


Table 26. Time access restrictions.

Initiatives 23–25: Time Access Restrictions/Delivery Time Windows	
Description: Strategies that restrict the times at which freight activity can take place, including delivery time windows, daytime delivery bans, or nighttime delivery bans	
Targeted mode: All traffic/large trucks	Geographic scope: Area
Type of initiative: Traffic management: access time restrictions	Primary objective: Reduce congestion/improve environmental sustainability
Expected costs and level of effort to implement: Time access restrictions require planning that considers the characteristics of the area’s freight movement, industries, and land use, extensive stakeholder engagement, and an assessment of both positive and negative impacts to all economic agents involved. The costs are associated with the installation of traffic signs, and efforts associated with meeting the requirements of local businesses.	
Advantages (daytime delivery restrictions): <ul style="list-style-type: none"> • Improve parking availability during ban interval • Improve service time • Improve reliability • Decrease operational costs • Environmental sustainability • Enhance safety • Decrease congestion 	Disadvantages (daytime delivery restrictions): <ul style="list-style-type: none"> • High probability for unintended consequences: <ul style="list-style-type: none"> – Increase idling – Increase vehicle-miles traveled – Increase congestion outside target area – Increase operational costs • Require high coordination among jurisdictions
Advantages (daytime delivery bans): <ul style="list-style-type: none"> • Reduce congestion • Decrease operational costs • Reduce congestion during daytime • Environmental sustainability • Enhance livability 	Disadvantages (daytime delivery bans): <ul style="list-style-type: none"> • High probability for unintended consequences: <ul style="list-style-type: none"> – Increase receivers’ costs – Increase congestion in the early morning or at end of working day – Increase noise impact • May require incentives to offset additional costs
Advantages (nighttime delivery bans): <ul style="list-style-type: none"> • Environmental sustainability: reduce noise emissions 	Disadvantages (nighttime delivery bans): <ul style="list-style-type: none"> • Increase congestion during daytime • Increase operational costs • Reduce operational capacity
Examples: <ul style="list-style-type: none"> • Time windows in Lucca, Italy; Toulouse, France; Paris, France; London, England (City Ports 2005; SUGAR 2011) • Time windows and loading restrictions in Göteborg, Sweden (START 2009) <div style="text-align: center;">  </div>	
Source: Rensselaer Polytechnic Institute – CITE	
Related alternatives: 1. Staggered Work Hours Program ; 2. Load Factor Restrictions ; 3. Voluntary Off-Hour Delivery Program ; 4. Vehicle Size and Weight Restrictions ; 5. Urban Consolidation Centers ; 6. Time-Slotting of Pick-Ups and Deliveries at Large Traffic Generators	
References: Allen et al. 2003; City Ports 2005; Department for Transport 2006; BESTUFS 2007; Quak and de Koster 2007; Quak 2008; van Rooijen et al. 2008; Quak and de Koster 2009; START 2009; C-LIEGE 2010; Holguín-Veras et al. 2011a; SUGAR 2011; Holguín-Veras et al. 2012c	