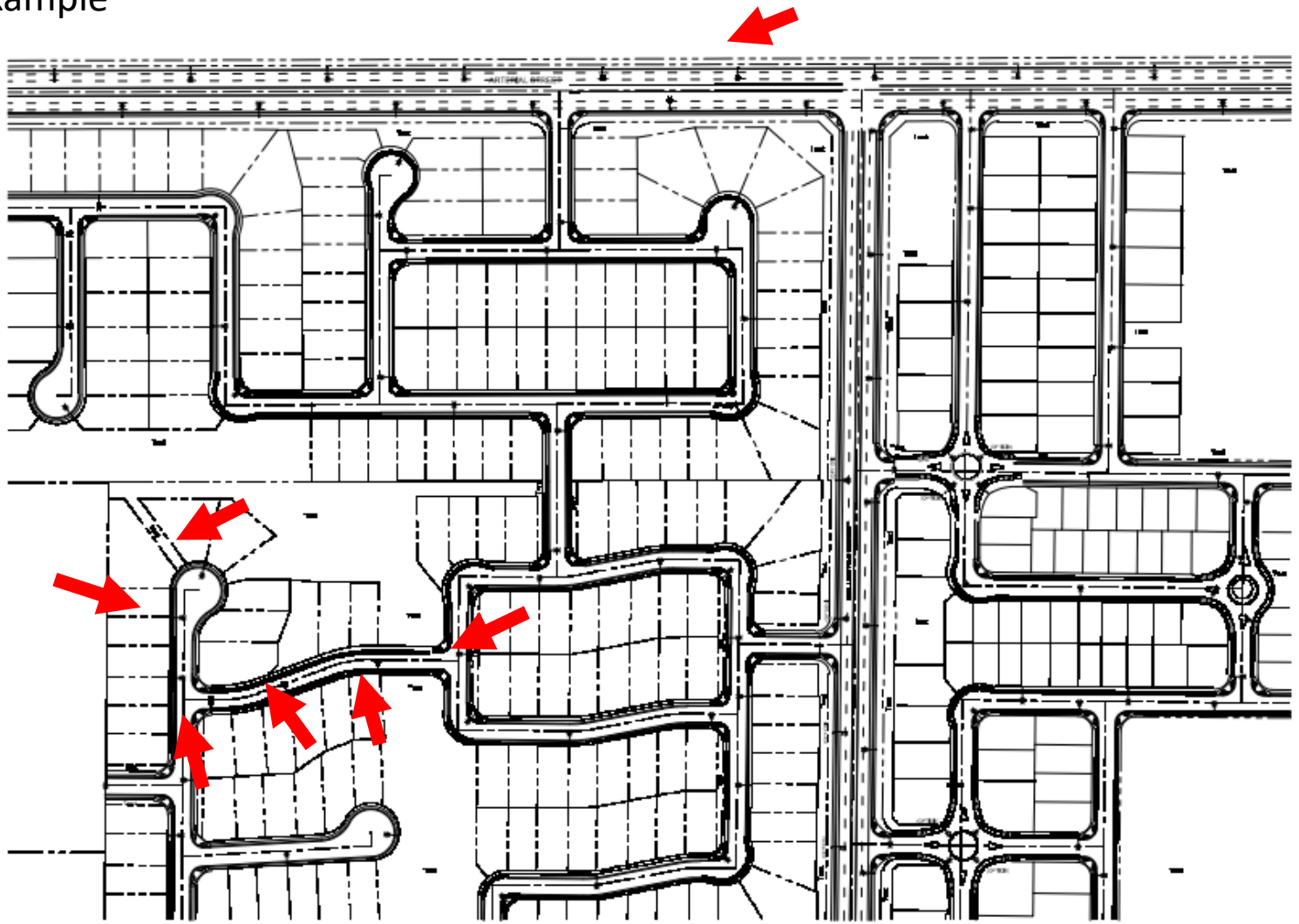
Light installations
are to be placed on lot lines if and as possible.

Typically, no lot should have More that one streetlight.



Better
placement concepts for residential street light requirements

Example



31	STREETLIGHT DESIGN GUIDELINES FIGURE 4: TYPICAL RESIDENTIAL STREET SPACING	5/13/05 Not to Scale

City of Phoenix

Typical Roadway Light Placements

Section 3. Streetlight Location Layouts

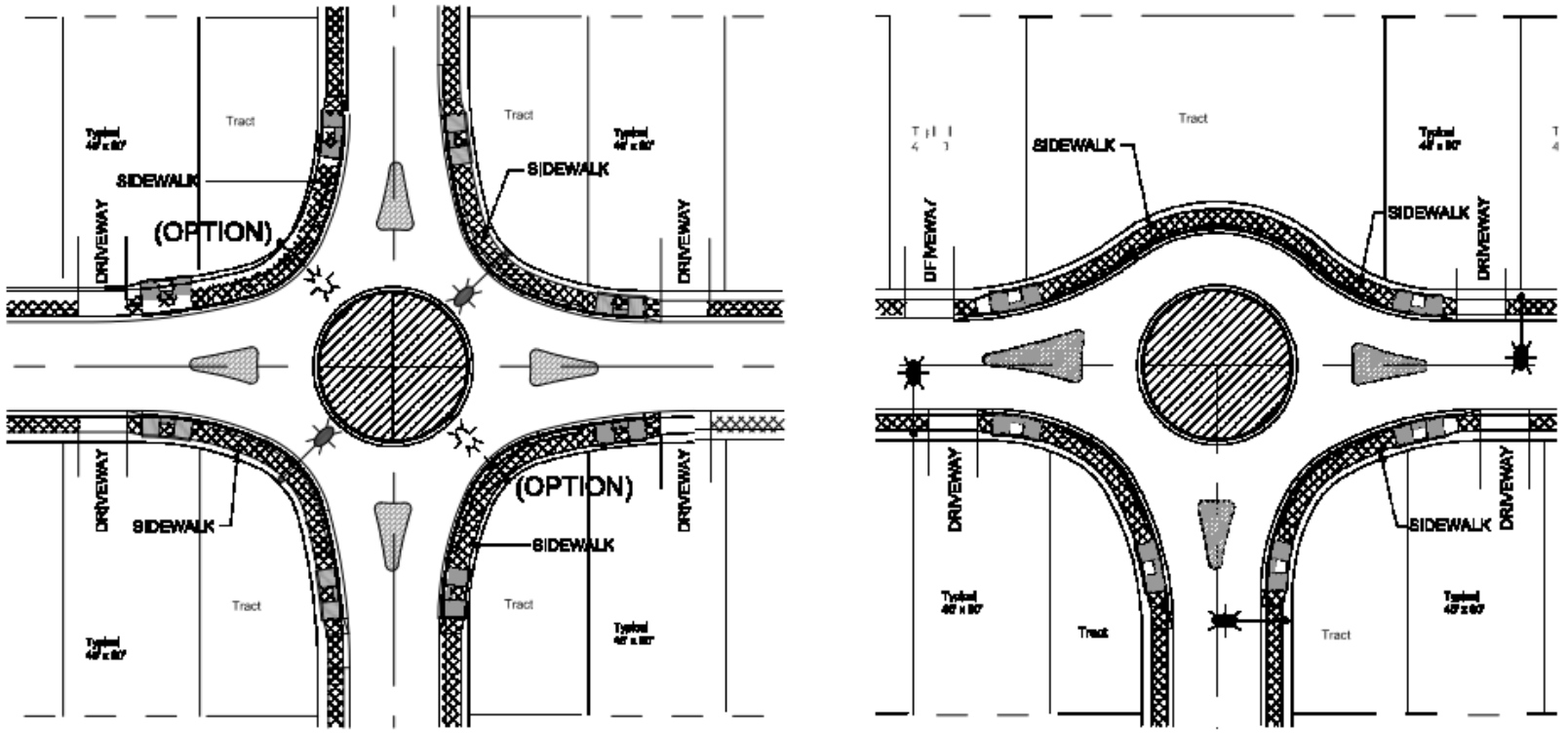
Per each typical application For arterials, collector and residential streets Total of 10.

1/3 Example

3 lot spacing or 200 feet +/- pole spacing is the typical approach.

Roadway Light

Example



35

STREETLIGHT DESIGN GUIDELINES

FIGURE 8: **LOCAL/LOCAL ROUNDABOUT**

5/13/05

Not to Scale

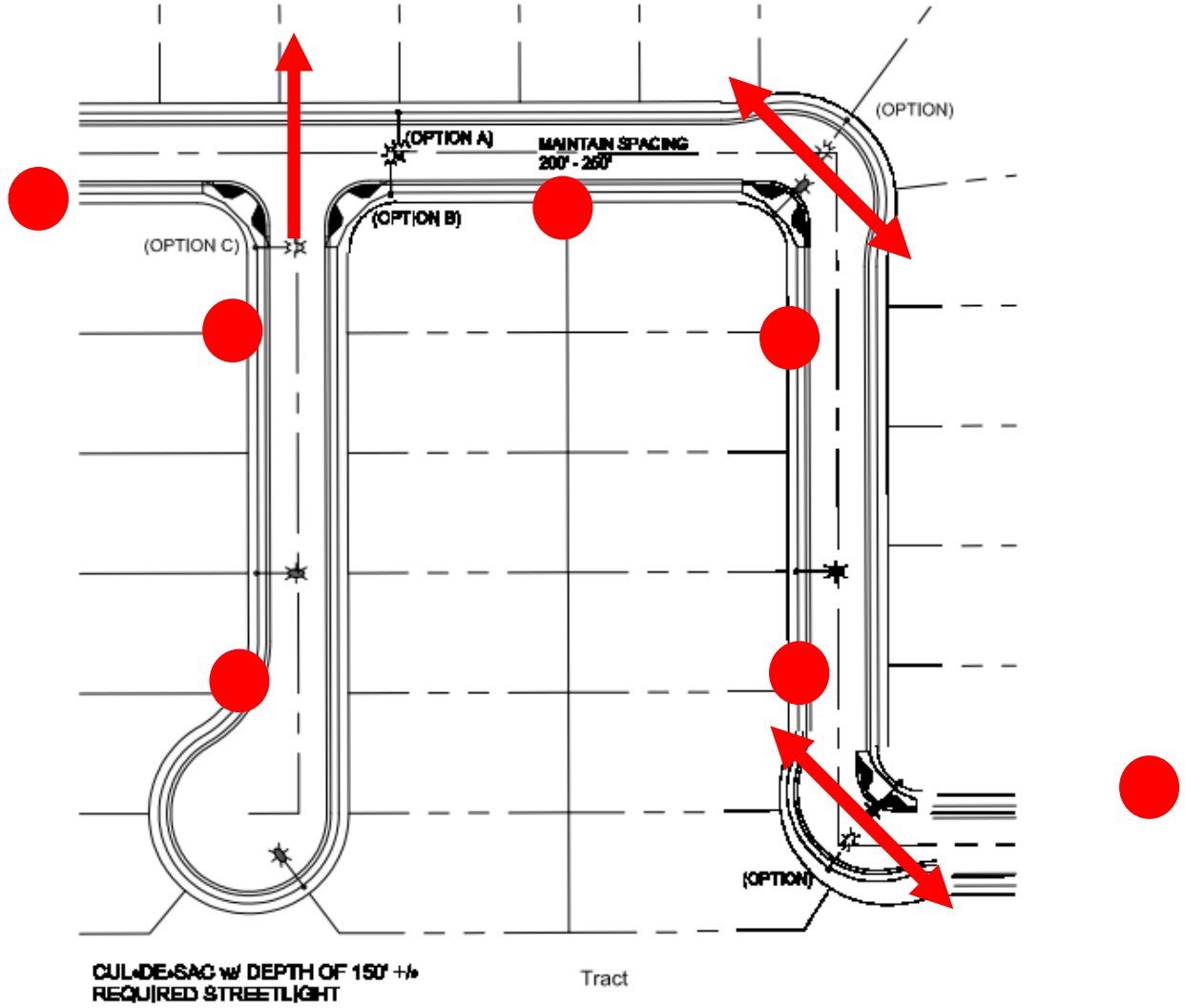
City of Phoenix

Typical Roadway Light Placements Roundabout

2/3 Example

Two lights minimum At a roundabout

Example



41

STREETLIGHT DESIGN GUIDELINES

FIGURE 14: ELBOW (DOG-LEG) INTERSECTIONS

5/

Not to Scale

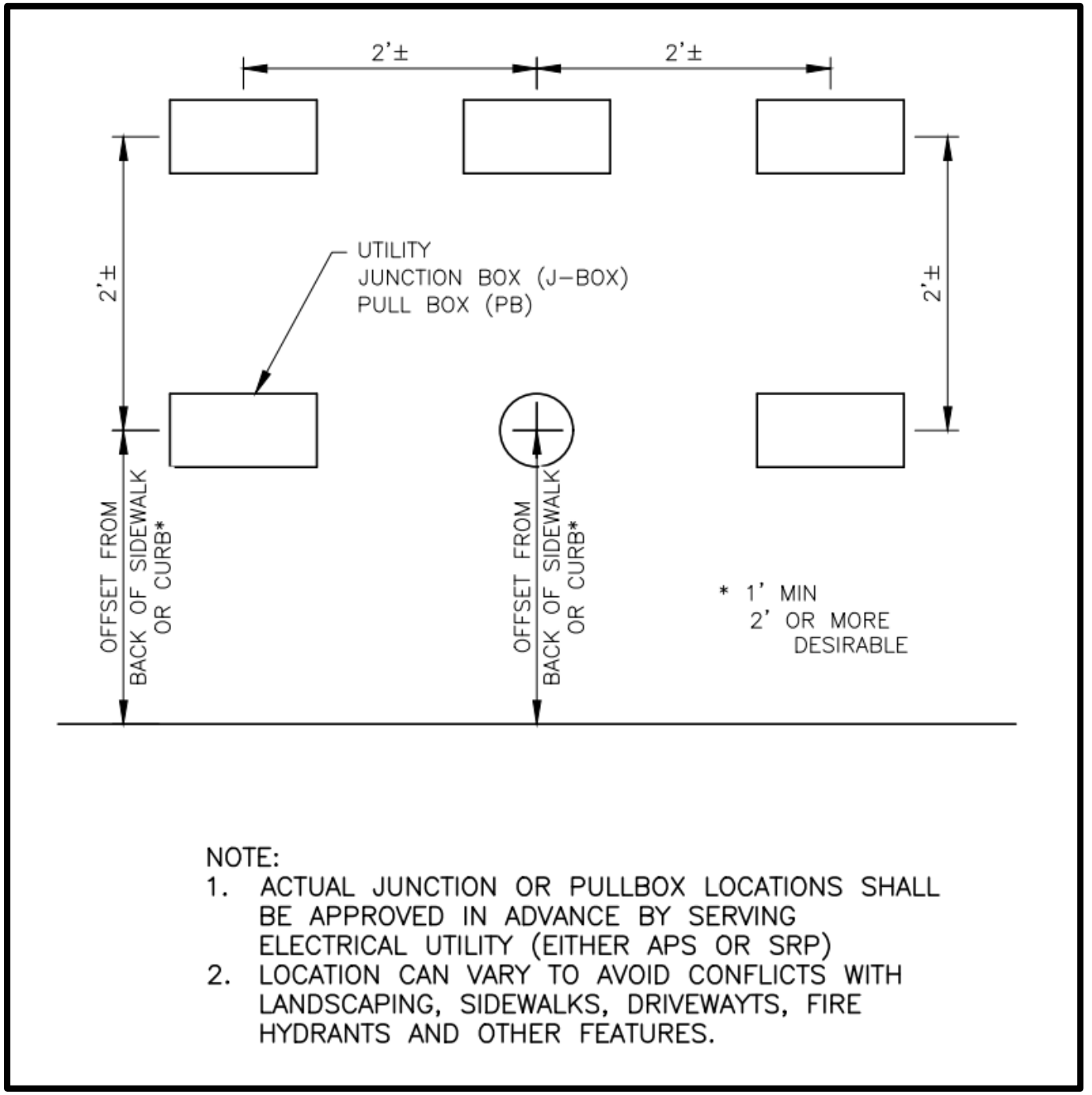
City of Phoenix

Typical Roadway Light Placements

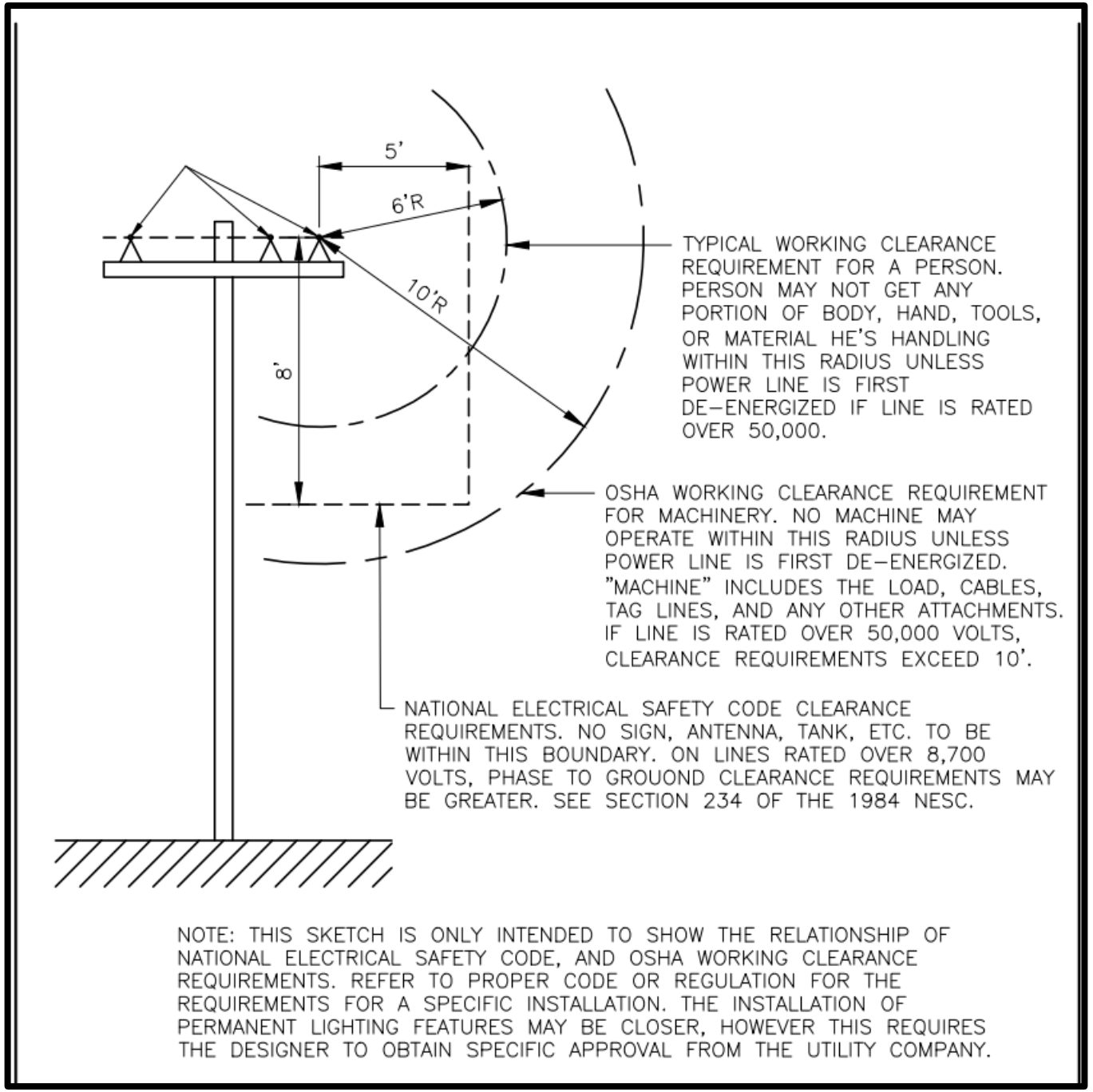
3/3 Example

Corner light on the turn and at intersection are a concern. These placements project light into adjacent properties as shown with red arrows:

Better to set lights close to the corners a lot or two away. Show with red Dots.



Typical Pole and Junction or Pull Box Placement

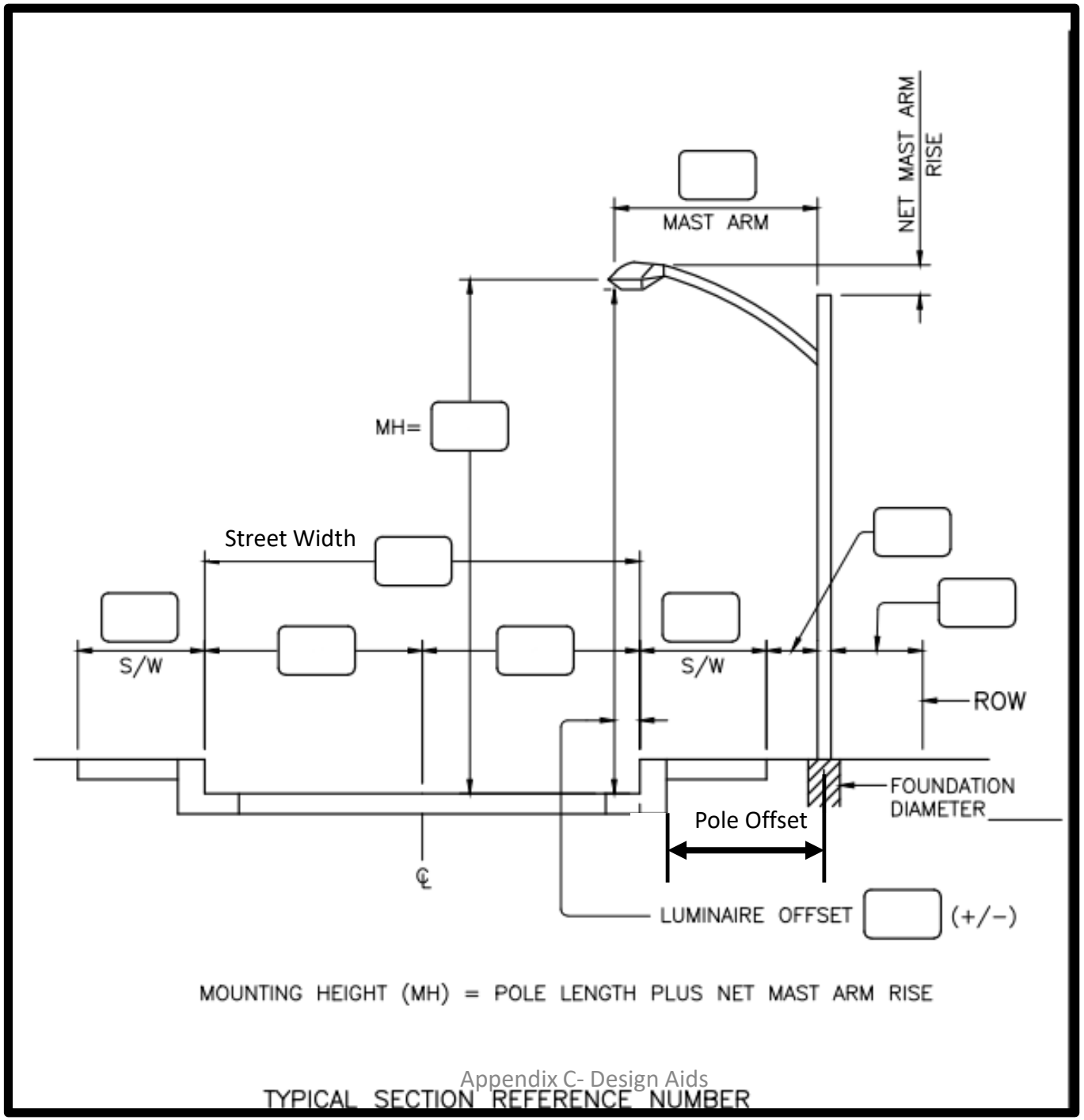


Typical minimum clearances from overhead electric lines

More clearance is always better than the minimums.

For information only.

APS, SRP and ARS requirements are to be met.



Typical Section Defined

Definitions of offsets and locations of measurement can vary based on application and engineering judgment.

Illuminance (ftc)

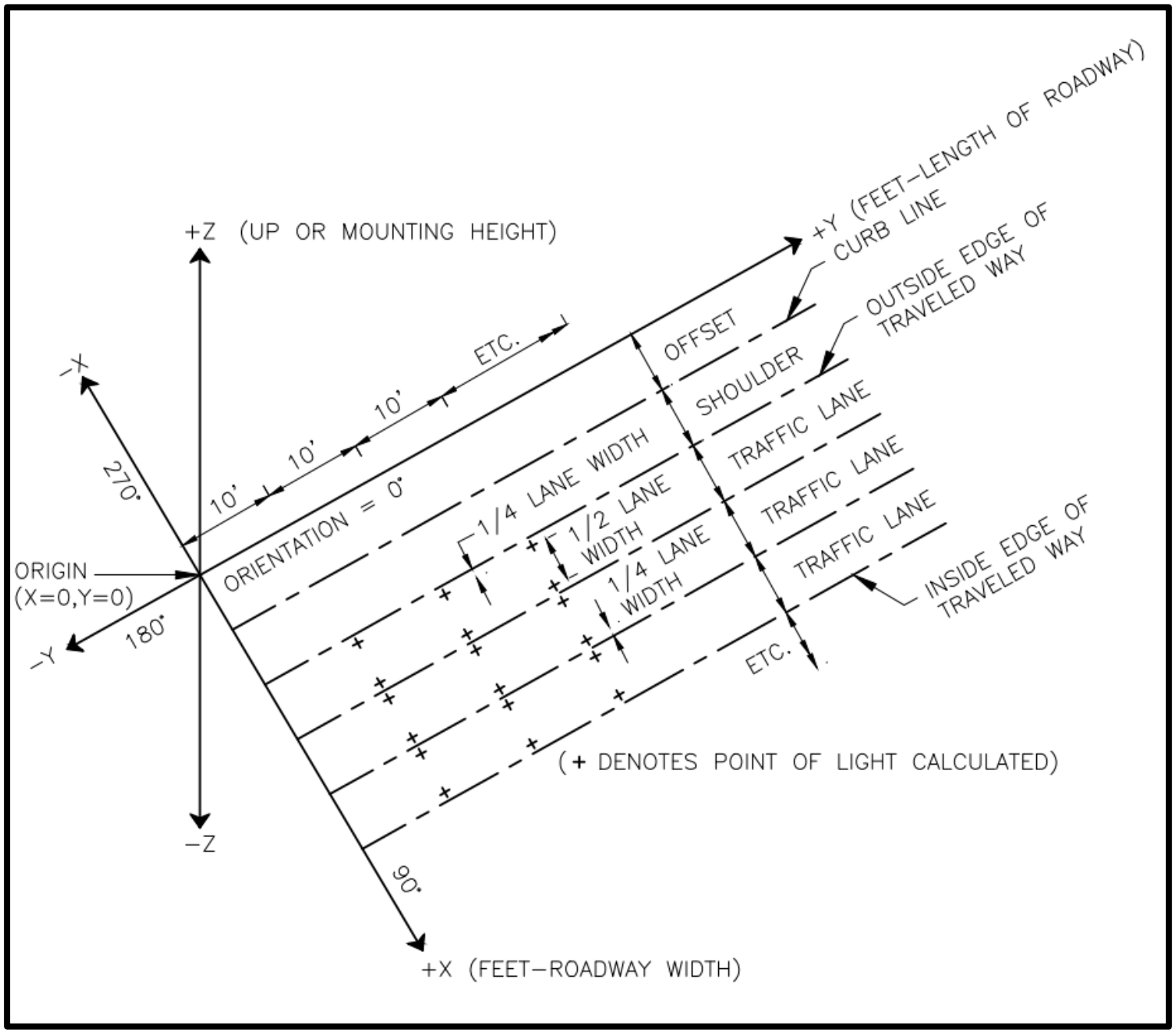
Calc. No.	Output Grid Ref. X/Y	OPTO Data Ref.	Arrangment Information									Illuminance (ftc)				Program File Name	Photo Curve	Remarks and/or Conclusions
			Sec. Ref.	RDW Width	MH	Spacing	LUM. Type Wattage	Dist. Type	Mast Arm	Offset	Arrangement	Ave	Min	Max/ Min	Ave/ Min			

Criteria for Optimization Calculations				
OPTP Data	Reference			
	○	○	○	○
Ave:				
Ave/Min:				
Min:				
Max/Min:				

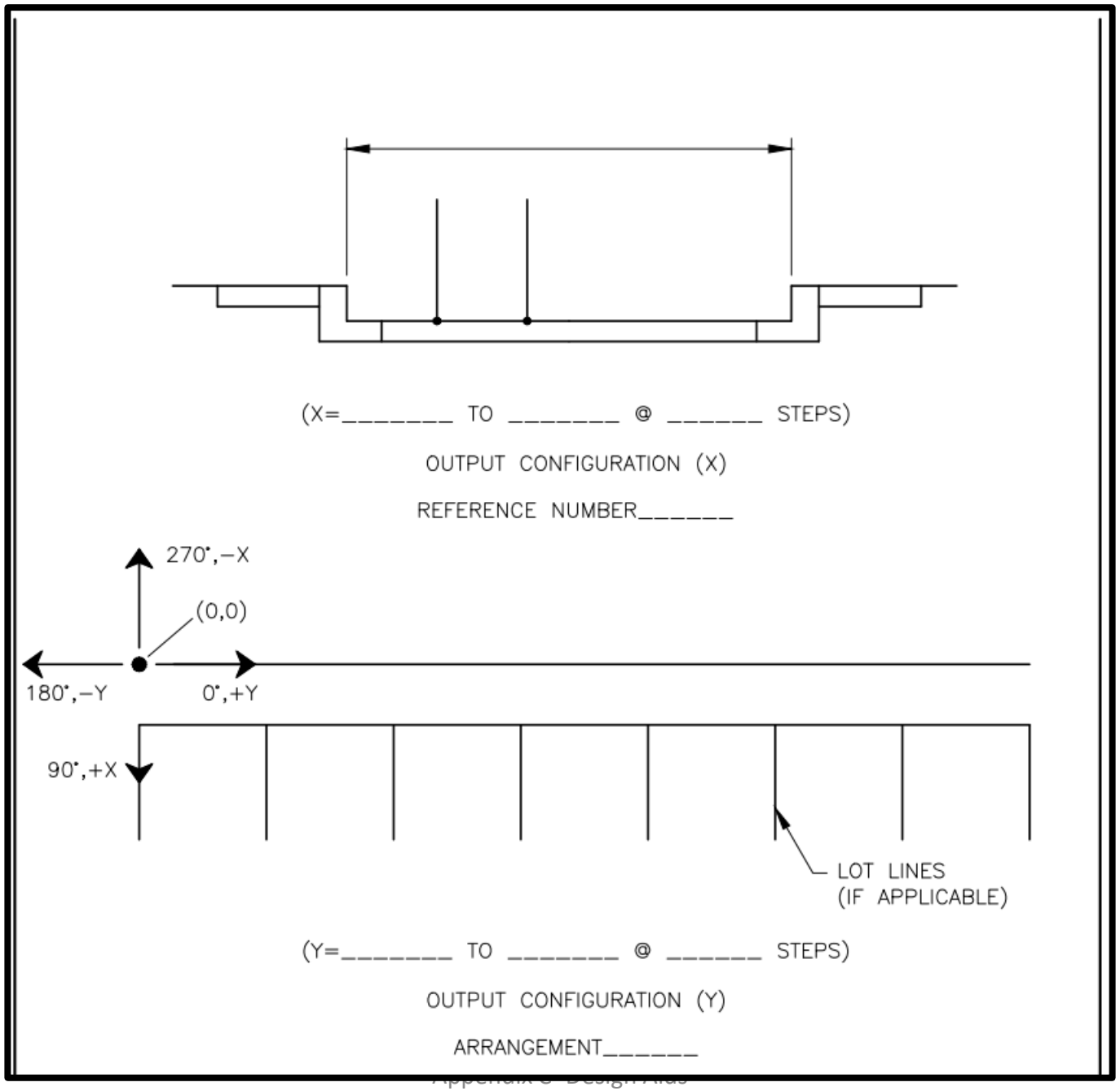
"A"–Analysis
"MH"–Mounting Height
"OS"–One Sided
"S"–Staggered
"OP"–Opposite

PROGRAM
"MSL"–Micro–Site–Lite
"CA"–Cala
"Gel"–Aladan

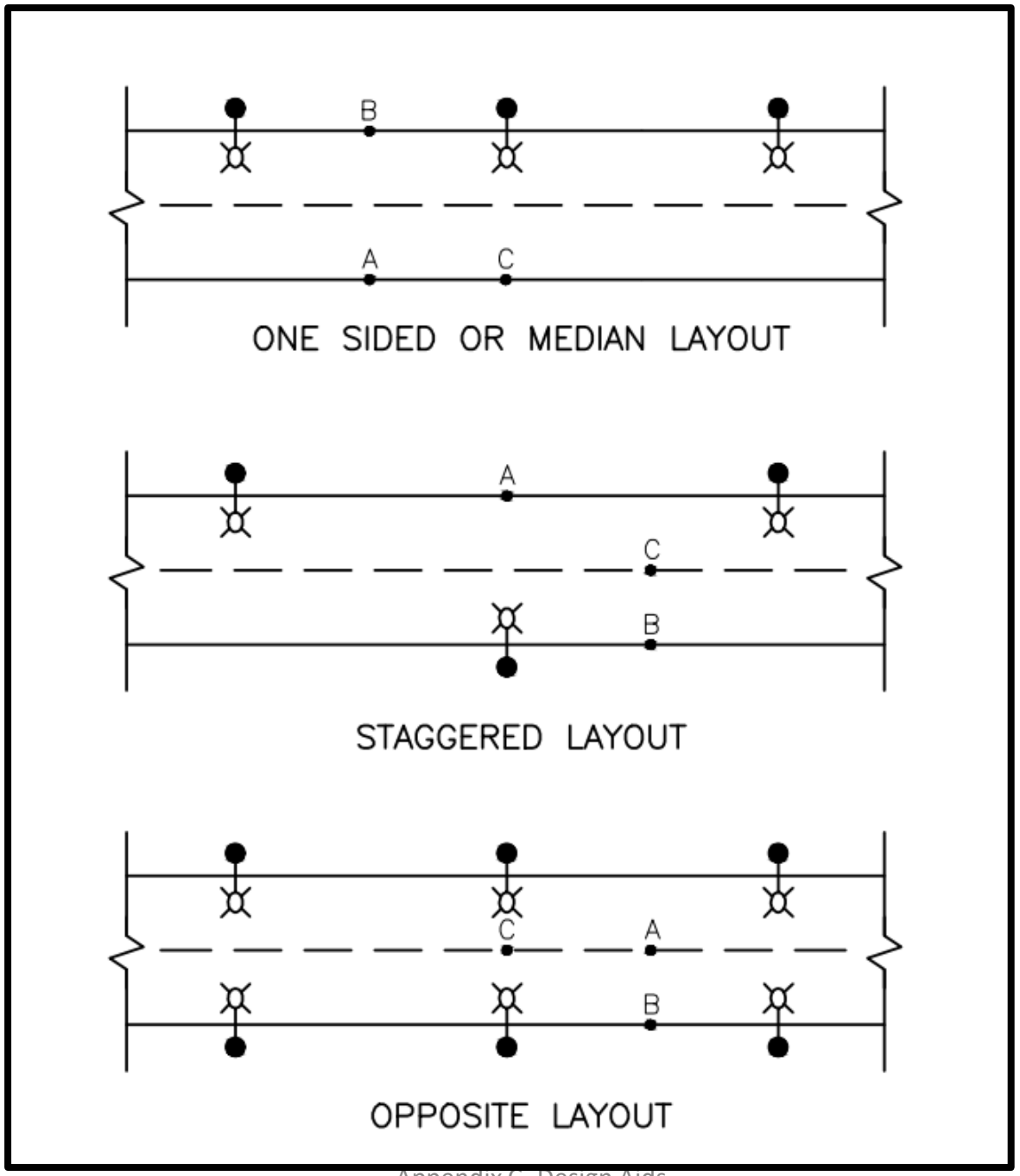
Summarize Analysis Results



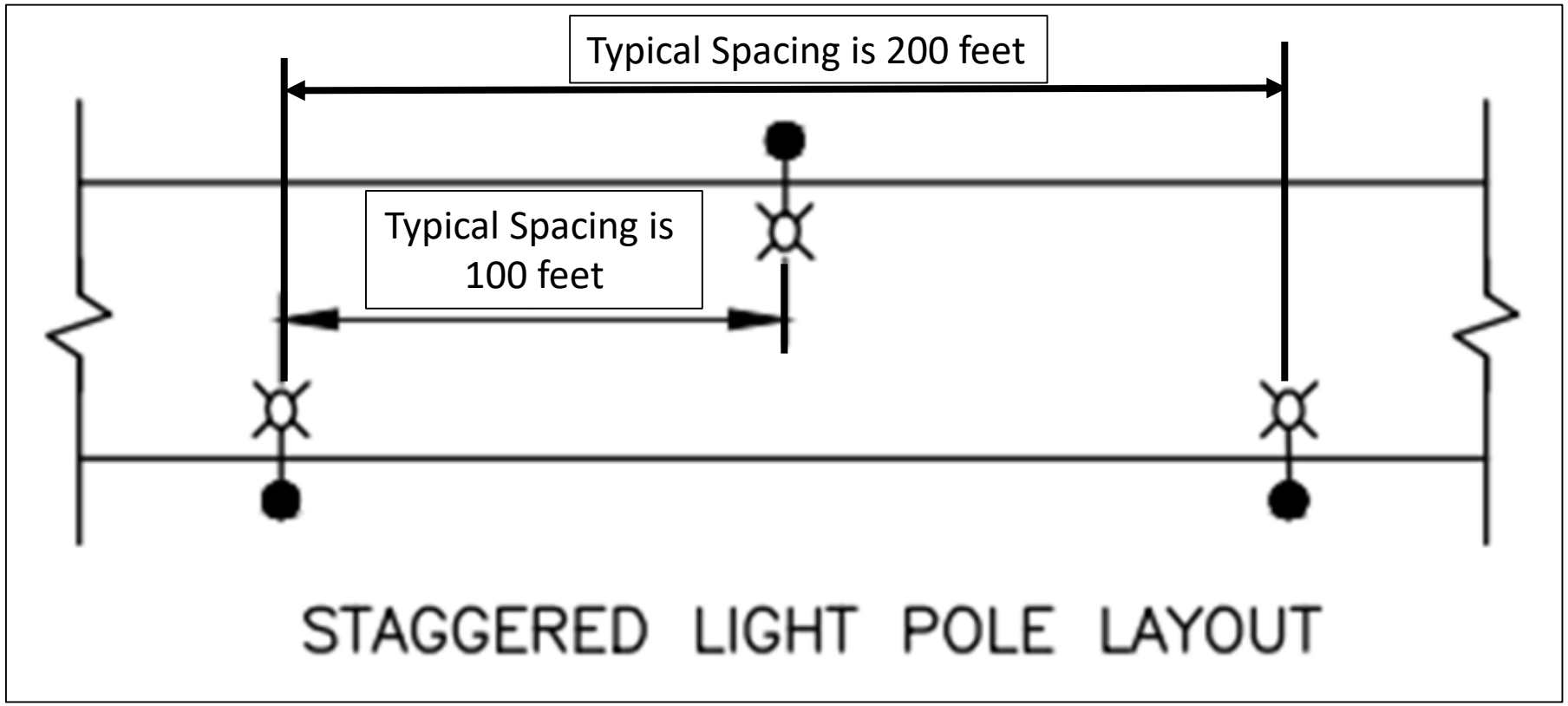
Illuminance Grid Requirements per RP-8



Standardized Grid Input



Typical low points need to be mitigated with mounting height, pole location or light distribution



Actual spacing is dependent on meeting illuminance criteria, Average and Average to minimum ratio.