

APPENDIX A – GLOSSARY OF TERMS

Americans With Disabilities Act (1990) – The act provides reasonable access to and use of building, facilities, and transportation by people with disabilities.

ADAAG – ADA Accessibility Guidelines from the US Access Board. see: <http://www.access-board.gov/adaag/html/adaag.htm>

Bus Bulb/Nub – is an angled narrowing of the roadway and a commensurate widening of the sidewalk resulting in a curb extension for a bus stop.

Bus Pad – a reinforced concrete pad embedded in the roadway that protects the roadway from structural damage from the weight of the buses.

Bus Rapid Transit (BRT) – According to Section 5309 of the MAP-21 legislation (2012), bus rapid transit projects fit into two categories:

- **Corridor-based bus rapid transit project.** – a small start project utilizing buses in which the project represents a substantial investment in a defined corridor as demonstrated by features that emulate the services provided by rail fixed guideway public transportation systems, including defined stations; traffic signal priority for public transportation vehicles; short headway bidirectional services for a substantial part of weekdays and weekend days; but the majority of which does not operate in a separated right-of-way dedicated for public transportation use during peak periods.

- **Fixed guideway bus rapid transit project** – a bus capital project that: (A) in which the majority of the project operates in a separated right-of-way dedicated for public transportation use at a minimum during peak periods; (B) that represents a substantial investment in a single route in a defined corridor or subarea; and (C) that includes features that emulate the services provided by rail fixed guideway public transportation systems, including:
 - defined stations;
 - traffic signal priority for public transportation vehicles; and
 - short headway bidirectional services for a substantial part of weekdays and weekend days.

Bus Turnout – is a short length of roadway that has been widened to allow for buses to reach a bus stop without blocking the curb side travel lane.

Busway/Transitway - Dedicated lane for buses: a special track, road, or section of a road designed and built exclusively for use by buses

Center/Median Running Lanes – Center running or median running lanes, are dedicated lanes located in the center of the roadway.

Crime Prevention through Environmental Design (CPTED) - a multi-disciplinary approach to deterring criminal behavior through environmental design.

Curbside stop – A bus stop in the travel lane immediately adjacent to the curb.

Downstream - in the direction of traffic.

Dwell time - the time a bus spends at a stop, measured as the interval between its stopping and starting.

Farside stop - a bus stop located immediately after an intersection.

Federal Transit Administration (FTA) - The Federal Transit Administration is an agency within the United States Department of Transportation (DOT) that provides financial and technical assistance to local public transit systems.

Headway - the interval between the passing of the front ends of successive buses moving along the same lane in the same direction, usually expressed in minutes.

Intelligent Transportation Systems (ITS) - Intelligent Transportation Systems (ITS) is the integration of advanced communications technologies into the transportation infrastructure and in vehicles. Intelligent transportation systems (ITS) encompass a broad range of wireless and wire line communications-based information and electronics technologies.

Kit of parts - A kit-of-parts is an organization of individual parts and raw material into assemblies of standardized components.

Landing area (landing pad) - an ADA-required 5' x 8' paved area adjacent to the curblineline, for passengers to board and alight from the bus. The landing area is where the bus deploys its wheelchair ramp. Separate from passenger waiting area and shelter pad.

Layover - time built into a schedule between arrivals and departures, used for the recovery of delays and preparation for the return trip.

MAP 21 - Moving Ahead for Progress in the 21st Century (**MAP-21**) is the federal transportation authorization bill reauthorizing surface transportation programs through fiscal year 2014.

Midblock stop - a bus stop within the block.

Mixed Flow - is a standard travel lane.

National Environmental Protection Act (NEPA) - is a United States environmental law that established a U.S. national policy promoting the enhancement of the environment.

Nearside stop - a bus stop located immediately before an intersection.

Nub - a stop where the sidewalk is extended into the parking lane, which allows the bus to pick up passengers without leaving the travel lane, also known as bus bulbs, bulbouts or curb extensions.

Open bus bay - a bus bay designed with bay "open" to the upstream intersection.

Pedestrian Access Route (PAR) - is the area used for pedestrians to travel to their destination.

Queue jumper bus bay - a bus bay designed to provide priority treatment for buses, allowing them to use right-turn lanes to bypass queued traffic at congested intersections and access a far-side open bus bay.

Queue jumper lane - right-turn lane upstream of an intersection that a bus can use to bypass queue traffic at a signal.

Roadway geometry - the proportioning of the physical elements of a roadway, such as vertical and horizontal curves, lane widths, cross sections, and bus bays.

sbX - San Bernardino (County) Express; the proposed system of BRT corridors and the branding of those services.

Shelter - a curb-side amenity designed to provide protection and relief from the elements and a place to sit while patrons wait for the bus.

Sight distance - the portion of the highway environment visible to the driver.

Stand Alone Validator (SAV) - is a fare collection reader used to check for proof of payment .

Street-side factors - factors associated with the roadway that influences bus operations.

TCRP - Transit Cooperative Research Program of the Transportation Research Board.

Ticket Vending Machine (TVM) - is a fare collection vending machine that dispenses tickets for use on transit systems.

Transit Oriented Development (TOD) - compact, mixed-use, pedestrian-oriented neighborhood or district surrounding a transit station, typically within a ¼ mile or ½ walking distance radius.

Transit Signal Priority (TSP) - electronic sensors and equipment that detect buses moving toward signalized intersections and allow either a delayed red indication or an early green signal to advance the bus through the intersection with minimal delay; typically used in conjunction with dedicated BRT lanes or queue jumper lanes.

Turnout - a dedicated bus lane cut into the curblines, where buses can pull out of traffic, load passengers, and then merge back into traffic

Upstream - toward the source of traffic.

Variable Message Sign - is a changeable, electronic message sign.

Wireless Local Area Network (WLAN) - is a wireless communication system that transmits and receives data.

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APPENDIX C – REPORTS AND RESOURCES

Guidance Documents

- APTA [Bus Stop Design and Placement Security Considerations](http://www.aptastandards.com/LinkClick.aspx?fileticket=hGJMqluValw%3D&tabid=329&mid=1682&language=en-US) -
<http://www.aptastandards.com/LinkClick.aspx?fileticket=hGJMqluValw%3D&tabid=329&mid=1682&language=en-US>

APTA Standards Development Program: Recommended Practice. APTA SS-IS-RP-008-10. American Public Transportation Association (2010)

- [APTA Bus Rapid Transit Stations and Stops](http://www.aptastandards.com/Portals/0/BUS_Published/002_RP_BRT_Stations.pdf) -
http://www.aptastandards.com/Portals/0/BUS_Published/002_RP_BRT_Stations.pdf

APTA Standards Development Program: Recommended Practice. APTA BTS-BRT-RP-002-10. American Public Transportation Association (2010)

- [APTA Bus Rapid Transit Running Ways](http://www.aptastandards.com/Portals/0/BUS_Published/003_RP_BRT_Guideways.pdf) -
http://www.aptastandards.com/Portals/0/BUS_Published/003_RP_BRT_Guideways.pdf

APTA Standards Development Program: Recommended Practice. APTA-BTS-BRT-RP-003-10. American Public Transportation Association (2010)

- USDOT FHWA Pedestrian Safety Guide for Transit Agencies -
http://safety.fhwa.dot.gov/ped_bike/ped_transit/ped_transguide/transit_guide.pdf

US Department of Transportation Federal Highway Administration. FHWA-SA-07-017. February 2008.

- [TCRP Legal Research Digest 24](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_lrd_24.pdf) -
http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_lrd_24.pdf

Transit Cooperative Research Program Legal Research Digest 24: Transit Bus Stops: Ownership, Liability, and Access. Transportation Research

- [TCRP Report 19](http://trb.org/news/blurbs_detail.asp?id=2597) -
 “http://trb.org/news/blurbs_detail.asp?id=2597”
 Transit Cooperative Research Program 19: Guidelines for the Location and Design of Bus Stops, Texas Transportation Institute at Texas A&M University (1996)

Other Transit Agencies’ Guidelines

- VTA BRT Design Guidelines -
http://www.vta.org/projects/tsp/pdf/6_brt_service_design_guidelines.pdf

VTA Transit Sustainability Policy, Bus Rapid Transit Service Design Guidelines. 2007.

- [OCTA Policy](http://www.octa.net/temp/OCTA_Bus_Stop_Safety_and_Design_Guidelines.pdf) -

“[http://www.octa.net/temp/OCTA Bus Stop Safety and Design Guidelines.pdf](http://www.octa.net/temp/OCTA_Bus_Stop_Safety_and_Design_Guidelines.pdf)”
 Orange County Transportation Authority (CA) - Bus Stop Safety and Design Guidelines (2004)

- [Palm Tran - Transit Design Manual](http://www.co.palm-beach.fl.us/palmtran/library/TRANSIT_DESIGN_MANUAL.pdf) -

“[http://www.co.palm-beach.fl.us/palmtran/library/TRANSIT DESIGN MANUAL.pdf](http://www.co.palm-beach.fl.us/palmtran/library/TRANSIT_DESIGN_MANUAL.pdf)”
 Palm Beach County, Florida Transit Design Manual (2004)

- [Arlington County - Bus Stop Standards](http://www.commuterpage.com/TDM/pdf/Arlington) -
 “<http://www.commuterpage.com/TDM/pdf/Arlington>”

CoBusStopStandards.pdf”
Arlington County (VA) - Bus Stop Design Standards
(2002)

- [AC Transit Bus Stop Policy](#) -
“[http://www.actransit.org/aboutac/bod/policies/pdfs/Policy_508 - Bus Stop Policy.pdf](http://www.actransit.org/aboutac/bod/policies/pdfs/Policy_508_-_Bus_Stop_Policy.pdf)”
Alameda - Contra Costa Transit District (CA) Board
Policy 508 - Bus Stop Policy (2005)
- [Grand Junction Transit Design Standards](#) -
“<http://www.gjcity.org/CityDeptWebPages/PublicWorksAndUtilities/TransportationEngineering/TEFilesThatLinkintoDWStoreHere/TEDS/TRANSITREGS.pdf>”
Grand Junction / Mesa County Metropolitan Planning
Organization (CO) - Transit Design Guidelines (2003)

ADA Information - Current Information on Web Sites

- [US Dept. of Justice - Transportation Requirements](#) -
“<http://www.usdoj.gov/crt/ada/reg3a.html#Anchor-11861>”
- [CA Disability Access Information for Transportation](#) -
“<http://www.disabilityaccessinfo.ca.gov/transport.htm>”
- [Disability Access Information for Government](#) -
“<http://www.disabilityaccessinfo.ca.gov/government.htm>”
- [Federal Transit Administration - ADA Information](#) -
“http://www.fta.dot.gov/transit_data_info/ada/14524_ENG_HTML.htm”
- [United States Access Board](#) - “<http://www.access-board.gov/index.htm>”
- [ADA Accessibility Guidelines](#) - “<http://www.access-board.gov/adaag/html/adaag.htm>”

APPENDIX D – POINTS OF CONTACT

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APPENDIX E – SUMMARY OF STAKEHOLDER OUTREACH

On June 13th and 14th 2012, Omnitrans held the first of three rounds of stakeholder outreach and hosted four workshops with local jurisdictions to initiate an update of its 2006 Bus Stop Design Guidelines. The meetings were held in the cities of Ontario, Rialto and Fontana and at Omnitrans in San Bernardino; city staff from all of Omnitrans Service area were invited. The consultant team presented the 2006 Bus Stop Design Guidelines and introduced the sbX service and design. A draft outline of the Transit Design Guidelines was distributed to facilitate discussion with the intent of soliciting information from the city staff. Omnitrans requested that any information useful to city staff be included in the document including any information from Omnitrans regarding design of its facilities, concerns or lessons learned from transit improvements and the transportation planning process. An overview of the FTA process, development of the sbX Corridors and strategies for success in the sbX corridors and coordination with Omnitrans were discussed with the city staff.

The second round of stakeholder outreach occurred on September 25th and 26th 2012 at Omnitrans in San Bernardino. A

draft copy of the Transit Design Guidelines containing an update of the 2006 Bus Stop Design Guidelines and sbX design criteria and information was distributed prior to the meeting for review by city staff. A discussion of the Design Guidelines and the sbX service followed, with questions from the city staff regarding the development process for transit improvements and the roles and responsibilities of Omnitrans and City Staff. Design oriented questions concerning the preference of dedicated lanes, signal improvements and station designs were discussed, and Omnitrans discussed the decision making process that occurs as part of the Alternatives Analysis process with coordination and approval by the city. Questions were received and answered regarding the station design and incorporating local history and context to stations, as well as the Omnitrans art program. Funding and maintenance was discussed, including advertising at stations and developers' responsibilities for stations.

The Final Stakeholder outreach occurred on October 29th and 30th, 2012 at Omnitrans in San Bernardino. A presentation of the final draft of the Design Guidelines and a field trip to the Green Line (sbX E Street Corridor) to view the current construction and design of station and roadway improvements was held.

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