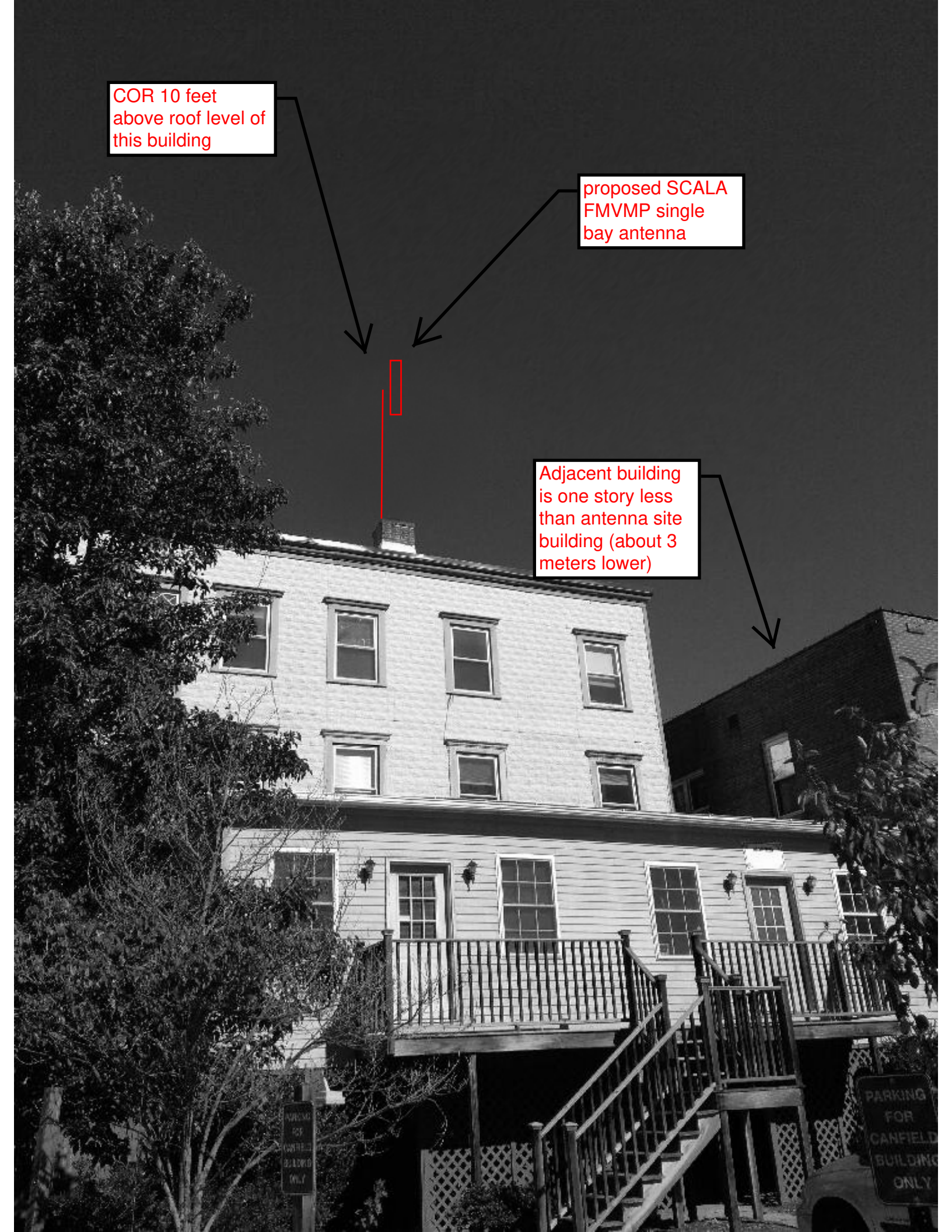


COR 10 feet  
above roof level of  
this building

proposed SCALA  
FMVMP single  
bay antenna

Adjacent building  
is one story less  
than antenna site  
building (about 3  
meters lower)



**Table 2 (worst case considering surrounding roof-tops instead of ground level)**

### Radiofrequency Electromagnetic Exposure Analysis for WSGG

Source	Height AGL(m)	Antenna type	Bays	Horizontal ERP (kw)	Vertical ERP (kw)	Power Density $\mu\text{W}/\text{cm}^2$ at 2 meters AGL				
						at 10 meters distance	% controlled environment limit (1000 $\mu\text{W}/\text{cm}^2$ )	Max. PD	% uncontrolled environment limit (200 $\mu\text{W}/\text{cm}^2$ )	Distance to maximum PD (m)
<b>WSGG</b>	<b>*6</b>	<b>Dipole (EPA)*</b>	<b>1</b>	<b>0.25</b>	<b>0.25</b>	<b>140.0</b>	<b>14.0%</b>	<b>140.0</b>	<b>70.0%</b>	<b>3.2</b>
						140.0	14.0%	140.0	70.0%	3.2

(proposed)

\* Instead of ground level, the elevation of the antenna center of radiation above the roof level of the next closes building is considered.

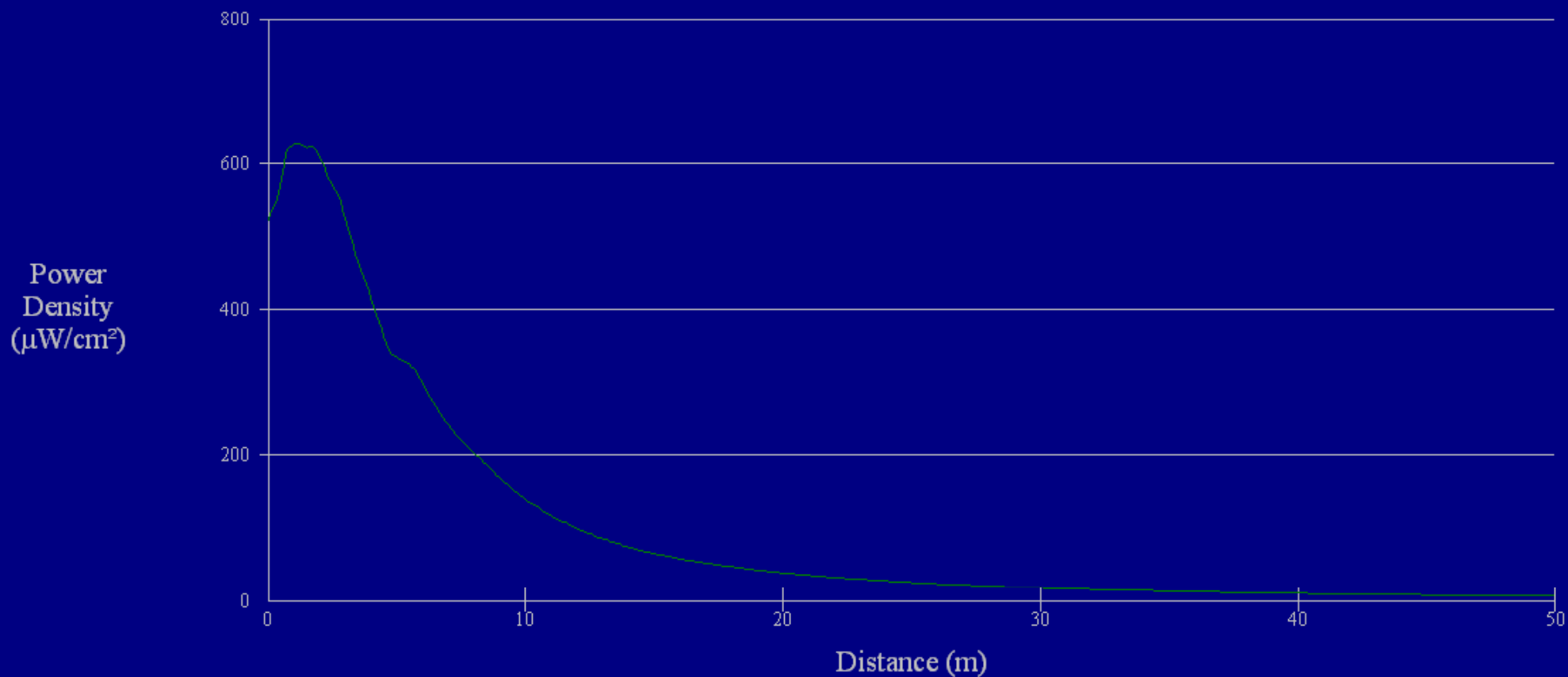
The horizontal distance from the antenna to the edge of the roof, in the direction of the nearest adjacent building rooftop, is approximately 10 meters. The surrounding buildings on either side of and across the street are 2-story or less. The proposed antenna is to be supported on a mast 3 meters above roof level on the 3-story building. Therefore considering the 3 meter mast height and the difference of one story between buildings' roof heights, it can be assumed that the antenna is 6 meters above the adjacent building roofs. The power density at the roof edge, 10 meters horizontally from the antenna, would be  $140 \mu\text{W}/\text{cm}^2$  (which is 70% of the uncontrolled limit). Therefore, the highest power density possible (worst case) on the roof of adjacent buildings would be no more than 70% of the uncontrolled limit.

The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

Calculations made using FCC FM Model v2.10 Beta

\*In the absence of specific antenna data, the Dipole (EPA) model is assumed (worst case).

## Power Density vs Distance



Office of Engineering and Technology

Distance (m):	<input type="text" value="50"/>	Antenna Type:	<input type="text" value="Phelps-Dodge 'Ring Stub' or Dipole (EP)"/>
Horizontal ERP (W):	<input type="text" value="250"/>	Number of Elements:	<input type="text" value="1"/>
Vertical ERP (W):	<input type="text" value="250"/>	Element Spacing:	<input type="text" value="1"/>
Antenna Height (m):	<input type="text" value="6"/>		

Update Gra