



New Orleans, LA

NEW ORLEANS SAFETY ACTION PLAN



04















The New Orleans Engineering Safety Toolkit

This document and the information contained herein, is prepared for the purpose of identifying, evaluating, and planning safety improvements on public roads, which may be implemented utilizing federal aid highway funds. This information shall not be subject to discovery or admitted into evidence in Federal or State court pursuant to 23 U.S.C. 407.

Proven Systemic Safety Countermeasures

There are many tools and resources that can improve transportation safety for all roadway users. The Federal Highway Administration (FHWA) Proven Safety Countermeasures initiative is a collection of countermeasures that have been proven through research to decrease serious injuries and fatalities on















roadways throughout the country. FHWA recommends potential countermeasures based on roadway characteristics such as land use, traffic volumes, crash history, and more to help communities across the country improve roadway safety.

SPEED MANAGEMENT	PEDESTRIAN / BICYCLIST		ROADWAY
 <p><u>Appropriate Speed Limits for All Road Users</u></p>	 <p><u>Bicycle Lanes</u></p>	 <p><u>Crosswalk Visibility Enhancements</u></p>	 <p><u>Enhanced Delineation for Horizontal Curves</u></p>
 <p><u>Speed Safety Cameras</u></p>	 <p><u>Medians & Pedestrian Refuge Islands</u></p>	 <p><u>Pedestrian Hybrid Beacons</u></p>	 <p><u>Median Barriers</u></p>
 <p><u>Variable Speed Limits</u></p>	 <p><u>Road Diets</u></p>	 <p><u>Rectangular Rapid Flashing Beacons (RRFB)</u></p>	 <p><u>SafetyEdge</u></p>
	 <p><u>Walkways</u></p>	 <p><u>Leading Pedestrian Interval</u></p>	

The City of New Orleans can proactively address safety by implementing safety countermeasures on roadways with characteristics that can lead to fatal and serious injury crashes by integrating countermeasures into existing or planned roadway projects, resurfacing or maintenance work, or full reconstruction

projects. The selection and design of safety countermeasures should be decided through the lens of the Safe System Approach.

The following list includes hyperlinks with an overview and description of each countermeasure’s effectiveness in improving safety.

DEPARTURE	INTERSECTIONS		CROSSCUTTING
 <p><u>Longitudinal Rumble Strips and Stripes on Two-Lane Roads</u></p>	 <p><u>Backplates with Retroreflective Borders</u></p>	 <p><u>Corridor Access Management</u></p>	 <p><u>Lighting</u></p>
 <p><u>Roadside Design Improvements at Curves</u></p>	 <p><u>Dedicated Left-and Right-Turn Lanes at Intersection</u></p>	 <p><u>Reduced Left-Turn Conflict Intersections</u></p>	 <p><u>Local Road Safety Plans</u></p>
 <p><u>Wider Edge Lines</u></p>	 <p><u>Roundabouts</u></p>	 <p><u>Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections</u></p>	 <p><u>Pavement Friction Management</u></p>
	 <p><u>Yellow Change Intervals</u></p>		 <p><u>Road Safety Audit</u></p>

Safety Toolkit

The Priority Safety Projects detailed in Chapter 5 include a number of common safety engineering and design recommendations. This safety toolkit provides a more detailed overview of these design elements, including a general description, planning and design considerations, and a summary table of their intended safety outcomes.

The Safe System Approach stresses that 1) redundancy is critical—these design tools are meant to be applied in conjunction with other

safety elements, not singly; and 2) safety is proactive—these are measures that should be deployed systemically, not just at a few locations with a certain crash history.

To achieve the goals of this Plan, the City must coordinate internally and partner with LaDOTD, developers, business owners, and local residents to determine the most appropriate and contextual application of these design elements across infrastructure projects at all levels.

Access Management

For streets with frequent curb cuts and driveways, vehicle turning movements create conflict, increase crash risk, and may significantly hamper traffic operations. Access management elements offer a way to improve both safety and operations on roadways where traffic volumes, conflicts, and delays are high. These designs also provide for greater safety and visibility for VRUs, and can encourage increased walking, rolling, bicycling, and transit use as preferred travel alternatives.

Types of access management for the City of New Orleans to consider include:

- Half closures which restrict access from one direction onto a street
- Driveway consolidation to reduce the number of conflict points between sidewalk or bikeway users and drivers
- Driveway narrowing to slow turning vehicle speeds
- Right-in / right-out restrictions to force drivers to turn right onto a street, preventing left-turning conflicts

When properly designed, access management features allow for emergency access and efficient transit operations, while restricting riskier vehicle movements and reducing conflicts between modes.

Planning and Design Guidance

Provide accessible routes for people walking and rolling through access control features using flush surfaces and curb ramps at crossings. Provide bike and pedestrian crossing warning signage (signs W11-2 or W11-15) where bicyclists and pedestrian crossings may be unexpected.

Maintain emergency vehicle and transit access by considering the larger wheelbases of those vehicles when designing elements such as diverter islands. Mountable curbs and widths clear of landscaping and vertical elements allow larger vehicles to encroach on barriers when turning. Also ensure that drainage and debris removal are considered in the design of access management features.

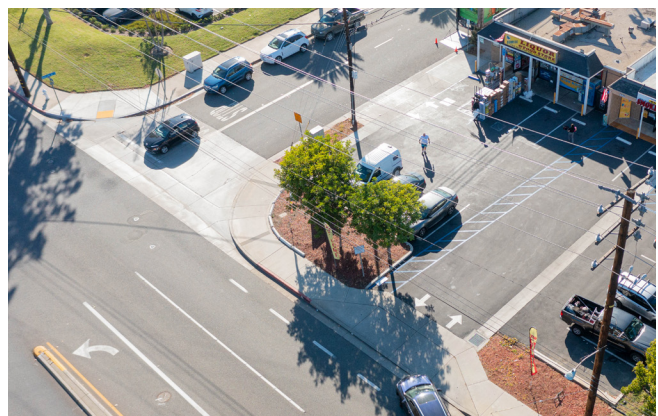


FIGURE 11 Access Management
An example of driveway narrowing and median access management strategies in Costa Mesa, CA.

Crosswalks

Well-designed crosswalks are important to create pedestrian friendly environments. Safety for all pedestrians, especially for those with limited mobility and with disabilities, is a key criterion informing crosswalk design. Marked crosswalks indicate a designated path for people walking and rolling through intersections, mid-block crossings and high-volume driveways.

Curb extensions can contribute to safer crosswalks by shortening the crossing distance and therefore reducing pedestrian exposure to motor vehicles. Raised crossings, where crosswalks are elevated to reduce or eliminate the transition from the sidewalk to the street crossing, can be used for traffic calming and to improve motorist yielding to people walking, rolling, and bicycling at certain mid-block crossings and intersections.

Planning and Design Guidance

Continental crosswalk striping should be used in all locations except in locations where crosswalks consist of brick paver material. Install ADA-compliant curb ramps (or blended transitions for raised crosswalks) to connect to accessible routes when constructing new crosswalks. Crosswalks should be as wide or wider than the connecting sidewalk. At controlled intersections, provide a stop bar in advance of the crosswalk and consider signal timing guidance that prioritizes pedestrians at signalized intersections.

Consider the location of vehicle stop bars based on the design vehicle's turning envelope. Restrict on-street motor vehicle parking at least 20 feet in advance of the crossing to provide adequate sight distance. Depending on context, signage, paint, or curb extensions or other strategies to daylight crosswalks may be appropriate.

Crosswalks may be used at mid-block crossings with the appropriate infrastructure—rectangular rapid flashing beacons (RRFBs), pedestrian hybrid beacons (PHBs), median refuges, warning signage, and other elements—as appropriate.

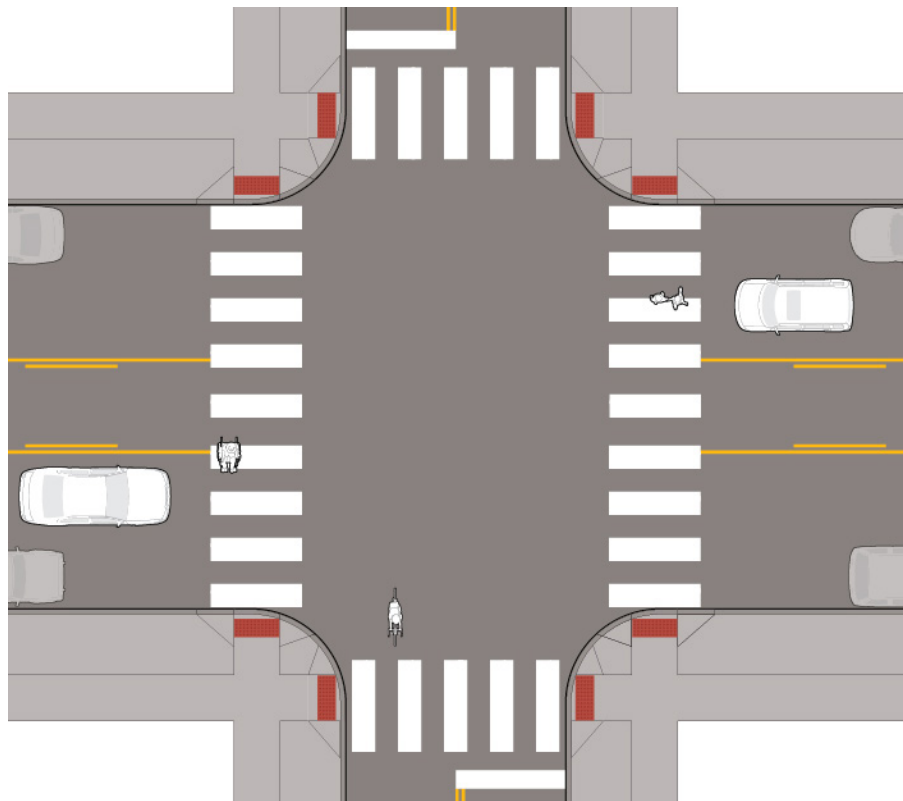


FIGURE 12 Crosswalks
Crosswalks are vital for pedestrian safety with marked and high-visibility options.

Curb Extensions

Extending the curb beyond the sidewalk or buffer edge shortens crosswalk length and increases visibility of people walking and rolling, particularly where there is on-street parking. Curb extensions are also effective tools for narrowing streets or tightening intersections to reduce motor vehicle turning speeds. Curb extensions may also be used to create a chicane for traffic calming effects, or a bus bulb, prioritizing efficient transit operations through in-lane stops and providing safer boarding and alighting.

Planning and Design Guidance

Keep corner radii as small as possible while still accommodating the vehicle for which the corner was designed. Provide accessible curb ramps at each crosswalk, except in the case of raised crosswalks or intersections, where tactile warnings should instead be used. Ensure curb extensions do not impede stormwater management and drainage criteria. Consider any maintenance impacts for cleaning and maintenance of stormwater

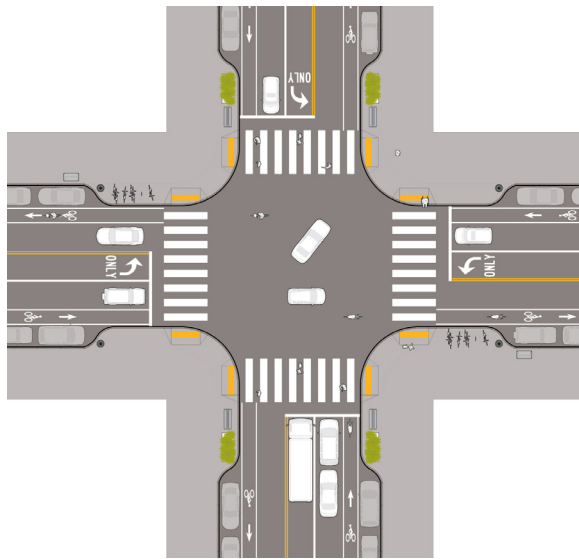


FIGURE 13 Curb Extension Design
Curb extensions improve pedestrian visibility and enhance street safety by narrowing roadways and tightening intersections.

facilities. Incorporate green infrastructure into curb extensions to collect stormwater and provide a planting area where appropriate. Accommodate large design vehicles with mountable curbs or more low-profile aprons while keeping corner radii tight to maintain slow turning speeds. As per the MUTCD, the location of the pedestrian pushbuttons, or the use of pedestrian detection is an important consideration here. Depending on the location of the signal poles, supplemental poles at the crosswalks may be required for the pushbuttons.

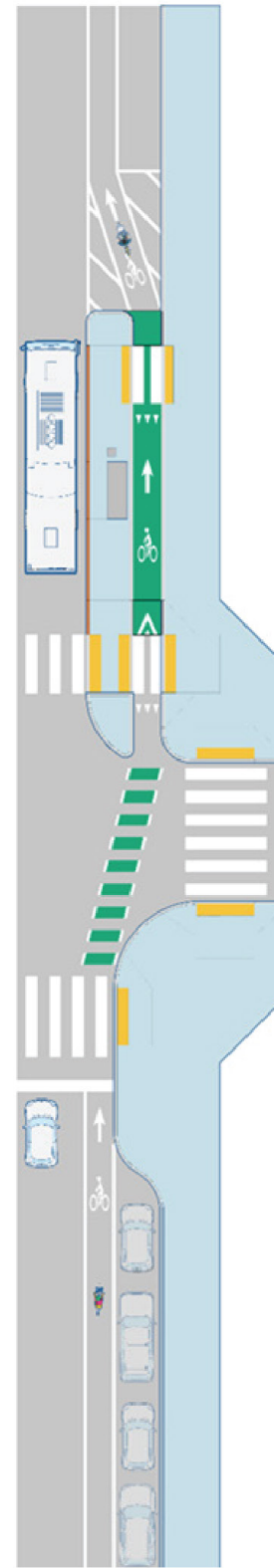


FIGURE 14 Curb Extension Design
A floating bus stop and separated bike lane barrier can function as curb extensions—either as separate or joint facilities.

Decreased Corner Radii

Corner design has a significant effect on how well an intersection serves the diversity of roadway users. A well-designed intersection with appropriate corner radii helps slow turning vehicles, improve visibility, and can improve yielding compliance.

Two of the most important corner design elements are the effective corner radius and the actual curb radius. Actual curb radius refers to the curve that the face of curb line makes at the corner, while the effective corner radius refers to the curve which motor vehicles follow when turning, which may be affected by on-street parking, bicycle lanes, medians, and other roadway features. A smaller effective corner radius requires drivers to make a tighter turn, reducing the speed they can carry to comfortably navigate the turn. Conversely, a larger effective corner radius allows drivers to carry more speed through a turn, increasing the risk to vulnerable roadway users, lengthening stopping distances, and decreasing the likelihood of a driver to yield to a crossing pedestrian or bicyclist

Corner radii considerations are foundational to street geometric design and are applicable to all street types.

Planning and Design Guidance

Roadway designers in New Orleans should select the smallest possible design vehicle when designing intersections, considering the volume and frequency of vehicles that will traverse the intersection. Intersection design should strive for an actual curb radius that is between 10 and 20 feet. While pedestrian safety is negatively affected by wide crossings, pedestrians are also placed at risk if the curb radius is too small and the rear wheels of a truck track over the pedestrian waiting area at the corner. Maintenance problems are also caused when trucks must regularly drive over street corners to make turns. In locations where larger design vehicles need to be accommodated, practitioners can take a two-stage approach that still slows smaller design vehicles through the use of mountable truck aprons. These elements cause smaller vehicles to traverse intersections more slowly while still accommodating larger vehicles that can track over the mountable elements to make a turn.

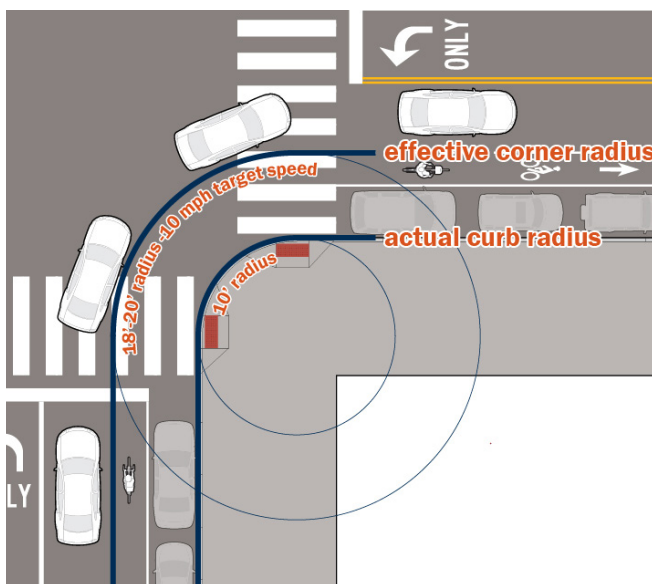


FIGURE 15 Mountable Truck Aprons

Mountable truck aprons facilitating turns for all vehicles to optimal corner radii ensuring comfortable driving speeds.

Lane Configuration

Vehicle travel lanes make up the largest portion of the roadway on most streets. Safe multimodal streets often minimize the number and width of travel lanes to the safest extent possible to maintain the narrowest cross section and allow room to accommodate other modes. Travel lanes will have the greatest impact on the availability of space on public streets. In creating project plans that minimize delay to motor vehicles, planners may simultaneously prioritize the safety and comfort of vulnerable roadway users. This supports the comfort of other users of the street, reduces speeding, and decreases impervious surfaces.

Travel lanes may be reconfigured to reduce overall roadway width, with the possibility of repurposing motor vehicle travel lanes for the space and comfort of people walking, bicycling or using public transit. When measuring lane width for vehicle use, the lane should be measured to the face of curb, inclusive of any gutter.

Planning and Design Guidance

There are two main ways to reduce space dedicated to vehicle travel lanes—a road diet and a lane narrowing. A road diet reduces the number of lanes. A lane narrowing reduces the width of the lanes but maintains the number of lanes. General travel lanes may be 10 feet. Curbside travel lanes that are on bus routes should accommodate buses by using a minimum width of 11 feet. Curbside travel lanes in areas with heavy freight truck traffic may also need 11' travel lanes to accommodate the full width of the trucks.

A road diet from four to three lanes is most common and results in two travel lanes with a turn lane in the center. This is often as productive (or more productive) than a four-lane configuration with two lanes in each direction and no dedicated turn lane. Consider vehicle volumes, throughput, and turning movements for efficient use of travel lanes. The minimum width of the center turn lane is 12 feet. General travel lanes may be 10 feet wide.

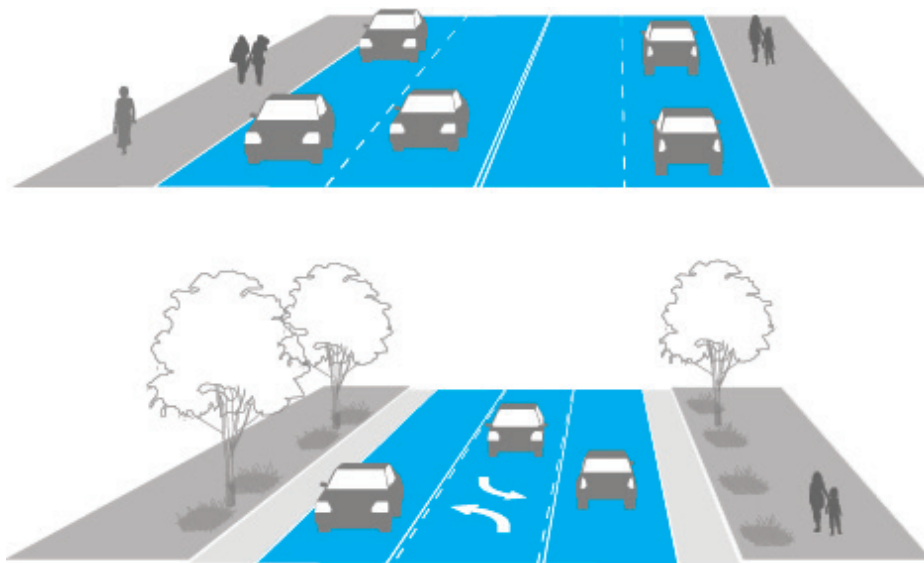


FIGURE 16 Travel Lanes

Travel lanes should be minimized to the extent possible to maintain the narrowest cross section and support the comfort of other road users, such as people walking, rolling, or bicycling.

Reconfiguration of the roadway may also require significant reconfiguration of signalized intersections and may require a complete rebuild of traffic signals. While many existing streets have multiple lanes to accommodate vehicular throughput, wider roadways are counter to other local and regional goals including safety, multimodal connectivity, livability, and air and water quality.

Pedestrian Signal Priority

Pedestrian signals are part of a system of traffic signals that control intersection operations for people walking and rolling. Pedestrian signal phasing is intended to minimize exposure of people walking and rolling to motor vehicles, minimize delay for people waiting to cross the street, reduce noncompliant and unsafe crossing behavior, and provide accessibility benefits to people with disabilities. Pedestrian phasing falls into three categories: concurrent with vehicles, exclusive to pedestrians, or a hybrid of the two. Lead pedestrian intervals are a hybrid that give pedestrians 3-7 seconds to begin crossing prior to signals turning green, thus improving safety and visibility of pedestrians.

Planning and Design Guidance

A walking and rolling speed of 3.5 feet per second should be used to time all pedestrian phases and provide adequate time for people to cross the street. Consider protected only left turn phasing and prohibiting right turns on red to better protect pedestrians against right- or left-turning vehicles.

Use accessible pedestrian signals that provide timing cues in nonvisual forms—audible tones, verbal messages, and vibrating surfaces. Accessible pedestrian signals (APS) can provide information such as existence/location of pushbutton, beginning of WALK interval (most critical information, needed on any APS), and direction of crosswalk and location of the destination curb. Accessible pedestrian signals can also provide information on intersection street names in Braille, raised print, or speech messages.

The ideal placement of pushbutton-integrated APS is between 1.5 and 6 feet from the edge of the curb, shoulder, or pavement and between the edge of the curb ramp and edge of the crosswalk, on the side farthest from the center of the intersection.

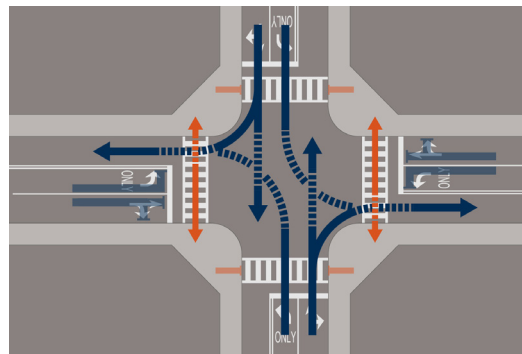


FIGURE 17 Concurrent Phasing

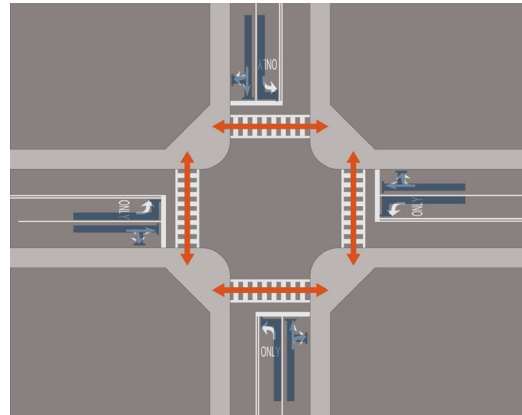


FIGURE 18 Exclusive Phasing

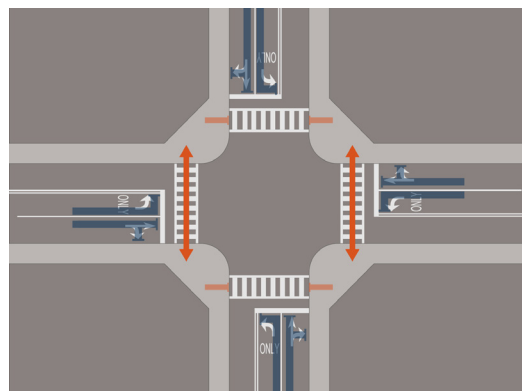


FIGURE 19 Leading Pedestrian Interval Phase 1

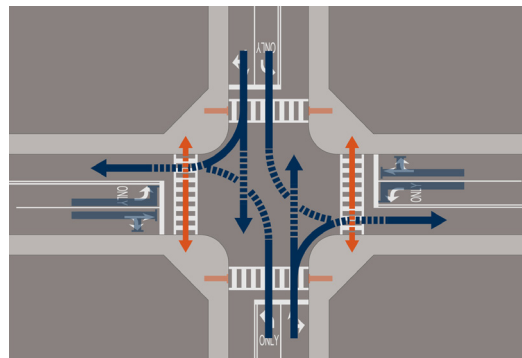


FIGURE 20 Leading Pedestrian Interval Phase 2

Protected Intersection

Protected intersections maintain bicyclist separation in a separated bike lane or side path up to the intersection using corner islands (vertical elements or curbing) to separate bicyclists from traffic. This treatment may be used at signalized and unsignalized intersections and driveways.

Planning and Design Guidance

At uncontrolled approaches of intersections and at signalized intersections where turning vehicles and bicycle through movements are expected, designers should offset the bicycle crossing between 6 and 16.5 ft. from the adjacent motor vehicle lane. This treatment creates a yielding space for motorists and has been shown to reduce crashes at uncontrolled and permissive conflict locations.

A conventional or buffered bike lane can be transitioned to a protected bike lane and follow the design of a protected intersection to increase the comfort of the bikeway at the intersection. Designers should consider this design as vehicle operating speeds reach 35 mph or higher.

At some locations, protected intersection treatments may not be feasible due to operating speeds or motor vehicle turning volumes. In these cases, as well as locations where a bicycle lane transitions to a shared roadway, a wide sidewalk or shared use path at sidewalk level may offer an alternative to riding in mixed traffic. Designers should consider using a bicycle ramp to provide an option for bicyclists to exit the roadway onto the side path prior to the intersection.



FIGURE 21 Protected Intersection

Protected intersections improve safety and comfort for people bicycling or walking by reducing conflicts with vehicles, slowing turning speeds, and making movements more predictable (Photo Location: Chicago, IL)

Roadway Lighting

Roadway lighting is essential for enhancing safety and visibility for all road users, with a focus on motorists. It helps reduce the risk of crashes by illuminating potential hazards, improving sightlines, and increasing overall awareness during nighttime or low-light conditions. Effective lighting is particularly important in areas with high foot traffic, such as intersections, pedestrian crossings, and urban environments. Additionally, it can enhance the aesthetic appeal of streetscapes, encouraging outdoor activities and contributing to a sense of security within communities.

Planning and Design Guidance

Roadway and pedestrian lighting illuminate the street similarly but for different purposes. Roadway lighting should be designed to provide accurate and comfortable visibility in low light conditions for drivers to detect, identify, and react to hazards in an adequate period of time.

The spacing and provision of lights should be based on AASHTO's light level requirements and other industry best practices. Within divided streets, roadway lighting is often placed within the median. This is an efficient means to reduce the number of foundations and poles, by using dual arms to illuminate both directions of travel. When located along the roadway edge, they may have an additional arm to illuminate the pedestrian and/ or bicycle facilities. They can also serve a dual purpose with brackets for decorative banners, signage, and seasonal lighting display.

Designers should also consider lighting for transit stops and stations where roadway or pedestrian-scale lighting does not provide sufficient illumination of passengers waiting, boarding, or alighting buses and streetcars.

Key considerations include minimizing light trespass, particularly in mixed-use and high-density residential areas and opting for Dark Sky-approved fixtures to reduce light pollution and environmental impact. Provide adequate space for the requisite transformer, meter, and control box, yet ensure this equipment does not interfere with the pedestrian accessible route. Care should be taken to encourage comprehensive, thoughtful placement

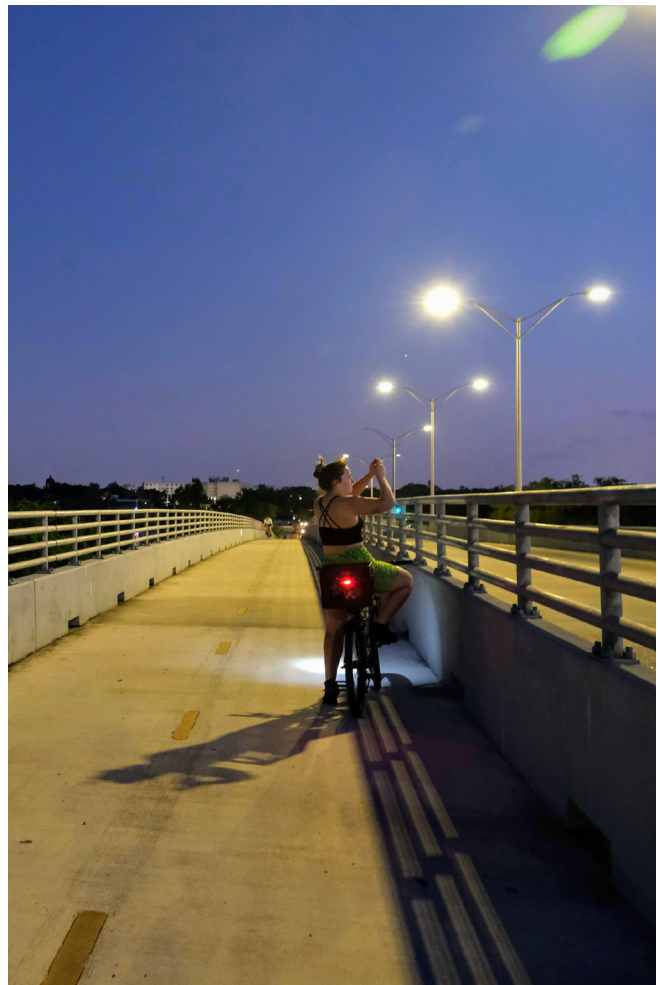


FIGURE 22 Roadway Lighting

Roadway lighting enhances visibility and safety for pedestrians and vehicles, creating a welcoming and well-lit environment that encourages outdoor activity and community engagement. (Photo Location: New Orleans, LA)

Separated Bike Lanes

Separated bike lanes (SBLs), also called protected bike lanes or cycle tracks, provide a greater physical distance from motorized travel making them more attractive to a wider range of bicyclists than traditional striped bike lanes, particularly on higher volume and higher speed roads. SBLs are intended for exclusive use by bicyclists and other micromobility users—they are not intended for pedestrians.

SBLs require both horizontal separation and vertical separation to be effective, safe, and comfortable for users of all ages and abilities. Vertical barriers provide both a perceived and real protection from motorized vehicles and can consist of a variety of elements, including flex posts, low-profile composite curbs, planters, concrete barriers, and temporary or permanent curbs/medians. Vertical separation can also be used to protect multi-use paths.

This facility type is best used for bikeways on or adjacent to streets with actual operating speeds over 30 mph or where average daily traffic exceeds 6,000 vehicles per day.

Planning and Design Guidance

Determining bike lane and buffer widths involves considerations of traffic operations, anticipated peak hour bicycle and micromobility volume, and roadway width constraints. Where widths are constrained and vehicle speed and volume necessitate separated bike lanes, designers should first consider narrowing or reconfiguring motor vehicle travel and parking lanes to allocate sufficient space for safe bicycle travel. In addition to the buffer space, maintain a minimum bike lane width of 5' for one-way SBLs and 8' feet for two-way bikeways, to ensure bicyclists can safely pass other bicyclists and micromobility users.



FIGURE 23 Separated Bike Lane
The graphic above shows various SBL configurations.

Signalization Improvements

Traffic signal design and operation play a critical role in reducing conflicts between roadway users and improving safety at intersections. Adjustments to signal timing, phasing, and operational strategies can reduce conflicts between vehicles and vulnerable roadway users, improve compliance with traffic control devices, and support safer crossings for pedestrians and bicyclists, as noted above in "Pedestrian Signal Priority."

Signalization strategies can also clarify right-of-way, reduce delay that may lead to noncompliant behavior, and support transit and emergency vehicle operations. Improvements to signal timing and phasing may be implemented individually or in combination, depending on roadway context, traffic volumes, and the presence of vulnerable roadway users.

Planning and Design Guidance

Signal cycle lengths refer to the total time required for a signal to complete all phases and can influence pedestrian delay and intersection safety. Cycle lengths should balance efficient vehicle progression with adequate pedestrian crossing time and

should avoid excessively long delays that may encourage unsafe crossings.

Vehicle turn restrictions such as No Turn on Red or protected-only turning phases can reduce conflicts between turning vehicles and pedestrians or bicyclists at intersections with high volumes of vulnerable roadway users or documented turning crashes.

Bicycle signals provide dedicated signal indications for bicyclists and help clarify right-of-way at intersections where bicycle facilities intersect with motor vehicle traffic, particularly where separated bike lanes or complex turning movements are present.

Emergency and transit signal priority technologies allow emergency vehicles or transit vehicles to receive preferential signal timing, improving emergency response times and transit reliability while maintaining safe and predictable intersection operations.

Rest-in-red signal operation maintains a red indication for the primary roadway until a vehicle, bicycle, or pedestrian is detected, helping to reinforce speed compliance and improve safety on lower-volume or neighborhood streets.



FIGURE 24 Signalization Improvements

Signalization improvements should be timed, phased, and designed to improve safety, clarify right-of-way priority, and reduce conflicts at a crossing. (Photo Location: New Orleans, LA)

Transit Stop Improvements

Transit stops provide a safe, designated waiting area for passengers. The installation of bus shelters and lighting is encouraged, especially at stops with high boarding activity, frequently used stops, and stops serving more vulnerable passengers, like those near schools and senior centers. Benches, trash and recycling receptacles, and bike parking are other amenities that are often co-located with bus stops to provide additional comfort and functionality within the public transit system. Transit stops should be planned in conjunction with sidewalk and bicycle facilities for beginning and end-of-trip needs, and may also be considered in placemaking strategies.

Planning and Design Guidance

Transit stop location and siting are crucial to safer, more efficient operations. Designers should consider the proximity of safe street

crossings, accessible routes, and nearby destinations. Transit stop designs should also adhere to the standards and needs of the New Orleans Regional Transit Authority (RTA).

A clear pedestrian access aisle of at least 5 feet wide must be preserved behind the transit stop and the back of the sidewalk or nearest building facade. Install solar lighting where solar exposure is adequate.

Where possible, provide bench seating under the transit stop shelter, with an accessible clearance area that is 30 inches wide by 40 inches long. Include transparent wall panels in all shelters to promote feelings of personal safety and security.

Consider providing real-time information displays with bus arrival times, delays on connecting lines, weather and news.

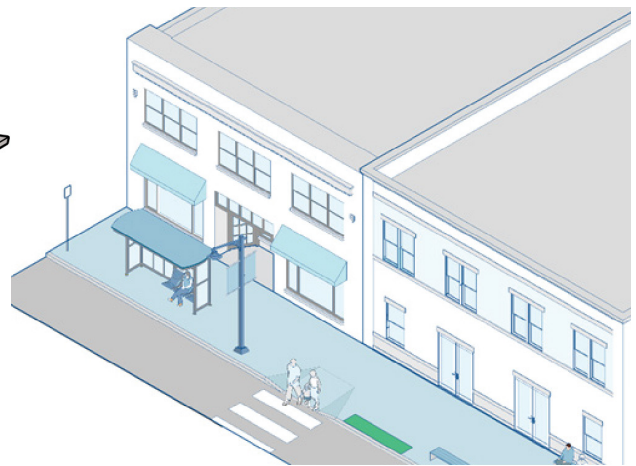
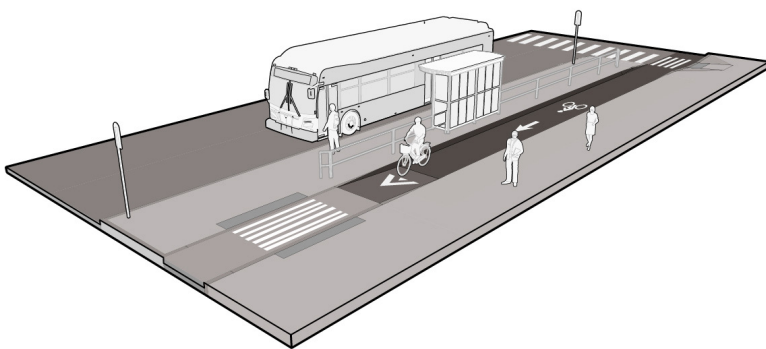


FIGURE 25 Transit Stop Amenities

Amenities—like shelters, lighting, and trash and recycling bins—are encouraged at all transit stops, with priority given to stops serving vulnerable populations.

Turn Restrictions

No Turn on Red restrictions and signage may be used to prohibit right turn movements at all times, or dynamic signage may be installed to limit turns at specific times or conditions. Motorists turning right on red tend to focus on finding a gap in cross traffic. Driver attention in these situations tends to be on conflicting traffic approaching from their left, and not necessarily a pedestrian beginning to cross from the driver's right. Drivers may also encroach into the crosswalk while waiting for a gap in traffic, effectively blocking the crosswalk. Right turn on red restrictions may be used to reduce these conflicts, though such signs may not be effective if sight distance is limited by geometry or other roadway features (e.g., landscaping, business signs, etc.) without significant enforcement efforts. Where left turns on red are legal on one-way streets, such restrictions may be appropriate for similar reasons.

Planning and Design Guidance

Consider implementing “No turn on Red” signs at signalized intersections exhibiting specific features, including an exclusive pedestrian phase where vehicles must remain stopped, a leading pedestrian interval, bicycle boxes, or significant conflicts between motor vehicle turning movements and high volumes of pedestrians or bicyclists. These signs are also warranted in locations with poor sight distances, intersection geometry that may cause unexpected conflicts, and in cases where more than three pedestrian-vehicle crashes have occurred within a 12-month period while turn-on-red is permitted.

“No turn on Red” signs can also be used in conjunction with leading pedestrian intervals or cycle signals that allow through movements when turning vehicular traffic is stopped.



FIGURE 26 No Turn on Red

No Turn on Red Signs help draw attention to pedestrians in the crosswalk, but additional enforcement mechanisms may be necessary depending on roadway context. (Photo Location: New Orleans, LA)

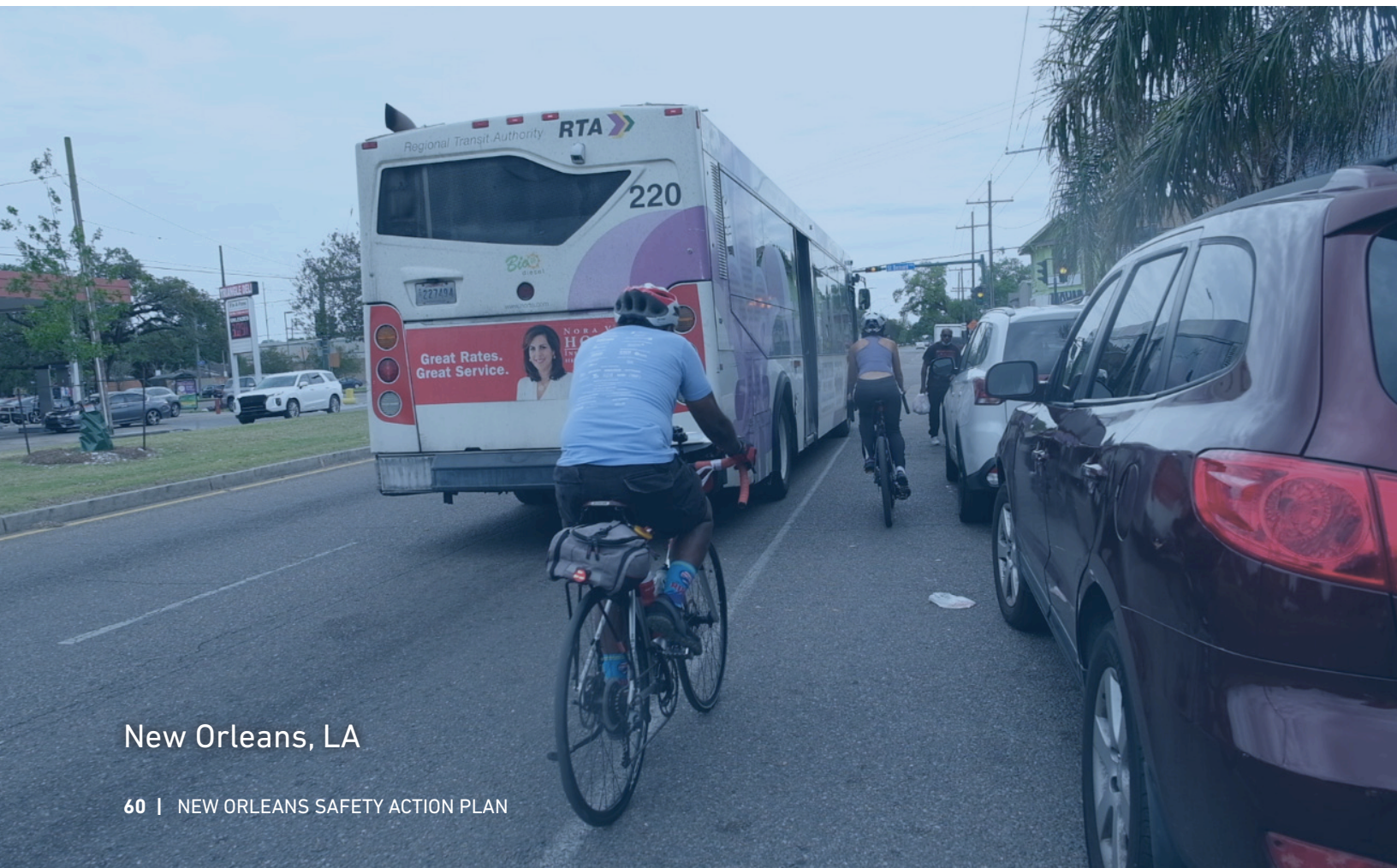
Crash Reduction Outcomes

The Engineering Safety Toolkit elements address common severe crash types in urban environments, including pedestrian crossings, turning conflicts, bicycle–vehicle crashes, and speed-related crashes.

Toolkit elements reduce risk through four primary outcome categories:

- **Speed Reduction** - Design features that slow vehicle travel and turning speeds.
- **Conflict Reduction** - Treatments that reduce the number or complexity of interactions between road users.
- **Visibility and Awareness** - Improvements that help drivers detect and respond to hazards earlier.
- **Separation and Exposure Reduction** - Infrastructure or signal timing strategies that physically or temporally separate vulnerable roadway users from vehicles.

Many treatments contribute to multiple outcomes simultaneously, supporting systemic safety improvements across the street network. To help quantify expected safety benefits, **Table 1** to the right includes typical Crash Modification Factor (CMF) ranges derived from the FHWA CMF Clearinghouse and related research literature. A CMF represents the expected proportional change in crashes after a treatment is implemented; values below 1.0 indicate a reduction in crashes (for example, a CMF of 0.70 corresponds to an estimated 30% crash reduction). Actual effectiveness varies based on roadway context, traffic volumes, and design implementation.



New Orleans, LA

Safety Toolkit Element	Outcome Category	Key Crash Types Addressed	Typical CMF Range
Access Management	Conflict Reduction	Driveway crashes, turning conflicts	0.65 - 0.85
Crosswalks (High-Visibility/Raised)	Visibility and Exposure Reduction	Pedestrian crossing crashes	0.60 - 0.85
Curb Extensions	Speed Reduction, Exposure Reduction	Pedestrian turning crashes	0.70 - 0.90
Decreased Corner Radii	Speed Reduction	Turning crashes involving pedestrians/bicyclists	0.75 - 0.90
Lane Configuration (Road Diets/Narrowing)	Speed Reduction, Conflict Reduction	Read-end, sideswipe, speeding-related crashes	0.53 - 0.75
Signalization Safety Improvements	Conflict Reduction, Separation in Time	Turning crashes involving pedestrians/bicyclists	0.60 - 0.90
Protected Intersections	Conflict Reduction, Separation	Bicycle turning crashes	0.55 - 0.80
Roadway Lighting	Visibility and Awareness	Nighttime crashes, pedestrian crashes	0.60 - 0.75
Separated Bike Lanes	Separation and Exposure Reduction	Bicycle-vehicle crashes	0.50 - 0.80
Transit Stop Improvements	Visibility and Exposure Reduction	Pedestrian crashes near transit stops	0.70 - 0.90
Turn Restrictions (e.g., No Turn on Red)	Conflict Reduction	Pedestrian turning crashes	0.60 - 0.90

TABLE 1 Safety Toolkit - Crash Reduction Outcomes