

One-Way Couplet Spacing Guidelines

Couplets are traffic solutions, but they are also multi-modal, livable solutions!

One-way couplets have excellent win-win characteristics across a range of urban policy objectives. It is true that couplets of the 1950's were high-speed and auto-oriented, but so were all arterials up until recently. The ability of couplets to fit into pedestrian-oriented settings has more to do with speed limits, lane-widths, traffic-calming strategies, and streetscape amenities than whether operations are two-way or one-way. In fact, because one-way streets are easy to coordinate, this can make it less likely drivers will exceed speed limits, as it is obvious that driving exactly the speed limit will ensure you hit green lights. See our ["Top 10 Advantages of One-Way Couplets,"](#) and our ["Addressing the Top 10 Arguments Against One-Way Couplets."](#)

Some locations have converted from one-way to two-way operation, partly because auto demand has decreased over time. But at other locations mixed-use development is waiting in the wings if gridlocked traffic can be improved, and couplets may be among the only strategies for relieving congestion in an affordable, context-sensitive manner. In these cases, questions often arise regarding spacing. "We are excited about the advantages of couplets, but the only streets we can use may be too far apart. How far is too far?"

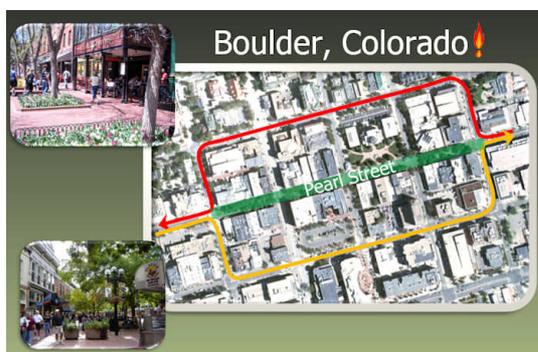
Spacing Guidelines for Greenfield, New Urbanist Development

As the distance between one-way couplets increases, the out-of-direction travel required for general circulation also increases. In a Greenfield setting where mixed-use, New Urbanist development is planned, ideal couplet spacing would range from 250 to 500 feet. If couplet spacing is between 500-1000 feet, out of direction travel is still generally inconsequential for autos, but becomes more onerous for pedestrians and transit riders.

Street Spacing Affects the Very Nature of Development

Spacing also influences the market for land development. As blocks and parcels get larger, it is harder for developers to create walkable urban mixed-use development and all the more likely the land will instead develop as suburban strip malls, Big Box retail, massive multi-building apartment complexes, or suburban 2-4 story office campuses, all with huge surface parking lots. Some may appear "high density," but in reality it could have been much denser had block sizes been smaller. Being decidedly urban does not necessarily define the area as unfriendly to popular retailers, but

you may need to work with those retailers to find ways for them to fit into the character you are aiming for.



Boulder's Pearl Street has nearly 800 ft between couplets. Pearl Street in the Center forms a "Triplet"

Using "Triplets"

Couplets in the 700-1000 foot range may still be considered ideal in that the effects on traffic circulation are minimal, but consider adding an alignment between the couplets to ensure more walkable block sizes, and also to provide an alignment for transit, on-street parking, and light traffic circulation. An alignment between a couplet makes it a "Triplet."

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The greater the problem, the wider you can go

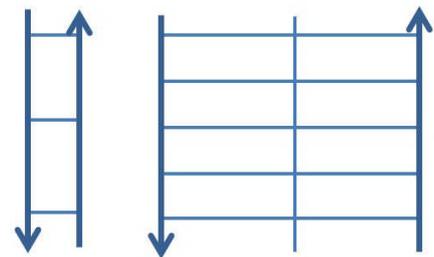
When dealing with less than ideal realities, arterial couplets can work well enough even when separated by up to half a mile (2,600 feet). Out of direction travel is quite significant in these cases, especially for short trips of a mile or less. But it may still be preferable if there are a lot of longer trips, and if the alternative is serious congestion caused by two-way operation of the candidate arterials. As a rule of thumb, the higher the volumes and the more critical the couplets are for improving regional mobility at an affordable price, the stronger the case for going with couplets even if intra-couplet circulation is long and circuitous.

Improving circulation within wide couplets

Local circulation can still work well if connections between couplets are frequent and if two-way local paths exist between and generally parallel to the couplets. The wider the separation, the more important it is to create two-way connectivity between and parallel to the arterial couplets. Consider punching through cul-de-sacs, breaking up circuitous blocks, and creating formal streets across large parking lots to help ensure local circulation can work well in spite of the wide separation.

Pseudo-couplets in lieu of widely-spaced couplets

For addressing the needs of transit and local-area circulation when spacing becomes excessive, pseudo-couplets may be an option. A road might have 3-lanes in one direction, with signal coordination and features designed to favor that direction, and just one lane in the opposite direction, which is intentionally disfavored and serves only to help enable circulation that otherwise would have an onerously circuitous route. Signalization is trickier, and you may still need a center-left turn lane, but you still get many of the advantages of true couplets.



With narrower couplets, spacing between connections can be greater. But as they get up to ½ mile apart, circuitous paths can be reduced by developing more frequent connections and parallel local 2-way streets.

Also see our companion list of positive arguments in favor of couplets: [“Top 10 Advantages of One-Way Couplets,”](#) and our [“Top 10 – Addressing Arguments Against One-Way Couplets”](#)

Metro Analytics develops and analyzes multi-modal circulation solutions for mixed use, high-density environments. Metro Analytics believes that couplets can often play an important role in Complete Streets and Place-Making, while at the same time handling the higher traffic volumes that these places often generate, or must accommodate.

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