Installation Guide of HIKVISION ANPR Cameras

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1 Overview

To obtain the maximum license plate recognition accuracy, you need to install the ANPR camera in a proper way to get the clear image.
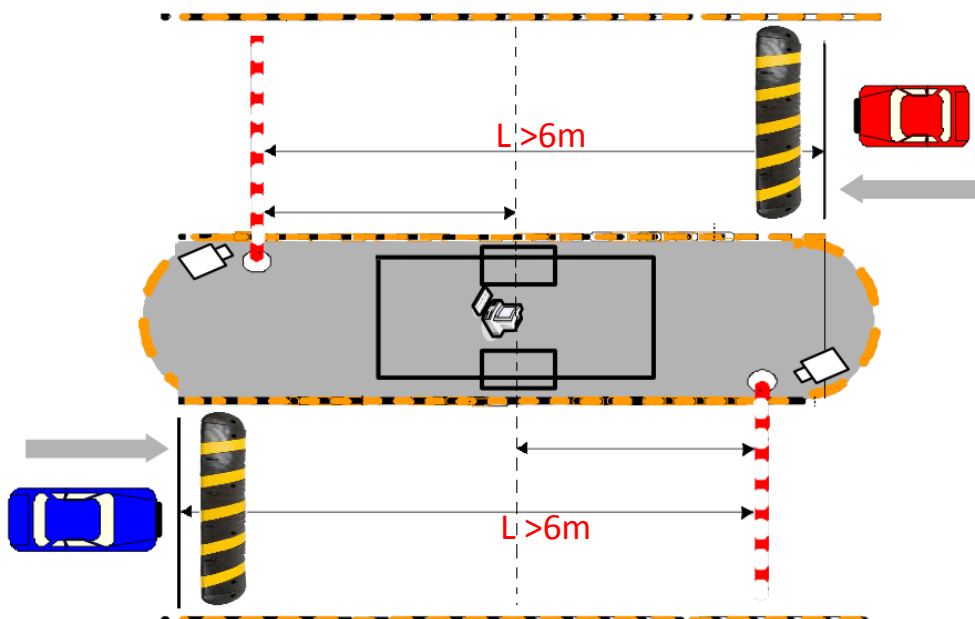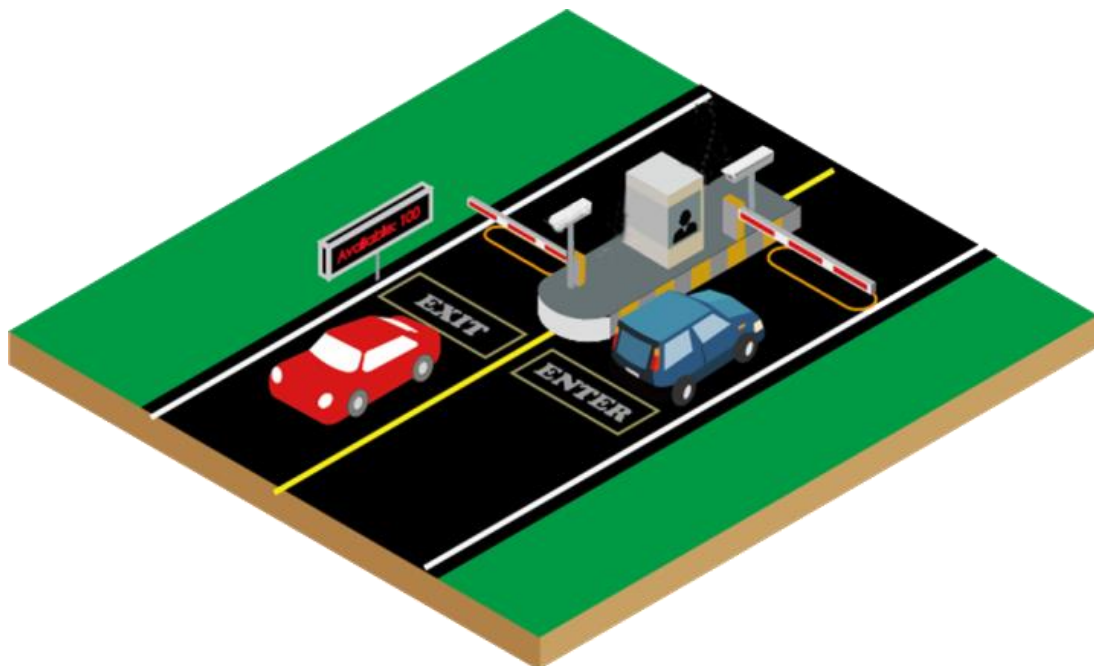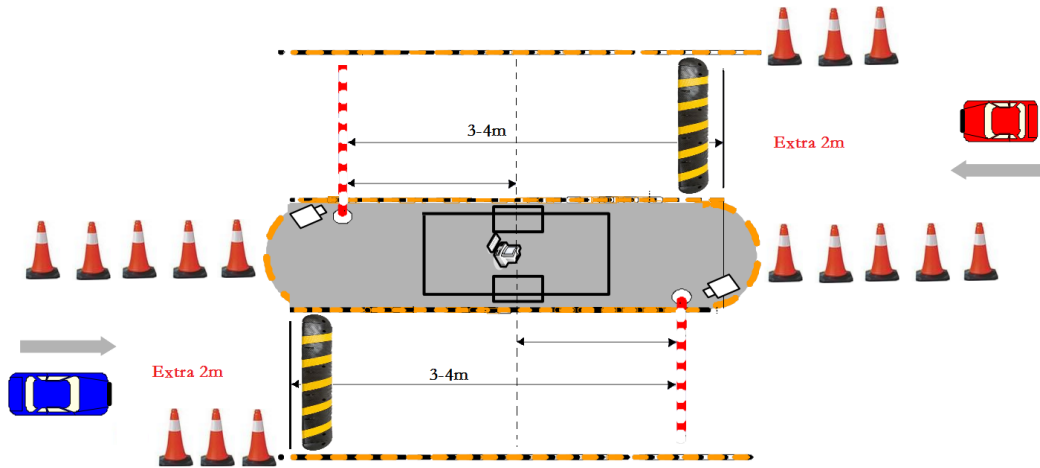
2 Installation Requirements

2.1 Camera Installation

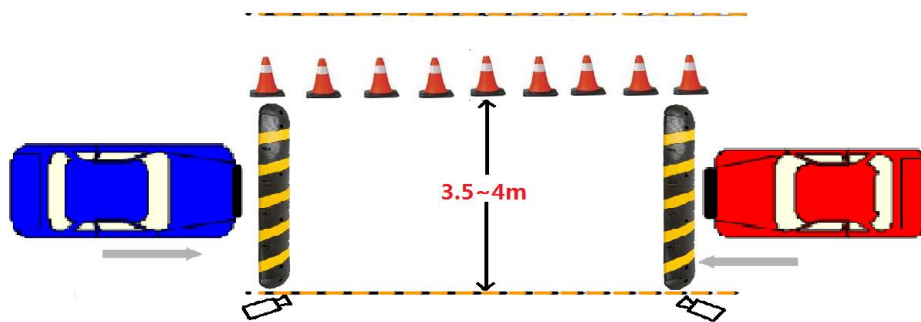Installation direction: face the vehicle head.
Installation Height
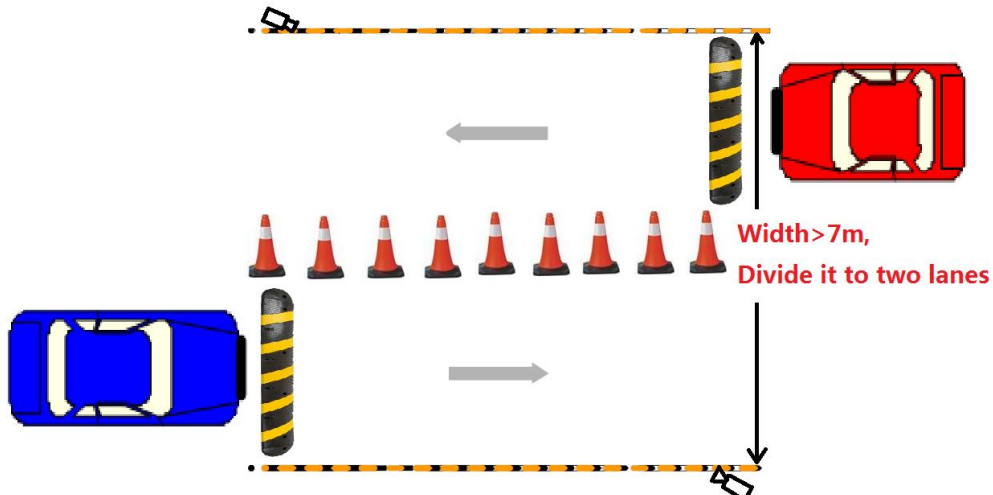**2.1.1** For entrance surveillance:
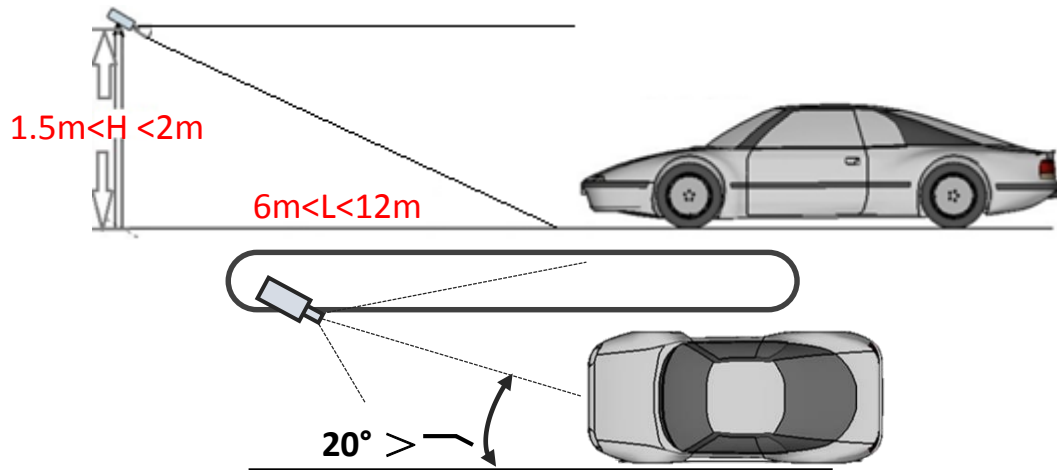
The lane should be no more than 4m width.

If the lanes is too wide, the vehicle will be far from the camera, so divide the tunnel to two or more lanes.
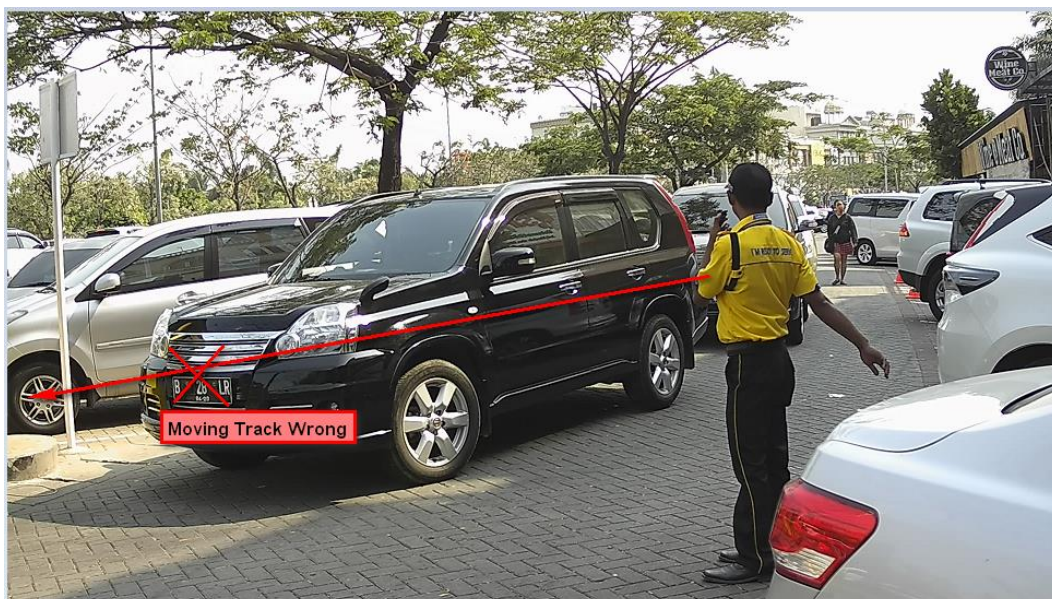

Note, if vehicle speed is over 5km/h, speed bump or barrier installation is necessary to reduce speed.
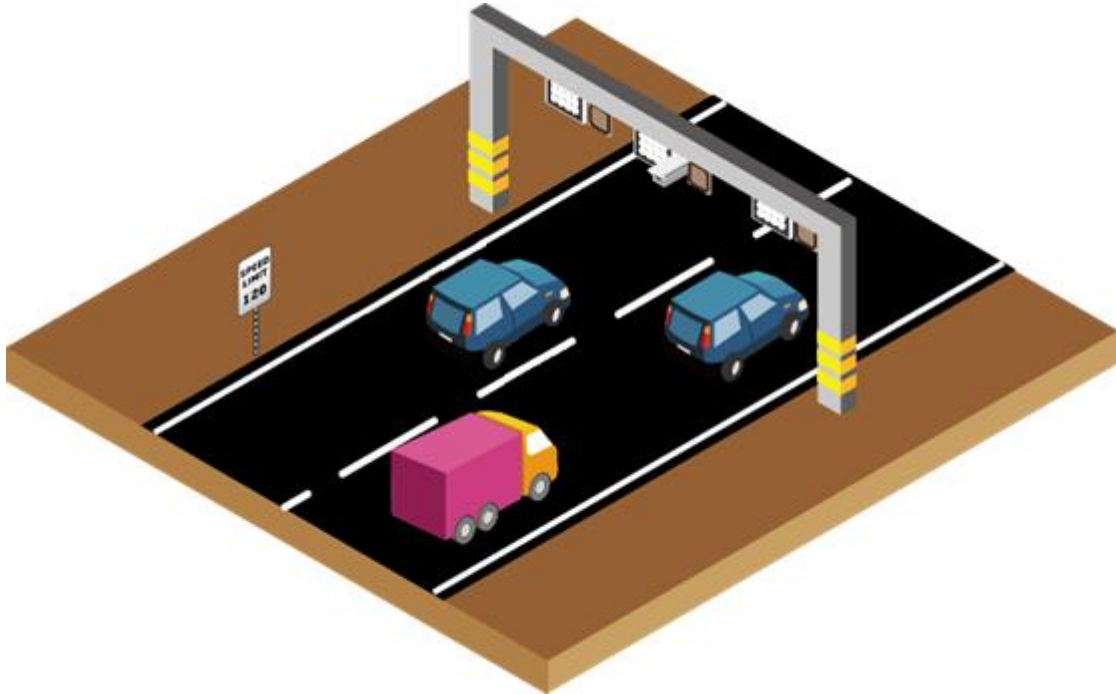
Camera should be installed at 1.6-2 meters height.

Adjust the camera Vertical angel to make sure the vehicle go down through the middle bottom of the image
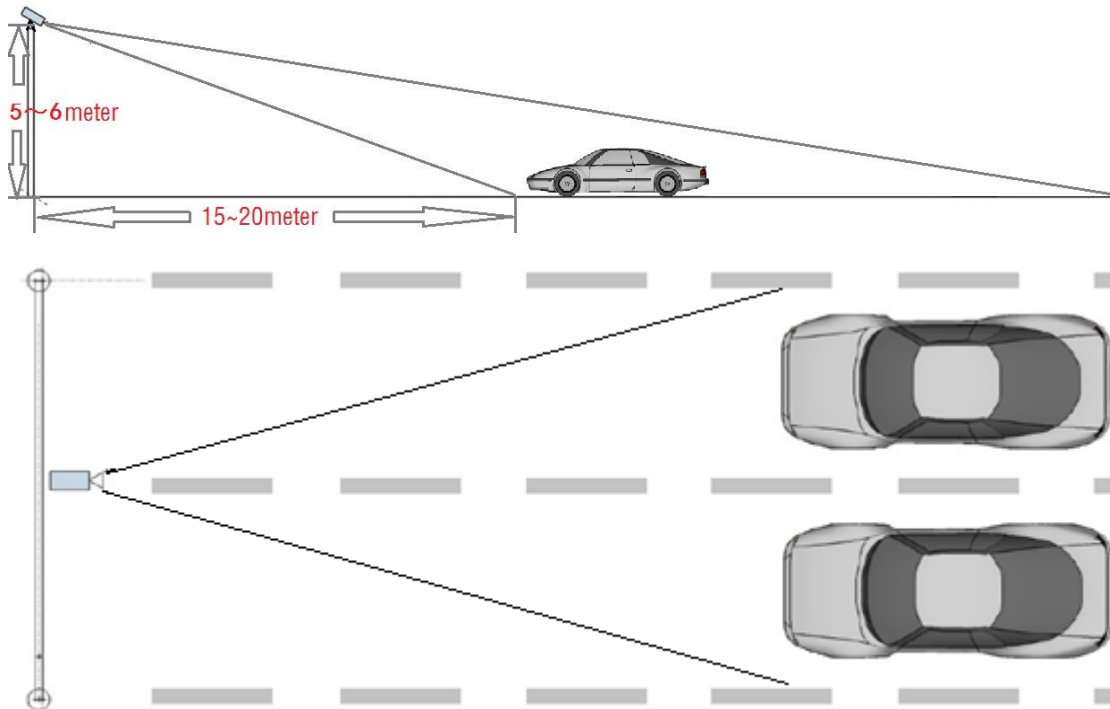
2.1.2 For Road Traffic Surveillance:
If you want to recognize two lanes - it is better to mount a camera on the middle of a cross pole, and the vehicle speed should be lower than 60km/h. If the speed is higher than 60km/h we recommend to capture only one lane.
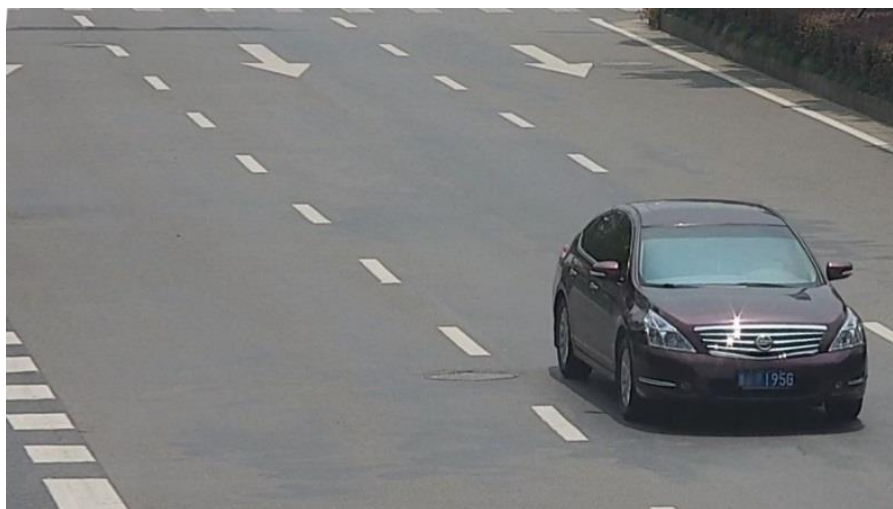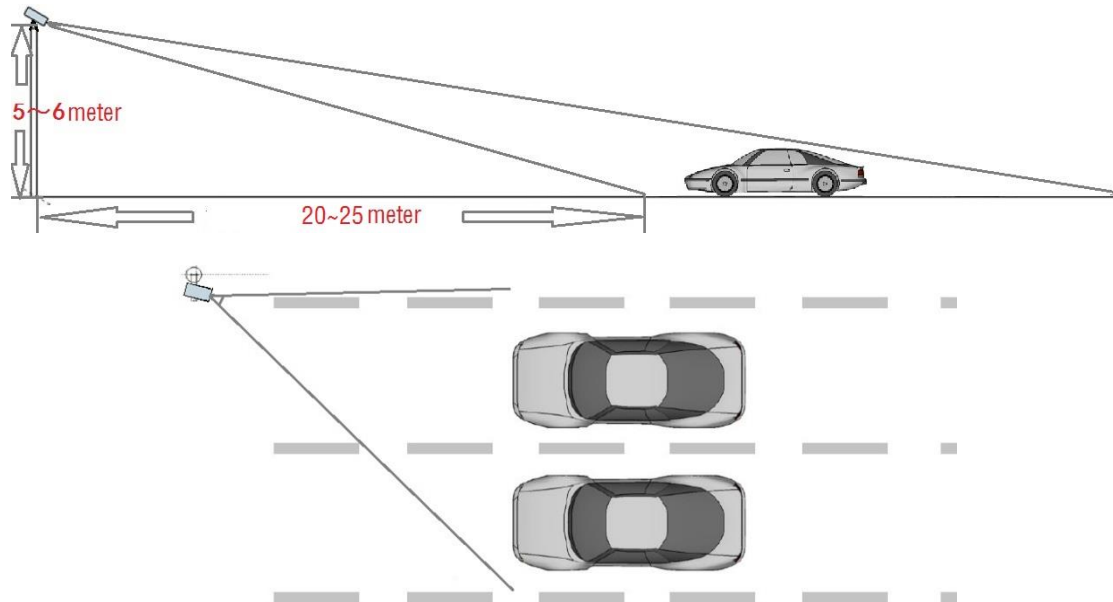

Camera should be installed at 5~6 meters height.
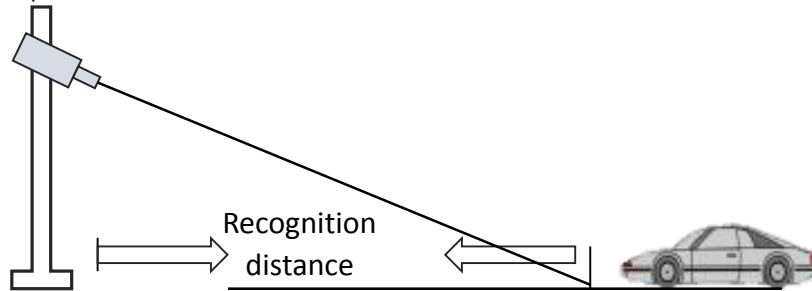The video bottom edge target should be about 15~20meters far from the camera pole.

You can also install the camera at the edge of the road, on the top of a pole with 5~6 meters height. But you need to make sure there is no trees sheltering the vehicles.

2.2 Camera Installation Tips

2.2.1 Select the Lens

The recognition distance based on the camera's focal length, to get enough pixels in the frame, you should select a proper lens. Refer to the table below to select a proper lens.
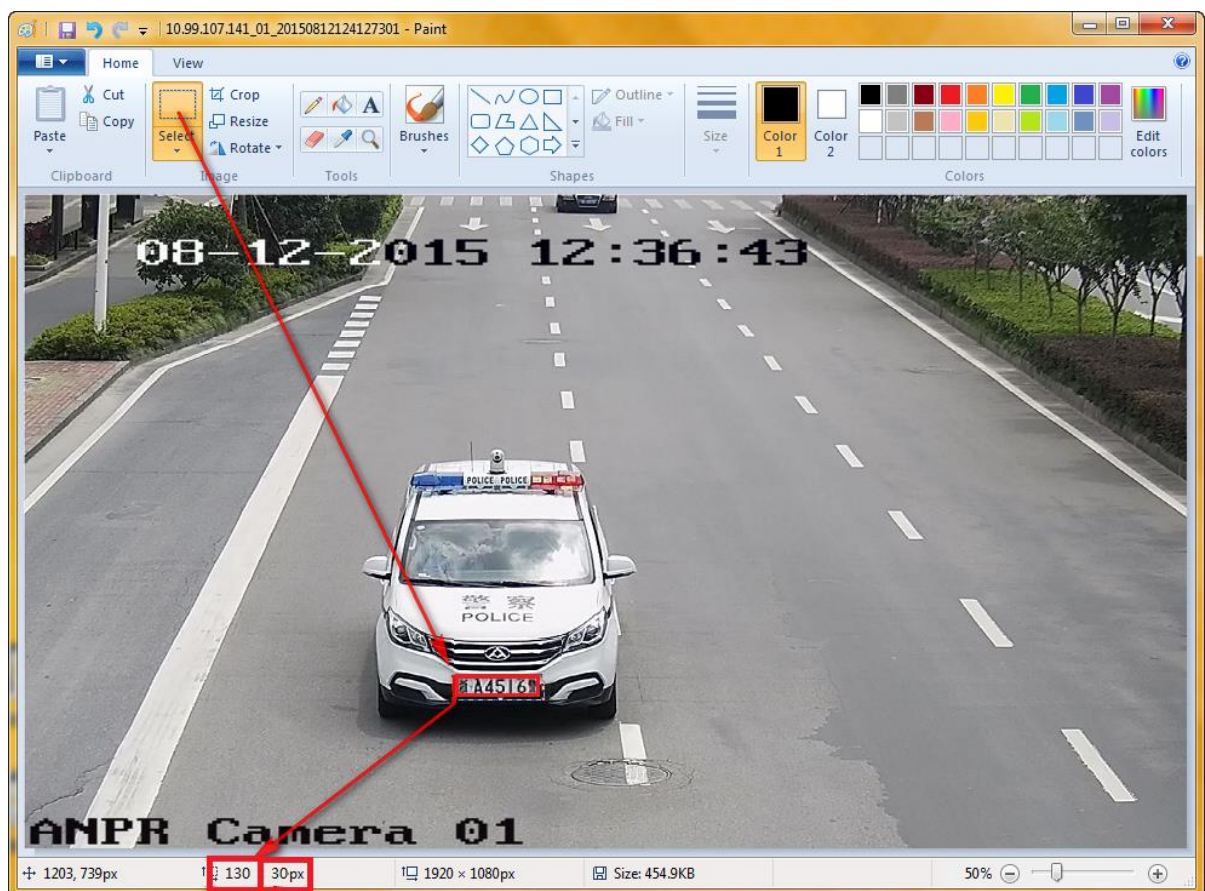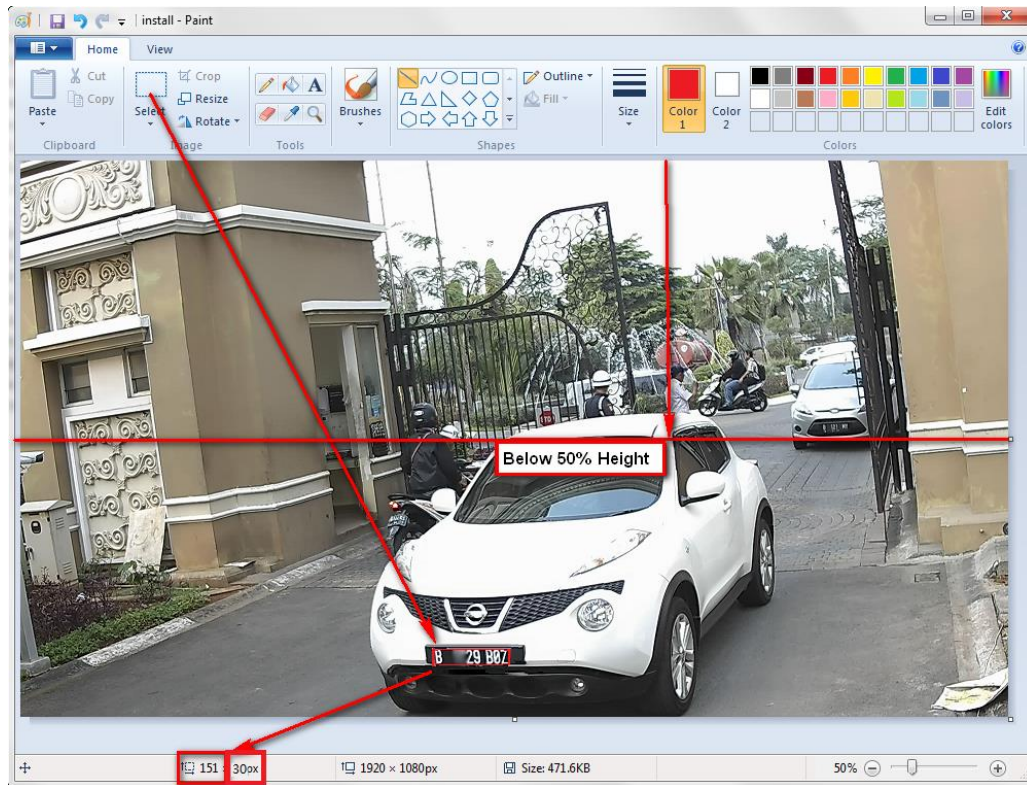

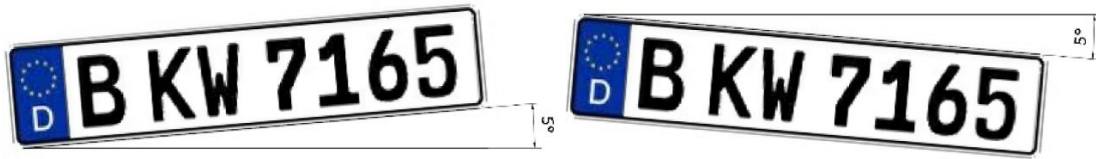| Camera Model	Lens (mm)	Min. recognition distance(m)	Max. recognition distance(m)	Proposed Environment
4X26FWD/P	2.8-12 3.8-16	6	12	Entry/Exit
	8-32	15	30	Road/Street Traffic
	7-33			
	11-40			

2.2.2 Pixels Requirement

(1)License plate itself must be clear in the video.

(2)License plate dimensions must be right pixels, not bigger or smaller. Please use Paint application to check the width of license plate. The measure area must be below 50% height of the image, nearby the bottom.

The best plate dimensions is that the character height pixels should be around 23-32 pixels in the recognize area.

(3)License plate tilt angle must be within +/-5 degrees. Don't care background is plane or not.

(4)Depth of focus is a very important parameter. You must check if the lens is focus well under manual-iris expose mode.

So please make sure to change iris type to manual before focus, then focus the lens, and change the iris type back to auto-iris. This operation could make sure the depth of the focus.