



Municipal Outreach, Training, and Assistance Program

DROP-IN SESSION

# PLANNING FOR BUS STOPS

JANUARY 13, 2022

# PRESENTERS

## **PennDOT Connects Virtual Drop-in Session Building Better Bus Stops**

Presenters:

Andy Batson, AICP

PennDOT - Bureau of Public Transportation  
Chief, Planning and Project Delivery

[abatson@pa.gov](mailto:abatson@pa.gov)

Natasha Manbeck, P.E., AICP

McMahon Associates, Inc.

Senior Project Manager

[nmanbeck@mcmahonassociates.com](mailto:nmanbeck@mcmahonassociates.com)



# QUESTION/CHAT BOX/AUDIO CONTROLS

The image shows a screenshot of a GoToWebinar session. At the top, there are three video thumbnails of participants. The main content area displays a presentation slide titled "Local Technical Assistance" with a sub-heading "Pavement" and "Roads Scholar I". The slide includes the Pennsylvania Department of Transportation logo and the text "April 2020".

Four red callout boxes with arrows point to specific interface elements:

- Full Screen:** Points to the "Full Screen" icon in the top right corner of the webinar window.
- Raise Hand:** Points to the "Raise Hand" icon in the top right corner of the webinar window.
- Audio Controls:** Points to the "Audio" control panel on the right side of the screen, which includes a "Sound Check" section and options for "Computer audio", "Phone call", and "No audio".
- Question/Chat Box:** Points to the "Questions/Chat" panel on the right side of the screen, which includes a "question" field, an "Audience Question" section, and a "Send Chat To:" dropdown menu.

The "Audio" panel also shows a "Headset Microphone (Plantronics Bla...)" and a "Headset Earphone (Plantronics Black...)" with volume indicators. The "Questions/Chat" panel shows a "Talking" indicator for "Virginia Lawson" and a "Send Chat To:" dropdown menu with "Patrick Wright (Organizer, Present...)" selected.



# HANDOUTS & LINKS

## Handouts in the gotowebinar Toolbar:

- PDF of the presentation slides
- [Quick Reference for Building Better Bus Stops Resource Guide](#)

## Link in the Question/Chat Box:

- [Building Better Bus Stops Resource Guide](#)

<http://ppta.net/pages/betterbusstops/>

**Introductory Poll Questions**



# AGENDA

- Overview of new Building Better Bus Stops Resource Guide
- Ways to incorporate bus stops into local plans and policies
- Key components of bus stop design
- Overview of typical bus stop configurations
- Your Choice! More information on...



**Building Better Bus Stops**  
Resource Guide

[ppta.net/pages/betterbusstops](http://ppta.net/pages/betterbusstops)

[penndot.gov/Doing-Business/Transit/InformationandReports](http://penndot.gov/Doing-Business/Transit/InformationandReports)

**Bus stops provide vital  
connections between transit  
service and communities**



# Resource Guide - Background

- Increasing interest and need for bus stop planning
  - Public transportation agency efforts and initiatives
  - Development of Bus Stop Design Guidelines
  - Municipal interest
- Limited bus stop guidance and resources
- Leadership to fill the gap
  - Pennsylvania Public Transportation Association (PPTA) – Planning Committee
  - PennDOT Bureau of Public Transportation



Northwest  
Commission

Bus Stop Guidelines: Design and Amenity Standards



# Resource Guide - Purpose

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- Consider and incorporate transit in design of land developments and transportation infrastructure projects
- Promote partnerships between PennDOT, transit agencies, municipalities, property owners, and developers
- Educate planners, engineers, developers, business owners, municipal officials, and transit agency representatives
- Provide a resource guide that reflects federal and state requirements and best practices



# Resource Guide - Development

- Core Work Group
- Technical Advisory Committee
- Stakeholder Review
- Research & Development
- Additional Outreach



Full Resource Guide and Quick Reference Available on PPTA and PennDOT Websites

[ppta.net/pages/betterbusstops](http://ppta.net/pages/betterbusstops)

[penndot.gov/Doing-Business/Transit/InformationandReports](http://penndot.gov/Doing-Business/Transit/InformationandReports)





# Resource Guide - Overview

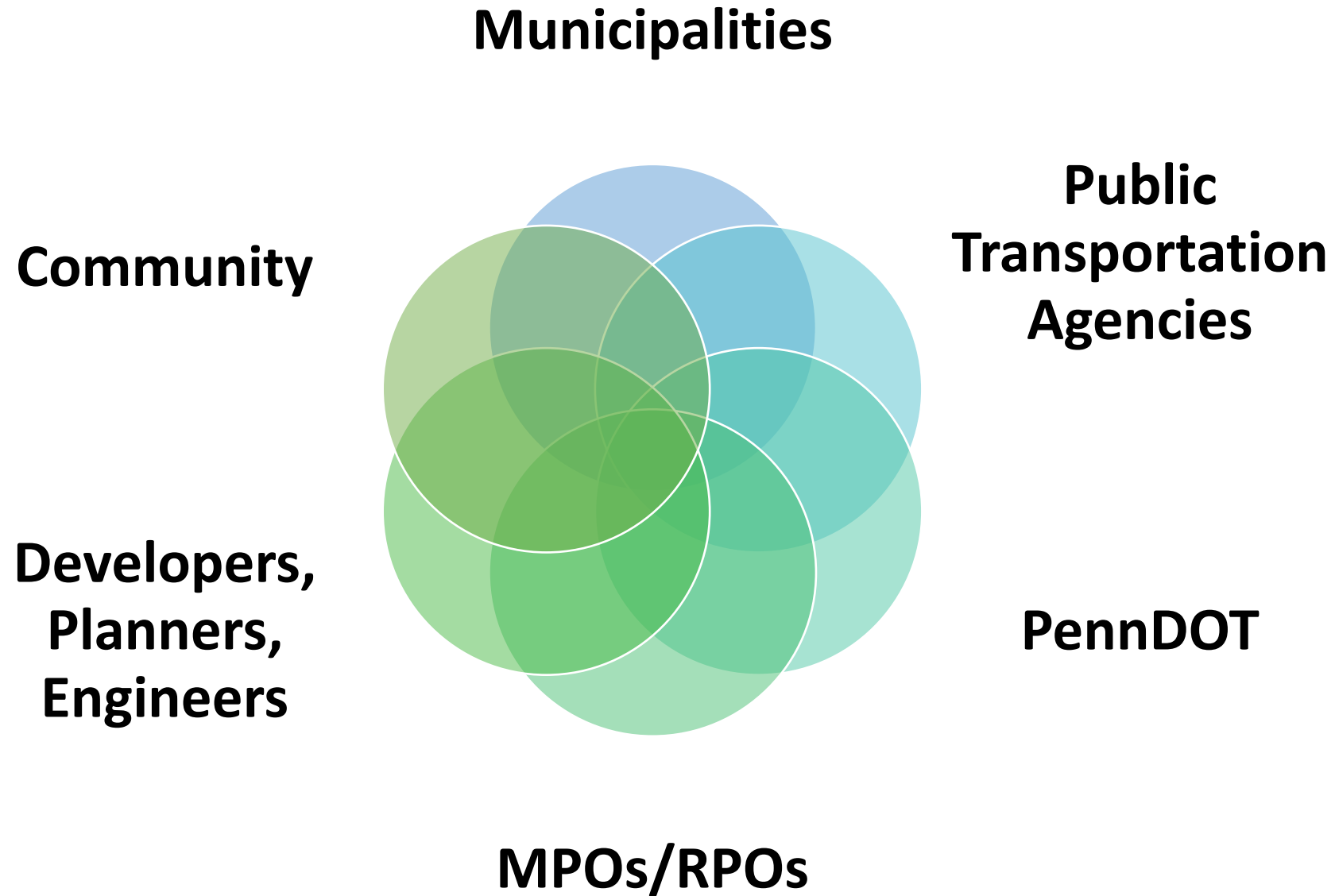
- Resources, tools, and best practices - Not requirements
- Developed by PennDOT and PPTA
- Covers planning and design for fixed route bus stops
- Focus on bus stop design for areas outside of SEPTA and Port Authority service areas, particularly suburban and rural areas
  - Municipal planning and policy resources applicable across the state



# Resource Guide – Solutions for Challenges



# Roles, Responsibilities, and Partnerships



# Resource Guide - Contents



## ▪ [1] Planning and Policy Resources

Appendix A – Model Ordinance

Appendix B – Plan Review Checklist



## ▪ [2] Design Resources



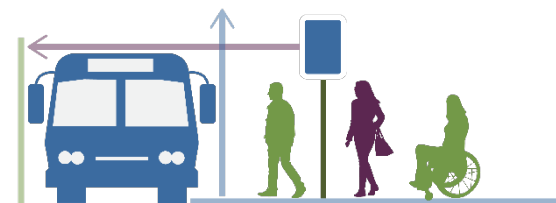
## ▪ [3] Bus Stop Typologies

## ▪ Quick Reference



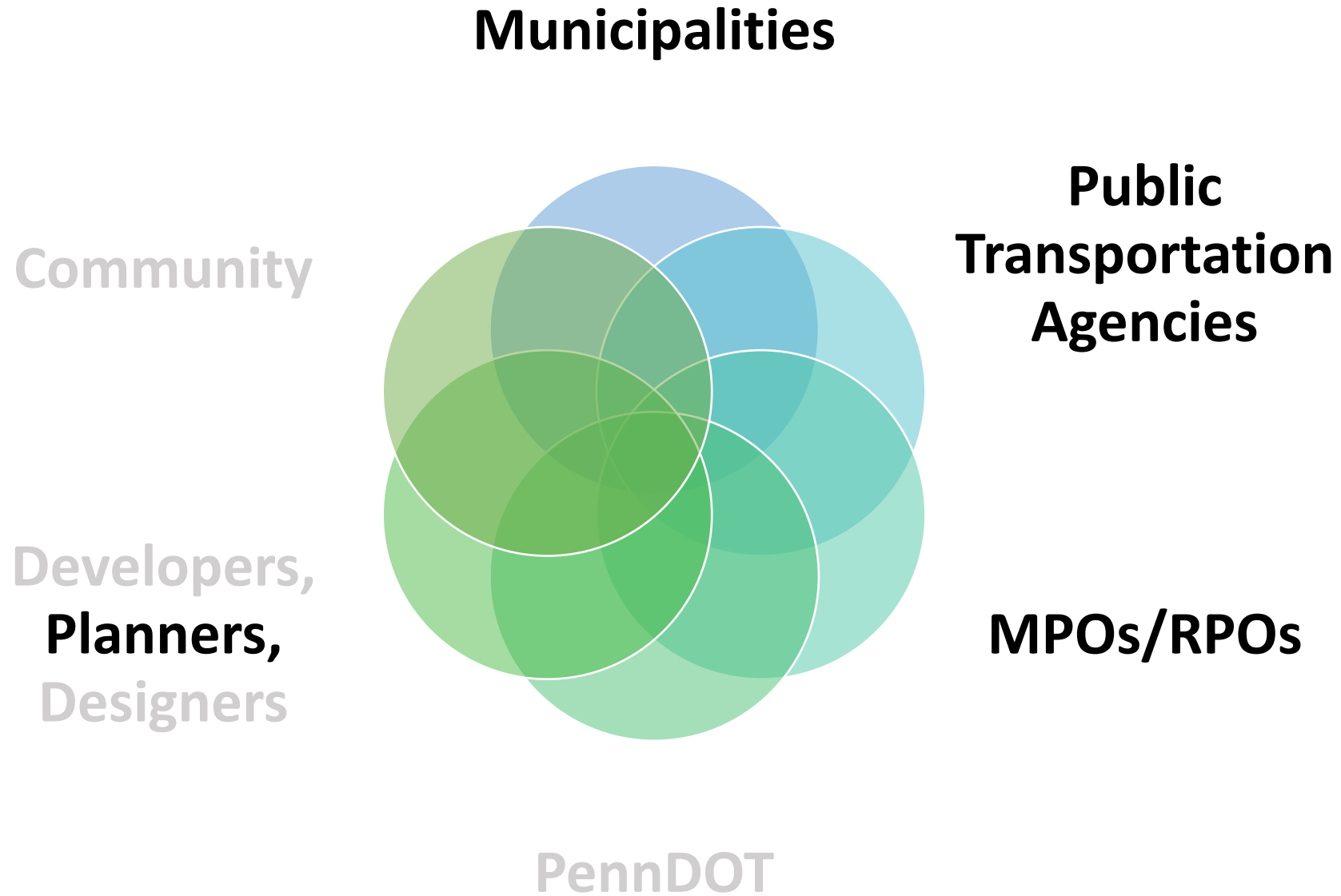


# [1] Planning and Policy Resources



**Building Better Bus Stops**  
Resource Guide

# Planning Resources – Key Partners



# Relationship between Transit and Land Use



## Public Transportation Benefits



### Delivers Economic Opportunity

\$10 billion/year statewide in economic activity



### Safer than a car

10x safer/mile



### Saves money

Household savings of \$10,000/year by living with one less car



### Decreases gas consumption

1 passenger mile = 1/2 fuel consumption of private vehicle



### Reduces air pollution

1 passenger mile = 95% less CO, 92% less VOCs, 50% less CO<sub>2</sub> and NO



### Increases Mobility

For ALL riders



### Encourages Healthier Habits

2/3 of riders walk to bus stops



# Opportunities to Incorporate Transit

- Comprehensive Plan
- Zoning Ordinance
- Subdivision and Land Development Ordinance (SALDO)
- Official Map and Ordinance
- Other Planning Documents
  - Capital Improvement Plans
  - Economic Development / Revitalization Plans
  - Open Space / Recreation Plans
  - Corridor / Special Area Plans
  - Active Transportation Plans





# Transit Supportive Land Use and Design



Land Use



Site Design



Parking



Pedestrian / Bicycle  
Connections and Amenities



Bus Stops



# Model Ordinance

## Appendix A

### Model Ordinance Language for Better Bus Stops

- Definitions
- Zoning Ordinance
- Subdivision and Land Development Ordinance (SALDO)

#### Definitions

*The following definitions should be included, added, or updated in the definitions sections of a municipal Zoning Ordinance and/or Subdivision and Land Development Ordinance (SALDO).*

- **ADA** – The Americans with Disabilities Act of 1990.
- **ADA Loading Pad** – A level loading area with a firm, stable surface where the front door of a bus opens to receive and discharge passengers. The ADA loading pad may be a stand-alone facility or may be integrated with the adjacent sidewalk.
- **Bus Passenger Bench** – A seat where multiple people may sit at one time while waiting for a bus.
- **Bus Shelter** – A permanent roofed structure located at a bus stop that provides protection from the weather to persons waiting for a bus. The shelter is often semi-enclosed and may provide seating.
- **Bus Stop** – A designated place where a bus may stop to allow boarding or alighting of public transit riders. A bus stop is marked with a bus stop location sign and may include infrastructure or amenities, such as a bus shelter or bus passenger bench.
- **Bus Stop Infrastructure** – Facilities located at a bus stop that are designed and intended to provide safe access to fixed route public transit service, including ADA loading pads, bus passenger benches, and bus shelters.
- **Bus Stop Passenger Information Sign** – Printed or electronic display at a bus stop that provides information to waiting passengers related to the public transit services, such as maps, schedules, or real-time information about the location or anticipated arrival of a transit vehicle.
- **Bus Stop Street Furniture** – Bus stop street furniture that provides comfort to public transit riders and may include, but is not limited to, bus passenger benches, leaning rails, waste receptacles, and bicycle racks.
- **Bus Stop Location Sign** – A marker identifying a location used as a bus stop, typically listing the name of the public transit service provider and bus routes serving the stop.



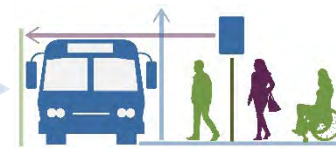
# Plan Review Checklist

## Appendix B

### Plan Review Checklist for Better Bus Stops

#### For all projects

	Yes	No	Comments
Is the proposed project located adjacent to an existing or planned bus stop?			
Does the proposed project include bus stop infrastructure?			
Is the proposed land development project located adjacent to or within 3/4 mile of an existing or planned bus route?			
Is the proposed land development project considered a development of regional significance and impact? (Does the proposed project meet PennDOT's criteria for a Transportation Impact Study?)			
Is there public and community support for a new, relocated, or improved bus stop?			
If the answer to any of the above questions is "Yes," has the applicant contacted and coordinated with the transit agency? (Request documentation of coordination.)			
Has the transit agency reviewed and approved the bus stop location?			
If it is determined that a bus stop is not necessary based on current conditions, but could be needed in the future, can an easement be dedicated or right-of-way reserved for future bus stop infrastructure or connecting sidewalks?			



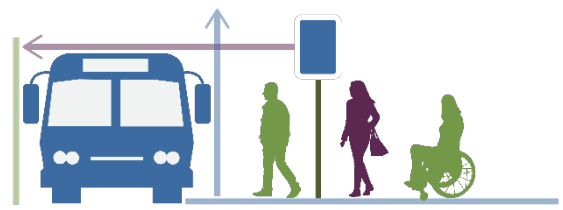
# Implementation Resources

- Land Development Projects
- Transportation Improvement Projects
  - PennDOT Connects →
    - Collaboration Meetings
- Public-Private Partnerships
- Potential Funding Sources



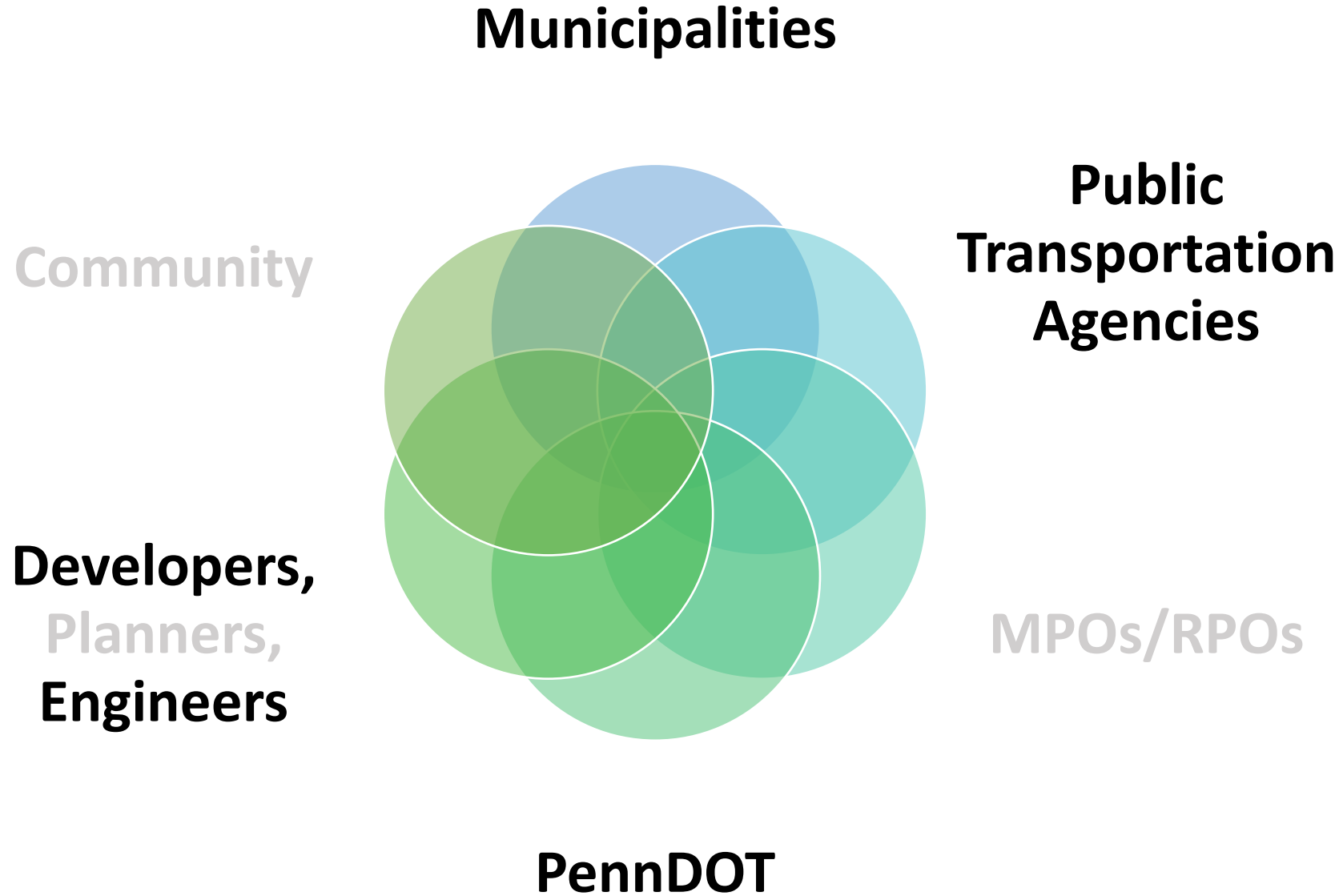


# [2] Design Resources



**Building Better Bus Stops**  
Resource Guide

# Design Resources – Key Partners



# Basic Bus Stop Design Principles



**Accessible to everyone.**



**Safe, convenient, and comfortable location.**



**Visible and easily identifiable.**



**Good pedestrian access and connections.  
Well integrated with surroundings.**



**Includes amenities to make the wait comfortable.  
Supports efficient and effective bus operations.**

*Source: Adapted from Memphis Area Transit Authority (MATA) Bus Stop and Accessibility Guidelines, 2017*



# Evaluating Bus Stop Locations

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- Land Use
- Ridership, Demographics and Equity
- Transit Operations and System Performance
- Safety and Security
- Pedestrian Connections and Accessibility
- Roadway Operations
- Amenities





# Other Siting and Design Considerations

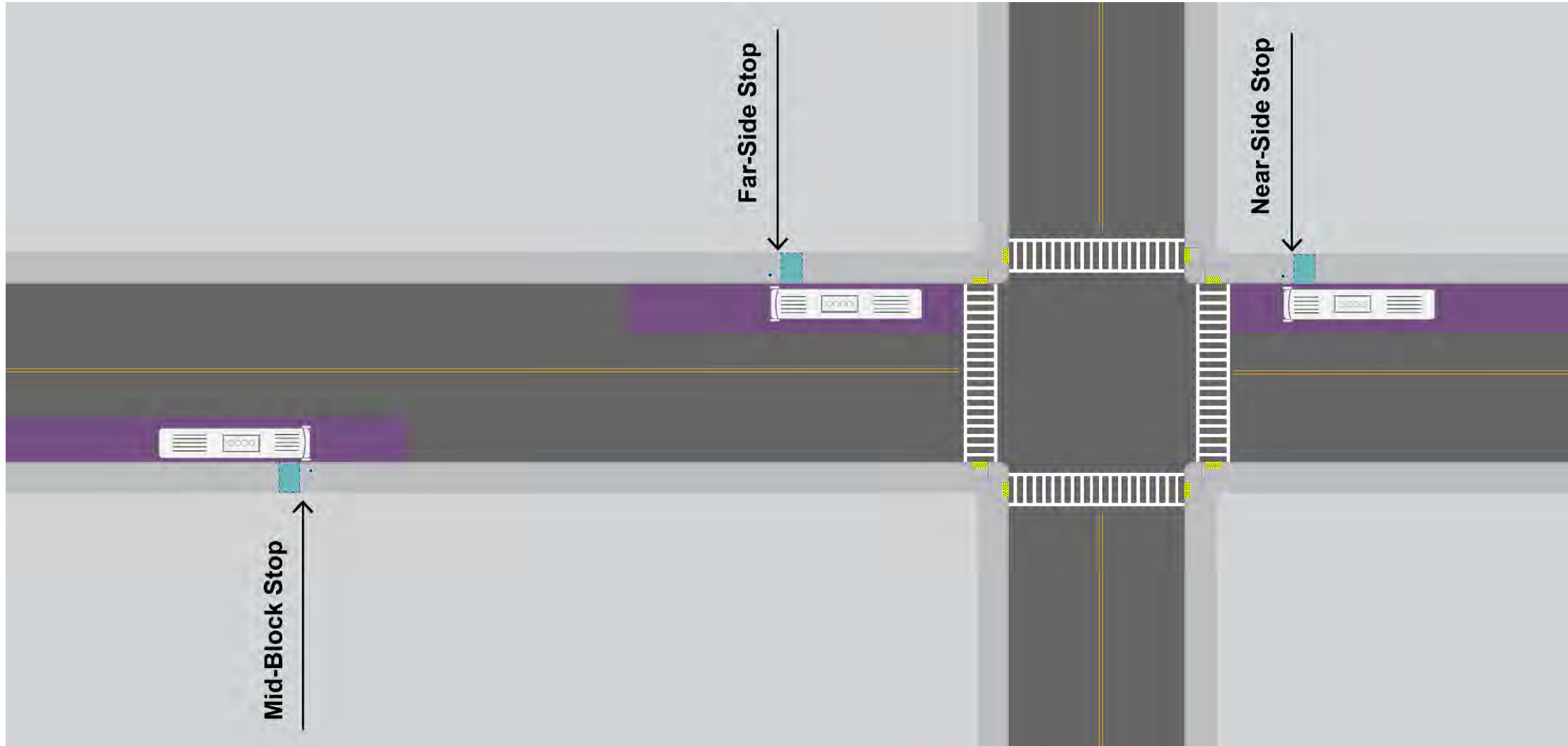
## ■ Transit Vehicles

- Length: 35' and 40' most common in Pennsylvania
- Width: 10.5' wide with mirrors
- Clearances
- Turning radii

- Driveways and Access Management
- Sight Lines and Sight Distance
- Curb Management and Parking Restrictions
- Bicycle Lanes
- Pavement Markings and Signage
- Pavement Materials
- Traffic Signals and Roundabouts



# Bus Stop Placement



# Bus Stop Configuration



## Roadside or Curbside Stops

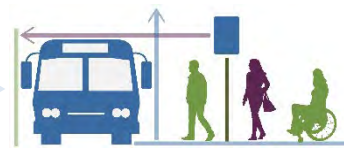
- Travel Lane
- Parking Lane
- Shoulder



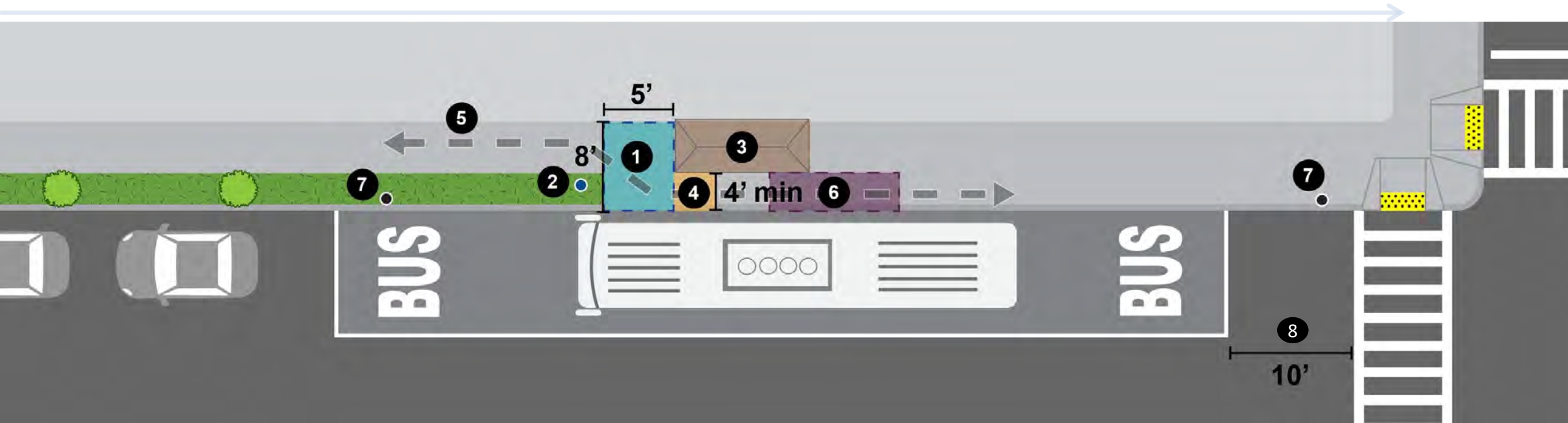
## Curb Extensions



## Bus Bays



# Basic Bus Stop Elements



- 1 ADA Loading Pad
- 2 Informational Signage
- 3 Shelter, Bench, Amenities
- 4 Accessible Route (to shelter)
- 5 Accessible Route (through the stop)
- 6 Clear Zone for Rear Door
- 7 No Parking
- 8 Safety Buffer



# Basic Bus Stop Elements

## 1 ADA Loading Pad



## 2 Informational Signage



## 3 Shelter, Bench, Amenities



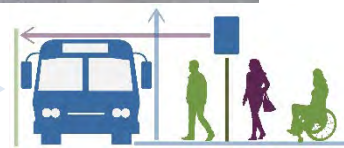
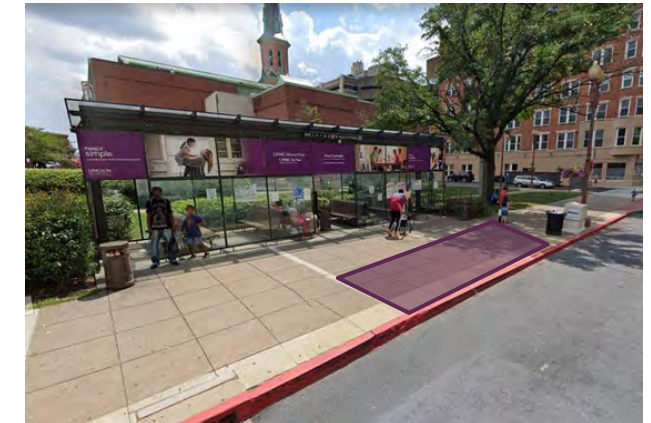
## 4 Accessible Route (to shelter)



## 5 Accessible Route (through the stop)



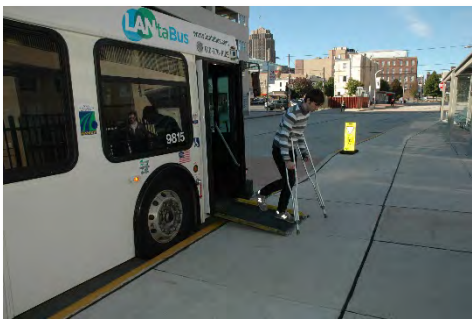
## 6 Clear Zone for Rear Door



# ADA Loading Pad



**Not an ADA Curb Ramp**



# Other Amenities

- Benches
- Bicycle Parking
- Trash Receptacles
- Lighting
- Landscaping and Stormwater Management



Play bus stop with a bench on West Market Street in the City of York

*Source: rabbittransit*



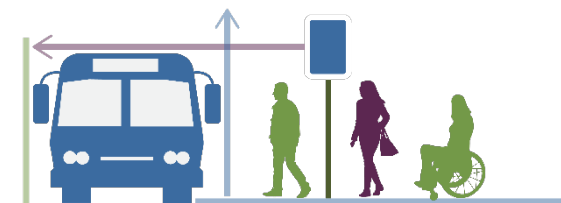
# Permissions, Agreements, and Maintenance

- Rights and permissions
  - PennDOT Right-of-Way: Transit Shelter Right-of-Way Placement Agreement
  - Municipal Right-of-Way
  - Private Property: Open to public
- Routine and Ongoing Maintenance
  - Emptying trash
  - Replacing signs
  - Cleaning shelters
  - Removing graffiti
  - Seasonal maintenance





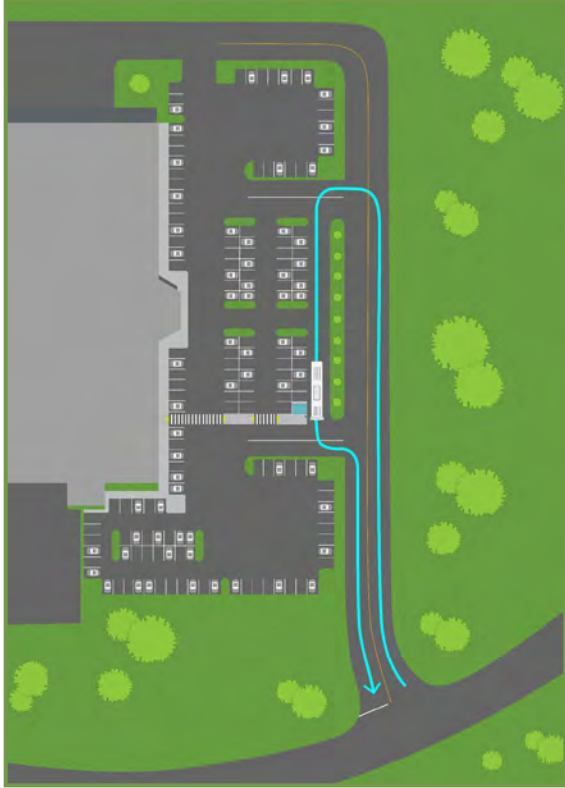
# [3] Bus Stop Typologies



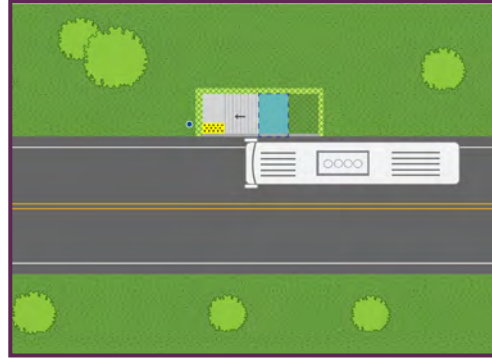
**Building Better Bus Stops**  
Resource Guide

# Typologies - Overview

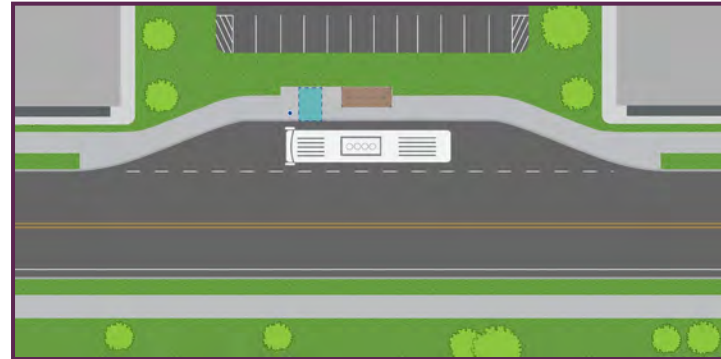
## Suburban Stops— Within a Site



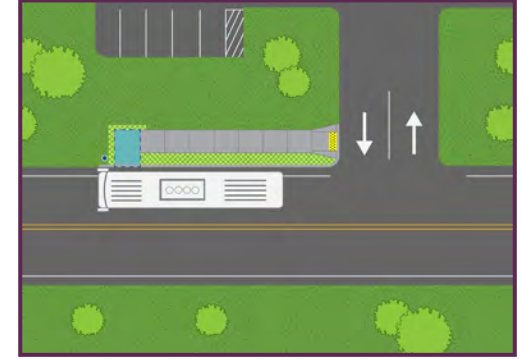
## Rural/Suburban Stops



Curb Heigh ADA Loading Pad



Closed Bus Bay



Commercial Driveway

## Urban/Suburban Stops



Far-Side Basic Stop



Near-Side Stop with Curb Extension and Shelter



# Next Steps

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- Pandemic Implications
- Advocate for Your Community's Transit Needs
  - PennDOT Connects
  - Metropolitan Planning Organization (MPO)/ Rural Planning Organization (RPO) Regional Planning Activities
- Build Partnerships and Build Better Bus Stops!



# PRESENTERS

## **PennDOT Connects Virtual Drop-in Session Building Better Bus Stops**

Presenters:

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Senior Project Manager

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# PENNDOT CONNECTS

## **PennDOT Connects**

<https://www.penndot.gov/ProjectAndPrograms/Planning/Pages/PennDOT-Connects.aspx>

## **Municipal Resources**

<https://www.penndot.gov/ProjectAndPrograms/Planning/Pages/Land-Use-and-Transportation-Planning.aspx>

Phone: 717-710-2090

Email: PAConnects@pa.gov





[DOT](#) > [Projects & Programs](#) > [Planning](#) > Municipal Resources for Land Use and Transportation Planning

## Municipal Resources for Land Use And Transportation Planning

Request  
Municipal  
Assistance or  
Training [↗](#)

All services are free to municipalities.

### Planning Assistance

- Are you involved with municipal land use and transportation planning activities?
- Could your municipality use assistance to help shape future land use or transportation projects?
- Would you like to learn how to advance your community's planning and transportation-related goals?

### PennDOT Connects Municipal Program Resources

[Online Training](#)

[Drop-Ins and Webinars](#)

[Technical Information Sheets](#)

[Newsletters](#)

[Newsletter Sign Up](#) [↗](#)

(Fill out this form to receive monthly electronic newsletter and program announcements.)

### Resources

[2008 Sound Land Use  
implementation](#) (PDF)

[Access Management Ordinances  
for PA Municipalities](#) (PDF)

<https://www.penndot.gov/ProjectAndPrograms/Planning/Pages/Land-Use-and-Transportation-Planning.aspx>





Municipal Outreach, Training, and Assistance Program

DROP-IN SESSION

# **LONG RANGE TRANSPORTATION PLAN & FREIGHT MOVEMENT PLAN**

FEBRUARY 10, 2022 - NOON TO 1:00 PM