

# VISION ZERØ

CITY OF PHILADELPHIA

## Neighborhood Slow Zones & Pedestrian Enhancements in Philadelphia

Casey C. Ross // Temple University // February 2020

# Professional Background

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## Haverford College Class of 2010

B.A. in History – Latin American History & History of Science



## Apple Inc. (2010 – 2014)

Genius Bar Technician & Failure Analysis Engineer



## University of Pennsylvania School of Design Class of 2017

In City Planning – Community & Economic Development, Sustainable Transportation Infrastructure



## SEPTA (2016 – 2017)

Graduate Intern in Long-Range Planning



## City of Philadelphia (2017 – present)

Transportation Planner



# Today's Agenda

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- What is Vision Zero?
- Why Vision Zero in Philadelphia?
- The Neighborhood Slow Zone Program
- Parklets, Ped Plazas, & Bike Corrals



# What is Vision Zero?

# What is Vision Zero?

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*A policy that states clearly that traffic deaths are preventable and unacceptable.*

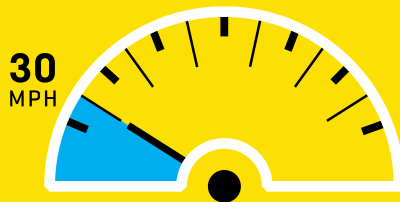
## **CORE PRINCIPLES:**

- Human life takes priority over mobility;
- Human error is inevitable and unpredictable;
- People are inherently vulnerable and speed is a fundamental predictor of crash survival;
- Safe human behaviors, education, and enforcement are essential contributors to a safe system.

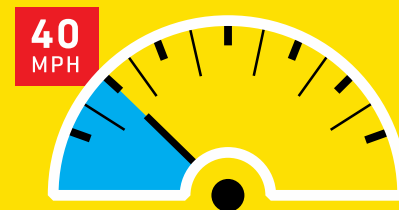
# WHEN A PERSON IS HIT BY A DRIVER AT...



**1** OUT OF **10** DIE



**5** OUT OF **10** DIE



**9** OUT OF **10** DIE

*Slowing down saves lives.*

# Why Vision Zero in Philadelphia?

*Every year, there are nearly 10,000 reported crashes on Philadelphia streets.*

## 5-YEAR TREND:

- 2014: 82 killed / 223 severely injured
- 2015: 83 killed / 250 severely injured
- 2016: 96 killed / 252 severely injured
- 2017: 78 killed / 244 severely injured
- 2018: 91 killed / 249 severely injured

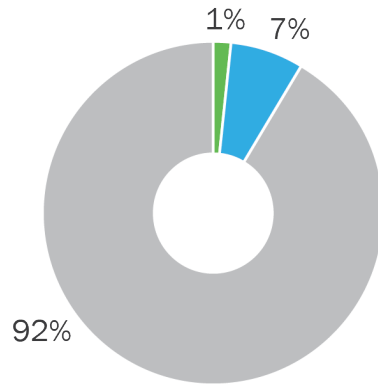
**100 PEOPLE EVERY YEAR**



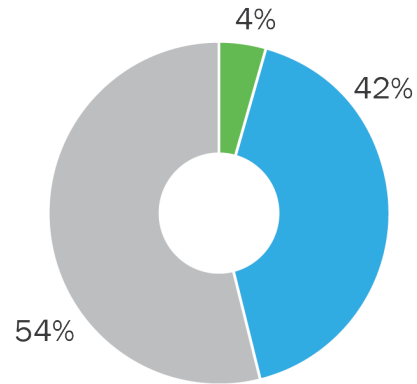
100 people are killed in traffic related crashes.

# Traffic deaths by mode

People Involved in Crashes  
2014 - 2018



People Killed in Crashes  
2014 - 2018



People Walking People Biking People in Motor Vehicles

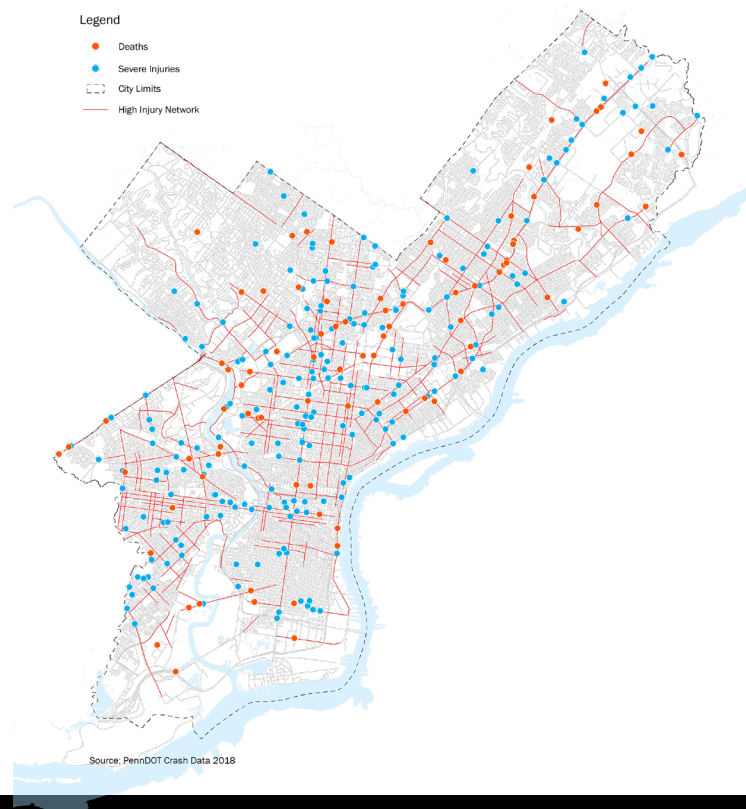
Source: PennDOT 2014 - 2018



# High Injury Network



**50%** of killed and serious injury **crashes** occur on **only 12%** of city streets





**VISION  
ZERO**

CITY OF PHILADELPHIA

**OUR CITY AND OUR  
FAMILIES DESERVE  
SAFER STREETS.**

*Zero traffic deaths by 2030.*

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# Vision Zero principles to priorities

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**EQUITY** Identify equitable solutions developed on behalf of all Philadelphians

**ENGINEERING** Engineer streets to reduce the risk of crashes

**ENFORCEMENT** Enforce laws to reduce and prevent unsafe roadway behaviors

**EDUCATION** Educate Philadelphians to promote a culture of safe driving, walking, and biking

**EVALUATION** Evaluate efforts to ensure resources are being used effectively



# The Neighborhood Slow Zone Program

# Neighborhood Slow Zones

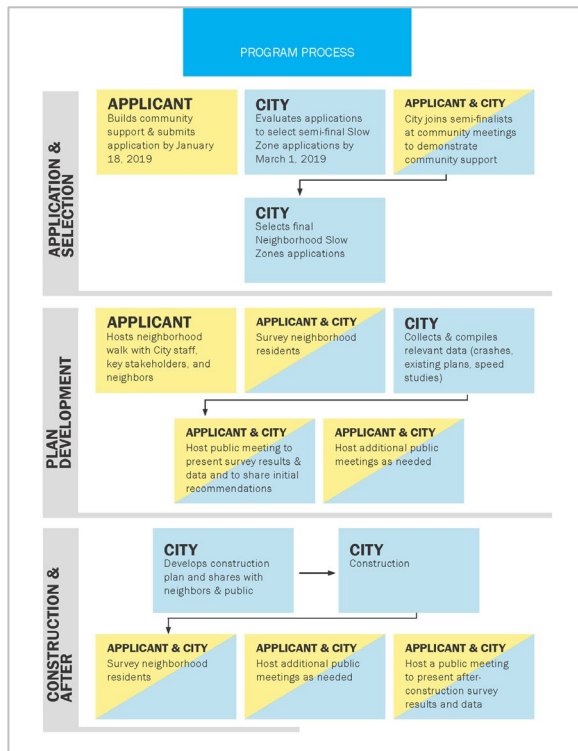
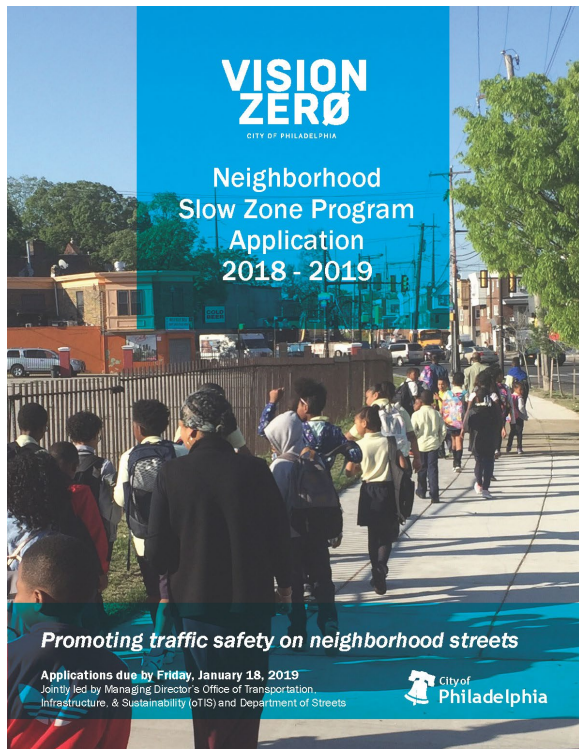
*The Neighborhood Slow Zone program is a Vision Zero initiative that brings 20MPH speed limits and traffic calming measures to a clearly- defined zone of residential streets.*

## THE SLOW ZONE PROGRAM:

- Works with neighbors to develop a plan for traffic calming that responds to critical traffic safety issues in their communities.
- Lowers speed limits to 20MPH.
- Installs gateway treatments.
- Is self-enforced by engineered traffic calming and safety measures.



# Neighborhood Slow Zone Applications



## OVERVIEW

- Announced by Mayor Kenney on **October 19, 2018**.
- Funded by **Automated Red-Light Enforcement (ARLE)** funding distributed by PennDOT.
- Total ARLE award was **\$1M for design and construction costs** associated with two (2) Neighborhood Slow Zones.



# Neighborhood Slow Zone Applications

## APPLICATION (2) SLOW ZONE MAP

### (2) SLOW ZONE - MAP

Draw a map of your proposed Neighborhood Slow Zone and submit it with your application by January 18, 2019.

You must submit a map of your proposed Slow Zone. Your map can be simple; it can even be hand-drawn.

When deciding how to define your Slow Zone, keep in mind that:

- Slow Zones should have boundaries, which could be:
  - Busy streets, including arterial roads and roads with trolley tracks (For example: Arterial roads, like Aramingo, Baltimore, Glenwood Avenues, etc.)
  - Parkways, highways, Interstates, streets with painted center lines, or multi-lane one-way streets
  - Large parks or cemeteries
  - Train embankments
- Slow Zones must:
  - Be made up of residential streets that are one lane one-way streets and/or two-way streets without a painted centerline.
  - Be no larger than about a half-mile by a half-mile, which is about six blocks (**Slow Zone applications that are larger than this will not be considered**);
  - Not contain any streets with painted center lines (see illustration to right) or any one-way streets with more than one lane (**those streets can be boundary streets**).
- Slow Zones should not include major commercial areas and industrial sites. However, they may be bound by industrial or commercial corridors.
- Slow Zones should avoid streets with trolley tracks. However, Slow Zones may be bound by streets with trolley tracks.

When drawing your Slow Zone map, be sure to:

- Include the applicant's name and contact information on the map.
- Clearly outline the boundaries for your proposed Neighborhood Slow Zone.
- Identify any of the below that are on the boundary of or within your proposed Slow Zone:
  - Schools, Free libraries, and/or Philadelphia Parks & Recreation sites;
  - Senior housing and/or Public housing communities;
  - Religious institutions;
  - Hospitals, clinics, police stations, and/or firehouses.

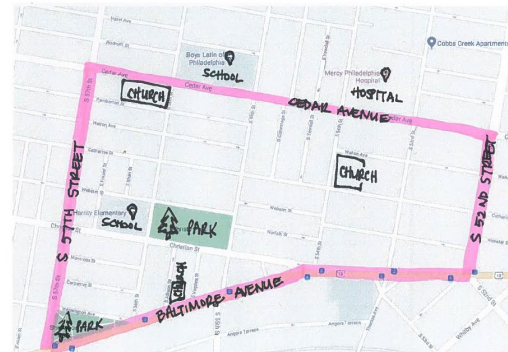


Example: Two-way streets with no painted center lines can be included within your Slow Zone.



Example: Two-way street with a painted center line. This can be a boundary street.

### EXAMPLE APPLICATION SLOW ZONE MAP



### ! DON'T FORGET

Add your name and contact information at the top of your proposed Slow Zone map.

## APPLICATIONS

- January 18, 2019 deadline for application submissions.
- **Forty (40) communities submitted applications:**
  - Twelve (12) communities did not provide a map of a Slow Zone with boundaries that met the Program criteria.
  - **Twenty-eight (28) complete Slow Zone applications evaluated.**

# Neighborhood Slow Zone Evaluation

## APPLICATION EVALUATIONS & SCORING

Score category	Maximum score
Crash history	50
Vulnerable user	45
Community places	5
Total maximum score	100

*The highest score in each of the three (3) score categories received the maximum score for that score category. All other applications received prorated scores by score category. This means that, by score category, applications received scores that were a fraction of the highest score, based on their percent of the highest score.*

*Because the proposed Slow Zones varied in size, normalization was applied to each score category.*

### CRASH HISTORY: UP TO 50 POINTS

- People killed or seriously injured in traffic crashes on Slow Zone streets (PennDOT, 2013 - 2017)
- People injured in traffic crashes on Slow Zone streets (PennDOT, 2013 - 2017)

### VULNERABLE USERS: UP TO 45 POINTS

- Households with children under 18
- Households with people aged 60 and over
- Households with incomes below poverty line

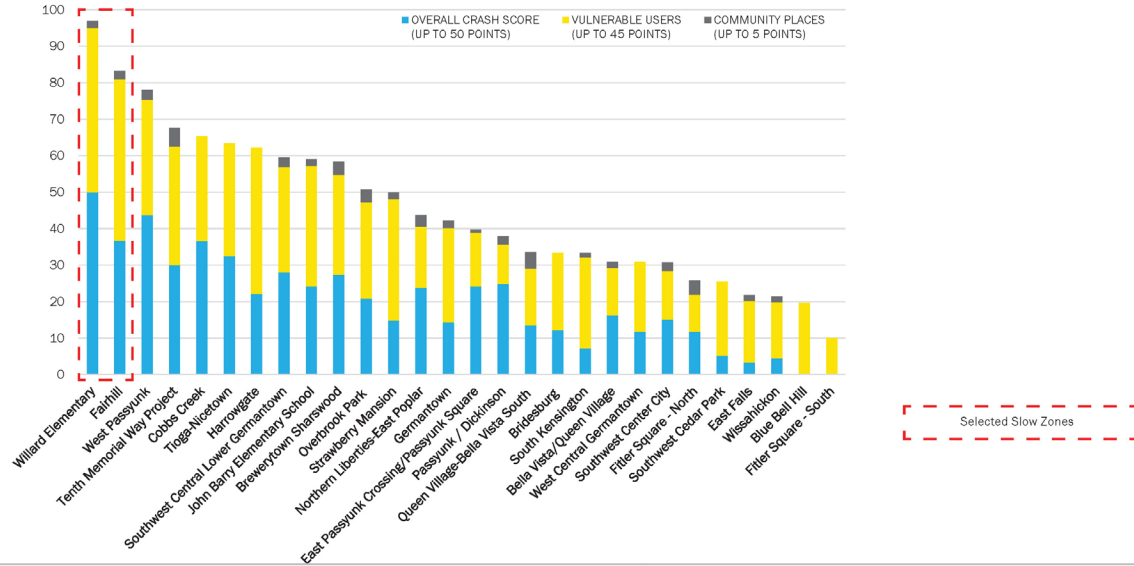
### COMMUNITY PLACES: UP TO 5 POINTS

- Free Library locations
- Schools
- City Health Centers
- Philadelphia Housing Authority communities



# Neighborhood Slow Zone Transparency

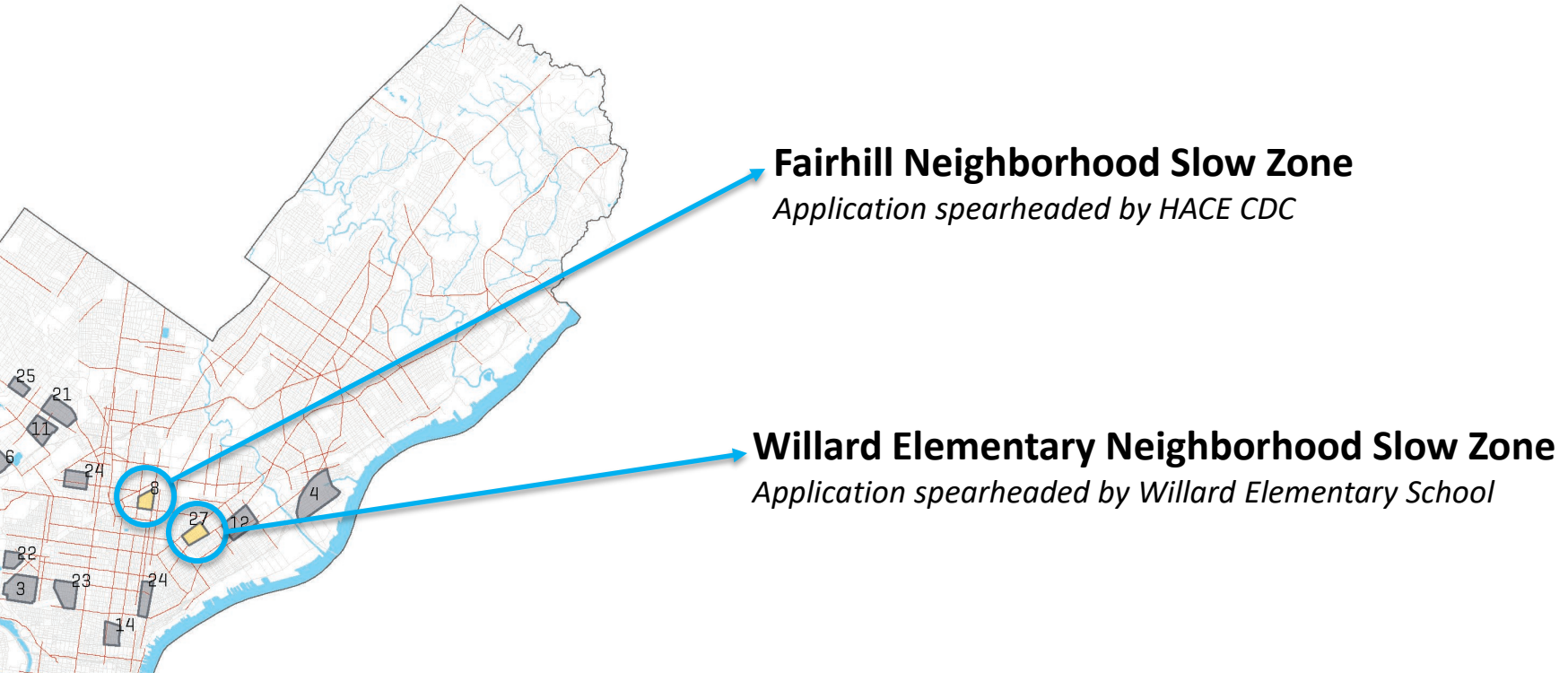
## PROPOSED SLOW ZONES SCORES



The full evaluation report including raw scores for each application and statistical normalization methodology was released online for public reference.

# Selected Slow Zones

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# Slow Zone Design Elements



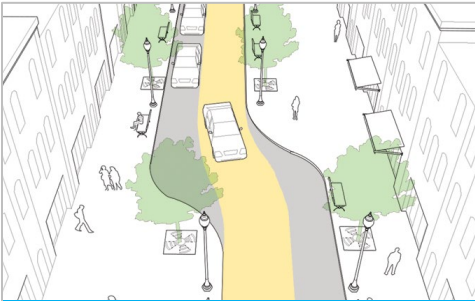
**Speed Cushions**



**Raised Crosswalks**



**Gateway Treatments**



**Chicanes**



**Traffic Diverters**



**Curb Extensions**

# Typical Slow Zone Design Process

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## MEETING #1:

- Congratulate the community for being selected!
- Community walk to note problem areas.

## MEETING #2

- Review traffic calming tools that can be used in a slow zone.
- Participatory mapping and prioritization activity.

## MEETING #3

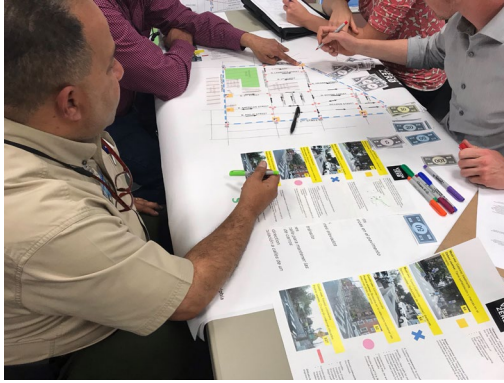
- Open-house presentation of Slow Zone design.
- Opportunity for community to provide additional input.

## MEETING #4

- Open-house presentation of final Slow Zone design.
- Update on construction timeline to community.



# The Importance of Community Input





# What does our slow zone cost?

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TOTAL BUDGET = \$ 500,000.00

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- \$ 25,000.00 for construction mobilization (5%)



# What does our slow zone cost?

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TOTAL BUDGET = \$ 500,000.00

- \$ 75,000.00 for construction management (15%)

- \$ 50,000.00 for unexpected costs & contingency (10%)

- \$ 25,000.00 for construction mobilization (5%)

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\$ 350,000.00 for slow zone improvements (65%)

# Expectations & Priorities

## VISION ZERO

CITY OF PHILADELPHIA

**Must use:** Gateway treatments  
**Deben usarse:** Tiene señalización y marcas en el pavimento



**\$6.00**

**"Gateways"** clearly mark the beginning of a Neighborhood Slow Zone, so drivers know it's a Slow Zone. Gateways will look the same in Slow Zones across the city, making it easy for drivers to recognize them.

Gateways consist of:

- 20 MPH sign
- 20 MPH pavement marking
- High visibility crosswalk
- "Corner clearance"

**Must use:** Speed cushions  
**Deben usarse:** Reductores de velocidad: Badenes



**\$2.00**

**Speed cushions** are raised areas of the street that are 4' tall and 12-foot long. They are designed to be comfortable to drivers traveling 20 to 25 MPH and uncomfortable to drivers traveling at higher speeds.

Benefits:

- Slows driver speeds in the middle of the block
- Doesn't remove any parking from the street

Considerations:

- Can lead to a little more noise on the street

**Could Use:** Raised crosswalks  
**Podría usarse:** Cruces de peatones elevados



**\$27.00**

**Raised crosswalks** bring the crosswalk to the level of the sidewalk.

Benefits:

- Slows driver speed
- Improves visibility of people walking

Considerations:

- impacts drainage
- impacts emergency vehicles and can slow down transit

**Could Use:** Chicanes  
**Podría usarse:** Chicanas



**Costs vary by design**

A chicane is a roadway design that makes drivers drive down a street in an "S" shaped line using objects such as curb extensions, planters, or parking that is switched from one side of the street to the other.

Benefits:

- Slows drivers on residential streets

Considerations:

- Only appropriate for one-lane roads
- May impact available parking
- May impact snow removal

Cramp Elementary School Slow Zone

## VISION ZERO

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**Could Use:** Standard corner clearances  
**Podría usarse:** Bolardos en la calle para mantener las esquinas libres de carros



**\$2.00**

*Did you know? It is illegal to park on or within 20' of a crosswalk Philadelphia Vehicle Code § 2121*

A "corner clearance" is something physical that is installed near an intersection.

Benefits:

- Prevents parked cars from blocking drivers' views
- Encourages drivers to make turns at slower speeds
- Shortens crossing distance for people walking

Considerations:

- Residents may be used to parking within 20' of crosswalks

**Could Use:** Decorative corner clearances  
**Podría usarse:** Bolardos en la calle con murales para mantener las esquinas libres de carros



**\$4.00**

A "decorative corner clearance" is something physical that is installed near an intersection.

Benefits:

- Can be designed in collaboration with local community
- Adds color and artwork to the street
- Prevents parked cars from blocking drivers' views
- Encourages drivers to make turns at slower speeds
- Shortens crossing distance for people walking

Considerations:

- Residents may be used to parking within 20' of crosswalks

**Could Use:** Concrete curb extension  
**Podría usarse:** Extensión de acera



**\$31 to \$248**

A "curb extension" is a physical extension of the concrete sidewalk at an intersection.

Benefits:

- Permanent change with updated ADA curb ramps
- Prevents parked cars from blocking drivers' views
- Encourages drivers to make turns at slower speeds
- Shortens crossing distance or people walking

Considerations:

- Residents may be used to parking within 20' of crosswalks

**Could Use:** Traffic Diverters  
**Podría usarse:** Desviadores de tránsito



**Costs vary by design**

**Traffic diverters** are temporary or permanent installations that physically restrict vehicles from being driven onto a street.

Benefits:

- Reduces cut-through traffic
- Reduces volumes of vehicles on residential streets
- Prevents turning conflicts

Considerations:

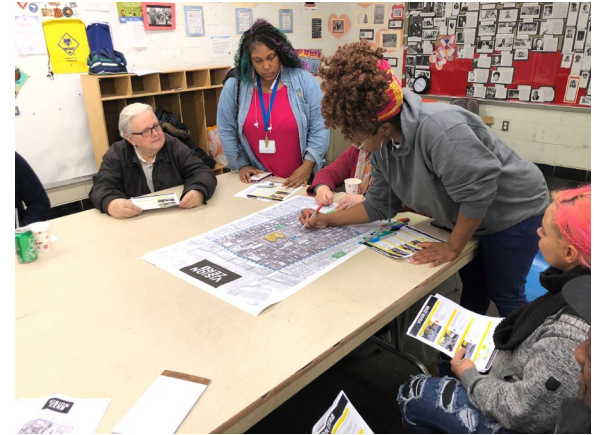
- May increase traffic on nearby streets
- Does not reduce mid-block speeds

Cramp Elementary School Slow Zone



# Expectations & Priorities

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# The Importance of Community Input



# The Importance of Community Input

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- Creates a **sense of ownership** for the community.
- Creates opportunities for **participation and inclusion**.
- Insures **space for feedback** and **open channels of communication**.
- Creates **educational opportunities** for neighbors.
- **Fosters trust** between historically-underserved communities and the City.
- **Builds relationships** between community leaders, community organizations, and the City.
- **Provides insights** that might not otherwise be available to planners and engineers.

# Additional Slow Zones

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- **Cramp Elementary School Slow Zone**
  - ✓ First meetings held in late January
  - ✓ Conceptual design beginning now February
  
- **Hamilton Elementary School Slow Zone**
  - ✓ Community outreach upcoming

# Opportunities

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- **Community excitement about the project**
- **Ground-up public engagement in design process**
- **Transparency of program**
- **Opportunity to work in neighborhoods that have been historically excluded from Government processes**
- **Opportunity to work with communities who have historically been systematically denied resources**
- **Chance to create a positive relationship between neighbors and City Government**



# Challenges

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- **Setting appropriate expectations from the get-go**
- **Engineering within a limited budget**
- **Relatively-low turnout at community meetings**
- **Contracting processes for design and installation**
- **Shifting timelines for design and installation**
- **City bureaucracy and inflexible processes**



# Parklets, Ped Plazas, & Bike Corrals

# Program Management

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*Parklets, ped plazas, and bicycle corrals are approved and permitted by the City of Philadelphia, but they are maintained and operated by community partners.*

## **SOME OF OUR COMMUNITY PARTNERS:**

- University City District (UCD)
- Manayunk CDC
- South Street Headhouse District
- Asociación Puertorriqueños en Marcha
- Esperanza CDC
- South of South Neighbors Association (SOSNA)
- Philadelphia Chinatown Development Corporation (PCDC)

# Program Management

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*Parklets, ped plazas, and bicycle corrals are approved and permitted by the City of Philadelphia, but they are maintained and operated by community partners.*

## **SOME OF OUR BUSINESS PARTNERS:**

- Shake Shack (20th and Sansom)
- The Quick Fixx (South and 15th)
- Johnny Brenda's (Girard and Frankford)
- Ultimo Coffee (22nd and Catharine)
- Mariposa Food Co-Op (Baltimore and 49th)
- Neighborhood Bike Works (Lancaster and Haverford)
- Bob and Barbara's (South and 15th)

# Pedestrian Enhancement Applications



Images: Ford Field Photography

## CITY OF PHILADELPHIA PARKLETS GUIDELINES & APPLICATION

FEBRUARY 2016

## PROCESSES

- Different processes and requirements for different programs
- Basic requirements for all three:
  - Minimum insurance requirements
  - Demonstrated community support
  - Streets Department approval
  - Maintenance plan

# Successful Examples

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## GRAYS FERRY TRIANGLE

- Simplified a complex intersection
- Shortens pedestrian crossing distances
- Reclaims space for pedestrians
- Provides seating and activities
- Combined with IndeGo station for density of resources
- Well-maintained by community partner
- Supports nearby businesses

# Successful Examples

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## 48TH STREET & BALTIMORE AVENUE

- Simplified a complex intersection
- Shortens pedestrian crossing distances
- Reclaims space for pedestrians
- Slows turning vehicles
- Well-maintained by community partner
- Supports nearby businesses

# Successful Examples

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## 43RD STREET PARKLET

- Reclaims street space for people
- Provides public seating and community amenities
- Acts as a community gathering place
- Encourages increased pedestrian dwell time
- Well-maintained by community partner
- Supports nearby businesses



# Successful Examples

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## CHINATOWN PARKLET

- Reclaims street space for people
- Provides public seating and community amenities
- Acts as a community gathering place
- Encourages increased pedestrian dwell time
- Well-maintained by community partner
- Prevents illegal parking at the corner

# Opportunities

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- **Reclaims public space for the community**
- **Creates active locations on the street**
- **Increases pedestrian safety (pedestrian plazas)**
- **Can provide public amenities such as tables and seating**
- **Can support/complement local businesses**
- **Encourages pedestrian dwell time and eyes on the street**

# Challenges

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- **Insurance requirements create a barrier to entry**
- **Application process can be confusing and take a long time**
- **The City provides no funding assistance to applicants**
- **Requires a strong community and/or business partner to apply for, fund, insure, and maintain**
- **Almost always takes parking, which can be controversial**

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*Zero traffic deaths by 2030.*

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# THANK YOU & QUESTIONS

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