



# DESIGNING TRANSIT ACCESSIBLE COMMUNITIES



All Ages, One Region Conference  
March 27, 2014





# Transit Accessibility

Transit Accessibility is...  
the segment of an individual trip that  
occurs between an origin or  
destination point and the transit  
system.

~ Source: American Public Transit Association

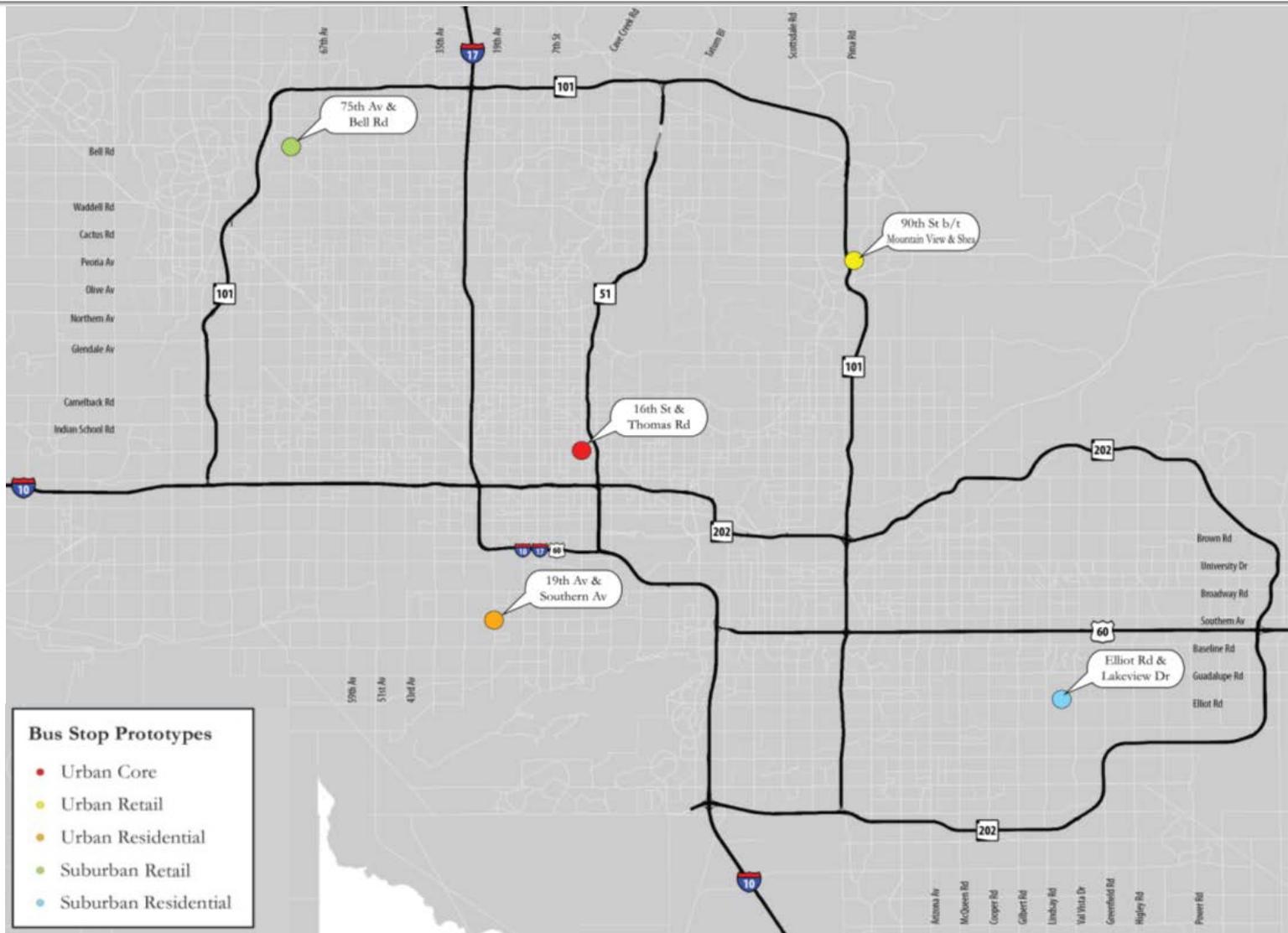


# Stakeholder Workshop





# Case Study Locations





# Surveys (April 2012)





## Surveys Collected *(April 2012)*

1. Shade Trees (68%)
2. Bus Schedule Information (64%)
3. Streetlights (60%)
4. Landscaping (55%)
5. Bicycle Lanes (52%)
6. Bicycle Parking (51%)
7. Curb Extensions (50%)
8. Medians (43%)
9. Decorative Pavement (41%)
10. Art (40%)



# Transit Accessibility Toolkit

Issue  
Importance  
Improvement Considerations  
Planning/Policy Guidance  
Cost

*Lighting*

*Information  
Signage*

*Wayfinding*

*Seating*

*Shelter*

*Shade*

*Adjacent Land  
Use*

*Bicycle Access*

*Bicycle Parking*

*Pedestrian  
Crossing*

# DESIGNING TRANSIT ACCESSIBLE COMMUNITIES study



March, 2013



Prototype Concepts & Implementation Strategies



## Shelter

### ISSUE

Bus shelters provide protection shade, seating, protection from the elements, and serve as a visual guide for transit stops. The Transportation Research Board published a report titled *Guidelines for the Location and Design of Bus Stops* which demonstrated the importance of shelter location, design, and pavement materials used. The report states that both **asphalt and concrete increase air temperature by several degrees because of the material's ability to retain and reflect heat. Temperatures at bus stops can often exceed actual air temperature by several degrees.** The report also states where shelters should be located based on accessibility factors such as bus stop transfer distances.

Within the MAG region, local jurisdictions determine shelter designs. There are a variety of designs that can accommodate different passenger volumes and various site details. In the MAG region, sun protection is a key function of a shelter. Depending on the orientation of the bus shelter (north facing, etc.), time of day and transit service, a bus shelter may or may not provide relief from direct sunlight. In these circumstances other shading strategies such as planting a shelter near an existing tree can also be considered.

### IMPORTANCE

The field survey did not ask specific questions regarding shelter importance. In *Evaluating Transit Stops and Stations from the Perspective of Transit Users* 749 transit users were surveyed at bus stops and stations around metropolitan Los Angeles. **respondents reported shelter to protect them from the sun or rain as being important, also, it was the highest ranking in terms of importance of all five amenities surveyed** (Isekis, H., Taylor, B. D., 2010).

Most case study locations provided bus shelters and bus stops. Some locations had bus shelters installed but bus service was not provided. At these locations bus transfer distances were long which resulted in riders missing transfers or cutting through developments to reach the next bus stop. One location had no shelter, only a bus sign and a shade tree. None of the case study locations included shelters designed for southern climates.

### IMPROVEMENT CONSIDERATIONS

Like bus benches, bus shelters may be supported by advertising or constructed using entirely public funds. Transparent screening is an important element of both of the examples below, as visibility is an important security feature and it also allows passengers to see approaching buses from behind the screen.

Furthermore, **shelters can be coordinated with landscaping to provide maximum protection from the elements** and to enhance the visual quality of the bus stop. Shade trees reduce heat at a site and provide additional shade for patrons waiting outside the shelter. To increase rider comfort consider using low heat gain materials and finishes.

**...shelters can be coordinated with landscaping to provide maximum protection from the elements and to enhance the visual quality of the bus stop. Shade trees reduce heat at a site and provide additional shade for patrons waiting outside the shelter.**

**Southern Climate Shelters** | Shelters designed for southern climates are designed with the goal of alleviating uncomfortable conditions caused by heat and sun exposure. Shelters can be configured with a screen placed between the street and bench to protect waiting passengers from direct sunlight; this configuration would be most applicable for east or west facing stops and where there are few trees or buildings to block the sun. Prefabricated trellis panels may be used in the construction of transit shelters which offer both aesthetic and thermal benefits. Vertical panels and seating areas can be staggered to maximize shade opportunities throughout the day.

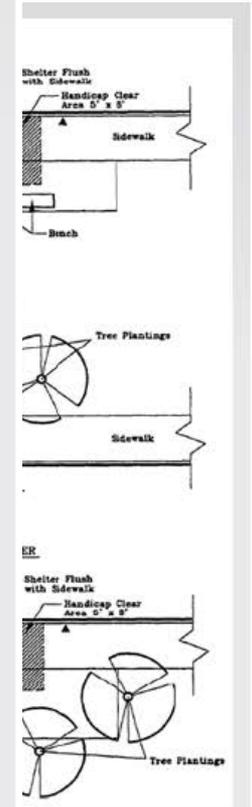
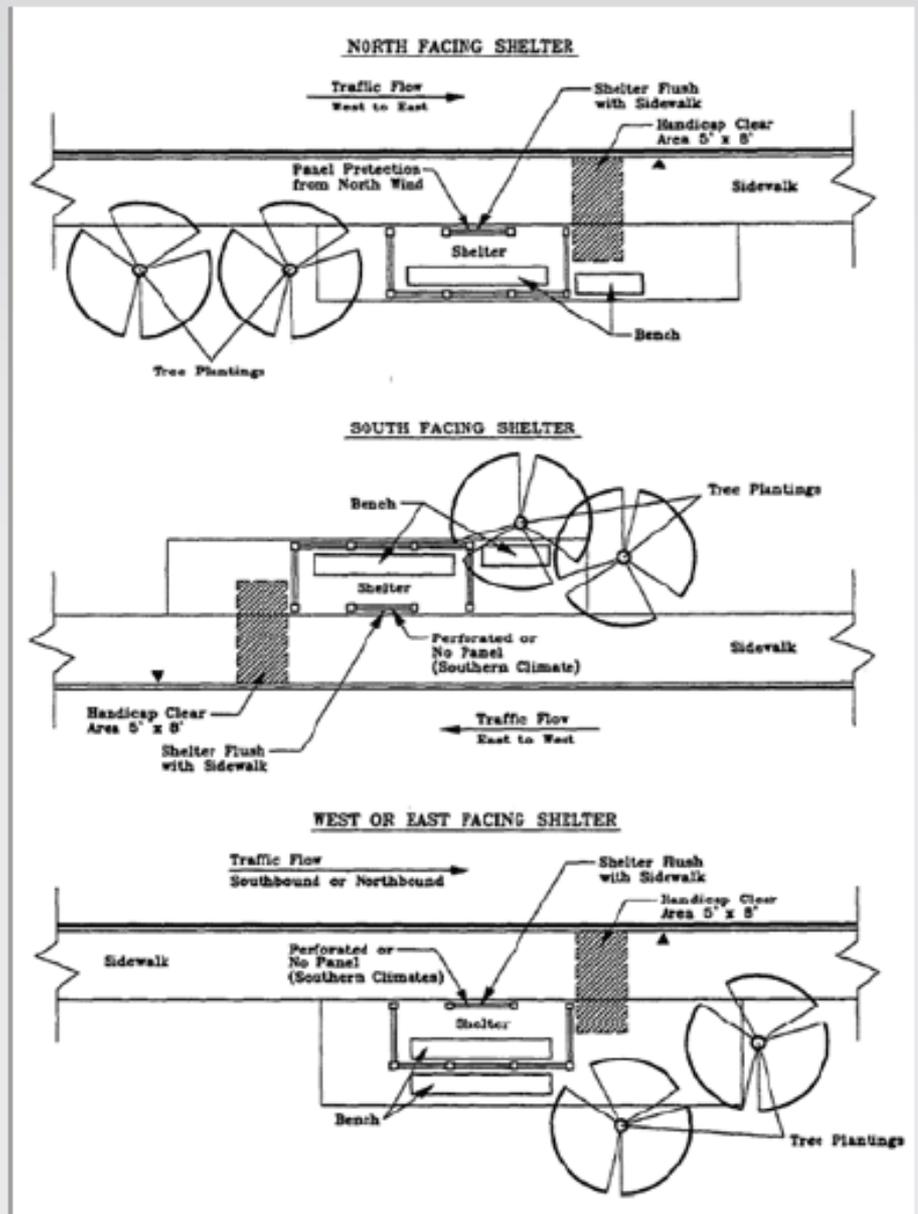


4:00 p.m.  
**EAST FACE**



2:00 p.m.  
**EAST FACE**

The City of Scottsdale conducted a sun exposure study. The resulting design is similar to concept designs in



Conceptual Shelter Design for Southern Climates  
Source: TCRP Report 19c - Guidelines for the Location and Design of Bus Stops



## Seating

### ISSUE

Seating is typically included in shelter design, but where installation of a shelter is not justified a bench with a shade tree provides comfort and convenience at bus stops. Factors used in determining installation and locations of bus stop seating include:

- Available space
- Stops with long headways
- Landowner/developer was denied permission to install a shelter
- Stops frequently used by elderly and the disabled
- Evidence of riders sitting on nearby land or structures

### IMPORTANCE

The field survey did not ask specific questions related to seating. In “Evaluating Transit Stops and Stations from the Perspective of Transit Users” 749 transit users were surveyed at 12 transit stops and stations around metropolitan Los Angeles; in terms of provided amenities, respondents selected “enough places to sit” as fourth out of five in rank of importance (Isekis, H., Taylor, B. D., 2010).

Most case study locations provided seating via a bus shelter. One location provided additional benches outside of the shelter. And one location provided no seating at the bus stop.

### IMPROVEMENT CONSIDERATIONS

Bus stop seating may be provided independent of bus shelters, offering comfort and convenience at bus stops. Seating at bus stops is often provided based on existing or projected ridership.

**Bench** | Seating provided independent of bus shelters would typically be provided where ridership is below those justifying a bus shelter. The quality, financing and siting of benches may vary according to the needs and resources of the responsible agency and local community. Locate benches near shade trees whenever possible to maximize shade or plant shade trees near the bench location. Coordinate bench locations with street lighting to increase visibility and enhance security. Do not locate benches in undeveloped areas of the right-of-way or near driveways to improve pedestrian safety and comfort. Locate benches on a non-slip, properly drained, concrete pad.

**Seat Wall** | Street walls can be designed at lower heights to serve as additional seating from transit patrons (aka Seat Walls). Seat walls can be integrated into pedestrian refuges. Shade trees should be planted near seat walls to provide the maximum amount of shade. Install skate stops or skate blocks along seat walls to avoid damage that may occur to wall.

**Public Art/Gateway Monument** | Seating can be incorporated as public art or as part of a gateway monument.



Bench with no advertising (shade from tree and building)



Seating provided on adjacent street wall, also known as a seat wall.



Seating provided on adjacent street wall, also known as a seat wall.



# Landscape Shading

## ISSUE

Adequate shading can improve uncomfortable environmental conditions like heat and sun. In the MAG region, sun protection is a key function of shelters. Depending on the orientation of the bus shelter (south facing, north facing, etc.), time of day, and transit service time, a typical bus shelter may or may not provide relief from direct sunlight. In these circumstances other shading strategies such as locating the bus stop near an existing tree can be considered. *TCRP Report 19c* provides detailed guidance on the shade of bus stop areas.

It is important to consider the orientation of the sun and the shade it provides. Treatment of peak activity data and pedestrian determining

## IMPORTANT

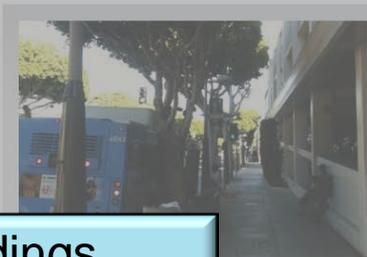
During the first study if an increase in more likely transit riders often if additional shade was provided. Only 21% of riders thought there were a lot of trees and plants.

At all case study locations only partial shade was provided during certain periods of the day but not during all hours of daylight. At most case study locations at least partial shade was provided from the bus shelter; at bus stops where a shelter was not provided a nearby shade tree provided partial shade. None of the case studies had adequate shade pedestrian or bicycle routes in the catchment area.

## IMPROVEMENT CONSIDERATIONS

Various strategies for providing shade at transit stops have been discussed in previous sections including the siting of benches to take advantage of existing shade and the design and orientation of shelters. In addition to shade at the bus stop location, consideration should be given to providing adequate shade on bicycle and pedestrian routes that connect to bus stops.

**Street Trees with Grates** | Shade trees planted in tree wells are common in urban areas where on-street parking may be directly adjacent to the planting area. Shade trees



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A landscaped strip between the curb and

The design and orientation of buildings, particularly with regard to setback and height, can have a significant impact on the level of shade provided at transit stop and along sidewalks in the transit stop catchment area.

**Sidewalk-oriented Buildings** | The design and orientation of buildings, particularly with regard to setback and height, can have a significant impact on the level of shade provided at transit stop and along sidewalks in the transit stop catchment area. Structures may also be built over sidewalks for short stretches to provide pockets of relief from direct sun exposure. Depending upon the orientation of the building (i.e. north, south, east, west) and the location of the sun, buildings with a zero setback line or small setback line can provide shade for the sidewalk. A two-story building has a comparable height to a mature shade tree.

Landscape strips that will be planted with shade trees need to be at least 3' wide to allow for a minimum 2'6" clearance radius around the base of the tree. Evaluate tree litter, fruit characteristics, smell, growth rate, proximity to building structures and utilities, root spread, and seasonal growth when determining tree species. Certain species can have major impacts on building foundations, sidewalks, cars, pedestrians, and utilities.

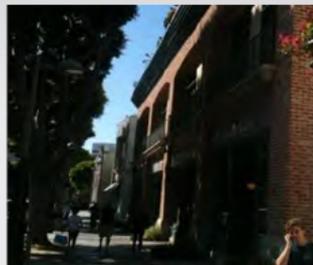
**Shade Trees** | Whenever possible, landscape transit, pedestrian and bicycle areas with shade trees rather than palm trees. Palm trees provide little to no shade.

**Canopies** | Canopies are typically used on private property. They may be erected to provide shade between the building entrance and the public sidewalk. Canopies have also been used on roadways in some urban settings.



## PLANNING/POLICY GUIDANCE

- Install trees to maximize shade opportunities while considering the natural and built environmental impacts.
- Some cost effective strategies for planting street trees include:
  - Locating bus stops in locations where they will benefit from existing shade trees.
  - Prioritizing the planting of street trees that will serve existing bus shelters and sidewalks.
- Wide and/or detached sidewalks allow for a buffer zone that can include tree wells in urban areas or a continuous landscaped strip in more suburban settings.
- Shade can be a consideration during private development design and review and the implementation of public improvements within the public right-of-way. Identifying the appropriate strategy requires consideration of capital cost, maintenance and contextual factors such as aesthetics and the number of pedestrians and transit users who will actually benefit from the investment.
- Provide appropriate landscaping that does not interfere with pedestrian and bicycle accessibility.



The combination of tree wells and sidewalk-oriented buildings provides consistent shade throughout most of the day.



Sidewalk oriented development provides shaded connection between bus stops and building entrances.  
Source: City of Chandler, Green Building Program



Canopies provide shade from the public sidewalk to the building entrance.

## COST

The table below lists the estimated unit construction costs for shade that may be included at transit stops. The potential application of each feature by prototype is highlighted.

Table 24: Cost of Shade & Potential Prototype Application

Feature	Description	Unit	Unit Cost	Application for Prototypes				
				Urban Core	Urban Retail	Urban Res.	Sub. Retail	Sub. Res.
Shading	Standard shelter w/ seating, lighting, bicycle rack, concrete pad, trash receptacle	Each	\$16,000					
	Enhanced shelter w/ seating, side screens, lighting, bicycle rack, concrete pad, trash receptacle	Each	\$25,000					
	Custom shelter w/ seating, side screens, interior lighting, stop area lighting, bicycle rack, concrete pad, trash receptacle	Each	\$35,000					
	Shade tree (irrigated)	Each	\$750					
	Landscape buffer w/ shade tree (irrigated)	Sq. Ft.	\$3.00					
	Tree well with cover	Each	\$250					
	Custom shade structure	Each	\$5,000					



# Adjacent Land Use

## ISSUE

Adjacent land use is an important element to consider when creating or improving a pedestrian environment. Developments with large setbacks, or gated communities all act as barriers to pedestrians and bicyclists from the

## IMPORTANCE

During the field survey, transit riders at a bus stop close to home, work, or school thought the bus stop was close to their destination point.

Of the case study locations, only the Suburban Residential stop provided direct access to adjacent land uses but no direct access to the sun areas. All other case study locations provided access to adjacent land uses, the way to the Suburban Residential stop which has access only at subdivision road to the bus stops.

Recent research has concluded that development patterns have a significant impact on transit systems and stops:

*"The results of this research suggest that the primary means available to planners to increase transit ridership through land use planning is to increase density in the areas near transit corridors, and channel a greater amount of retail development within a quarter mile of transit stops. In fact, this analysis suggests that increasing transit service through increasing transit ridership to a greater degree through retail, mixed-use and multifamily development than through increasing transit service."*

- Bus Transit and Land Use: Illuminating the Interaction

## IMPROVEMENT CONSIDERATIONS

Urban planners and transit planners should consider locating bus stops adjacent to land uses that generate the most activity or "eyes on the street" to enhance personal safety of transit users. Transit-stop-adjacent developments should provide services that may be useful to transit users and turn on the transit investment.



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Sidewalk-oriented development provides shade and direct access to building entrances.

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In Metro core locations, a minimal setback is encouraged, such as this example in Tempe.

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locations that provide easy access for pedestrians and bicyclists to both enter and exit the subdivision.



The City of Tempe has several means by which to encourage pedestrian- and transit- friendly development. The *City of Tempe Transportation Master Plan* includes design criteria for new development (excerpt at right). Additionally, the City's Public Works Department enforces the City's *Engineering Design Criteria* which includes right-of-way dedication/improvement requirements (excerpt below).

**Pedestrian-friendly Design Criteria for New Development**

The [City of Tempe Transportation Master Plan](#) (pp. 2-2 & 2-3) includes design criteria for new development promoting pedestrian-friendly design:

- Encourage pedestrian and transit-user access to buildings by locating buildings at the minimum setback for arterial and arterial to collector intersections. The distance between bus stops and building entrances shall be minimized by using minimum setback requirements for locations of buildings on the site.
- Encourage pedestrian and bicycle access to the main building entrances from all sides of the site by providing more links to street frontages.
- Encourage buildings to locate closer to street intersections by minimizing the amount of parking allowed at street frontages, or by locating all parking behind or to the side of buildings.
- Encourage mixed-use development, allowing people to work where they live.
- New and existing cul-de-sacs and dead-end streets can be enhanced by providing connecting pedestrian and bicycle paths to the major streets.

Table 25. Cost of Wayfinding Signage & Potential Prototype Application

Right-Of-Way (ROW) Dedication/Improvement		Manufacturing/Industrial			Commercial/Retail			Residential		
		Large 70,000+ SF	Medium 18,000-70,000 SF	Small 0-18,000 SF	Large 45,000+ SF	Medium 8,000-45,000 SF	Small 0-8,000 SF	Large 75+ Units	Medium 25-75 Units	Small 0-25 Units
1. Public Health and Safety Requirements or Requests	1a. ROW/Install turning lane	R	R	R	R	R	N	R	R	N
	1b. Install looped water system where pressure/supply problems would otherwise exist.	R	R	R	R	R	R	R	R	R
2. Trip Generation Rate Requirements or Requests	2a. ROW for arterial street.	R	R	N	R	R	N	R	R	N
	2b. Full arterial half-street improvements (see 1b & 1e)	R	R	N	R	R	N	R	R	N
3. Individualized Determination or Requests	3a. Bus pad dedications for bench	R	R	N	R	R	N	R	R	N
	3b. Bus pad installation for bench	R	N	N	R	N	N	R	N	N
	3c. Bus shelter dedication	R	R	N	R	R	N	R	R	N
	3d. Bus shelter installation	R	N	N	R	N	N	R	N	N
	3e. Bus bay dedication (Arterial/Arterial, Arterial/Collector)	R	R	R	R	R	R	R	R	R
	3f. Bus bay installation (Arterial/Arterial, Arterial/Collector)	R	N	N	R	N	N	R	N	N
	3g. Multi-use path easement	R	N	N	R	N	N	R	N	N
	3h. Multi-use path construction (including lighting)	N	N	N	R	N	N	R	N	N
	3i. Construction of looped water main where existing pressure/supply is inadequate to service subject property	N	N	N	N	N	N	N	N	N



## **i** Information Signage

### ISSUE

To have an effective transit system, riders need to have easy, reliable, and up-to-date information regarding the transit service. Providing bus service information at bus stops is important to transit users and can be used effectively to increase ridership by retaining existing riders and encouraging the use of transit by new riders, infrequent riders, and disabled individuals.

### IMPORTANCE

During the field survey, transit riders were asked if an increase in schedule information would make them more likely to ride the bus more often; **64% of transit riders said they would ride the bus more often if adequate schedule information was provided.**

At most case study locations bus stops had little to no information signage. The existing signage offered at all bus stops included a bus stop number sign only. Several locations had a sign providing the bus stop number and the bus route number that transit riders can use to find information about the bus stop. A few locations offered a transit system map. One location provided park-and-ride location information. None of the case study locations provided a bus schedule, route destinations, or real-time travel information.

Table 17: Information Signage Elements

Information Content	Station/stop, route, schedule, service alert, real-time location, destination, vehicle load factor.
Information Format	Map, table, website, trip planner, electronic message, phone text.
Information Delivery Media	Telephone, personal computer, mobile device, signage, kiosk.

### IMPROVEMENT CONSIDERATIONS

Information signage can be implemented in several formats and with various combinations of information. It is highly encouraged that transit stops include a full bundle of information for transit riders including: a bus stop number, route(s) number and destinations, transit system schedule, transit system map, transit system provider's contact information, and if applicable, the park-and-ride location. Furthermore, bus stops and routes with high ridership volumes can consider adding real-time travel information. The types of information signage shown below are but a few examples of the possible design and format to provide the information. Overall, transit system information signage should be as consistent as possible throughout the entire transit system.



**64% of transit riders said they would ride the bus more often if adequate schedule information was provided.**

**Bus Stop Sign with Route(s) Number and Destinations** | As stated in the table above, the existing post-mounted bus stop sign includes the bus route number. These signs can be enhanced to include the route name and the primary destination along the route.

**Information Kiosk** | Each bus stop can include an information kiosk houses the transit system schedule and the system map. This may be another location to consider for the transit provider's contact information.

**Contact Information Signage** | Each bus stop can include the transit provider's contact information with the bus stop number. This sign provides another means for riders to get information regarding their bus route and bus stop. Many bus stops in the greater Phoenix area already include this sign. In addition to providing a phone number, these signs can be enhanced to include a QR code which would direct smart phone users to a website providing updated information on the bus route and bus stop.



## **i** Information Signage

### ISSUE

To have an effect to have easy, relevant information regarding the transit service information to transit users and increase ridership and encouraging infrequent riders.

### IMPORTANCE

During the field study, an increase in signage was more likely of transit riders more often if additional signage was provided.

At most case studies, no information was offered at all bus stops. A number sign only or a sign providing a number that transit information about the stop was offered at that stop. A transit system may provide park-and-ride information. None of the case studies provided schedule, route information.

Table 17: Information Signage

Information Content	Time location, destination, vehicle load factor.
Information Format	Map, table, website, trip planner, electronic message, phone text.
Information Delivery Media	Telephone, personal computer, mobile device, signage, kiosk.

### IMPROVEMENT CONSIDERATIONS

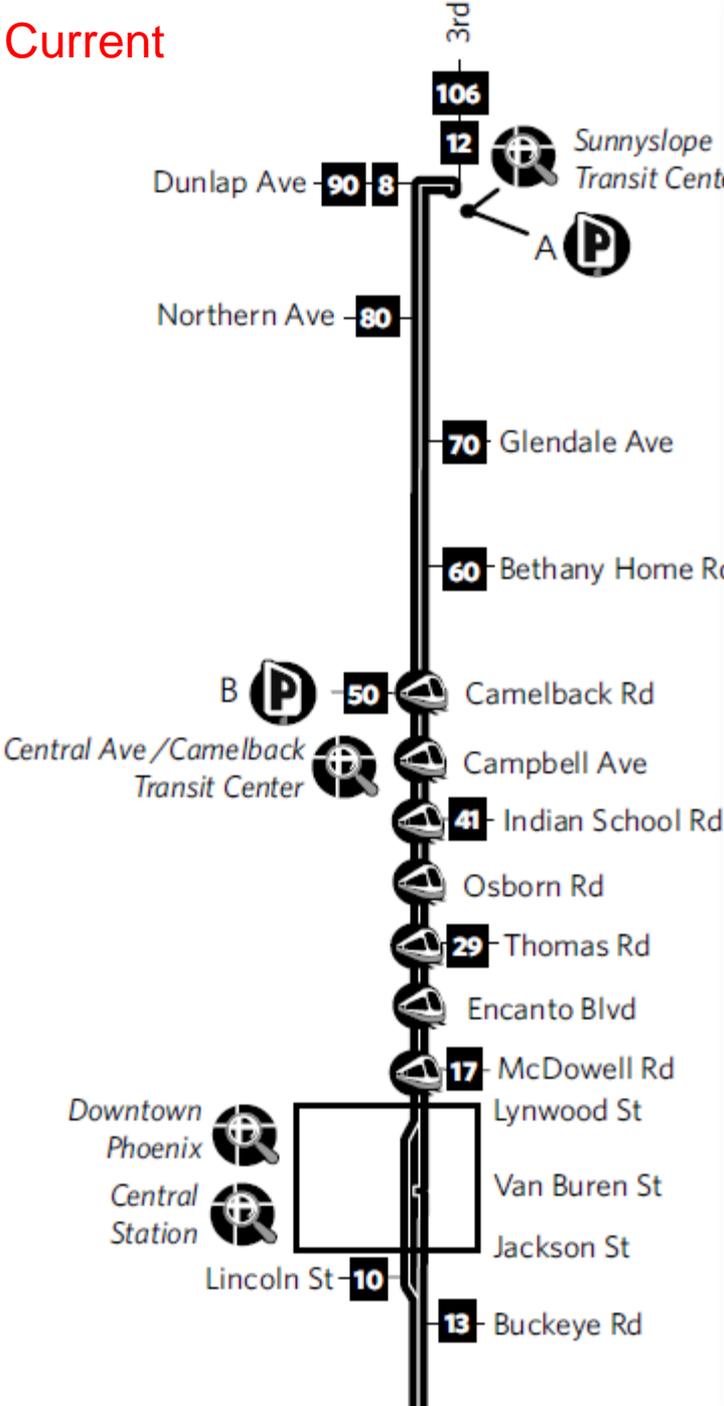
Implement bus stops in destinations applicable, after adding of the project as con



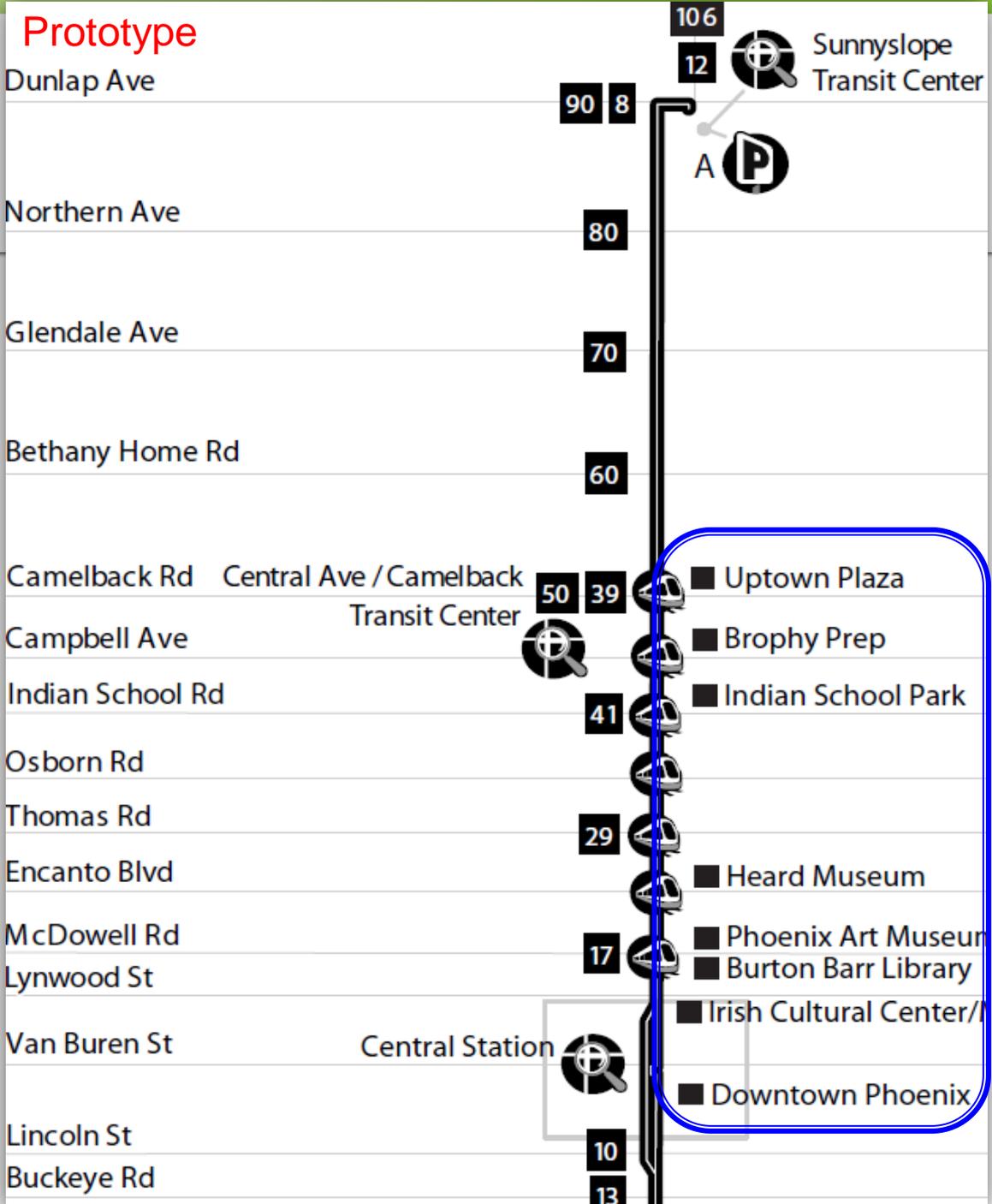
**Information Kiosk** | Each bus stop can include an information kiosk houses the transit system schedule and the system map. This may be another location to consider for the transit provider's contact information.

phone number, these signs can be enhanced to include a QR code which would direct smart phone users to a website providing updated information on the bus route and bus stop.

# Current



# Prototype



- Uptown Plaza
- Brophy Prep
- Indian School Park
- Heard Museum
- Phoenix Art Museum
- Burton Barr Library
- Irish Cultural Center/...
- Downtown Phoenix

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## NEWS HEADLINES

### **Report Offers Ways to Facilitate Transit Ridership for Bicyclists**

How can public transit planners accurately address the needs of riders who combine bicycling with bus or rail?

Given that many bicyclists place a high value on the ability to blend transportation modes, the Mineta Transportation Institute (MTI) has published a free, peer-reviewed report that provides policy recommendations that respond to the needs of these riders.

The report, *Perceptions of Bicycle-Friendly Policy Impacts on Accessibility to Transit Services: The First and Last Mile Bridge*, recognizes recent efforts many public transit agencies have made to combine bicycles and transit, including installing bicycle racks on transit vehicles and implementing bicycles-on-trains policies.

Highlights include the following recommendations for public transit planners:

## CLASSIFIEDS

» Metro Transit St. Louis has an opening for a director of risk management, claims administration & safety.

[\[More\]](#)

» The Chicago Transit Authority is looking for a manager, transportation-bus. [\[More\]](#)

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Highlights include the following recommendations for public transit planners:

Make cycle-transit coordination a high and funded priority for local and regional planning organizations and transit agencies responsible for bicycle planning.

Plan for increased demand in cycle-transit use by providing more secure bicycle parking and higher-capacity bicycle facilities on transit vehicles.

Develop better materials to promote cycle-transit travel.

Study strategies for further facilitating physical access by bicycles to, from, and within transit stations and terminals.

Encourage the growth and expansion of bicycle share programs.



## 6.1 Implementation Checklist

Included in the following pages is a checklist of topics that have been recommended when considering the placement, replacement or upgrade of bus transit stops. The checklist is for all stakeholders in the design, development, installation, and maintenance of bus transit stops, including: planners, transit providers, city design review staff, and private developers. Below is a checklist illustrating all topics to be taken into consideration when planning for, locating, and building a bus transit stop. The checklist includes core elements identified in the DTAC study that make an effective transit stop.

Topics for Consideration	Check All That Apply
Have you <b>coordinated</b> with member agency staff?	<input type="checkbox"/> Transit operations staff <input type="checkbox"/> Facilities staff <input type="checkbox"/> Street planner/engineer <input type="checkbox"/> Development review/services <input type="checkbox"/> Safety/Safe Routes to School <input type="checkbox"/> Bicycle/Pedestrian <input type="checkbox"/> Other/parks and recreation/maintenance, etc
Did you consider <b>location</b> ?	<input type="checkbox"/> At intersection (bus bay/acceleration lane). <input type="checkbox"/> Mid-block (with pedestrian crossing). <input type="checkbox"/> Close to targeted development. <input type="checkbox"/> Ease of transit transfer. <input type="checkbox"/> Potential conflict with pedestrian/bicyclists/auto users
Did you consider <b>lighting</b> ?	<input type="checkbox"/> Reviewed applicable lighting standards. <input type="checkbox"/> Freestanding street light located near bus stop. <input type="checkbox"/> Freestanding pedestrian light. <input type="checkbox"/> Pedestrian light attached to street light pole. <input type="checkbox"/> Pedestrian light attached to building.

### Lighting Examples





Did you consider information signage?

- Freestanding information kiosk with detailed route and schedule information.
- Pole-mounted bus stop sign with associated bus route number(s)/ destinations and NextRide information.
- Pole-mounted information box with route map.
- Wayfinding signage to local attractions, libraries, schools, public spaces, transit centers, light rail.
- Bicycle wayfinding signage to iconic routes (major crossings, off street paths, canals, etc).

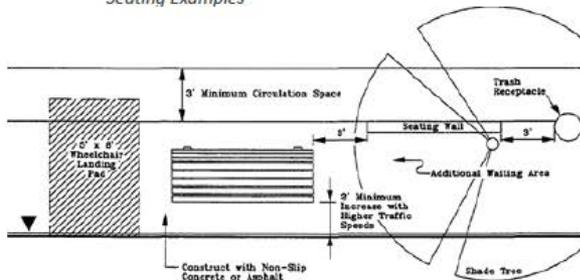
*Information Signage Examples*



Did you consider seating?

- Bench under tree.
- Bench in shelter.
- Seating wall.

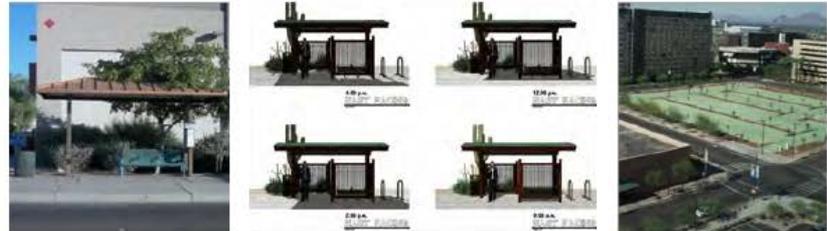
*Seating Examples*



Did you consider shelter?

- Shelter designed for southern climates.
- Enhanced paving/surface coating.

*Shelter Examples*



Did you consider shade?

- Street trees that also create a buffer.
- Adjacent building structure.
- Other shade structure.
- Transit shelter that is appropriately oriented for southern climates.
- Shade/landscaping that minimizes interference to pedestrian and bike access.
- Interference to built/natural environment.

*Shade Examples*





Did you consider **adjacent development (retail/commercial)**?

- Sidewalk-oriented development.
- Pedestrian-oriented building entrance.
- Minimal setback with direct path.
- Path to building entrance.
- Shade at building entrance.
- Safe and shaded pedestrian pathway through parking lot.
- Awning or shade structure that shades the public ROW (TOD structures).
- Pedestrian and bicycle circulation between parcels.
- Multi use path or sidewalk easement (8-10' preferred).
- Safe pedestrian path from transit stop location to building access points.

*Adjacent Development (Retail/Commercial) Examples*



Did you consider **adjacent development (residential)**?

- Pedestrian and bicycle access from walled residential communities to the transit system.
- Pedestrian and bicycle infrastructure within the community and to transit access point.

*Adjacent Development (Residential) Examples*



Did you consider **bicycle access routes and multi-use paths**?

- On-street bicycle lane.
- Off-street bicycle path connected by wayfinding in catchment area.
- Local or collector road connected by wayfinding in catchment area.
- Bicycle crossings.
- Bicycle/pedestrian lighting.
- "Conflict zone" lane painting.
- Bicycle lane buffer.
- Pavement markings.
- Traffic calming and diversion.

*Bicycle Access Examples*





Did you consider <b>bicycle parking</b> ?	<input type="checkbox"/> Sidewalk bicycle rack.
	<input type="checkbox"/> Bicycle corral.
	<input type="checkbox"/> Bicycle rack at development entrance.
	<input type="checkbox"/> Other bicycle parking (e.g. lockers).
	<input type="checkbox"/> Transit frequency and use.
	<input type="checkbox"/> Bike visibility and site location access.
	<input type="checkbox"/> Shade for bicycles.

*Bicycle Parking Examples*



Did you consider <b>enhanced sidewalk</b> ?	<input type="checkbox"/> Urban buffer zone with tree wells.
	<input type="checkbox"/> Suburban buffer zone with landscape strip (Only in suburban/ collector streets. Not preferred in locations limited R.O.W.)
	<input type="checkbox"/> ADA accessibility.
	<input type="checkbox"/> Maximize sidewalk width (8-10").

*Enhanced Sidewalk Examples*



Did you consider <b>pedestrian crossings</b> ?	<input type="checkbox"/> Provide safe connects between pedestrian desire lines.
	<input type="checkbox"/> Curb extensions.
	<input type="checkbox"/> Median refuge.
	<input type="checkbox"/> Raised crosswalk.
	<input type="checkbox"/> Rapid rectangular flashing beacons.
	<input type="checkbox"/> HAWK signal at mid-block crossing.
	<input type="checkbox"/> In-road flashing beacons.
	<input type="checkbox"/> Transit stop placement proximity to safe street crossing.
<input type="checkbox"/> Diagonal/direct pedestrian crossing.	

*Pedestrian Crossing Examples*





**Question?**

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