

INFO BRIEF

Re-envisioning School Streets: Creating More Space for Children and Families



Pedestrian and Bicycle
Information Center
www.pedbikeinfo.org



Creedmoor Elementary School in Creedmoor, NC. Source: *Walk and Bike to School Day*.

Introduction

For decades, communities worldwide and in the U.S. have been working to improve road safety around schools, especially for children. Children have unique safety needs, and there is a growing acknowledgement of and receptiveness to the idea that safety for kids should be the top priority when planning and designing streets around schools. Limiting or prohibiting motor vehicles on a street adjacent to a school creates an opportunity for walking and biking to be a safe, convenient option for school travel and makes space for children and families to socialize and play.

The COVID-19 pandemic has disrupted typical travel behaviors and provided an opportunity for communities to consider a different way of doing things. For example, some cities are implementing “slow street” initiatives and rebalancing public space on streets to limit motorized vehicle traffic

and better accommodate walkers and bicyclists. These changes better support physical distancing requirements in the short term and can help people establish new travel behaviors that may persist when “normal” activities resume. Similar initiatives on streets adjacent to schools and within school sites can prioritize space for children and families to walk, bike and play, and challenge long-held assumptions about school travel patterns and mode choice.

This information brief is for transportation professionals, school administrators, and school volunteers as they consider street changes around schools to create more space for children and families. It includes examples of street modifications to improve safety and active travel access around schools, considerations for determining what changes work best in different settings and brief case studies from communities that have altered their streets.

Benefits of school street changes

Limiting motor vehicle access around a school offers many potential benefits.

Improving safety

Prioritizing the safety of walking and bicycling for children and youth can help make streets safer for all users because young people are among the most vulnerable. A focus on youth can also be the spark that creates community support for a broader Vision Zero program to eliminate all traffic fatalities. **Vision Zero for Youth**¹ encourages communities and elected officials to focus on safety improvements and efforts to slow traffic speeds where children and youth frequently travel.

Encouraging more walking and bicycling to/from school

Changes to streets around schools to create more space for children and families can make existing walking and bicycling routes safer and more comfortable, both supporting students who may have no other travel mode option and - for those who do have a choice - encouraging active travel to school. Street changes also send a message that walking and biking to school is the norm and is a valued behavior.

Improving air quality

Air quality around schools is impacted by the traffic volume on roads near the school and the number of drivers that engage in behaviors such as stopping/starting and idling during school arrival and dismissal. Air quality can be improved by reducing the number of motor vehicles on roads near the school.

Recreational space

Besides physical benefits, play is a form of learning and can contribute to social and emotional wellness in children. Road closures can create extra space for recess and other recreational activities for students during the school day and beyond.

Flexible space

Many schools are recognizing a need for flexible and adaptive space for physically distanced tasks such as temperature checks and parent drop-off that are set back from the front door. While this is a near-term issue, it speaks to a need for flexibility on and near school campuses that is likely to remain important moving forward.

¹ <http://www.visionzeroformyouth.org>

Changing streets to prioritize young walkers and bicyclists

It is important to consider who will benefit and who could be burdened by changes to streets near schools. People of color and people living in underserved communities have historically been burdened by transportation decisions and are typically overrepresented in crash data. The physical needs of differently abled students are also important to consider when planning a street change. School representatives can support outreach to families to learn about their travel habits and places that are convenient for drop-off and pick-up.

Because every school and community is unique, what works for one may not work for another. However, there are a variety of options for changing school streets, including time-restricted closures, full closures, or creating shared space. Changes can be physical or operational. Physical changes address places where people walk, bike or drive, like by installing bollards to block motor vehicle access to a street in front of a school. Operational changes adjust how and when the street is intended to be used, such as allowing on-street parking at certain times of day but not others.

Time-restricted closures are daily closures of lanes, streets, or driveways to motor vehicles during specified timeframes, such as during school drop-off and pick-up times. This type of change requires planning, collaboration, and communication between stakeholders, including local government transportation agencies. It is important to have established protocols, clearcommunication, and designated roles to implement this change daily, such as posting road closure signs and posting volunteers or staff as needed. Small operational changes such as making a street one-way or closing selected school driveways for some periods during the day can make a significant

difference by reducing potential conflict points and simplifying crossings for kids. See the case study on *Fair Haven, New Jersey* for an example of a time-restricted closure.

Full closures prohibit motor vehicle traffic, so the street is entirely pedestrian-oriented. Deliveries, bus travel, and accessible drop-off and pick-up for students with disabilities occurs elsewhere on the school site. Because there are no motor vehicles, a full closure can create space for recreational activities and can be flexible and adaptable so the design and use can evolve and change over time. Street art can be used to change the orientation, look, and feel of a street. See the case study on *Chief Joseph Elementary School in Portland, Oregon* for an example of a full closure.

Shared spaces give pedestrians priority throughout the entire space, but limited motor vehicle access is still allowed for reasons such as enabling accessible drop off for students or receiving deliveries. This change requires consideration of traffic operations surrounding the school and motor vehicle access for residents who live on the street. Shared space changes may repurpose spaces for play structures to engage students with the space. See the case study on *Vestre Skole in Odense, Denmark* as an example of a shared space.

Making changes short-term or permanent

In addition to how to change the street, communities can determine the level of permanency. Whether it's a trial of a few days, a temporary change or a permanent one, each offer benefits and drawbacks. Shorter-term changes are generally more flexible and adaptable and provide greater opportunities for community involvement. Permanent changes generally require more coordination with the local government and may cost more but also create more assurance that the change will last from one year to the next.

Trial

Trial changes typically last a few days, tend to be lower cost and can be a good strategy for testing an approach and getting community feedback without committing to a change. A trial can help a broad range of stakeholders understand and visualize a change. If a school or public agency wants to repeat or continue the trial, it is usually easy to do so because of the temporary nature of the physical and/or operational implementation. See the case study on *Keele Street Public School in Toronto, Canada* as an example of a trial.

Temporary change

Temporary changes can last several months. They allow schools or public agencies to evaluate changes in use, behavior, and opinions over a longer period and for more complex changes while still allowing for design adjustments or a decision to remove the change and return to the original traffic pattern. These changes require more advance planning and coordination than a trial. Materials should also be durable to withstand the longer timeframe.

Permanent change

Permanent changes are a way to institutionalize street improvements and are less susceptible to being changed because of turnover in political or school leadership. Conducting a short-term change before making a permanent change is recommended and can help identify unforeseen issues and allow for adjustments based on community feedback. See the case studies on *Vestre Skole in Odense, Denmark* and *Chief Joseph Elementary School in Portland, Oregon* as examples of permanent changes.

Considerations that may impact street change options

Both the characteristics of the surrounding streets and the layout of the school site offer guideposts for determining which street changes can be considered.

Street Characteristics

Street network and street type

A **grid network** around a school makes street closures easier, as motor vehicle traffic can be routed to adjacent streets. If a school is not located within a dense street grid with options to redirect vehicles, a complete street closure will likely not work. **Neighborhood streets** are typically slower speed and lower volume (unless impacted by school pick-up and drop-off times). Neighborhood streets are easier to change to make school safety-related improvements. **Arterials** with higher traffic volumes and speeds may benefit from safety treatments to reduce speeds and better accommodate pedestrians but are less conducive to closures or shared space. **Dead-end streets** contribute to vehicle traffic and congestion. When located close to schools, they can also exacerbate ongoing challenging roadway conditions related to drop-off and pick-up schedules. If motor vehicle traffic can shift to an adjacent street, the dead-end street can become an opportunity for a more pedestrian-friendly space.

Existing congestion

Existing traffic congestion around the school site, whether it stems from school trips or not, impacts access to the school. Congestion limits the available space for walking and biking, can make it hard for pedestrians to see when it's safe to cross a street, and can present other safety and operational challenges. If there is significant school travel-related congestion near the school site, street changes may need to be accompanied by the addition of a remote drop-off site. If the traffic congestion is not school travel-specific the street may not be a good candidate for more changes.

Street parking

Parking is important to consider in conjunction with traffic circulation and drop-off and pick-up conditions. If street changes result in some parents and caregivers parking on streets around the school site or on nearby neighborhood streets, space may be limited and create challenges for residents. Similar to existing traffic congestion, street changes may need to be accompanied by the addition of a remote drop-off site.

Surrounding land use

School streets may be located in a variety of places with different land use contexts, such as residential, commercial, or mixed use. If there are industrial or commercial uses nearby, it will be important to consider street change impacts on the operation of those businesses. Including such stakeholders in planning may identify ways to re-route heavy vehicles or accommodate deliveries.

On-Site School Characteristics

Access points

School sites are often designed with multiple locations for motor vehicle (including deliveries), pedestrian, and bicycle access. Sites with multiple access points makes street changes easier because there is flexibility to direct traffic to other entrances. It is important to look for opportunities to reduce potential conflicts between all travel modes and to prevent additional conflicts.

School drop-off and pick-up procedures

School drop-off and pick-up procedures and the volume of motor vehicles, including school buses, generated by school arrival and dismissal have a major impact on the street space around schools. Existing procedures should be reviewed and options for changes considered (such as relocating the drop off and pick up location) if the

functionality of a street is being changed. However, changes to drop-off and pick up conditions could also impact access for students with disabilities. When considering street changes, it is important to continue to provide safe drop-off and pick-up conditions and ensure accessibility.

The number of students who can walk or bike to school

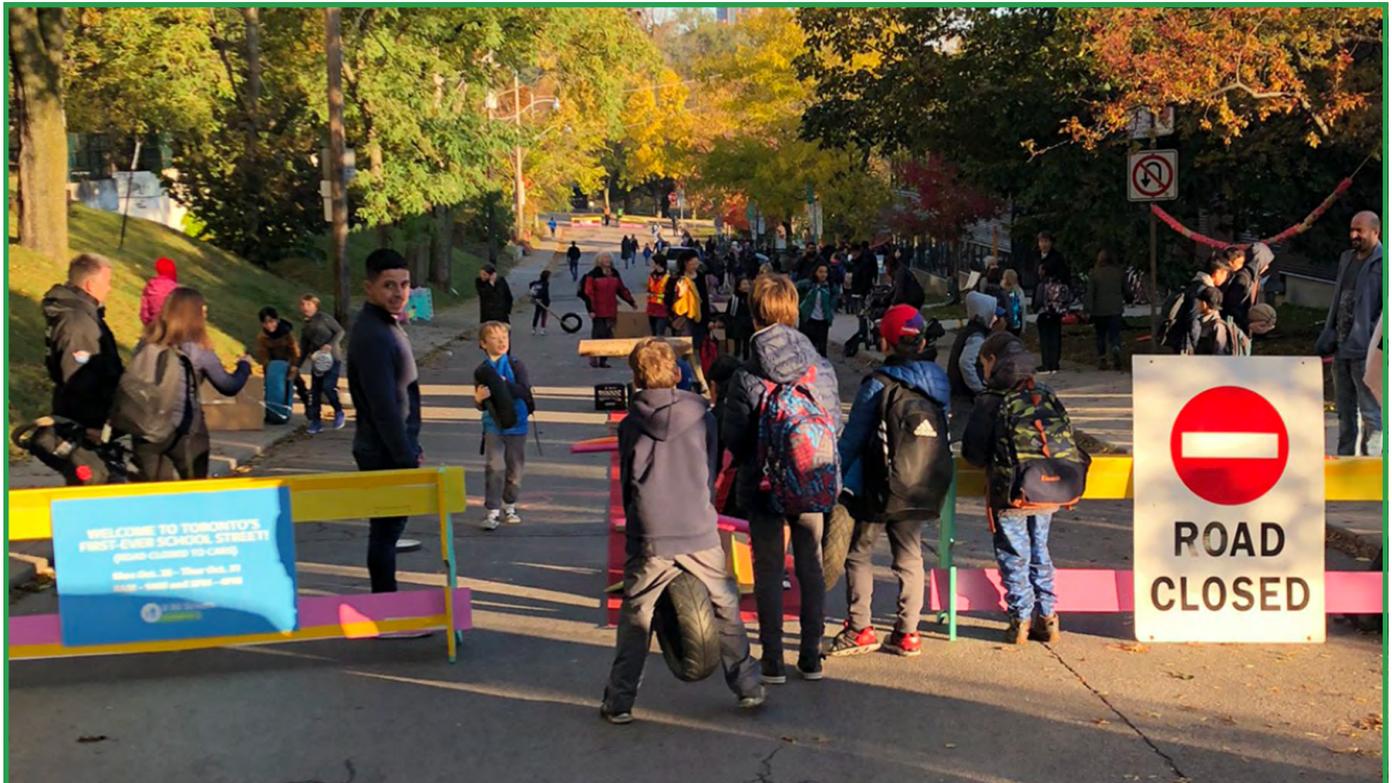
If a large percentage of students travel to school by walking and bicycling – or would if conditions around the school were better – this would make a compelling case for street changes. Likewise, if most students ride a school bus or must be driven to school then the impact on these travel modes would need to be carefully assessed.

On-site parking

Parking lots on the school property and the internal streets that provide access to and from them are primarily used by school staff and visitors, and at high schools parking is often provided for student drivers as well. Proposed street changes need to consider the impacts on access to these parking lots, especially access to accessible parking spaces. On-site parking lots may also provide opportunities to repurpose space for students. In some cases, there may be portions of the parking lot that are rarely used, making repurposing quite practical.



Traffic garden
in Portland, OR.
Source:
Sam Balto.



Keele Street Elementary School in Toronto, ON, Canada. Source: 8 80 Cities.

Case studies

Keele Street Elementary School in Toronto, ON, Canada conducted a four-day trial to improve street safety for students by closing an adjacent street during school arrival and dismissal times. The school's existing high rates of students walking and biking, as well as timing the trial with a yearly local media blitz on street safety, helped generate attention and excitement. Volunteers placed colorful barriers to enforce car restrictions at each end of the street and requested that residents avoid using the street to access their homes during one hour at school arrival and dismissal. Students and faculty with accessibility needs traveling by

car were directed to an accessible parking lot, minimizing their access impact. Games were available for the students to play with along the street to encourage families to occupy the space. The school community worked with the local government for permitting with support from an elected official. Interactive evaluations of the street were used to gather feedback from parents, students, and school administrators.

For more information on the school street at Keele Street Public School, see [8 80 Streets Mountainview Summary Report](#)² and [8 80 Mountainview video](#)³.

² <https://www.880cities.org/wp-content/uploads/2020/06/8-80-Streets-Mountainview-Summary-Report.pdf>

³ <https://www.youtube.com/watch?v=Ud8lUaXP6Zk>

Ōwairaka District School in Auckland, New Zealand initiated a trial to improve pedestrian safety and access around the school site and alleviate morning and afternoon traffic congestion. By using flexible materials such as traffic cones, school officials closed two streets bordering the school to school traffic and repurposed street parking on two other streets adjacent to the school. By repurposing curb-side space, school administrators increased the visibility of students navigating from the drop-off zone to the school and expanded space for students dropped off by car. Temporary roundabouts improved traffic circulation, minimizing conflicts between motor vehicles and pedestrians. Neighboring streets and cul-de-sacs were designated as drop-off zones, with connecting pedestrian pathways for students to walk to school.

For more information on the Ōwairaka District School trial see the [Auckland Transport project webpage](#)⁴ and the [Safe School Streets Ōwairaka District School Parking Changes plan](#)⁵.



Before (above) and after (below) changes in Ōwairaka District School in Auckland, New Zealand. Source: Auckland Transport.



Fair Haven, NJ coordinates with Knollwood Public School and Sickles School to operate a permanent time-restricted closure of a local connector street between the two schools during arrival and dismissal so that students and parents can walk and bike safely to school. Because of Fair Haven’s flexible street grid network, residents can easily reroute if they are driving in the area.

For more information on Fair Haven’s time-restricted closure and how it supports an annual event for the school community, see the [Fair Haven, NJ – Third Street Community Connection video](#)⁶.



Fair Haven, NJ. Source: New Jersey Department of Transportation.

4 <https://at.govt.nz/projects-roadworks/safe-school-streets/#Owairaka>

5 <https://at.govt.nz/media/1983191/owairaka-interim-stage-map.pdf>

6 <https://www.youtube.com/watch?v=kfm0c96NXVE>

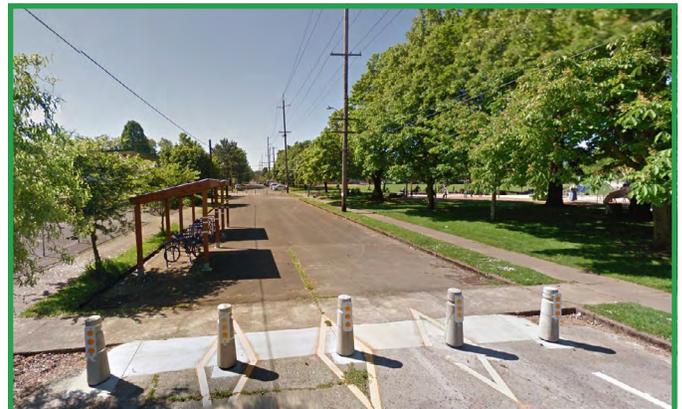


Before (left) and after (right) changes, Vestre Skole, Odense, Denmark. *Source: Google Maps.*

Vestre Skole in Odense, Denmark designed a permanent shared space on a dead-end street, creating more areas for students to play by repurposing street parking, painting colorful squares on the street, and installing permanent play structures. There are no physical barriers

blocking motor vehicle access, so the street is still accessible by car to the residents living there. These changes to the streetscape, such as the addition of the play structures, reinforce pedestrian priority and are an example of a physical implementation of permanent fixtures.

Chief Joseph Elementary School in Portland, Oregon closed a section of an adjacent street to cars but kept it open for walking and bicycling. Located across the street from a public park with play amenities, the closure provided a safe and designated space for children to access the park as well as space for students to park their bikes. The closure is designed with permanent bollards and includes an accessible sidewalk to cross the street. The street is located on a grid network that allows for easy rerouting for car traffic.



Chief Joseph Elementary School, Portland, OR. *Source: Google Maps.*

Conclusion

Street changes around schools that prioritize walking and bicycling for children and youth can help improve safety and contribute to a community's goal to eliminate traffic fatalities and serious injuries. These changes can also make active travel feel convenient, welcoming and fun.

While every school and community is unique, there are a variety of options for changing school streets and on-site spaces. These changes offer an opportunity for collaboration and partnerships between school administrators, the school community, and local government staff to benefit school children and all road users.

Additional resources

Interested in learning more? The following resources focus on designing street spaces for youth:

- [8 80 School Streets Guidebook](#)⁷
- [NACTO Streets for Pandemic Response and Recovery, School Streets](#)⁸
- [NACTO Designing Streets for Kids](#)⁹
- [Safe Routes National Partnership Back to School 2020 Considerations](#)¹⁰
- [School Streets Initiative](#)¹¹

7 https://www.880cities.org/portfolio_page/school-streets-guidebook/

8 https://nacto.org/wp-content/uploads/2020/07/200708_School-Streets.pdf

9 <https://globaldesigningcities.org/publication/designing-streets-for-kids/>

10 <https://www.saferoutespartnership.org/safe-routes-school/bts2020>

11 <http://schoolstreets.org.uk/>

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