

**Table 12. Enhanced building codes.**

<b>Initiative 11: Enhanced Building Codes</b>						
<b>Description:</b> The design of off-street parking and loading facilities in urban center buildings, and of parking lots in and at the fringe of metropolitan areas						
<b>Targeted mode:</b> Large traffic generators/urban deliveries/all traffic			<b>Geographic scope:</b> City, area			
<b>Type of initiative:</b> Parking/loading areas management: off-street parking and loading			<b>Primary objective:</b> Improve inadequate infrastructure			
<b>Expected costs and level of effort to implement:</b> Enhanced building codes for off-street parking and loading facilities require consideration of the characteristics of the network, building designs, existing regulations, and vehicle characteristics. The planning process should involve the private real estate sector as well as public planning and economic development agencies, as these changes may involve building codes, land use regulations, and the retrofitting of existing buildings and facilities. Changing design standards and building/zoning codes will carry a low cost. Retroactively updating existing developments for off-street loading facilities will carry a high cost.						
<b>Advantages:</b> <ul style="list-style-type: none"> <li>• Reduce congestion</li> <li>• Environmental sustainability</li> <li>• Enhance safety</li> <li>• Increase operational efficiency</li> <li>• Improve inadequate infrastructure</li> <li>• Low probability for unintended consequences</li> </ul>			<b>Disadvantages:</b> <ul style="list-style-type: none"> <li>• Require private-sector acceptance</li> <li>• Require high capital investment costs when constructing or retrofitting existing infrastructure</li> <li>• May require updating existing development regulations</li> <li>• May require political consensus on updating design standards</li> <li>• Require available space for off-street loading</li> </ul>			
<b>Examples:</b> <ul style="list-style-type: none"> <li>• Parking requirements examples (Ogden 1992)</li> </ul>						
	Land use	Floor area	Minimum number of bays	Land use	Minimum number of bays	
	Office	General Minimum e.g., 5000 m <sup>2</sup> e.g., 20000 m <sup>2</sup>	1/5000 m <sup>2</sup> 1 LR 1 HR 4 HR	Dept Store	General Minimum e.g., 2000 m <sup>2</sup> e.g., 4000 m <sup>2</sup>	1/1000 m <sup>2</sup> 1 HR 2 HR or 1A+1HR 1 A + 3HR
	Shop	General Minimum e.g., 2000 m <sup>2</sup> e.g., 10000 m <sup>2</sup>	1/2000 m <sup>2</sup> 1 LR 1 HR 2 HR + 3 LR	Showrooms	General Minimum e.g., 5000 m <sup>2</sup> e.g., 10000 m <sup>2</sup>	1/2000 m <sup>2</sup> 1 HR 3 HR 4 HR + 1A
	Supermarket	General Minimum e.g., 1000 m <sup>2</sup> e.g., 2000 m <sup>2</sup> e.g., 4000 m <sup>2</sup>	1/1000 m <sup>2</sup> 1 HR 1 HR 1 A + 1 HR 2 A + 2 HR	Warehouse and Industry	General Minimum e.g., 5000 m <sup>2</sup> e.g., 10000 m <sup>2</sup>	1/1000 m <sup>2</sup> 1A 1 A + 1 HR 2 A + 1 HR
		LR: Light Rigid Truck Bay HR: Heavy Rigid Truck Bay A: Articulated Truck Bay		Others	General Minimum	1/2000 m <sup>2</sup> 1HR
<b>Related alternatives:</b> 1. <a href="#">Ramps for Handcrafts and Forklifts</a> ; 2. <a href="#">Upgrade Parking Areas and Loading Docks</a> ; 3. <a href="#">Improved Staging Areas</a> ; 4. <a href="#">Integrate Freight into Land Use Planning Process</a>						
<b>References:</b> Rizzo Associates 2001; Smart Growth Network and ICMA 2002; Department for Transport 2010b; PIARC 2011; SUGAR 2011; Wilbur Smith Associates 2012						