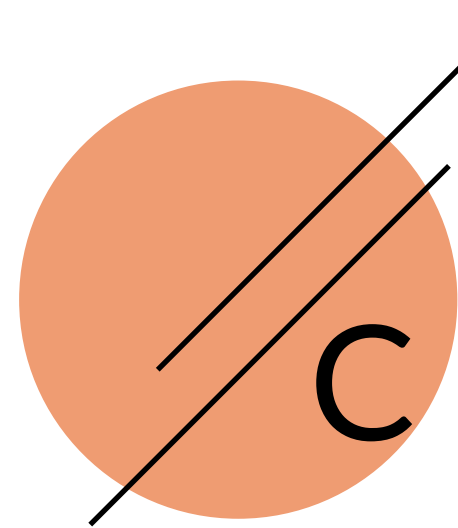




CROSSWALK SAFETY GUIDE

A community toolkit for creating
safer pedestrian crossings



CONTENT

This guide presents the latest industry standards and recommendations for unsignalized pedestrian crossings in North America, and it draws heavily on research from the Federal Highway Administration as well as various government and academic sources.

The content of this guide is intended for general informational purposes only. Please consult your local or state transportation department for specific requirements and guidance.

Proper engineering judgment should always be exercised in the evaluation, selection, and installation of any traffic safety countermeasure.

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So you want to build a crosswalk?

Key considerations and tips for getting an unsignalized crosswalk built (or improved)

Proven safety countermeasures

Safety solutions and enhancements endorsed by the FHWA

Evaluating the options

From total project cost to local guidelines

Tools for the job

Resources that can help you prepare your pitch



INTRODUCTION

As a driver, you might enjoy the experience of travelling along wide, multi-lane roads with long blocks, high speed limits and few or no intersections or stops. That's because this type of street design, ubiquitous in suburban and commercial areas across America, was tailor-made for you, allowing for fast and efficient movement from A to B.

But imagine having to travel this same route without your trusty car, truck, or SUV. Instead, you must make the journey on foot—maybe with a load of groceries or laundry, or pushing a toddler in a stroller. Suddenly, your perception of the road is quite different. What was a quick, quiet, and convenient experience for a driver becomes a long, difficult, and even dangerous experience for a pedestrian.

Fortunately, most urban and transportation planners today agree that streets should be designed for people rather than cars. Wider sidewalks, slower speed limits, and accessibility improvements have all gained traction in recent decades as cities attempt to move from car-centricity to a more “complete street” that accommodates (and encourages) active transportation.

One of the simplest and most effective ways for cities to achieve safe, walkable streets is by adding, or improving, crosswalks in areas with high levels of pedestrian activity or crash rates. Often, these are midblock locations—places away from signalized intersections where crossings have not been identified, but where pedestrians nonetheless decide to cross. [Three quarters of pedestrians](#) killed in 2018 were crossing midblock.

3/4

**of pedestrians
killed in 2018
were crossing
midblock**

**WITH THE
RIGHT
LOCATION AND
TREATMENT,
MARKED
CROSSWALKS
CAN PROVIDE
MYRIAD
BENEFITS—
AND NOT JUST
FOR PEOPLE ON
FOOT.**



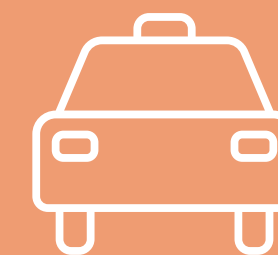
Typically implemented at unsignalized intersections (those without traffic signals), or at midblock locations and roundabouts, marked crosswalks can:

- Create safer, more visible, and more direct routes for pedestrians



- Help channel pedestrians to designated locations (where the lighting is better, and the sight distances are greater)

- Condition drivers to anticipate pedestrians at these designated locations



- When it comes to traffic flow, they have a patent advantage over their signalized counterparts—rather than requiring drivers to stop at set intervals, they need only yield if a pedestrian present

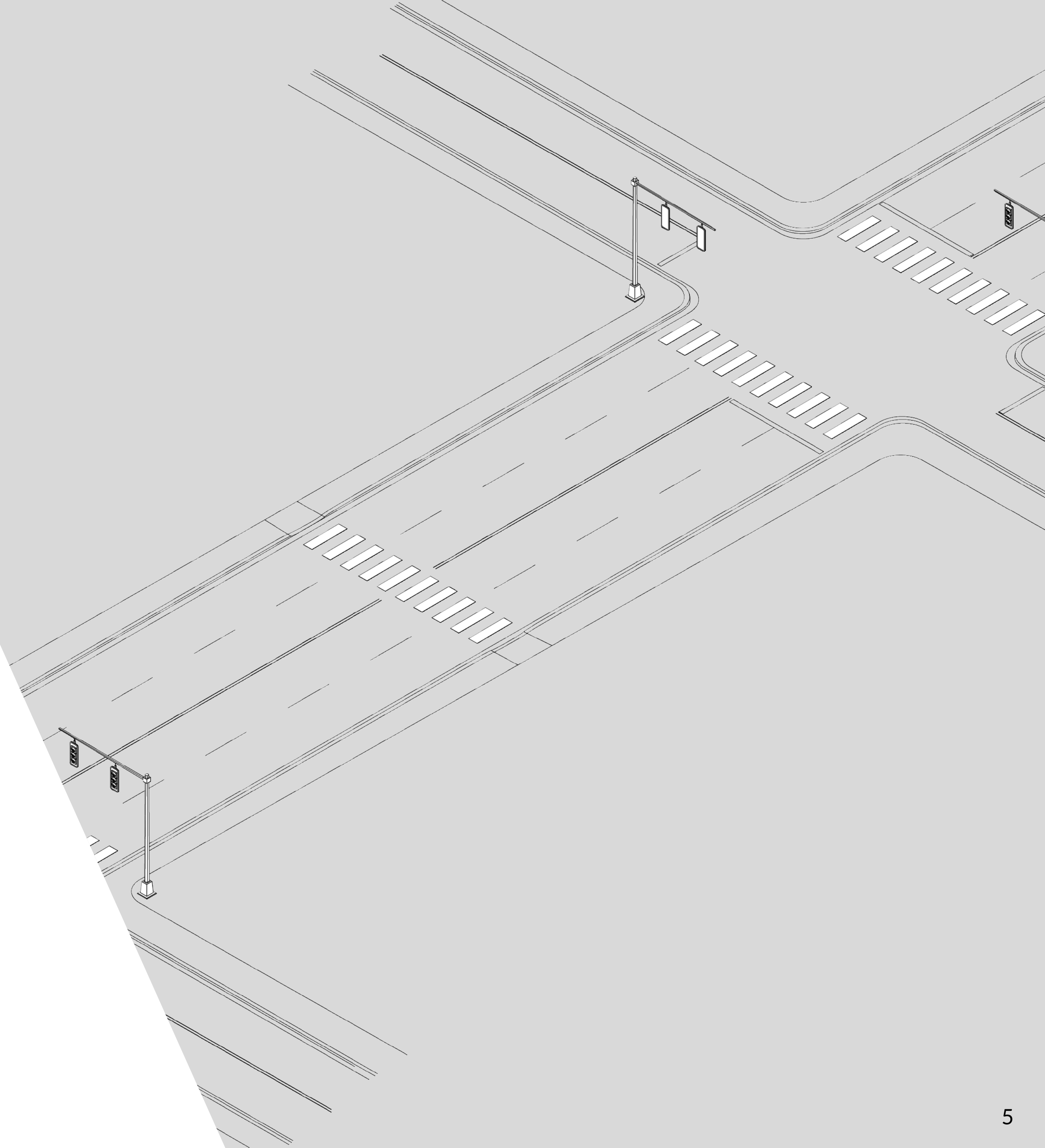
Yet for all their advantages, **marked crosswalks remain an often misunderstood and poorly implemented design tool.** This toolkit aims to change that. Intended for those outside the transportation industry, it details the process of evaluating, selecting, and implementing safety solutions at marked crosswalks. Having completed the toolkit and attendant resources, advocates should feel equipped to take their crosswalk projects from concept to reality.

SO YOU WANT TO

BUILD A CROSSWALK?

As simple as they may seem, crosswalks can be surprisingly difficult to get built. City traffic engineers receive large volumes of requests every year for marking crosswalks at unsignalized intersections and midblock locations and many of them end up on the cutting-room floor. There are good reasons for this—chief among them that overuse can lead drivers to become desensitized to their presence, resulting in yield rates that are even lower than they are now.

According to [a report produced for the FHWA](#), **“Crosswalks should be used, in general, only at locations where pedestrian activity is significant. This will ensure that motorists come to associate crosswalks with pedestrian activity.”**



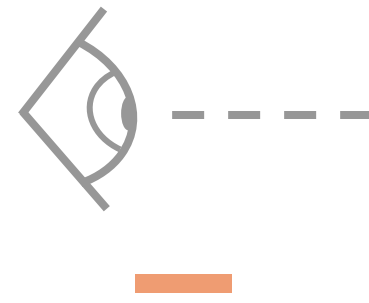
That said, there are plenty of locations where marked crosswalks are warranted and beneficial.

Examples include commercial areas where shopping and amenities are located along both sides of a street and at key access points to parks, schools, and community centers located away from signalized intersections. Generally, marked crosswalks work best at locations where:



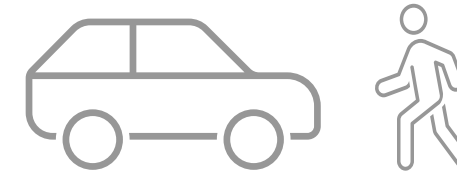
Speed limit is below 40 mph

Although higher speed limits can warrant a crosswalk with the right safety treatment



Adequate sight distance

The roadway ahead is long enough that a driver traveling at/near the posted speed limit can safely react to an incoming pedestrian



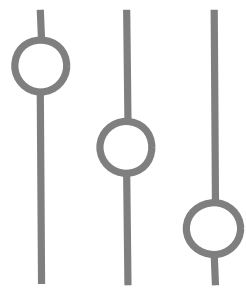
Existing conflict

The location has had a history of pedestrian/vehicle crashes



Significant volume of crossings

A substantial number of crossings are already happening, or the location anticipates them (e.g. new development)



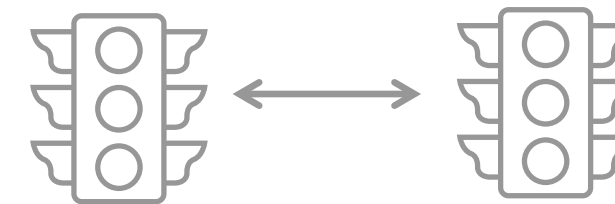
Four or fewer lanes

With or without a raised median



Four or more lanes

With a raised median



Block length exceeds 600 ft.

Spacing between signals

Sources:
[Federal Highway Administration](#)
[Virginia Transportation Research Council](#)
[City of Sacramento](#)

IF YOU CAN DEMONSTRATE THAT YOUR PROSPECTIVE LOCATION MEETS THESE CONDITIONS, YOU'RE ALREADY ON YOUR WAY TO TRANSFORMING YOUR PEDESTRIAN CROSSING INTO AN OFFICIAL MARKED CROSSWALK.

But there's still work to do—quite a lot, in fact. The exact steps will depend on where you're located and how your city/county/state's government is organized, but here is a general idea of how the crosswalk approval process works in most jurisdictions.

G

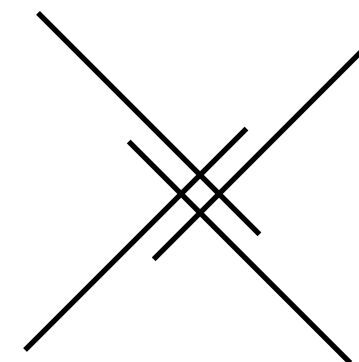
Gather the facts like average daily traffic and crash data

R

Rally the troops and build community support

T

Take your case to the right person at the city or county



F

Follow up to ensure your information reached its target



GATHER THE FACTS

As a regular user, you might think you know everything there is to know about your crossing location, but can you quote the annual average daily traffic (AADT) of the road? What about how many people try to cross it on a typical afternoon? Or how many crashes happened there last year? The more data you can provide to demonstrate that there is a problem at your location, the stronger your case will be.

The good news is most of this information is readily accessible online or at your local government office. To find the AADT of your location, you can consult a [Traffic Volume Map](#). To get crash data, you can mine your state's [Crash Data Portal](#) (if they have one) or contact the Crash Data & Reporting Branch at your local transportation agency. And you can always conduct a [traffic survey](#) to glean everything from pedestrian volumes to vehicle travel speeds.

Tip: The City of Sacramento has an excellent four-page [Crosswalk Data Collection form](#) that can help you collect and organize your data (see pages 41-44).

RALLY THE TROOPS

Once you've compiled your data, it's time to start building community support. Who do you want to join your cause? The possibilities are virtually endless. A good place to start is your neighbors, as they are likely well-acquainted with the crossing and will be willing to add their voice to your campaign. You might even consider drawing up a petition—sites like change.org and thepetitionsite.com are great for this.

Many communities have a local pedestrian advocacy group, such as [Walk San Francisco](#) or [Chicago's Active Transportation Alliance](#). You can also approach local homeowners' associations, your neighborhood school or PTA, chambers of commerce, and any other non-profit in your community concerned with pedestrian safety, active transportation, or sustainability.





T

AKE IT TO THE CITY (OR COUNTY)

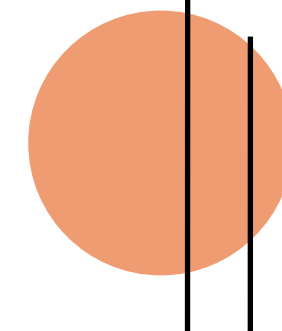
With signatures and documentation in hand, you're ready to present your case to the powers that be—so long as you know who that is. This varies greatly from location to location, and it can take some legwork to figure out who is responsible for the road in question. Chances are good it's a municipality, but it could be a county, state, or even a private community. A few phone calls should get you on the right track.

Now, you get to make the first of what will likely become several calls to the transportation authority in charge. When you get someone on the phone, clarify that your location is within their jurisdiction and ask if there are plans to install a marked crosswalk at your desired location. Find out if there is a formal crosswalk policy in place, and if there is **a list of approved or preferred pedestrian safety countermeasures** (we'll get into a list of countermeasures in the next section). Briefly explain the data you've gathered, the support you've received, and ask what they recommend as a next step.



FOLLOW UP (AND KEEP FOLLOWING UP)

Local government bureaucracy is notoriously slow, so don't expect immediate action, no matter how compelling your case. If you don't hear back within a couple of weeks, call back. Or call someone else—a traffic engineer might technically be the person responsible for your roadway, but it's often politicians (e.g. council members) who get projects moving.

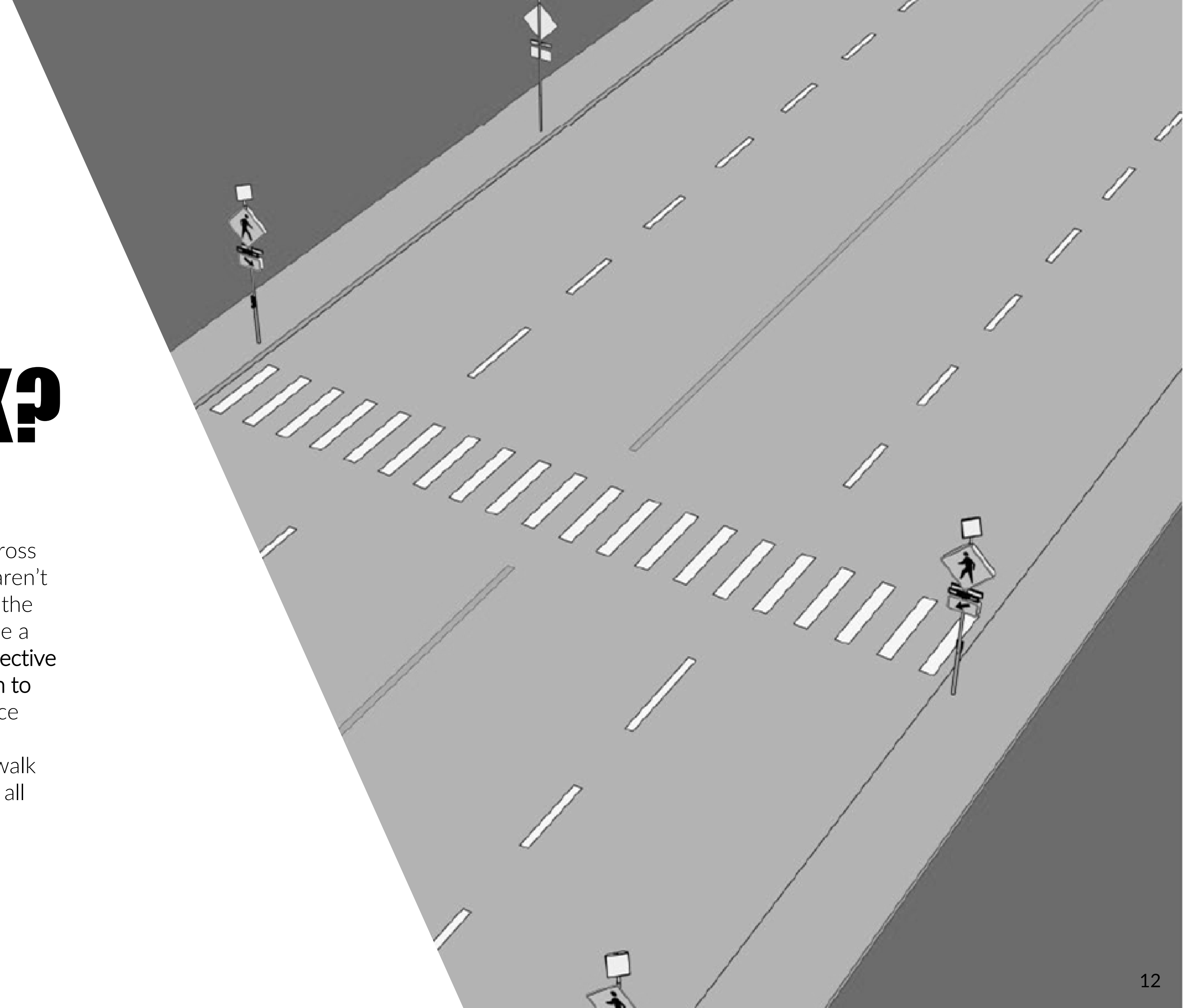


You can also apply pressure in other ways, such as publicizing your cause on social media, or asking your local paper to run a story. Attending city council meetings and other relevant public hearings also doesn't hurt. Sure, these can be long and boring, but don't be deterred! When you're admiring the fresh paint, retroreflective signs, and flashing beacons of your crosswalk a few months from now, you'll be glad you stuck with it.

SO YOU WANT TO

BUILD A SAFER CROSSWALK?

With hundreds of thousands of crosswalks across the country, the problem isn't just that there aren't enough designated places for people to cross the street. At many locations, there may already be a crosswalk in place, but **it might not be very effective at capturing drivers' attention and getting them to yield**—the paint may be faded, the sight distance inadequate, the warning sign tipped over, vandalized, or missing altogether. Just take a walk around your neighborhood and you'll see: not all crosswalks are created equal.





**YOUR NEXT
QUESTION
SHOULD BE...**

“What is the most effective countermeasure that can be used to help pedestrians at the location safely cross the street?”

THE DIFFERENCES IN CROSSWALK TREATMENT EFFECTIVENESS

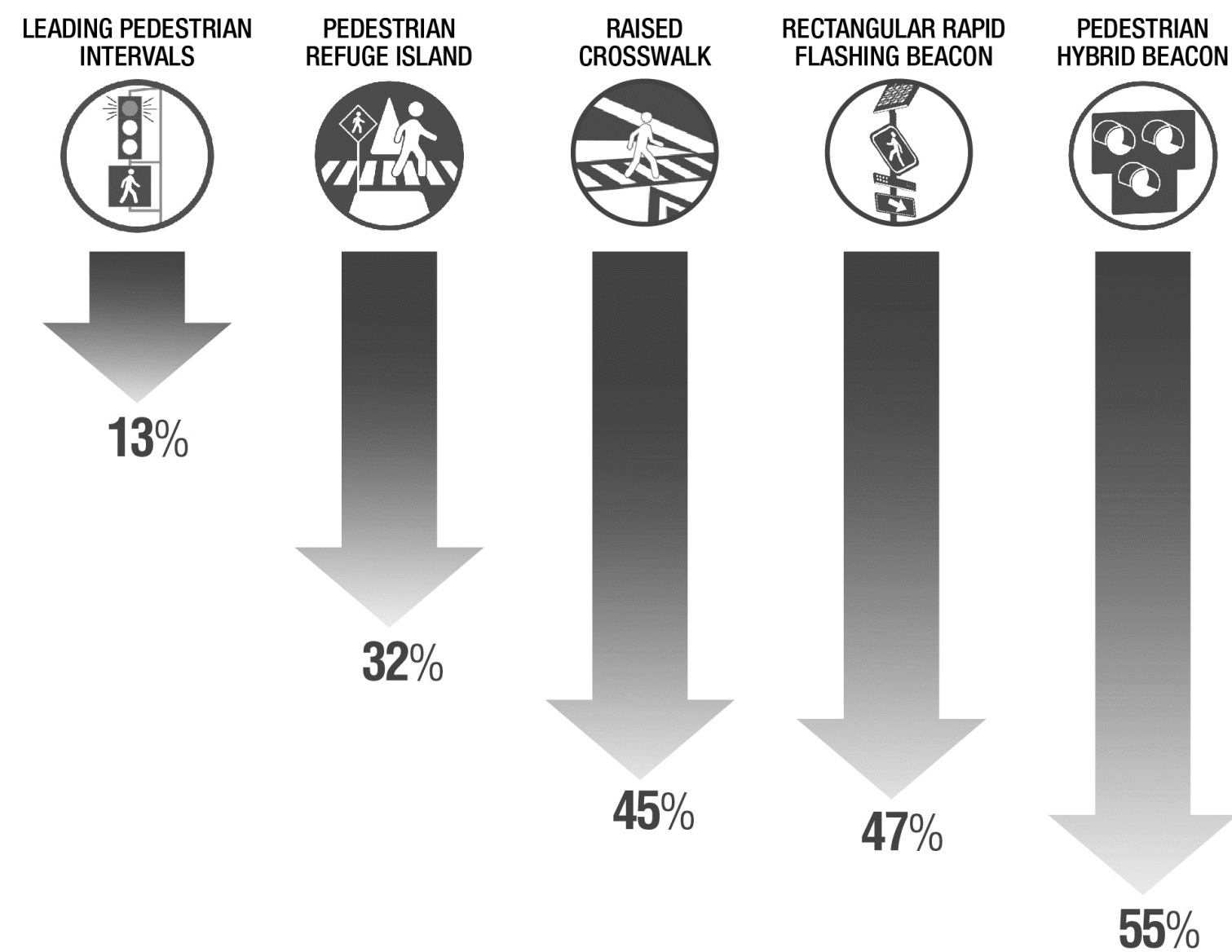
have been demonstrated time and again by the FHWA and others. [One study](#) found that the presence of only paint markings at unsignalized crosswalk locations had zero effect on pedestrian crossing or driver yielding behavior. [Another](#) found that a marked crosswalk alone (i.e. without additional safety enhancements) did nothing to lower the pedestrian crash rate compared to an unmarked crosswalk. **“On many roadways, particularly multilane and high-speed crossing locations, more substantial improvements often are needed,”** they wrote.

If a crosswalk has been marked at your location, but cars are still flying through (and pedestrians are still being hit) there are things you can do. Many of them are the same as the crosswalk approval process previously described: gather good data, rally your neighbors, find the decision-makers, and make your pitch as frequently and persistently as possible. But another thing you can do is educate yourself about what these other, “more substantial improvements” are, and what types of solutions might work best for your crossing. We’ll cover some of the most effective in the next section.

THE FEDERAL HIGHWAY
ADMINISTRATION'S RECOMMENDED

CROSSWALK SAFETY COUNTERMEASURES

Potential Reduction in Pedestrian Crashes



Do you know what a road diet is? How about what RRFB stands for? If you want to see real, meaningful change at your crossing, it's time to get acquainted with some crosswalk safety countermeasures.

The thing is, there's a lot of them. And for someone without a background in engineering or transportation planning, the options can be dizzying. Fortunately, the FHWA's [Safe Transportation for Every Pedestrian \(STEP\) program](#) has some excellent resources that are designed for industry professionals but that are accessible to just about everyone.

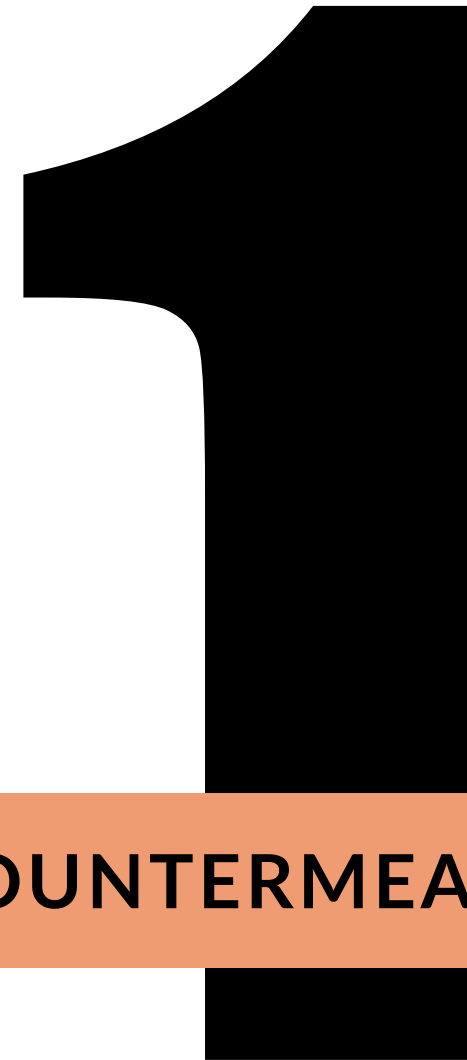
While a vast number of things can have a positive impact on safety at unsignalized crosswalk locations—everything from reduced speed limits to improved lighting to flower gardens planted on land formerly occupied by parking spaces—STEP has narrowed it down to just seven “spectacular” ones it thinks you should know about.

We'll provide some key points for each of them in this section (with the exception of leading pedestrian intervals, which are only applicable to signalized intersections), however, we highly recommend visiting the [STEP website](#) to explore their interactive resources, case studies, videos, and more.

**THE FHWA'S STEP PROGRAM
PROMOTES COST-EFFECTIVE
COUNTERMEASURES WITH KNOWN
SAFETY BENEFITS.**

CROSSWALK VISIBILITY ENHANCEMENTS

The first countermeasure on STEP's list is actually a group of enhancements, which includes high-visibility markings, advance warning signage and improved lighting, parking restrictions, and curb extensions—anything that can help improve the conspicuity of crosswalks and pedestrians from the perspective of an approaching driver.



COUNTERMEASURE



For faded markings

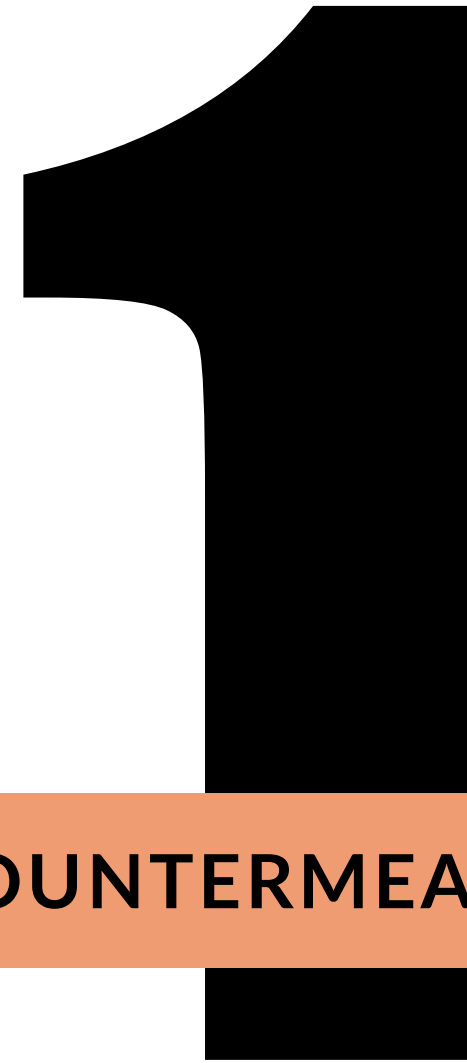
One of the most common issues that arises with existing crosswalks is faded or worn-out pavement markings that are hard to see during the day and even harder to see at night. Older markings can last as little as three to six months before needing to be repainted. Fortunately, newer thermoplastic technologies have a longer life, and their effectiveness can be increased using high-visibility marking patterns (zebra, ladder, piano bar etc.) versus standard parallel lines. Stop lines painted in advance of crosswalks can also provide improved visibility and buffer distance between cars and pedestrians.



For crosswalks near curves

Another major, but easy-to-fix, issue is signage. While the FHWA's Manual of Uniform Traffic Control Devices (MUTCD) recommends a W11-2 warning sign (yellow diamond) supplemented with plaques to inform drivers that they are approaching a crossing (e.g. "AHEAD" or "XX FEET"), many crosswalks in the U.S. lack them. This is particularly important on roads where crosswalks are located following a curve, or in locations where parked cars can obscure the crosswalk and pedestrians from drivers (and vice versa).

CROSSWALK VISIBILITY ENHANCEMENTS



COUNTERMEASURE



For nighttime crossings

More than [three quarters](#) of pedestrian fatalities in the U.S. in 2018 occurred in dark conditions. Although most streets with high levels of pedestrian activity are illuminated after dark with streetlights, they are typically spread far apart, and don't provide enough light, at the right level, for an incoming driver to detect and react to a pedestrian. To do this, you need to add pedestrian-scale lighting ahead of the crosswalk to [illuminate the front of the pedestrian and avoid creating a silhouette](#). Studies have also found that proper illumination can [encourage more pedestrians to use crosswalks](#).



For roadway clutter

Finally, curb extensions—sometimes called bulb-outs or neckdowns—can help improve visibility by bringing pedestrians into the driver's field of view before they enter the roadway. Curb extensions effectively narrow the width of a street, meaning pedestrians have less exposure to vehicles, as well as force drivers to slow down. Parking restrictions or what is commonly known as “daylighting”—creating no-parking zones at curbs in front of crosswalks—can also help create clearer sight lines and improve safety, particularly for children and people in wheelchairs who may be blocked from view by cars.

Other recommended safety countermeasures

1
Visibility
enhancements

2
PHBs

3
Refuge islands

4
Raised
crosswalks

5
Road diets

6
RRFBs

The next five countermeasures from STEP use either beacon (lighting) technology or roadway design to amplify crosswalk safety and are often paired with the visibility enhancements that were previously mentioned. Along with the countermeasure description, we've included two **safety effectiveness metrics** featured in the STEP guide:

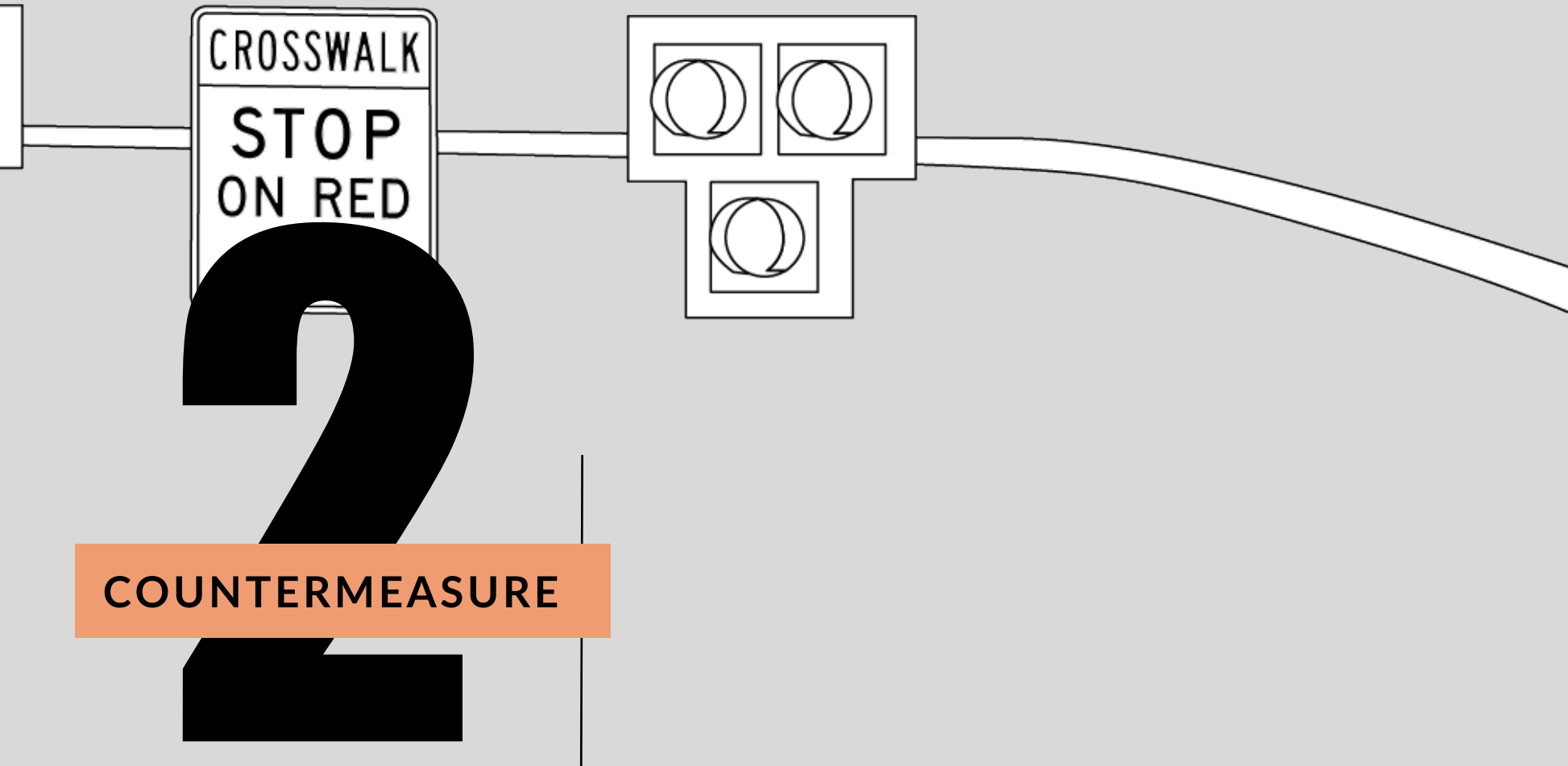
- **Crash Reduction Factor (CRF):** Estimate of the percentage reduction in crashes due to a particular countermeasure
- **Crash Modification Factor (CMF):** Multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure

Here are two examples to compare:

1. CRF of 32% and a CMF of 0.68
2. CRF of 19% and a CMF of 0.81

← Using this factor alone, this countermeasure is considered to be more effective.

Look for these metrics as well as the average installation costs (provided by FHWA) and other roadway factors ideal for each solution.



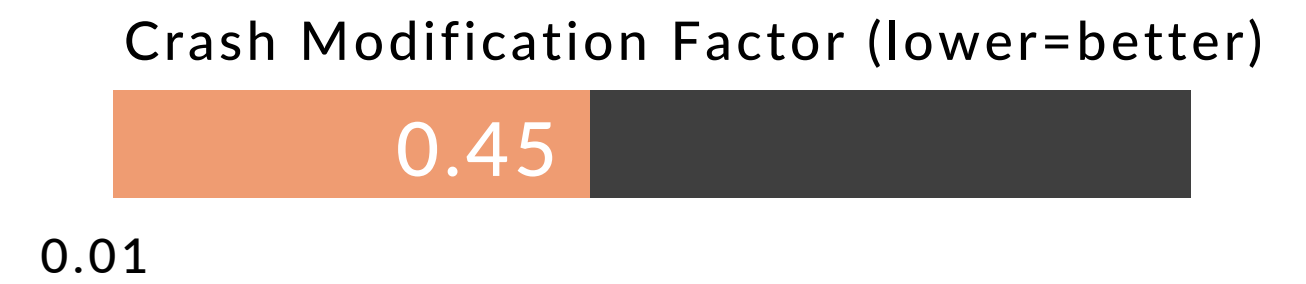
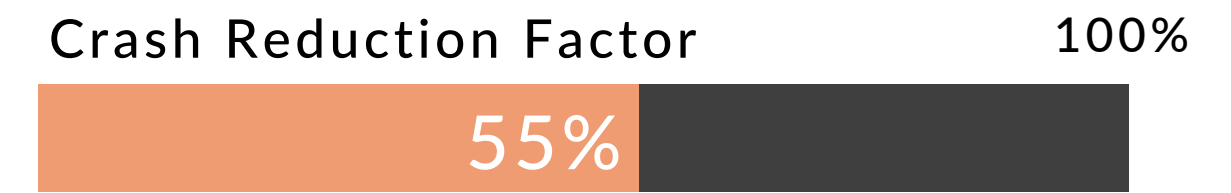
Pedestrian hybrid beacons (PHBs)

These overhead beacons (also known as HAWK systems) are typically mounted on mast arms above a crosswalk and have red and yellow lights that flash (and then go solid) when activated by a pedestrian.

PHBs have been shown to be highly effective at increasing driver yield rates, averaging 96% in [one FHWA study](#). This is primarily due to the fact that they, like a traditional traffic signal, feature a red light that requires drivers to come to a complete stop, greatly reduces the risk of a pedestrian collision.

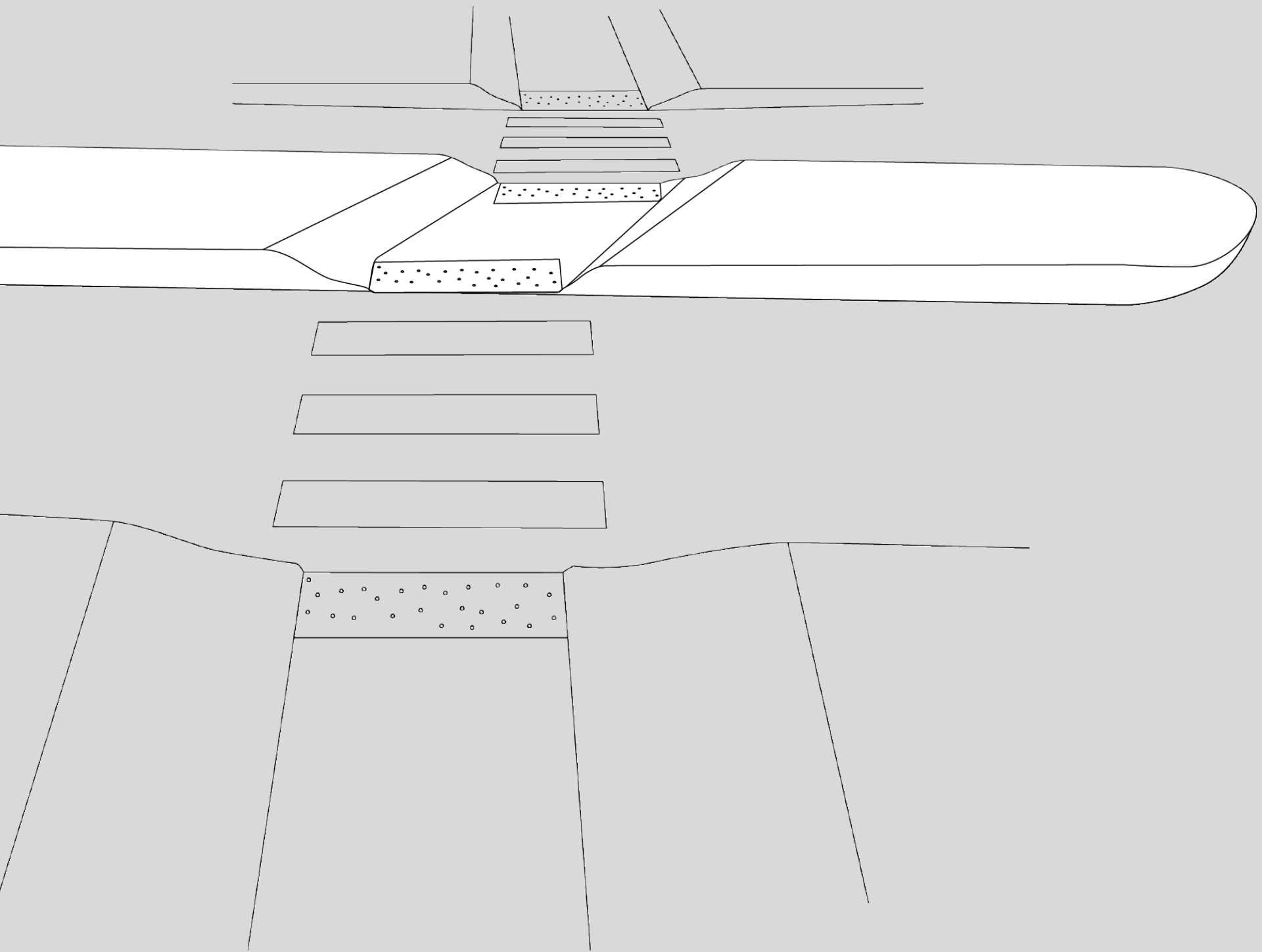
Despite their effectiveness, PHBs are not suitable to all crossings. Unlike the visibility enhancements described earlier, PHBs come with a hefty price tag—about [\\$57,680 on average](#). They also require significant investment in community outreach and education as most people (outside a handful of U.S. cities) are not familiar with their purpose and use.

For these reasons, the FHWA recommends reserving them for high-speed roadways (greater than 40 mph), and high-traffic roadways (AADTs above 9,000) with three or more lanes.



3

COUNTERMEASURE



Pedestrian refuge island

Typically installed in the middle of a two-way street, [pedestrian refuge islands](#) give pedestrians a safe place mid-crossing to stop and wait for drivers to yield. Their presence means that pedestrians can focus on one direction of traffic at a time as they cross, which can be helpful on wide, high-speed road crossings (four or more lanes, with speed limits 35 mph or greater) and for people with disabilities, children, and others who may be less able to cross a two-way road in a single stage.

Another benefit of pedestrian refuge islands is that they provide space to locate additional pedestrian safety devices, including lighting, signage, and flashing beacons. Even without these features, refuge islands can increase crosswalk visibility and calm traffic speeds, briefly narrowing the roadway and bringing drivers' attention to their surroundings.

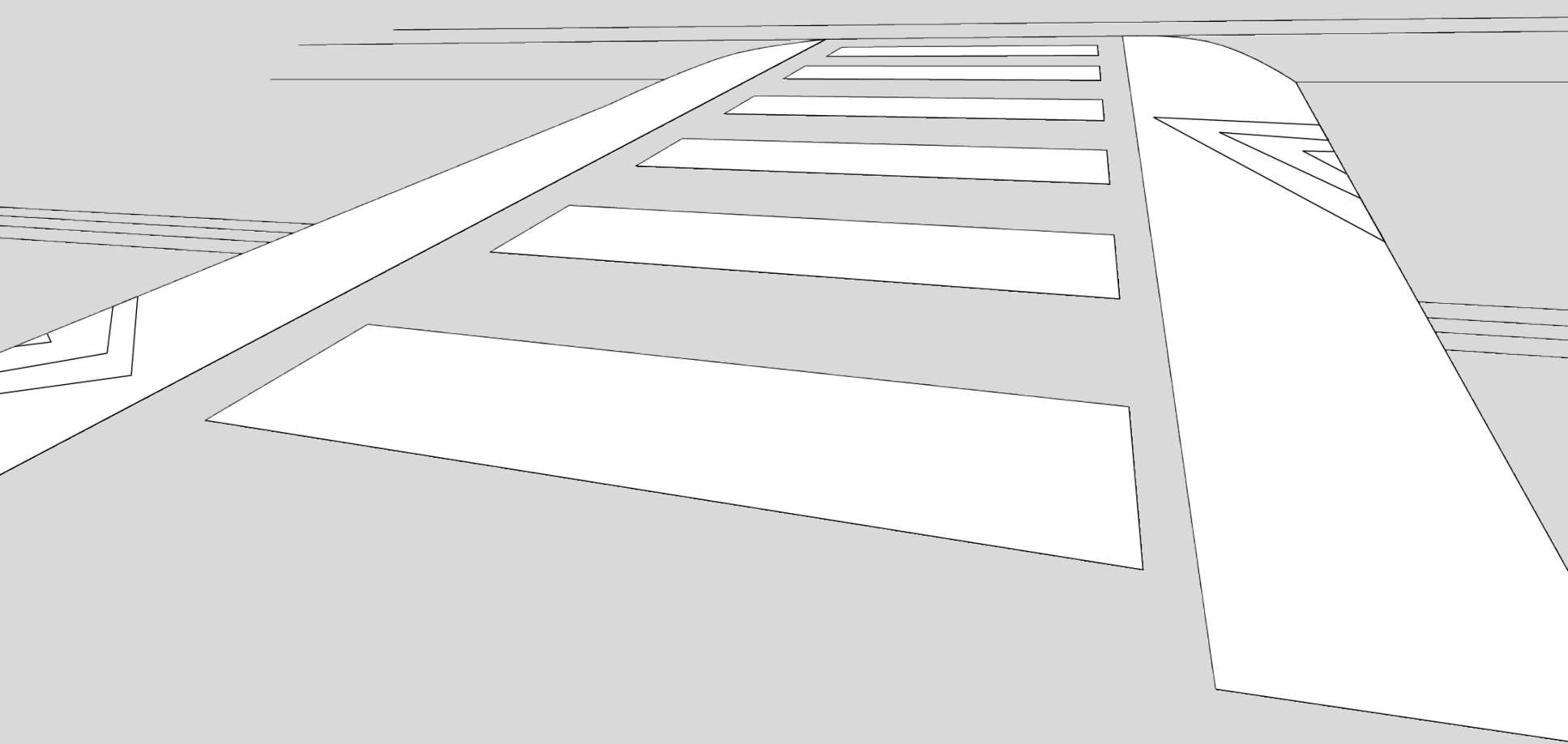


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COUNTERMEASURE

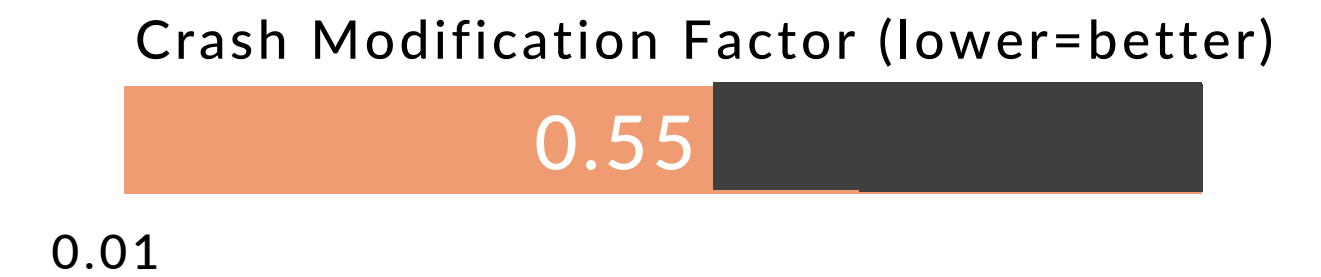


Raised crosswalks

Essentially a speed hump combined with a crosswalk, [raised crosswalks](#) encourage slower speeds while increasing pedestrian visibility and yield rates. The crosswalk is typically marked with paint or high-visibility marking materials, and is raised to the level of the sidewalk, making it more prominent in the driver's field of vision.

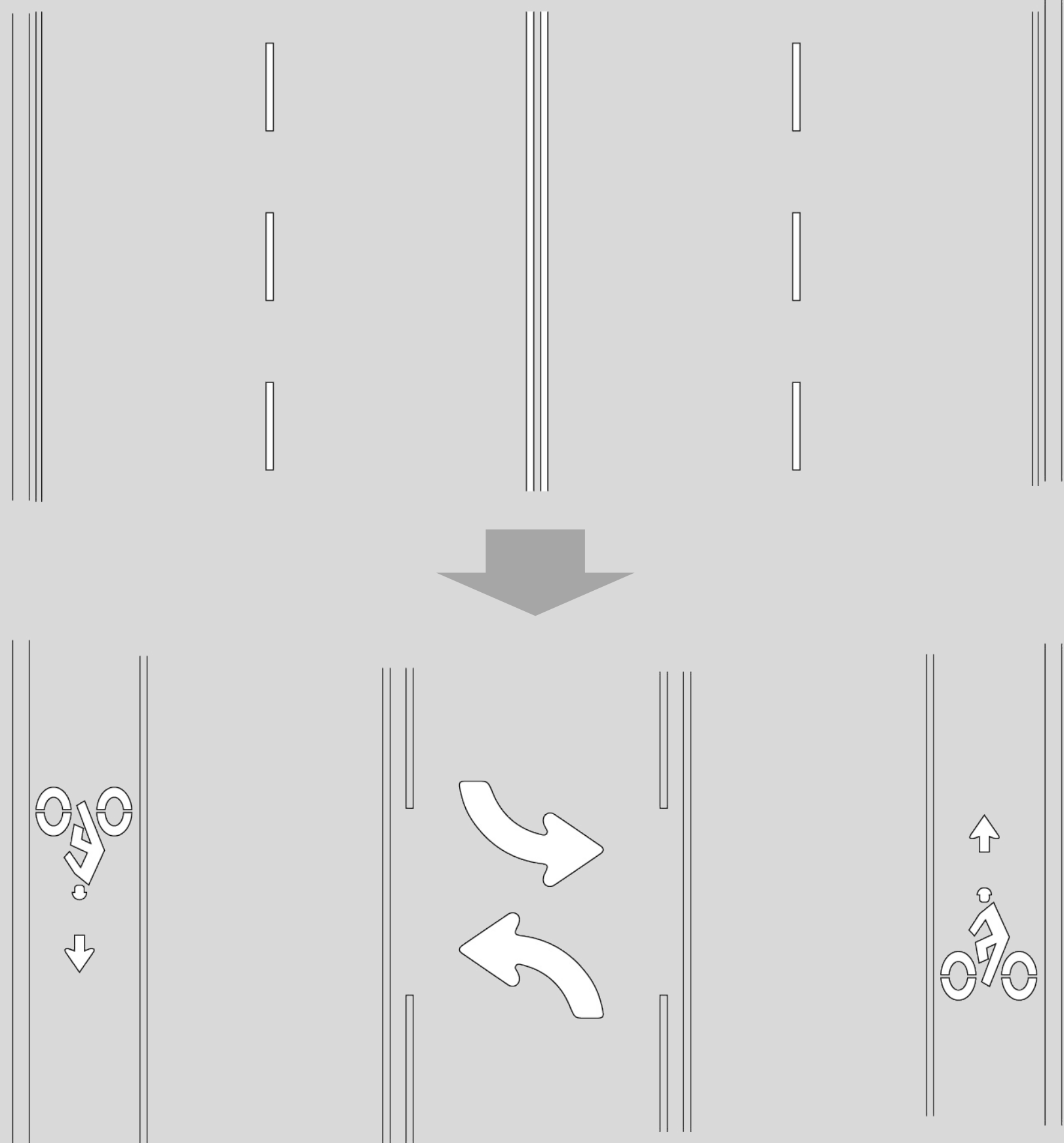
Raised crosswalks are best suited to [local and collector roads](#) (low-to-moderate capacity two- and three-lane roads) with speed limits of 30 mph or less and AADTs below 9,000. They can also be installed in campus settings, shopping centers, and anywhere with a high-traffic pick-up/drop-off zone (airports, schools, community centers, transit hubs, etc.).

Since speed humps can cause discomfort and noise (especially with larger vehicles), the FHWA recommends avoiding them on routes used by buses, heavy trucks, and emergency vehicles.



5

COUNTERMEASURE

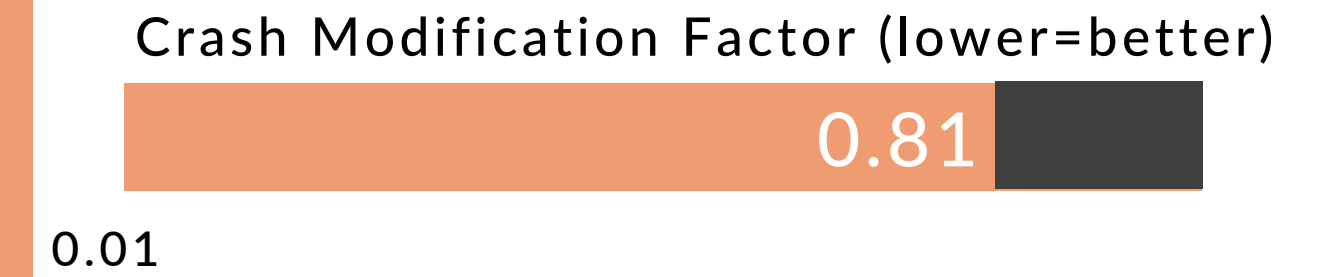


Road diets

A [road diet](#) might sound like the latest food trend, but it's actually a transportation strategy that reduces the number of lanes used for through-travel—typically from four to three. By reconfiguring four lanes (two in each direction) into three (one in each direction, plus a two-way left-turn lane in the middle), engineers can dramatically improve the safety of a road, reducing travel speeds and pedestrian exposure, while freeing up space for bicycles, buses, and amenities.

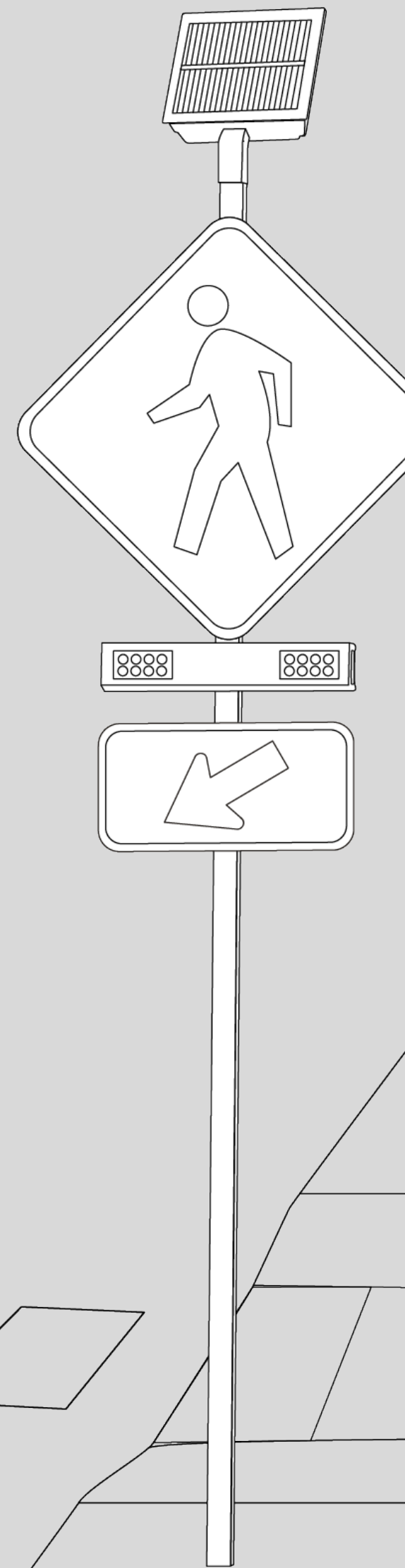
Still, road diets are not recommended for all multilane crossings. The best candidates typically see moderate traffic levels—AADTs of 5,000 to 20,000—though they have been used successfully on roads with AADTs as high as 24,000.

[Research](#) has also shown that they work better on roadways with lower left-turn lane demand, as the center turn lane could become difficult to access if demand is too high. The [FHWA's Road Diet Informational Guide](#) has additional information that can help determine if this countermeasure is appropriate for your crossing.



6

COUNTERMEASURE

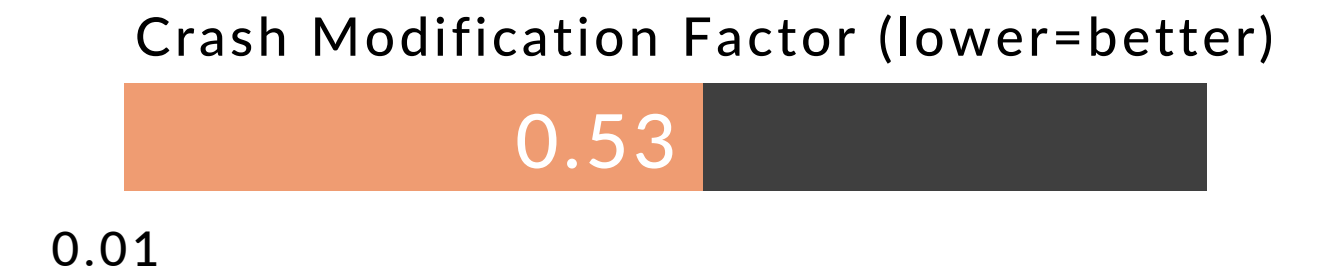


Rectangular rapid flashing beacons (RRFBs)

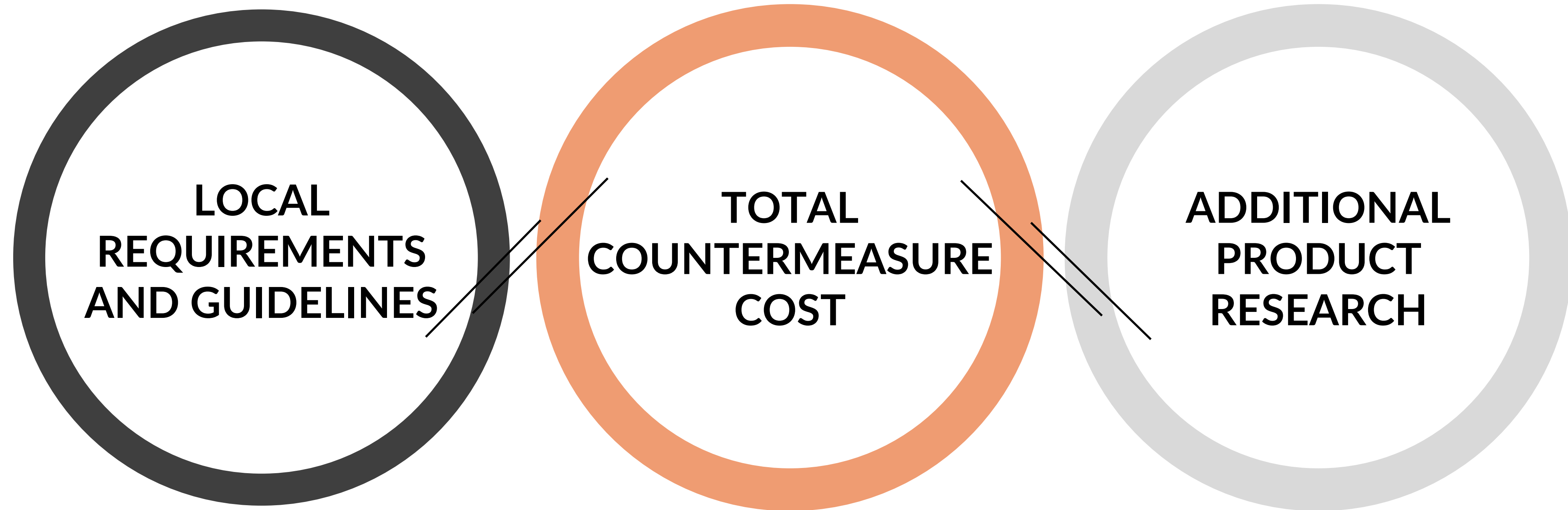
Installed at either side of a marked crosswalk—and sometimes in the middle on a median or pedestrian refuge island—RRFBs are pedestrian-activated flashing beacons that signal to drivers that a pedestrian is present and waiting to enter a roadway. Each device includes a light bar with two high-intensity LED lights that flash in an irregular, attention-grabbing pattern, like the light bars on a police car or ambulance. [Research](#) has shown that they can result in driver yield rates as high as 98% and can [reduce pedestrian crashes by 47%](#).

Unlike larger, overhead systems (e.g. traditional traffic signals), RRFBs can be solar powered, making them much easier and faster to install. They are also a comparably affordable solution, with the average cost estimated at \$22,250, according to the FHWA.

RRFBs are suitable for a wide range of roadways, including pedestrian, school, and trail crossings. According to the FHWA, they are recommended for multilane roadways with speed limits less than 40 mph, where crosswalks feature good sight lines (i.e. not immediately after a curve). They are also particularly effective when used in conjunction with other countermeasures, including advance warning signs, overhead lighting, and pedestrian refuge islands.



OTHER CONSIDERATIONS



WHILE FHWA AND MUTCD RESOURCES ARE HELPFUL FOR BUILDING AN UNDERSTANDING OF BEST PRACTICES AND THE PROS AND CONS OF VARIOUS COUNTERMEASURES, LOCAL CROSSWALK AND PEDESTRIAN PLANS (AT LEAST THE GOOD ONES) OFFER EXPLICIT GUIDANCE FOR DETERMINING WHERE AND WHEN TO INSTALL A CROSSWALK, AS WELL AS EXACTLY WHICH TREATMENTS AND PRODUCTS TO USE.

LOCAL REQUIREMENTS AND GUIDELINES

Take the [City of Portland's Pedestrian Design Guide](#). Beyond laying out the legalities of crosswalks according to Oregon law and Portland's traffic code, the guide provides a baseline frequency for crossing opportunities—generally not farther than 200-300 ft. apart in pedestrian districts—as well as maximum wait times (60 secs), and crossing distances (50 ft) for unsignalized crossings (C-3; C-4). These numbers can help you figure out if your location qualifies as a candidate for a marked crosswalk—if you happen to live in Portland, that is.

Another resource that can be useful at this stage is Approved or Qualified Product Lists (APL/QPLs). These are typically issued and maintained by state Department of Transportations (DOTs) and include thousands of products that have been vetted by engineers and found to be suitable for a given use (e.g. pavement markings, lighting, traffic signals). Their purpose is to provide engineers, contractors, consultants, and the public, with easy access to products that have been proven to perform in compliance with DOT specifications. Most of these lists are [publicly accessible online](#), and some are even [searchable](#).

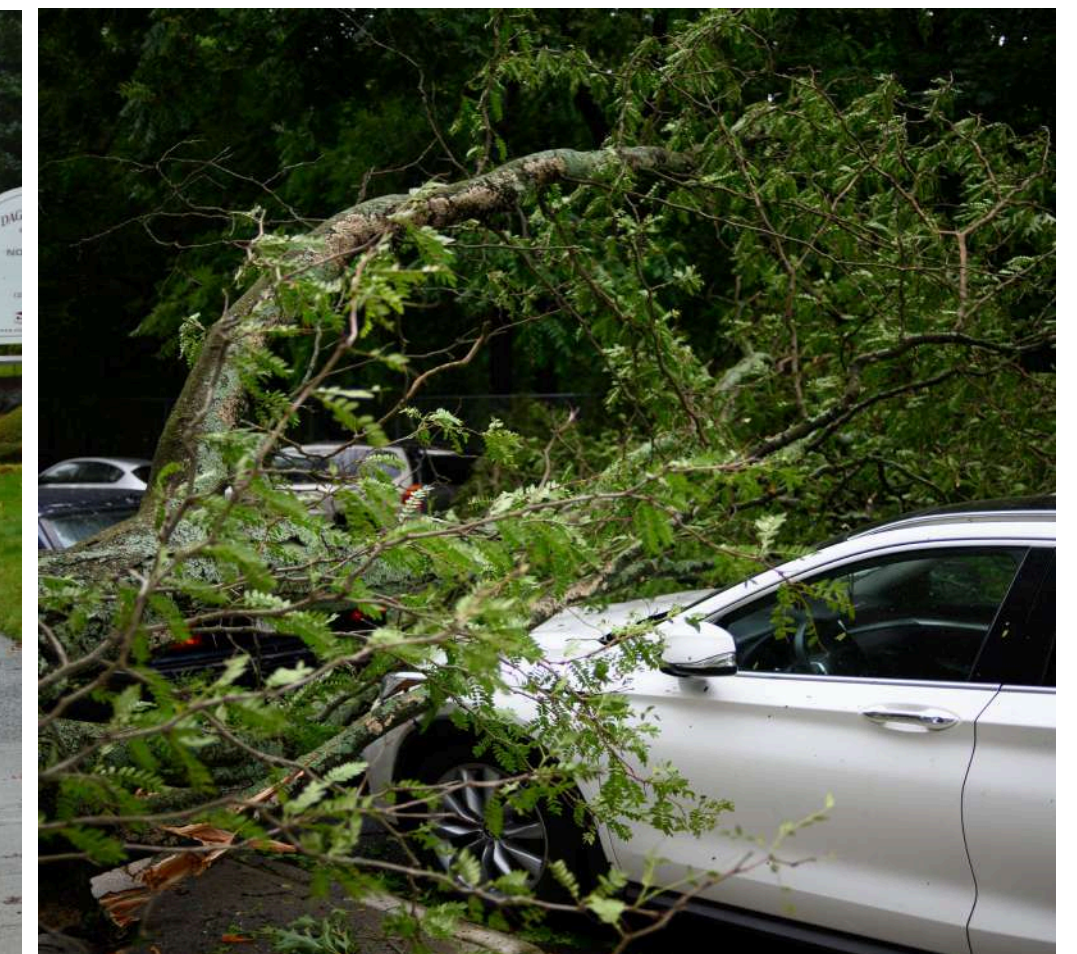
Though some state agencies require projects to use only products included on an APL/QPL, others consider the list as more of a starting point and are open to off-list options. It's also worth noting that the submittal process for APLs/QPLs can be extensive, so if you're unable to locate a product, you can still note down whether the product appears on other states' APLs/QPLs—especially [Florida's](#), which many consider the “industry standard” for transportation technologies.

Finally, some manufacturers provide technical guidelines for their countermeasure products that may be useful. For example, this [RRFB Application Guide](#) includes graphic road layouts, industry best practices, installation examples, and equipment options.

TOTAL COUNTERMEASURE COST

While new roadway projects can cost tens of millions of dollars to construct, most pedestrian-specific infrastructure improvements are comparatively low-cost. Still, costs vary greatly, from a cheap bucket of a paint at one end of the spectrum to a full-featured beacon system with overhead lighting at the other. Many cities simply don't have the budget for these more complex systems, or they may not be the best use of their dollars. Often, it's a choice between investing in one or two high-cost, high-performance systems or dozens of lower-cost, but still highly effective treatments.

It's important to remember, however, that it's not just the cost of the treatment that city planners and engineers need to consider as they compare and evaluate their options. The price tag on the product itself is but a small part of the overall cost of a countermeasure over its lifetime. City officials must also consider the costs of **engineering studies, installation, operation, maintenance, and even replacement.**



Photos by Michael Jin and Raul Nahera on Unsplash

TOTAL COUNTERMEASURE COST



ENGINEERING STUDIES

Start reading any DOT report or guidelines on installing crosswalks and before you get far, you'll encounter some version of the line, "Before undertaking any new project, an engineering study should be performed."

That's because no matter how crosswalk-savvy you become as a result of reading this guide, your city is still going to need a professional engineer to provide "good engineering judgment" and assess your prospective location for things like sight distance, approach speed, illumination, on-street parking, and a slew of other relevant factors.



INSTALLATION

As with all the product costs on this list, installation can range from next-to-nothing to a-whole-lot, depending on who's doing the work, how complex it is, and the scale of the project (the larger the project, the smaller the per-unit installation cost). Sometimes the installation of a countermeasure can necessitate modifications to the existing environment that would not have otherwise been necessary (like adding a raised crosswalk, and finding you also need to relocate a storm drain). Similarly, while the cost of installing a small asphalt or concrete crossing island might not be great, when you factor in landscaping and maintenance, your low-cost countermeasure might not be quite as affordable.



OPERATION AND MAINTENANCE

When it comes to crosswalk safety improvements, there's no such thing as "set it and forget it." Even the simplest of improvements requires upkeep, and upkeep costs money.

Take paint. As previously mentioned, it wears out and needs to be replaced frequently—typically [two to four times per year](#), at a cost of [\\$340-\\$770](#) per repainting. Space those re-paintings out over a few decades, and paint still comes out ahead, but by a much narrower margin. At the other end of the countermeasure cost spectrum, traditional traffic signals have an up-front purchase and installation cost of about [\\$250,000-\\$500,000](#). That's a big price tag, and it's still not the full picture—electrical bills and routine maintenance add another \$8,000 per year.

ADDITIONAL PRODUCT RESEARCH

Understanding what's going to work for your neighborhood will depend greatly on the infrastructure that's already in place – but don't be deterred! Looking at new technologies like thermoplastic paint or solar-powered beacons that don't require wire trenching or monthly utility bills can provide huge cost savings over a countermeasure's lifetime. A little extra product research could help strengthen your case.

Average costs for many crosswalk safety countermeasures are included in this toolkit. You can find additional cost estimates in a [2013 report](#) prepared for the FHWA by the UNC Highway Safety Research Center (the original source for the estimates provided by STEP). Note that there can be significant variability within a product category. For example, the average price of an RRFB given is \$22,250, but it also states a range from \$4,520 to \$52,310—a difference of almost \$50,000!

There are several factors that can influence this variability from geography to order quantity to feature sets. If you're comparing two seemingly similar products and noticing wildly different price tags, ensure you're “comparing apples to apples” by reviewing their [spec or data sheets](#), which can typically be found on manufacturers' websites. You don't necessarily need to understand all the technical specifications, but by collecting a few of these documents, you can gain a better understanding of how different products compare, and pass that information along to an engineer who is better equipped to evaluate it. Other documents like case studies can also be helpful.

Tools for the job

- [Federal Highway Administration STEP program](#)
- [Governors Highway Safety Association: Pedestrian Traffic Fatalities by State](#)
- [National Highway Traffic Safety Administration Fatality Analysis Reporting System](#)
- [FHWA report: Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations](#)
- [Example of an approved or qualified product list](#)
- [Example of a product specification sheet](#)
- [Example of a product case study](#)

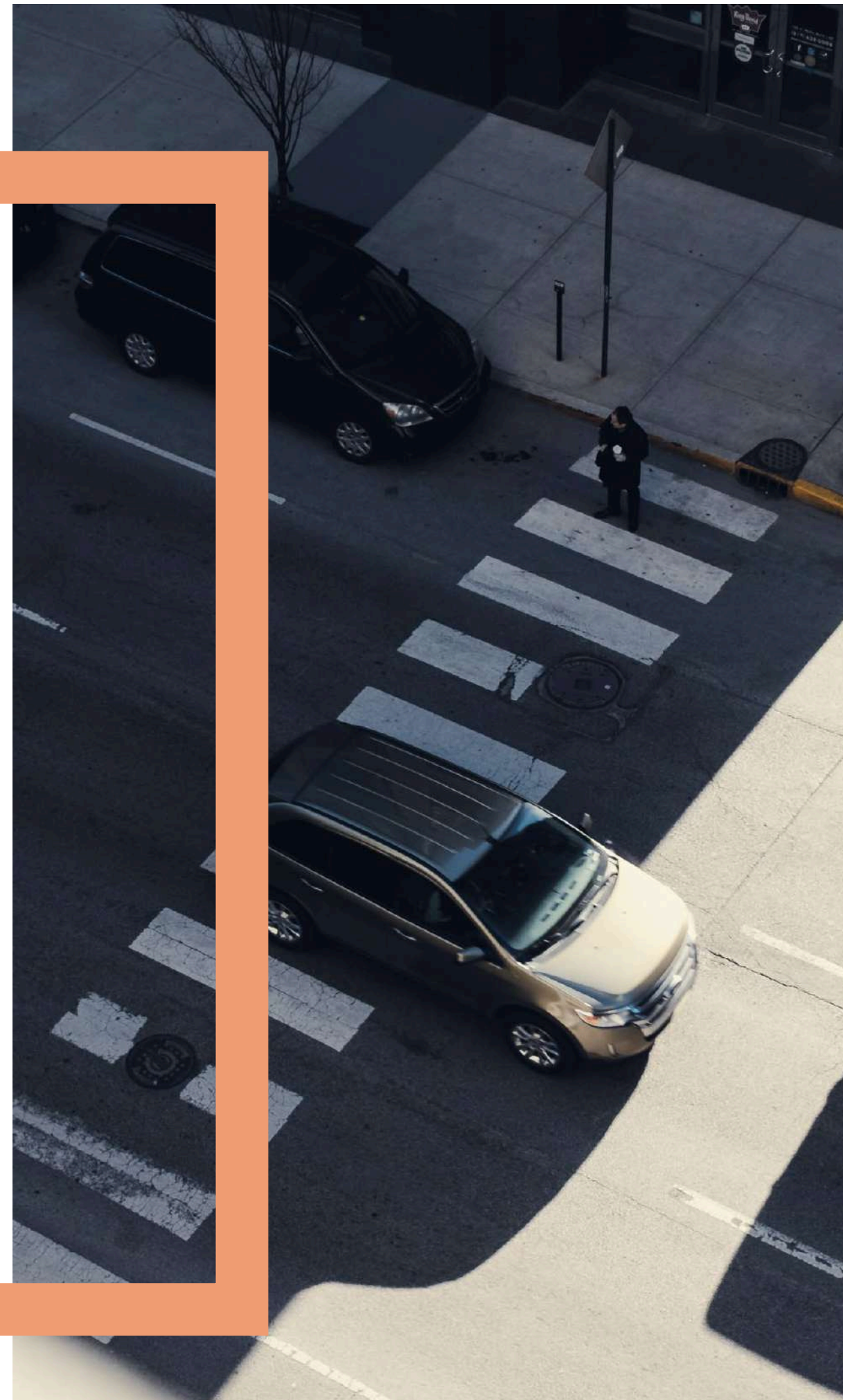


Photo by David Lee on Unsplash



CONCLUSION

Though it would be convenient for city planners and engineers if pedestrians always crossed at established intersections, observed pedestrian behavior (and personal experience) tells us this simply isn't the case. Most people will opt for the shortest route possible to their destination, even if it means negotiating several lanes of fast-moving traffic on an unlit roadway.

Unsignalized crosswalks with adequate safety countermeasures acknowledge this basic fact, creating safer, more visible, and more direct routes without forcing pedestrians to walk to the nearest intersection—or to cross at random, unpredictable, and dangerous locations. With the right location and treatment (two topics covered in-depth by this guide), they can improve outcomes for not only pedestrians but all road users, decreasing speeding, reducing crashes, and encouraging active, sustainable modes of transportation.

To learn more about this topic, please visit carmanah.com.

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