
















Cycle Track Barrier Selection Matrix

<div>DRAFT</div>	Striped Buffer	Flexible Bollards	Turtle Bumps	Large Bumps	Oblong Low Bumps	Parking Stops	Linear Barrier	6" Cast in Place Barrier Curb	Parked Cars	Jersey Barriers	Planters	Rigid Bollards	Cast in Place Barrier Curb	Precast Barrier Curb	Raised Cycle Track (Full Recon)
															
Cost/Benefit															
Cost per Foot of Barrier (per side of street) *Costs double for barriers on both sides	\$1.50-3/ft. \$8k-16k/mi.	\$3-6/ft. \$15k-30k/mi.	\$4-7/ft. \$10k-20k/mi.	\$4-8/ft. \$15k-30k/mi.	\$4-7/ft. \$10k-20k/mi.	\$4-8/ft. \$20k-40k/mi.	\$4-8/ft. \$20k-40k/mi.	\$5-15/ft. \$25k-75k/mi.	\$15-60/ft. \$80k-300k/mi.	\$15-30/ft. \$80k-160k/mi.	\$15-75/ft. \$80k-400k/mi.	\$20-40/ft. \$100k-200k/mi.	\$30-50/ft. \$k-k/mi.	\$70-115/ft. \$400k-600k/mi.	\$1,500-5,000/ft. \$8,000k-26,000k/mi.
Cost	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★	★★	★★	★★	★★	★	★
Cyclist Perceived Safety	★	★★★★	★★★★	★★★★	★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

Other Considerations																
Durability / Maintenance	★★	★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★	★★★★	★★★★★	★★★★	★★★★★	★★★★★
Sweeping	★★★★★	Depends on Width	Depends on Width	Depends on Width	Depends on Width	Depends on Width	Depends on Width	Depends on Width	★★★	Depends on Width	Depends on Width	Depends on Width	Depends on Width	Depends on Width	Depends on Width	Depends on Width
Trash Collection	★★★★★	★	★★★★★	★	★★★★★	★★★★★	★★★★★	★★★★★	Depends on Time of Day	★	★	★	★★★★★	★★★★★	★★★★★	★★★★★
Storm Water	★★★★★	★★★★	★★★★	★★★★	★★★★	★★	★★★★	★★★★	★★★★★	★★	★★	★★★★	★★	★★	★★	★
Traffic Compatibility (Motor vehicle / barrier interactions)	★★★★★	★★★★★	★★	★★	★★★★	★★★★	★★★★	★★★★★	★★★★	★★★★★	★★★★	★★★★	★★	★★★★★	★★★★	★★★★★
Aesthetics (factoring in damage over time)	★★	★	★★★★	★★★★★	★★	★★	★★	★★	★★★★	★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★
Construction Impacts	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★	★★★★★	★★★★	★★★★	★★	★★	★★	★★	★
Width Required	1.5'	1.5'	1.5'	1.5'	1.5'	1/2'	1/2'	1/2'	8' If not existing	2'	3'	2'	2'	1'	1.5	0'

Notes																
General									Requires on-street parking							
Cost	Least expensive option	Good cost per foot	Very good cost per foot	Good cost per foot	Very good cost per foot	Good cost per foot	Good cost per foot	Good cost per foot	ADA parking changes, pedestrian refuge islands, and ADA ramp changes can affect cost		Spacing of planters affects cost	Utility conflicts could affect cost	Cast in place curbs are much less expensive due to reduced handling time	Custom precast curbs significantly increases cost over cast in place barriers	Reconstruction including storm water improvements is likely	
Cyclist Perceived Safety	No physical element	Good vertical element	Good deterrent for motorist	Strong deterrent for motorist. Good vertical element.	Decent deterrent for motorists. Low contrast.	Good deterrent for motorist	Good deterrent for motorist	Good deterrent for motorist	Strong deterrent for motorist. Good vertical element.	Strong deterrent for motorist. Good vertical element.	Strong deterrent for motorist. Good vertical element.	Strong deterrent for motorist. Good vertical element.	Strong deterrent for motorist. Horizontal seperation.	Strong deterrent for motorist. Horizontal seperation.	Strong deterrent for motorist.	
Durability / Maintenance	Thermo / paint needs to be maintained	Flexible bollards may require frequent replacement	Good durability	Good durability	Good durability	Good durability	Good durability	Good durability	No element to maintain	Very durable barriers	Need a maintenance partner for watering and plant upkeep.	Good durability	Very durable barriers	Good durability	Very durable design	
Sweeping	No obstruction	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	Sweeping could be done in off-peak or no parking hours if cycle track narrow	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary	If barrier is less than 8.5' from curb special sweeping equipment will be necessary
Trash Collection	No obstruction	Height of barrer obstructs collection vehicles. Barrier could be driven over but not optimal.	Collection vehicles can drive over barrier	Height of barrer obstructs collection vehicles	Collection vehicles can drive over barrier	Collection vehicles can drive over barrier	Collection vehicles can drive over barrier	Collection vehicles can drive over barrier	Collection could be done in off-peak or no parking hours if cycle track narrow	Height of barrer obstructs collection vehicles	Height of barrer obstructs collection vehicles	Height of barrer obstructs collection vehicles	Collection vehicles can drive over barrier	Collection vehicles can drive over barrier	Collection vehicles can drive over barrier	Collection vehicles can drive over barrier
Storm Water	No obstruction	No / minimal obstruction	No / minimal obstruction	No / minimal obstruction	No / minimal obstruction	Barriers could be spaced to allow storm water to curb	No / minimal obstruction	No / minimal obstruction	No obstruction	Barriers could be spaced to allow storm water to curb	Barriers could be spaced to allow storm water to curb	No / minimal obstruction	Barriers could be spaced to allow storm water to curb	Barriers could be spaced to allow storm water to curb	Requires reconstruction of street to redesign stormwater system	
Traffic Compatibility (Motor vehicle / barrier interactions)	No high speed motor vehicle traffic concerns	No high speed motor vehicle traffic concerns	May have concerns adjacent to higher speed traffic	May have concerns adjacent to higher speed traffic	May have concerns adjacent to higher speed traffic	May have concerns adjacent to higher speed traffic	May have concerns adjacent to higher speed traffic	No high speed motor vehicle traffic concerns	May have concerns adjacent to higher speed traffic	Compatible with higher speed traffic. Care must be given to end treatments	May have concerns adjacent to higher speed traffic	Appropriate for moderate traffic speeds	Curb profile can be varried based on context	Appropriate for moderate traffic speeds	No high speed motor vehicle traffic concerns	
Aesthetics	Neutral asthetics	Damaged barriers quickly become ragged looking	Good asthetics over barrier life	Barrier enhances street asthetics	Neutral asthetics	Neutral asthetics	Neutral asthetics	Good asthetics over barrier life	Good asthetics over barrier life	Strong visual impact on street. Can be painted for improved asthetics	Barrier enhances street asthetics	Good asthetics over barrier life	Good asthetics over barrier life	Good asthetics over barrier life	Good asthetics over barrier life	
Construction Impacts	Striping changes only	Barrier installation is quick and non-invasive. Bolt/glue solution.	Barrier installation is quick and non-invasive. Bolt/glue solution.	Barrier installation is quick and non-invasive. Bolt/glue solution.	Barrier installation is quick and non-invasive. Bolt/glue solution.	Barrier installation is quick and non-invasive. Bolt/glue solution.	Barrier installation is quick and non-invasive. Bolt/glue solution.	Curbs have to be poured in place and dowled into street	Hard construction may not be required	Barrier installation is quick and non-invasive. Bolt/glue solution.	Barrier installation is quick and non-invasive.	Installation of bollards may have utility conflicts	Curbs have to be poured in place and dowled into street	Barrier installation is quick and non-invasive. Bolt/glue solution.	Complete reconstruction is likely required	
Width Required	Fairly compact barrier solution	Fairly compact barrier solution	Fairly compact barrier solution	Fairly compact barrier solution	Fairly compact barrier solution	Low-profile barrier solution	Low-profile barrier solution	Low-profile barrier solution	Good if on-street parking is existing	Wider barrier solution	Wider barrier solution	Wider barrier solution	Fairly compact barrier solution	Fairly compact barrier solution	Low-profile barrier solution	

Good Seperation Photos
<http://www.peopleforbikes.org/blog/entry/tech-talk-19-beautiful-ways-to-protect-bike-lanes-photos>