

angle (ODA) is based on maximum service probability of low and high traffic volume scenarios. The simulation results indicate that an increase of the antenna height changes expectedly the optimum downtilt angle; 10 m increase in the antenna height corresponds roughly to 1° increase of the ODA. For all network configuration, ODAs increase as a function of antenna height and decrease as a function of site spacing. Hence, with an optimum downtilt angle, network coverage is guaranteed, and simultaneously, other-cell interference is mitigated as efficiently as possible. For the 3-sectored configurations with 6° vertical beamwidth, the optimum downtilt angle varies between 4.3°–8.1° depending on the network configuration and downtilt scheme. In the 3-sectored configurations with 12° vertical beamwidth, the evaluated optimum downtilt angles range between 3.5°–10° (Table IV).