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MTI MINETA TRANSPORTATION INSTITUTE

City Best Practices to Improve Transit Operations and Safety

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16. Abstract

Public, fixed-route transit services most commonly operate on public streets. In addition, transit passengers must use sidewalks to access transit stops and stations. However, streets and sidewalks are under the jurisdiction of municipalities, not transit agencies. Various municipal policies, practices, and decisions affect transit operations, rider convenience, and passenger safety. Thus, these government entities have an important influence over the quality, safety, and convenience of transit services in their jurisdictions. This research identified municipal policies and practices that affect public transport providers' ability to deliver transit services. They were found from a comprehensive literature review, interviews and discussions with five local transit agencies in the U.S., five public transportation experts and staff from five California cities. The city policies and practices identified fall into the following five categories: Infrastructure for buses, including bus lanes, signal treatments, curbside access; Infrastructure for pedestrians walking and bicycling to, and waiting at, transit stops and stations; Internal transportation planning policies and practices; Land development review policies; Regional and metropolitan planning organization (MPO) issues. The understanding, acknowledgement, and implementation of policies and practices identified in this report can help municipalities proactively work with local transit providers to more efficiently and effectively operate transit service and improve passenger comfort and safety on city streets.

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Executive Summary

The purpose of this research was to identify key policies and practices that help (or hinder) surface public transit that are outside the purview of the transit agency but within the purview of cities and other local or state governments. This research, therefore, focused on the "owner" of the streets and other public spaces in which transit operates. Most often these are cities and towns, but also include county road departments and state highway agencies. These government entities have an important influence over the quality, safety, and convenience of transit services in their jurisdictions. This influence on transit service comes largely through their ownership and control over the streets, intersections and sidewalks used by transit vehicles and transit passengers. In addition, cities (and counties for unincorporated areas) have land use control authority and routinely enact developer conditions of approval and mandate mitigation measures. These measures also profoundly affect transit service to development sites, bus stops serving those sites, and/or pedestrian access to transit stops and stations that serve the project sites.

The research approach was first to conduct a comprehensive review of professional and academic literature to identify a range of policies and practices that affect transit operations and passenger access. This was followed by interviews with transit agency staff to learn, from the operators' point of view, those practices that help or hinder the provision of transit service. Then, five experts were consulted to comment on and embellish these policies and practices. The final step was to discuss the list of policies and practices with five California cities; their input was also used to refine and edit the list.

The goal of this research is to create a single list of policies and practices on the part of local governments and roadway owners that can help transit operators and improve passenger access. This list will enable local governments to address gaps in their practices and work more cooperatively with the local transit agencies. The practices were organized in five categories:

- Infrastructure for buses, including bus lanes, signal treatments, curbside access.
- Infrastructure for pedestrians walking and bicycling to, and waiting at, transit stops and stations.
- Internal transportation planning policies and practices.
- Land development review policies.
- Regional and metropolitan planning organization (MPO) issues.

The infrastructure issues that are the most impactful on transit operations and ridership are bus-only rights of way and facilitating bus access to curbside bus stops. In the realm of planning policies, the biggest issues were land use decisions and land development policies. In addition, both

agency staff and experts agreed on the fundamental importance of being invited to the table where decisions that affect transit buses and passengers are being made. Furthermore, best practices differ for cities of different sizes, economic conditions, and climate conditions.

This research also revealed that there are two aspects to city policies and practices. The first is in fact implementing the best practice. But an equally important aspect is **how** the city ensures that its policies and practices are being implemented, which can vary from a city ordinance to adopted design standards or guidelines to an unwritten informal department policy. The method of institutionalization can be considered a best practice in itself.

Two overall recommendations for cities are to:

- Consider and treat the local (and regional, if any) transit providers as if they were a city department and a full partner in the city's transportation network.
- Institutionalize city policies and practices that affect transit. It is important to define and articulate the city policy and practice, via ordinance or written guidelines, so that all affected staff and as well as citizens know the policy exists and how to execute it. This is also important to ensure that policies and practices survive personnel turnover and leadership changes.

Additional research is recommended in several areas including:

- Refine the list to create a separate list of practices for large vs small cites, and for urban vs suburban contexts.
- Conduct surveys to determine the state of the practice and strategies for implementation and cooperation.
- Develop a best practice handbook with guidance on when and whether to implement the policies and practices.
- Evaluate which institutional strategies are most appropriate for which practices.

Transit agencies have no direct control over the built environment in the communities in which they operate. In particular the allocation of space among the many competing modes and activities in a city falls under the purview of the roadway owner, i.e., city, municipality, county or state. Cities must consider the needs of transit planning and operations, just as they do all other modes, in all infrastructure and transportation planning activities. City decisions on transit infrastructure such as bus-only lanes and signals treatments as well as planning policies such as developer conditions of approval immensely improve transit operations and passenger access.

I. Introduction and Overview

1.1 Introduction

Throughout the United States, transit providers and roadway owners (cities, counties, states) are typically separate entities, each with its own discrete governance and management structure. Thus, transit agencies have no direct control over the built environment in which they operate, including roadways and street-oriented transportation infrastructure. Instead, transit agencies are dependent on the cooperation of local governments to permit, facilitate and enable their services. Consequently, these local government entities have significant influence over the quality, safety, and convenience of transit services in their jurisdictions in a variety of ways. First, local governments and roadway owners have control over the street infrastructure that is fundamental to efficient operation of transit vehicles. Second, they are the responsible entity for the safety of transit passengers as they walk or bicycle to access the transit vehicles, as well as their comfort as they wait at stops and stations. Third, cities exercise control over land use within their borders, and land use and the built environment directly affect the generation of transit trips; for example, passenger access to transit is enhanced when local land use controls (e.g., zoning, general plans, specific plans) are developed to encourage transit-supportive land use and urban design qualities. Finally, local governments can play an important role in funding transit services in their communities through the use of special taxes (e.g., value capture, and development impact fees), by pursuing state, federal and non-governmental grants, and by promoting and supporting the use of regional taxes and fees to fund public transit operations and capital costs, not just road infrastructure.

Figure 1. Bus on City Street in Pittsburgh

Source: Photo by Michelle DeRobertis.

1.2 Purpose, Need and Intended Users

The purpose of this research is to identify key policies and practices that help (or hinder) surface public transit that are outside the purview of the transit agency but within the purview of cities and other local governments. It identifies specific policies and practices that local governments and other roadway owners can implement to improve public transportation given their control over the streets, intersections and sidewalks used by transit vehicles and transit passengers.

As discussed in the literature review, many of the documents, reports and design standards that pertain to transit operational needs, even if they address city streets, are prepared by or for transit agencies. Often these are never referred to, let alone adopted, by the municipality with control over street and intersection design. Furthermore, even when cities have good policies and practices, little has been written about how cities institutionalize their practices. Thus, there is a need to identify all relevant policies and practices under the purview of cities that affect the provision of public transit.

In this report, we use the term “city” as in “city policies and practices”. By "city" we include any municipality, as well as counties and states[1], that own the streets, roads or highways upon which transit service operates and where transit passengers walk to stops and wait for transit.

The policies and practices identified in this research are intended for use by a variety of agencies and individuals.

- **Cities:** The policies and practices can be adopted proactively by cities and other local governments that want to support sustainable transportation modes and are interested in becoming more sustainable; these policies and practices dovetail with Complete Street policies and sustainable city goals. They can be used as a self -administered checklist so that cities can continually make improvements by adopting policies and practices that improve transit efficiency and safety.
- **Transit Agencies:** The policies and practices can be used by transit agencies, which may wish to identify the most useful practices for their own conditions and situation, then share them with the cities in their service area. For example, a transit agency could identify policies and practices most effective for improving travel times and reliability as well as passenger comfort with the goal of improving transit ridership.
- **Metropolitan Planning Organizations (MPOs) and Other Transit Funding Agencies:** The policies and practices can be used by MPOs who wish to take the lead on improving transit operations in their areas. For example, the policies and practices could serve as targeted items for funding programs or as elements to include in larger road funding programs.

- **Transit Advocates and Citizens:** The policies and practices can be used to help advocates identify what is missing in their communities and to help focus their advocacy efforts.
- **Evaluation Metrics:** The policies and practices can be used by nongovernmental organizations (NGOs) and non-profits (e.g., AARP[2] and others) that have programs and metrics to evaluate city livability, walkability, or a city's overall commitment to sustainability and environmental friendliness.
- **Policy Makers:** Elected officials and other policy makers can use the document to educate themselves about the range of policies and practices that can help deliver the most efficient and effective transit operations, as well as increase passenger comfort and safety.

1.3 Methodology

The research methodology was comprised of four main steps. First was a review of the literature, which included academic and research papers, reports published by professional organizations such as ITE and APTA, case and feasibility studies of transit implementation projects, and internal documents of some transit agencies. Based on the literature review as well as the researchers' professional knowledge of transit operations and how city decisions can affect them, a list of questions was prepared. These questions were used to interview staff at five transit agencies. Transit agencies were selected so as to have representation from small to medium-large metropolitan areas and from different regions of the U.S. The agencies serving the largest cities and metropolitan areas of the U.S. were deliberately excluded, since these may be atypical. The aim was to identify a wide array of issues, policies and practices affecting transit operations or passengers that are outside the control of the transit agency but are within the control of host city.

Based on these interviews, a comprehensive list of policies and practices within four overarching areas was prepared:

- Infrastructure for buses, including bus lanes, signal treatments, curbside access
- Infrastructure for pedestrians walking and bicycling to, and waiting at, transit stops and stations
- Development review policies
- City planning processes

This list of policies and practices was then reviewed by five U.S. experts in the public transportation field who were asked to provide input and refine the issues identified. As with the transit agencies, geographic diversity was sought in the selection of the experts.

To further refine effective policies and practices, the list of policies and practices was compared to actual city practices. The full list of policies and practices was shared with staff representatives from five California[3] cities to discover whether and how policies and practices are implemented. The

cities were also asked to share other ways that they proactively cooperate with transit agencies serving their communities. City size and geographic diversity were key factors in selecting the California cities to evaluate.

The final product of this research is a comprehensive list of policies and practices for municipalities to enable them to be full partners with the transit agencies serving their communities.

Although most of the transit agency interviews were conducted in February through April[4] 2020, during the early stages of the COVID-19 pandemic, it was not apparent at that time that there could be a long-term impact on transit. Therefore, these policies and practices did not ask about and do not consider the potential long-term effects of the COVID-19 pandemic.

1.4 Language and Terminology

The language and terminology used in this document reflect the backgrounds of the authors—American-English. Thus, occasionally words, phrases and/or contexts are used that may be different depending on the country or the U.S. state. Usage also varies within disciplines in the transportation field. Four examples immediately come to mind.

- For Canadian readers, the term "state" as used in this report should be interpreted as "province," and the term "ordinance" should be interpreted as "bylaw."
- Transit or public transit is used to mean public transportation; many other English-speaking countries prefer the term public transport.
- Transit "operations" has a different connotation in the public transit field than in the traffic engineering field or vehicle code sense. By transit operations, this report means the physical presence and movement of transit buses, streetcars and light rail vehicles on roadways, including their ability to move in traffic and access bus stops, and does not refer to overall transit service (e.g., headways, geographic coverage, hours of service) nor the individual vehicle operators (i.e., bus drivers).
- Various U.S. states define and distinguish different types of municipalities and the term "city" may have a legal definition separate from "town" or "village". For example, in the state of Pennsylvania, local municipalities are classified as either cities, towns, townships, or bureaus. In addition, in some areas of the U.S., the local municipality is none of these but is in fact the County; the most well-known is perhaps Arlington County, Virginia. In this report, these will all be collectively referred to as cities, municipalities or local agencies. Generally, these terms are used interchangeably.

II. Literature Review of Transit-Friendly Local Government Practices

This chapter identifies and evaluates local government practices found in academic professional literature sources that affect or could improve public transit. These include practices of the roadway owner (typically local, but also state and federal governments) that affect transit operations, including quality, safety, and convenience; and those that influence transit passengers. Research and practice literature types reviewed include transit operational and planning studies, academic and research papers, and design guidelines.

This literature review presents and analyzes the existing state-of-the-practice knowledge on how local (and state) governments can enhance transit services in their jurisdictions and on the streets and highways that they construct, own, and maintain.

2.1 Local Government Role in Effective Transit Operations

The research and practice literature provide information on the practical means for local governments, as owners of roadways, to improve transit vehicle operations through direct infrastructure improvements, including transit stops. The literature also addresses planning policies pertaining to transit-related infrastructure.

2.1.1 Transit Operations: Infrastructure

The design of streets, roadways and highways in the U.S. is solely within the purview of the roadway owner: cities, counties, and states. The designs and features of these streets and roads have a significant impact on the success or limitations of transit operations. The issue of roadway infrastructure with respect to transit operations has been addressed in a wide variety of literature types including design guidelines, operational studies and academic research papers. Local infrastructure affects the transit vehicles both while the vehicles are moving, such as roadway design and intersection design, and while the vehicle is loading and unloading passengers at transit stops. The discussion of infrastructure as it pertains to transit vehicle operations will be presented as follows: roadway design, intersections and transit stops. Some of the literature addresses only one of these three aspects but others covered all three, particularly transit agency design guidelines.

Transit Operations and Road Design

Of all the variables within the purview of local governments that contribute to the efficiency, safety, and reliability of transit operations, guideway design is arguably one of the most important, as guideways are the means of interaction (or avoiding interaction) with other traffic.

Often, the greatest challenge for nearly all local governments and transit agencies to overcome is the allocation or acquisition of the required physical space to allow transit vehicles to operate uninhibited by other road users, primarily private automobiles.

Guideways for transit vehicles can be classified as mixed traffic, semi-exclusive, exclusive, and grade-separated. Busways and bus lanes are two types of exclusive guideways which improve bus transit efficiency and reliability. According to the Kittelson and Associates et al.'s Bus Rapid Transit Practitioner's Guide, busways are, "[s]eparated roadway facilities for the exclusive use of buses, either within an overall roadway right of way or in a separate right of way". Bus lanes are located on city streets and typically exclude all vehicles except buses, resulting in reduced delays for the transit vehicle. Busways can attract high ridership and often compare well with rail regarding speed and reliability performance, but investment costs can be high and the infrastructure resembles the permanence of rail, so they are typically used for bus rapid transit (BRT) systems or express bus routes.

Roadway design and the specific issue of bus guideways are addressed primarily in transit-specific documents such as the *Transit Capacity and Quality of Service Manual* (TCQSM),[5] *Bus Rapid Service Design manual*,[6] *The Bus Rapid Transit Standard*,[7] and the *Transit Street Design Guide*.[8] In the past decade, there have been numerous documents and studies of BRT issues ranging from design guidelines to operational analyses of specific BRT applications. The American Public Transportation Association (APTA) publishes many recommended practice guides on various aspects of BRT.[9.] One of the most complete design guides in terms of BRT guideway and station design is that of the Institute of Transportation and Development Policy (ITDP). ITDP developed "The Bus Rapid Transit Standard," composed of a wide range of metrics in order to establish a common definition of BRT. It then uses these metrics to recognize particularly high-quality corridors with either Bronze, Silver or Gold rankings. These metrics allow cities with BRT systems to evaluate the quality of their service and to identify tangible ways to improve their systems. This tool can be used by both cities and transit agencies that are planning a BRT system (or currently operate one) to better understand which design elements would improve its effectiveness. Of the six categories of BRT design and operational elements, the following four are fully or partially within a city's purview:

- **BRT Basics**
  - Dedicated right of way (ROW)
  - Busway alignment within a roadway right of way
  - Intersection treatments: utilizing transit signal priority and signal synchronization to minimize transit wait times at intersections.
- **Infrastructure**
  - Passing lanes at stations
  - Stations set back from intersections
  - Pavement quality

- **Stations**
  - Safe and comfortable stations
- **Access and Integration**
  - Universal access
  - Pedestrian access and safety
  - Secure bike parking
  - Bicycle lanes
  - Bike-share integration.[10]

A number of studies have been conducted in advance of BRT implementation regarding performance improvements resulting from converting mixed traffic lanes (where buses share the right of way with other vehicles) to variations of bus only or conditional mixed-use lanes. Two such studies of BRT implementation are those of Lincoln Boulevard in Santa Monica, California and Van Ness Boulevard in San Francisco, California. The study of Lincoln Boulevard in Santa Monica[11] analyzed five scenarios where peak period curbside parking was removed for the implementation of a concurrent flow curbside bus lane. Metrics of evaluation (MOE) included delay, travel time, speed, and queue length as they pertain to general traffic and buses. The site-specific study found that, relative to the "do nothing" scenario, all transit improvement scenarios (ranging from opening the parking lane to mixed traffic to creating a bus-only lane) showed improvements pertaining to the MOE's, but the bus-only lane scenario produced the greatest improvements for buses, with the least delay, shortest travel time, and highest speed.[12]

The study along San Francisco's Van Ness Boulevard[13] modeled trade-offs between pedestrian throughput and level of service (LOS) degradation as a result of converting mixed flow traffic lanes to bus-only lanes. The study compared two scenarios, each including intelligent transportation system (ITS) improvements: (1) Converting two travel lanes, one in each direction, to a bus-only lane, or (2) Converting one lane of travel to a single, multi-directional bus-only lane.[14] The authors noted that ITS technologies for transit signal priority or preemption proved, "very helpful" in decreasing travel times and delays. Additionally, ITS technologies helped maintain pre conversion LOS ratings and in some cases led to improvements.[15]

Intersections and Signal Treatments

In addition to the bus guideway, the literature revealed that intersections also can be problematic for transit vehicles. Signalized intersections in particular affect transit reliability and ability to meet published schedules. Several documents described transit-specific treatments at intersections that improve transit performance. For example, Transit Cooperative Research Program (TCRP) Report 90[16] addresses ways that intersections can better accommodate BRT and buses, including transit signal priority (TSP) and queue jump lanes. TSP-equipped traffic signals allow buses the green time to proceed through an intersection whereas queue jump lanes allow buses to bypass the

queue of cars waiting at the signal. The report also found that TSP is especially effective when combined with queue jump lanes.

The improvements gained through implementing ITS and/or TSP are substantiated throughout the literature. There are two main strategies that are applied to transit operations that reduce intersection dwell times due to red lights.[17] The first uses signal preemption technologies, where the traditional signal operation is interrupted for the accommodation of a special event such as an approaching train. For bus transit uses, buses are equipped with coordinated global positioning systems (GPS) that trigger the initiation of the signal preemption. The second type are transit signal priority (TSP) systems. These systems use normal signal timing, but are calibrated to better accommodate transit vehicles along frequently traveled corridors. These systems can be passive, where they are timed in coordination with the scheduled approach time of buses, or interactive, where the systems actively sense appropriately equipped buses and make real time adjustments accordingly, such as lengthening the green phase for an approaching bus. While active systems allow for greater efficiency by allowing the systems to be used only when buses are present, more sophisticated technology is required and can be a financial barrier.[18]

According to Levinson et al.'s Bus Rapid Transit Practitioner's Guide, the Metro Rapid lines in Los Angeles achieve up to ten additional seconds of green light time when buses arrive at TSP-equipped intersections.[19] TSP was found to be an effective tool when used to support queue jump lanes allowing buses to bypass traffic at intersections. Queue jump lanes can either be designated as individual lanes or used conditionally with right-turn lanes. TSP technologies allow buses to access far side stops with the utilization of a bus only green signal allowing buses to avoid vehicular congestion when accessing the stop, reducing delays and increasing transit reliability.[20]

Another intersection issue addressed by one study was that of Yield to Bus (YTB) regulations. This practice is actually a city or state law mandating that traffic must yield to buses re-entering traffic from a bus stop. This reduces the delay buses experience due to traffic congestion, improving reliability and reducing travel time. In addition to the creation of law, one study examined the effects of installing electronic signs with "light emitting diode" (LED) lights on the backside of buses to alert motorists of the need to yield to the bus re-entering traffic. The study found, "For the safety conflict performance measure, the use of electronic YTB signs significantly reduced the conflicts between buses and other vehicles for the Tampa site compared with those of YTB decal only".[21] In terms of effectiveness, the study shows that "Improvements of 14% or more in the number of merging maneuvers that ended in a yield of right-of-way to merging buses can be obtained by implementation of electronic YTB flashing signs."[22] A related issue that is also within city purview regarding this strategy is the enforcement of the law by local police officers; however, that aspect was not evaluated by the study.

Transit Stop Design

Transit stops have two distinct design aspects: the location where the bus physically stops and the location where passengers wait to board and alight. The physical location of the bus stop is typically curbside of the roadway, so this is clearly under the control of the roadway owner. The back of curb portion of the bus stop is also often on city right of way, most often a sidewalk. Thus, cities have a lot of influence over the design and maintenance of both areas. Although the first issue affects the bus and the second issue affects the passenger, often the same literature addresses both aspects. For example, APTA publishes a recommended practice guide "intended to support transit agencies to actively pursue access improvements by describing the on-street stop design features and characteristics that improve or support access to transit."[23] Other organizations, including TCRP, have published documents with specific guidance on bus stop design to improve bus operations. In addition, bus stop design is often addressed by individual transit agency guidelines, such as Washington, DC Metro.[24]

The most pertinent issue for the transit vehicles discussed in these manuals is the need for adequate bus stop length; if on-street parking is present then there is a need for a red curb "No Parking" zone. Another recommended infrastructure strategy to ensure adequate bus access is bus curb extensions, also known as bus bulbouts. By extending the curbside bus stop out to meet the lane of travel, the bus can maintain its position in the travel lane, thus reducing dwell times since the bus no longer has to wait for an opening in traffic.[25] Yet another strategy is transit boarding islands. These are used for street cars/light rail vehicles whose tracks are not adjacent to the curb. They are also used for curbside bus stops where there is a curbside bikeway, allowing bicyclists to travel between the curb and boarding platform.[26]

2.1.2 Transit Operations: Planning

Most local bus planning activities do not involve capital-intensive projects that would significantly alter the design and operations of local streets. Therefore, local governments tend to play more of a reactive role in local bus service planning and programming, limited mostly to bus stop and transit passenger access infrastructure improvements. However, because of their capital-intensive nature, BRT and rail transit planning activities require cooperation between transit agencies and local governments. Therefore, this section focuses on BRT and other capital-intensive activities where local governments tend to take a more prominent role than that seen for local bus planning.

BRT can be a valuable addition to the array of transit options cities can implement. Although not all cities possess the size and demand characteristics to support BRT, those that do will likely face many implementation challenges. Therefore, in partnership with several agencies, departments, and the University of California system, Caltrans sponsored a series of studies to better understand the efforts and resources required for implementing BRT.

One of these studies, authored by Miller, et al., sought to understand the planning for and implementation of BRT systems, and provide a framework by which future BRT systems can be implemented with minimal delay. The intention of this framework was to identify characteristics unique to BRT systems that would serve the needs and limitations of site-specific locations. Local governments and transit agencies are identified as the two primary stakeholders, suggesting cities considering BRT should familiarize themselves with the planning and implementation process. The following framework is offered by the report's authors:

1. Determine possible combinations of BRT elements, while considering the existing transit system; feasibility of implementation, institutional issues and other considerations;
2. Assess the capital cost associated with each combination;
3. Derive feasible combinations consistent with budget constraints;
4. Evaluate each feasible combination;
5. Conduct sensitivity analyses regarding available budget, travel demand, costs, etc.; and
6. Recommend optimal alternatives of combinations for implementation. [27]

The report identified three "inter-related stages" from which the BRT planning process originates. The first is an initiation of a feasibility study or major investment study; the second is a determination of BRT elements to be included in the system and their sequence of deployment; and the third is operations planning such as routes, timetables, staffing, etc.[28] Since the first and third stages involve considerations for nearly all transit projects, the report acknowledges that its primary focus is on stage two, pertaining specifically to the unique requirements of BRT systems (and by implication, the role of local government). BRT-specific elements identified within the report include: ITS Technologies; Design; Operational and Service Plans; Institutional and Policy Issues; Interactions and Trade-offs.[29]

These elements are further broken down into various considerations within each category. All BRT systems are unique and there is no single combination of elements that will work universally. The paper highlights the need for cost-efficiency and effectiveness analysis to be conducted as well as site-specific factors including, "[l]and use, transit demand, passenger behavior, transit feeder service, traffic volume and road geometry,"[30] several of which are the prima facie provenance of local governments.

2.3 Local Government Role in Passenger Access to Transit

Local governments play a crucial role in making access to transit stops and stations as safe, convenient, and direct as possible, since access, whether by walking or biking, takes place on the sidewalks and roadways directly under their purview. Local governments also have a role in providing intuitive way-finding displays, and ensuring that transit stop locations are safe and comfortable. These all contribute to encouraging ridership.

2.3.1 Transit Passenger Access: Safety

Pedestrian and bicycle safety are important factors determining transit ridership. Since streets and roads and presence of sidewalks are largely controlled by local governments, safety conditions for pedestrians are within their purview. While there are numerous resources available in the literature that provide guidance on pedestrian and bicycle street safety improvements, there are relatively few that focus specifically on the safety improvements for transit access. A few sources explicitly focus on the implementation and evaluation of so-called, "safe routes to transit" or "SR2T" strategies and projects. Two such sources are as follows.

Nabors et al. developed the "Pedestrian Safety Guide for Transit Agencies," and while this report's primary audience is transit agency staff, it stresses the importance of creating partnerships with local governments to jointly plan, design, build and operate transit access safety infrastructure projects. These include wide sidewalks with planter strips or other buffers between street traffic and pedestrians, marked crosswalks, median islands, curb extensions, reduced number and width of travel lanes, pedestrian signals, and bike lanes.[31]

Weinzimmer et al. identified and evaluated SR2T programs and projects in the San Francisco Bay Area. Regional Measure 2 (RM2) was approved by the voters in the Bay Area in 2004, raising bridge tolls in the area by $1 and using a portion of these revenues to fund SR2T projects. Street infrastructure improvements funded under this program included transit plazas, curb extensions, landscaping, parking removal and street width reductions, and bicycle lane improvements along pedestrian and bicycle routes to transit stations. The researchers found that walking and bicycling increased by 3 percent in these station areas while driving decreased by 2.5 percent. Both pedestrians and bicyclists reported feeling safer on the road after these improvements.[32]

In terms of general pedestrian safety, motor vehicle crashes are a leading cause of death in the United States, and for pedestrians, speed plays a large role in the survivability outcome of pedestrian and automobile collisions.[33] APTA and others have published guidelines that included road design measures to improve traffic safety for pedestrians. For example, excessive speeds by right-turning vehicles are reduced by redesigning intersections with smaller curb radii and by eliminating channelized right-turns, which often enable right turns to be made at high speeds and without being under signal control.[34] Further safety improvements for pedestrians crossing the street can be derived from the implementation of pedestrian activated flashers at mid street-crossings or by providing "lead pedestrian intervals" at signalized intersections, which increase pedestrian visibility.[35] The APTA guide also includes bicycle safety as a means of improving access to transit stops and encourages road design to incorporate the designation of space for safe bicycle travel through means such as sharrows, striped bike lanes, buffered bike lanes and/or protected bike lanes.[36]

Measuring Transit Access Safety

Several sources in the literature provide livability measures for cities, some of which apply indirectly to the quality of transit service and can provide a useful starting point for planning and programming partnerships with local governments. AARP measures a broad list of criteria in rating cities' livability where livability encompasses many diverse amenities and characteristics that determine one's quality of life. Since road users' safety is largely the responsibility of cities and other local governments, traffic safety and pedestrian safety are prominent measures in how AARP assesses city livability. Pedestrian safety, in turn, is used as an indicator of transit access safety, given that most transit riders access buses by walking.

Concerning road users' safety, AARP also cites speed limits and road design as two important contributing factors to collisions; these are used as a proxy for overall pedestrian and bicycle safety.[37] Communities where local governments design, build, and manage their streets to have lower speeds "help residents feel confident walking and biking around their neighborhoods, resulting in healthier people, more vibrant communities"[38] and higher transit mode shares. Therefore, AARP assesses street speed limits as an indicator of both neighborhood pedestrian safety and transit operational safety.

In a similar way, Ferrell, Appleyard et al. developed a comprehensive methodology for measuring, analyzing, planning and building livable transit corridors. This method's battery of 12 evaluation metrics includes a pedestrian safety metric (pedestrian collisions per 100,000 pedestrians), providing an indicator of how dangerous it is for people to access public transit in their neighborhoods.[39]

Finally, neighborhood crime rates also have the potential to affect safety for pedestrians and bicyclists. Ferrell, Mathur, et al. studied the relationships between neighborhood crimes, transit station access, and mode choice. Their research found high levels of neighborhood- and corridor-level crimes along access routes to San Francisco Bay Area Rapid Transit (BART) train stations discourage transit use, walking, and bicycling while encouraging driving. Based on these findings, the researchers conclude that improved crime intervention strategies that can reduce the safety concerns of residents living in high-crime neighborhoods hold promise for more immediate benefits and should be considered as part of a larger package of both short-term and long-term measures to reduce automobile dependency.[40] Furthermore, crime rate metrics, collected and analyzed at the neighborhood level, can be useful tools for building partnerships between local governments and transit agencies.

2.3.2 Transit Passenger Access: Land Use and Urban Design

Urban design also plays an important role in determining the propensity for walking and transit ridership and is therefore frequently included in the role of transit within quality of life measurement systems. Ferrell et al. include a neighborhood urban design metric to capture the

influences of street network layout on travel behavior. This metric calculates the percentage of four (or more) legged intersections per square mile. The higher the percentage value, the more grid-like a neighborhood's street network tends to be, and the higher the likelihood of people to walk and ride transit.[41]

Ferrell, Appleyard et al., conclude that greater origin–destination proximity (as associated with higher urban densities) offers accessibility benefits, even in the face of associated congestion that slows vehicle travel. Their system provides five density measures in their suite of transit livability metrics.[42] Each metric is focused on capturing a unique aspect of the transit and urban design/land use connection:

- Population Density: Persons (Residents) per Acre
- Employment Density: Jobs per Acre
- Retail Employment Density: Retail Jobs per Acre
- Health Care Employment Density: Health Care Jobs per Acre
- Arts and Culture Employment Density: Entertainment Jobs per Acre.[43]

Using the methods developed by Ferrell et al., Appleyard et al. studied livability in transit corridors across the United States, and found that households located in corridors with highly integrated transit networks and land use patterns appear to pay substantially less for transportation, with corridors served by poor performing transit networks paying an average of $10,000 per year and highly integrated transit corridors paying roughly $7,500, a savings of about $2,500 a year on average.[44]

Cervero and Kang discuss the result of increasing housing density along implemented BRT corridors in Seoul, South Korea. Seoul introduced 70 kilometers (43.5 miles) of dedicated BRT services in 2004. Key findings indicated that housing density and land value both increased along the BRT corridors. Housing densification typically occurred by single-family homes converted into multi-family units, apartments and mixed-use projects. Increases in land value of 5–10% were recorded within a 300-meter (1,000 feet) area of BRT stops, with premiums as high as 26% within 150 meters (500 feet) from BRT stops. The authors make a direct point that premium increases are a result of the greater access brought about by the high-quality transit service, not the implementation of transit in and of itself. Performance improvements were measured before and after the BRT service was introduced, which showed that bus operating speeds nearly doubled.[45]

Finally, the online tool, Walkscore.com, gives ratings to cities pertaining to users' experiences regarding walking, biking, and transit in neighborhoods. Though less stringent and not derived from a formal planning or transportation association, the website is widely used in the real estate market, indicating a market demand for cities who have developed effective and convenient transit. Walkscore.com's methodology measures the pedestrian-friendliness of neighborhoods using a

combination of urban design and land use metrics: population density, block length and intersection density.[46]

2.3.3 Transit Passenger Access: Design, Policies and Practices

Along with the substantial amount of academic research on transit access as noted above, numerous recommendations have also been documented to guide local government implementation of transit access friendly policies and practices. Analysis of these sources suggests two key ways to improve transit passenger access: pedestrian/bicycle improvements and transit-oriented development.

Coffel et al. provide a useful resource, the "Guidelines for Providing Access to Public Transportation Stations."[47] This guide offers a descriptive list of various practices and policies to improve access to transit stations. The following list has been selected based on their applicability to local government implementation:

- Provide paved sidewalks at least 5 feet wide (station approach and environs).
- Remove sidewalk clutter near station entrances (environs).
- Provide station entrances through the buildings (environs).
- Build pedestrian overpasses and/or underpasses (environs).
- Provide weather-protected connections to adjacent land uses (environs).
- Install traffic signals at busy junctions (approach and environs).
- Improve night visibility (approach and environs).
- Install intersection safety improvements (e.g., crosswalks) (approach).
- Install wayfinding on approaches to stations (approach).
- Install bicycle lanes (approach).
- Provide bicycle paths (environs).
- Provide secure bicycle storage at stations (approach).
- Provide off-vehicle fare collection at stations (environs).
- Provide additional lane for bus stops on cross street at stations (environs).
- Prohibit rush period parking along bus routes (approach).
- Install transit signal priority at signalized intersections (approach).
- Install curb or interior bus lanes (approach).
- Install bus bays or bus bulbouts along approach roads (approach).
- Minimize conflicts on pedestrian access routes (where possible) (approach).
- Improve traffic operations on roads serving park-and-ride lots (approach).
- Integrate park-and-ride with transit-supportive development (environs).
- Install a one-way street couplet (approach).
- Eliminate peak or all-day parking (approach).
- Add intersection lane capacity (at intersection approach).[48]

A number of authors highlight potential policy implications resulting from their findings regarding improvements to transit accessibility. For example, given that demand for increased density and

successful mass transit is related to high ridership locations, planners should adjust zoning and regulatory restrictions to accommodate the projected demand for higher density. Supportive efforts should include upgrades to utilities infrastructure such as water and sewage capacity upgrades[49], all of which require close partnership and cooperation between transit agencies and local governments.

One example of guidance for the interrelation of built environment and transit is the "Traveler Response to Transportation System Changes Handbook," a series of reports published by the Transit Cooperative Research Program at the National Academies of Science. While the focus of these volumes is multimodal, they include substantial recommendations aimed at improving access to and ridership on public transportation. The objective of this document is to "...equip members of the transportation profession with a comprehensive, readily accessible, interpretive documentation of results and experience obtained across the United States and elsewhere from (1) different types of transportation system changes and policy actions and (2) alternative land use and site development design approaches." [50] Within the contents are numerous recommendations (presented as a "TOD Index" which can be used as a "design-planning guidance tool"[51]) within the purview of the local government to allow for greater access to public transit services. Indicators provided include:

- **Pedestrian Priority:** Block perimeter lengths in transit-oriented areas should be no more than 0.25 miles in length.
- **Mix of Uses:** Development in transit-oriented areas should provide for daily needs without the need for a car.
- **Urban Density Minimums for Transit Station/Stop Areas by Mode:** Densities in station/stop areas should be sufficient to support cost-effective transit services (see Table 1), create and sustain "utility" retail, and minimize walking distances for origins and destinations.
- **Parking Management:** Avoid parking space minimum requirements, encourage parking maximums, and charge full costs of parking to motorists.[52]
- **Street Widths and Driveways:** Scale streets and sidewalks to provide for pedestrian comfort and convenience. Avoid wide streets and intersections, as well as parking and associated driveways between sidewalks and buildings.
- **Housing Types:** Provide a diversity of housing types to accommodate a diversity of income levels of residents. Consider mandates for below-market housing.
- **Ground Floor Transparency:** Provide numerous windows on the ground floor of development to create inviting, active, and defensible pedestrian spaces.
- **Car Sharing:** Provide car sharing services at a rate of one car per 20 subscribers to discourage car ownership, reduce parking maximums and increase transit mode share.
- **Subsidized or Free Transit:** Provide free transit pass programs or no-fare transit services (either to target demographic groups or in general to all travelers) in station/stop areas to increase transit ridership and mode share.[53]

Table 1. Transit Modes Related to Potentially Suitable Downtown Size Ranges and Minimum Appropriate Residential Densities

Mode	Service Levels	Downtown Size Range (non-residential floor space)	Minimum Residential Density
Local Bus (minimum)	1/2 mile between routes 20 buses/day	5–8 million square feet	4 dwelling units (DU)/ residential acre
Local Bus (intermediate)	1/2 mile between routes 40 buses/day	7–18 million square feet	7 DU/residential acres ± (depends on downtown size and distance away)
Local Bus (frequent)	1/2 mile between routes 120 buses/day	18–70 million sq. ft.	15 DU/residential acres
Express Bus (walk-on)	5 buses/2-hour peak period	50 million sq. ft. & up	15/DU/res. acre average, 2 sq. mi. tributary area
Express Bus (park-ride)	5–10 buses/2-hour peak period	20 million sq. ft. & up	3/DU/res. acre average, 20 sq. mi. tributary area
Light Rail	5-min peak headways or better	35–200 million sq. ft.	9 DU/res. acre average, 25–100 sq. mi. corridor
Rapid Rail (Metro)	5-min peak headways or better	70 million sq. ft. & up	12 DU/res. acre average, 100–150 sq. mi. corridor
Commuter Rail	20 trains/day	70 million sq. ft. & up	1–2 DU/residential acre along an existing RR track

Note: Downtown is defined as a contiguous agglomeration of non-residential use (larger than the CBD as typically specified).

Source: Pushkarev and Zupan (1982) as presented in National Academies of Sciences, Engineering, and Medicine 2007. TCRP 95: *Traveler Response to Transportation System Changes Handbook*, Third Edition: Chapter 15, Land Use and Site Design. Washington, DC: The National Academies Press.

Some studies suggest that increased street connectivity is related to transit ridership. This is consistent with other findings in the literature as it pertains to intersection density and access. The study by Schlossberg et al. of three metropolitan areas in Oregon found that there were an average

of 30 nodes (defined as an intersection of three or more streets), and 0.4 miles of bike lanes within a ¼ to ½ mile zone around transit stop/stations.[54] Their modeling indicated a positive correlation between street connectivity and ridership. This same study found up to 17% variance in ridership resulting from characteristics of the built environment. A separate study carried out by Tilahun and Li discovered that the absence of a sidewalk along the route to a transit stop has the similar influence of adding 5.9 minutes to the duration of the access trip.[55] These findings in conjunction with the recommendation of bike lanes and intersection density offer insights into the ways local governments can improve the safety and attractiveness of accessing transit stops, which helps to make transit a more viable option for users. Given the limited access to space in urban areas, especially dense urban centers or downtowns, the studies conclude that the efficient and effective utilization of urban space is critical. Thus, participation and cooperation on the part of the roadway owner in designing this public space for optimal transit use is essential.

2.4 Pro-Transit Local Government Land Development Policies

The policies a local government chooses to enact sets the tone for how transit is viewed within their greater transportation system and, to a degree, the foundation from which transit can either thrive or merely exist. In particular, new development has the potential to significantly affect transportation conditions for transit. Local government policies for evaluating the transportation impacts of land development play a large role in whether and how public transit is assessed and improved in relation to new developments. The main document addressing this issue was a report by Institute of Transportation Engineers (ITE).

The ITE committee on Transit and Traffic Impact Studies (TIS), formed in 2014, surveyed 64 U.S. and Canadian cities on their practices with respect to analyzing transit in TIS of land development sites. The ITE *State of the Practice Report on Transit and Traffic Impact Studies* prepared by this committee presented the findings on whether and how public transportation is addressed in TIS.[56] It found that more than 75 percent of survey respondents indicated that their TIS "did not require nor suggest evaluations of traffic impacts on transit operations."[57] The report also identified best practices concerning the inclusion of transit within the TIS process, common challenges to the effective cooperation between local governments and transit agencies, and the need for consideration of transit within land development process, in general.[58]

Key findings from the ITE report pertaining to the responsibilities of local governments include enacting policies that require TIS to evaluate the time it would take transit to reach the site rather than focusing exclusively on the delay incurred by private automobiles. The report also evaluated the current practices for assessing traffic impacts on transit; it recommended that TIS include an assessment of how much the projected increase in automobile traffic due to the new development will adversely affect transit capacity and performance.[59]

The ITE report further recommended that access to the new development should also be evaluated from the vantage point of both pedestrians and bicyclists, which may reduce the demand for automobiles, and thereby reduce or diminish delays to transit. Concerning the design and layout of the new development, care and attention should be given to how it may impact transit service, routes and transit stops. The report recommends that an assessment should be undertaken as to whether the projected ridership demand on transit as a result of the development project can be accommodated by existing transit services, and if not, funding mechanisms to assist payment for improving transit services and capital purchases should be made available.[60] Additionally, those preparing TIS reports should seek input from transit agency officials throughout the report preparation process. Given the traditionally disproportionate focus on automobile LOS, their recommendations suggest developer mitigations to improve automobile LOS that negatively impact transit should not be considered.[61]

Despite evidence that pedestrian access to transit stops affects transit ridership[62], and the fact that the majority of pedestrian access improvement opportunities are under local government control, the ITE research found that assessments of pedestrian access are not typically incorporated in traffic impact studies. The authors of the report note that, "[t]he first and last mile considerations are very important in determining the adequacy of access to transit."[63]

2.5 Local Government Transit Funding Options

Local governments can also play a role in funding ongoing transit operations and service improvements through taxation, regulatory fees, and securing grants from regional, state and federal sources. Transit agencies are typically funded primarily by the following three sources: (1) sales taxes at the local level; (2) federal grants from the Federal Transit Administration (FTA), Federal Railroad Administration (FRA), or the Federal Highway Administration (FHWA); and (3) state grants, often funded with state-level gas tax monies.[64] New development lends itself to two significant means of funding that are fully or partially within the purview of local government, Development Impact Fees and Value Capture (VC).

Development Impact Fees

Development impact fees are a relatively well-established (and therefore easy to implement) means of raising funds for transportation improvements.[65] Impact fees are fees developers pay on new developments to fund the improvements necessary to mitigate the increased demand placed on transportation infrastructure as a result of the incoming development. Research indicates that the, "[v]ast majority of the revenue generated by transportation impact fees is spent on roadway projects."[66] However, the traffic impact studies from which fees are based often omit the potential for transit improvements to reduce the demand for trips by way of single-occupant vehicles. Previous research from an ITE Committee's report concerning transit and impact fees identifies

five local government policies that would address the financial impact of providing transit service due to new land development:

1. Transit impact fee program to provide funds for improved service and/or capital purchases based on transit ridership, existing or potential.
2. Traffic impact fee (citywide or smaller district) program that includes funding for the transit service provider for improved service and/or capital purchases based on traffic impacts, and/or as a mitigation to reduce traffic impacts.
3. *Pro-rata share district* approach or transit trust fund that includes funding for transit service providers for improved service and/or capital purchases.
4. Developer *Conditions of Approval* that assist transit agency operations or budget due to direct project impacts.
5. Other institutional arrangements between local agencies and transit service providers to help direct funds to the transit service provider for transit operations and/or capital purchases.[67]

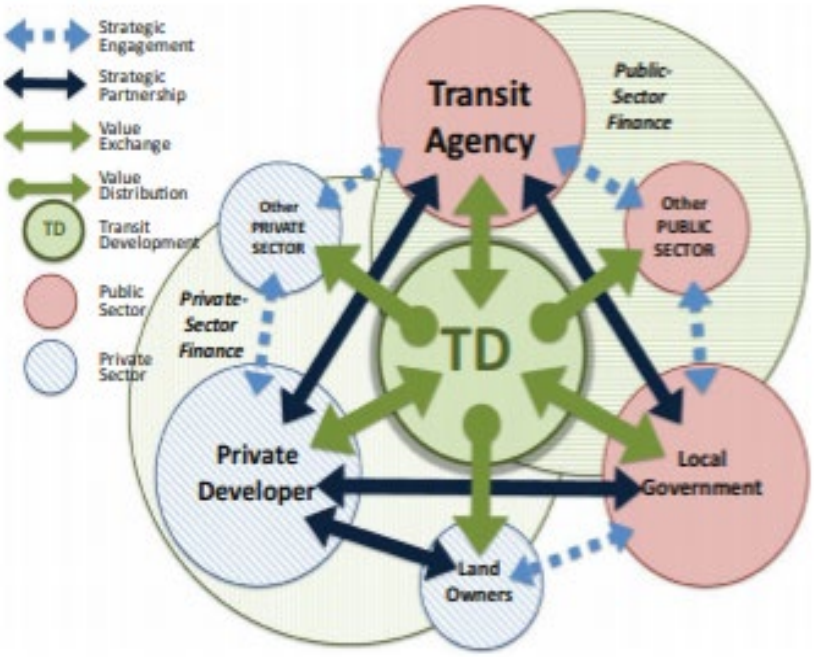
The City of Bellingham, Washington, offers an example of an exemplary transit supportive policy. It includes multimodal LOS standards and has implemented a multimodal transportation impact fee policy within the city's Comprehensive Plan.[68] Other Bellingham policies that have merit in relation to transportation impact studies, though they are technically outside the scope of finance, are their concurrency evaluation tools. City officials have developed the Concurrency Evaluation Tracking Tool (CETT) which is a "…spreadsheet-based tool that contains current arterial traffic volumes and capacities, seated transit capacities and ridership volumes, and completeness of bicycle and pedestrian networks."[69] The purpose of the CETT is to help evaluate the status of the city's multimodal network and whether it has the ability to accommodate new development.

Value Capture

Value capture (VC) is a potential means of generating revenue for transit. VC functions under the premise that public investment in transportation improvements or development offers a societal benefit by means of increasing mobility. Those who live in close proximity see direct benefits of increased property values and improved accessibility due to their proximity and should therefore contribute to the funding of the system.

VC policies attempt to capture a portion of the increase in real estate value generated from nearby investments. The implementation and success of VC does not reside with local government alone, but rather the cooperation between developers, public and private actors, and transit agencies. TCRP Report 190, which serves as a guide to value capture financing for transit, published a diagram which depicts the dynamic structure and relationships of value capture mechanisms[70] (see Figure 2).

Figure 2. Stakeholder Relationships in Value Capture Projects



Source: Page et al., Transit Cooperative Research Program Report 190, 2016.

Mathur and Smith[71] published a paper outlining the use of VCs on a project specific level, and identifying and analyzing several means of implementing VCs. Applicable to the present paper, they identify necessary considerations for implementing VCs, which in part directly relate to local government and public agency authority. These include:

- Whether state-level enabling legislation allows the use of tax increment financing for public transportation.
- Whether the local developer community opposes transit impact fees.
- Whether the local government has the financial, administrative, and technical capacity to undertake joint development.
- Whether transit impact fees yield adequate revenues, or whether joint development would be a better option. Could both be used?
- Whether impact fees reduce vertical equity by increasing housing prices.[72]

A review of the literature points to numerous types of value capture methods. The following key methods of enacting VC are offered by Mathur and Smith and supported by the TCRP Report:

- Increased property-tax revenues.
- The sale or joint development of public land in proximity to the transit system.
- Lease or sale of air rights above transit stations.
- Levy of special assessments.

- Imposition of public transit impact fees.
- Land-value taxation and capture of property-tax increments through tax increment financing.[73]

No single VC mechanism works universally. Evaluations of political climates, real estate markets, existing government policies and more must be performed to select the best VC mechanism or package of mechanisms available. A source of funding, noted in TCRP Report 190 as being excluded from the strict definition of VC, but enacted in some cities, is the designation of parking fees to pay for transit by means of local government policies.[74]

2.6 Literature Review Conclusions

The body of literature addresses a wide variety of topics that are under the control of, or otherwise involve, local governments. However, few of these sources focus on local governments themselves and how their actions help or hinder transit operations and passenger access. Still fewer explicitly address the larger issues of cooperation between transit agencies and local governments across multiple departments and domains (e.g., land use planning, public works, and access to social services) to build and operate transit-friendly cities.

The literature that addresses issues under city purview tends to focus on the subjects of the built environment and land use. While other references discuss issues under the control of the roadway owner, they are typically either in documents prepared by the transit agency itself, and therefore may or may not have involved direct input from their constituent local governments, or were documents prepared by advocacy groups or professional associations.

Although transit agencies may have internal specifications and standards on basics such as preferred bus stop length, and some may even have sophisticated guidelines on certain aspects of local government/transit agency overlap (including the siting and design of bus stops, multimodal corridors, and improving pedestrian access to transit, etc.) the jurisdictions they operate in may not know of them or use them, let alone adopt them as policies and practices.

One indication of the degree to which there is a gap in our knowledge is the lack of guidance available to city practitioners for creating transit-supportive city streets. It was only in 2016 that NACTO developed the *Transit Street Design Guide*, whose intended audience is city officials responsible for designing, building, and managing urban streets. While APTA has published several guidance reports related to the design of transit stops and access to them[75], BRT service[76], station, and access design[77], there is little evidence in the literature of assessments of how well such guidelines are disseminated to the cities' departments of public works (which have control of the streets), and whether cities have adopted any of the APTA guidelines or their own transit agency's guidelines. Thus, there is a genuine need for a single document addressing all the ways local

governments and roadway owners can help transit operators and passenger access. This is the subject of this research.

Literature review findings confirm that local city and county (and sometimes state) governments have an important influence over the quality, safety, and convenience of transit services in their jurisdictions. This influence comes largely through a local government's ownership and control over the streets, intersections and sidewalks used by transit vehicles and transit passengers. For example, local governments affect the quality of transit services in their communities by how they allocate roadway space and how they design curbside access, which is important for fast and efficient operation of transit vehicles. Their decisions also affect the safety of travelers as they walk or bicycle to access transit stops and stations. But local governments also affect transit and transit passengers through planning and land use decisions and zoning requirements. Passenger access to transit is enhanced when local land use controls (e.g., zoning, general plans, specific plans) are developed to encourage transit-supportive land use and urban design qualities. Finally, local government can play an important role in funding transit services in their communities through the use of sales taxes, special taxes (e.g., value capture), impact fees, and pursuing state, federal and non-governmental grants.

III. Development of the List of City Best Practices

3.1 Introduction

This chapter describes in more detail how the list of city best practices was developed. It began with the authors' general knowledge of transit needs and its dependence on the use of street and roadway infrastructure of the communities in which they operate. Background knowledge was also informed by the findings of the ITE committee on Transit and Traffic Impact Studies, of which two authors were members. This committee produced the ITE Informational Report *State of the Practice–Transit and Traffic Impact Studies*, which was published in February 2019.

Based on this foundation, a scan of the literature on transit needs and city practices was conducted as described in Chapter 2. At this point, a list of issues was developed in the form of questions to ask staff from five transit agencies. Based on these responses, a list of city practices was prepared. This list was then shared with five experts in the public transportation field. Based on their input, the list was revised and expanded. From this list, an evaluation questionnaire was prepared which was used to assess five California cities as to whether and how they conducted any of these policies and practices. Based on their input, a final list of policies and practices was prepared and is presented in Chapter 4. In addition, in the course of the study a number of topics arose that lent themselves to further study; these are presented in Chapter 5 as recommendations for future research.

The remainder of this chapter describes in more detail the three stages of the research that involved input from practitioners and researchers, and discusses key lessons learned at each stage.

3.2 Transit Agency Interviews

This phase of the project conducted interviews with key transit planners from five transit agencies that operate fixed route surface transit. The main goal of the interviews was to gain an understanding from the perspective of transit agency staff of what constitutes good city practices with respect to the provision of public transit, i.e., buses and light rail. The interviews also revealed some practices that hinder transit operations. Finally, there was sometimes mention of specific practices which, though not currently implemented, could help transit. Thus, the interviews revealed many good or recommended practices whether or not they were in fact practiced by any of the corresponding municipalities.

3.2.1 Selected Transit Agencies

In selecting the transit agencies to interview, an effort was made to have a sample from throughout the country, not just California. The agencies serving the largest cities and metropolitan areas, in particular New York, were deliberately avoided since they may be atypical. However, at least one

small agency was desired, since there are literally hundreds of them in the U.S. The five transit agencies selected to be interviewed were from small, mid-size and large metropolitan areas in different regions of the U.S.: Pittsburgh (East), Minneapolis (Upper Midwest), Denver (Mountain), Oakland-Berkeley (California), and Whatcom County, Washington (Pacific Northwest). The number of local governments served ranged from seven to over a hundred; the number of counties in the service area ranged from one (Whatcom Transportation Authority, WTA) to eight (Denver Regional Transportation District, RTD). Four metropolitan areas have populations of between two and five million, with central city populations ranging from 300,000 to 700,000. The fifth, Whatcom County, has a population of 220,000, and its largest city, Bellingham, has 90,000 inhabitants. Table 2 outlines key information about each agency and the region it serves.

Each transit agency was asked how their governing board is structured and the relationship between the board and the jurisdictions served. The five agencies exhibit a variety of governance structures. For example, AC Transit and Denver RTD have elected boards (which is rare for public transit, both abroad and in the United States) with electoral wards or districts that overlap municipal boundaries. The other three transit agencies are governed by boards composed of appointed members and/or elected officials from cities or counties within their service area, which is more the norm. Specifically, the Port Authority of Allegheny County is a county-owned, state-funded agency based in Pittsburgh and is overseen by an 11-member board, five of whom are appointed by the county and the other six by the Governor. Board members may be from either the public or private sector. Metro Transit, which serves the seven-county Minneapolis–St. Paul region, is a division of the Metropolitan Council, the region's metropolitan planning organization. The Metropolitan Council's governing board currently has 17 members, 16 of whom represent a geographic district in the seven-county area with one chair who serves at large. All members are appointed by the Governor of Minnesota. WTA is a Public Transit Benefit Area (PTBA) and has a governing board composed of local elected officials: mayors of the two largest cities, city council representatives from two of the smaller cities, plus a county council representative.

The purpose of this assessment of governance was not to evaluate or critique the governance types, nor even to illustrate the variation between our case studies, but rather to illustrate that in all cases, there is a distinction between the public transit provider and the owners of the roadways on which their transit vehicles operate. The transit agencies and the municipalities they serve are separate entities, each with their own management and governance structure. The consequence is that the transit agencies interviewed always have to obtain approval from each individual city, town or county in their service area in order to provide the service they are mandated or expected to provide, even for something as simple as installing the pole for the bus stop sign. Thus, the interviewed transit agencies each operate within a reality in which they have no direct control over the built environment of the communities in which they operate. This gives them an informed appreciation as to what cities and other roadway owners do, or could do, to facilitate the provision of surface public transportation.

Table 2. Characteristics of the Five Interviewed Transit Agencies

Central City/ Cities	Transit Agency	Population of Area*	Central City Population	No. of Counties	No. of Municipalities in Service Area
Pittsburgh, Pennsylvania	Port Authority of Allegheny County	1,415,000/ 1,734,000/ 2,300,000	300,000	1	130
Minneapolis and St. Paul, Minnesota	Metro Transit	1,837,000/ 2,650,000/ 3,600,000	430,000	7	~75
Denver and Boulder, Colorado	RTD-Regional Transportation District	2,920,000/ 2,374,000/ 3,000,000	730,000 107,000	8	~55
Oakland and Berkeley, California	AC Transit	1,425,000/ 3,281,000/ 4,700,000	435,000 120,000	Parts of 2	13
Bellingham, Washington	WTA-Whatcom Transportation Authority	220,000/ 114,000/ 220,000	90,000	1	7

**Note:* xx/yy/zz = service area / urbanized area (UZA) /metropolitan statistical area. (Note that UZA may be larger than service area.)

Source: National Transit Database Agency Info, 2018; MSA population from https://www.statista.com/

3.2.2 Interviews

The interviews were conducted by telephone between February and May of 2020. Each interview began with a brief statement of the purpose of the study: to identify city practices that help transit agencies deliver their services and improve the passenger experience on city property. Then questions regarding the various practices were posed with several closed and open-ended questions using a questionnaire/interview guide developed by the project team. The aim was to solicit opinions and specific examples of what cities do that helps or hinders transit operations and passenger experience when outside the transit vehicle. The questions also elicited transit agency suggestions regarding what cities could do and what is not being done to improve transit service and passenger safety. Although there were specific interview questions, the interviews allowed respondents the flexibility to relate their own examples of things cities do or that they wish cities would do to help transit. The outline of questions is presented in Appendix A.

3.2.3 Lessons Learned: Main Takeaways from Transit Agency Interviews

During the interviews, many specific examples of city activities that help or hurt the provision of transit service were obtained. The initial one-and-a-half pages of questions were expanded to 20 pages of specific policies and practices. The interviews corroborated and emphasized that key elements, as well as minor elements, of surface transit operations and passenger experience are under the control of—indeed on the property of—the city/local government, or even on state highways within city limits. These elements that affected transit service and passengers were organized into the following categories:

- Infrastructure affecting bus operations.
    - Rights-of-way and dedicated bus-only lanes.
    - Traffic signal treatments that help transit vehicles.
    - Curbside access to bus stops.
    - Bus stop placement and relocation.
    - Bus stop design from perspective of the passenger waiting area.
    - Layover areas.
- Infrastructure for transit passengers as pedestrians.
    - When walking to transit stops and stations.
    - When waiting for transit vehicles.
    - Americans with Disabilities (ADA) issues including boarding and alighting from vehicles.
- Transit considerations in planning and other city activities.
    - Transit-related activities conducted by city staff.
    - Incorporating transit consideration in routine planning.
- Development review and zoning, including Traffic Impact Studies and conditions of approval.
- Funding strategies and mechanisms for the transit provider.

Figure 3. Bus Passengers in Bellingham, WA

Source: Evantide Photography.

Specific policies and practices under each of these topic areas were identified and then presented to the expert panel for their review and comments as described in the next section. General observations for these main areas are as follows.

Infrastructure Affecting Bus Operations

Transit agency staff noted that not only is the roadway travel lane important, but the curbside area as well. The management of this area and its permitted uses is under the control of the roadway owners (city, county or state). One transit agency staff member observed that, given the many and various types of curbside activities, the curbside space was quite different from and much more complicated than the travel lane. Whereas the sole purpose of the travel lane is to facilitate flow, the curbside lane serves many diverse functions. In addition to bus stops, the curbside is also the location for public parking (metered and unmetered), deliveries (yellow curb zones), passenger loading (white curb zones), bicycle travel (both with and without designated bike lanes), driveway cuts, and, more recently, parklets and pedestrian bulbouts. In short, there is a substantial demand and competition for this space. City policies and practices regarding the curbside space have a huge impact on the ability of a transit provider to fulfill its mission.

Transit Considerations in Planning and Other City Activities

With respect to planning, cities that have staff with transit-related responsibilities (e.g., in their title, job description or even unwritten but in practice) are better at understanding transit needs than those that don't. For example, such cities tend to routinely include transit agency staff in meetings or correspondence regarding roadway projects that could affect a bus's ability to access bus stops or a passenger's ability to board or alight. With respect to land development procedures, cities that included transit agencies in project meetings, or at least in site plan review, were more

likely to impose developer conditions of approval that improved transit stops and pedestrian access to stops and stations.

Transit Considerations in Planning and Other City Activities

One general observation that emanated from the interviews with transit agency staff is that most of the interviewees experience an "us versus them" relationship ("us = city = cars" and "them=transit agency=buses") with at least some of the cities they serve. The "us versus them" mindset of city staff essentially sets the stage for the range of policies and practices that cities control that help or hinder public transit. Many municipalities, particularly in suburban locations, consider auto flow, not transit, their primary sphere of duty. Thus, decisions are made from the perspective of what is best for automobile flow and LOS; rarely were bus operating needs on city streets as important as those for cars or even bicycles. One planner stated that cities in the service area do not necessarily intend to hinder transit; however, in practice, auto traffic engineering concerns often prevail at the expense of transit operations since the cities don't consider transit as part of their innate responsibilities. Even something as mundane as trash can maintenance can devolve into "us" versus "them", with some cities not taking responsibility for placing or even emptying trash cans at bus stops, since bus riders are not considered the city's responsibility. Furthermore, even when cities adopt policies to support transit in their general plans, these often don't translate into concrete measures to support it.

On the other hand, transit agency planners serving larger cities agreed that staff with larger cities in their service area (e.g., Minneapolis, Pittsburgh) tend to understand and appreciate the need for transit-specific infrastructure, such as bus-only lanes and full-sized bus stops, better than the smaller cities and suburbs, and even better than the State Departments of Transportation (DOT) which are mostly concerned with automobile traffic. Ironically, among the five interviewed, the transit agency that reported the best relationship with the cities it serves was Whatcom Transportation Authority in Washington State, which serves a county with a population of 220,000. The WTA planner stated that they received excellent cooperation from the main city in their service area, the City of Bellingham, a small city with a population of 90,000. These observations raise the prospect of a need for further research that is discussed in Chapter 5.

3.3 Expert Panel Input

From the agency interviews and the literature review, a 20-plus page list of city policies and practices was created. The list was then presented to five practitioners and researchers in the field of public transportation who were assembled to review and critique the draft list of city best practices.

3.3.1 Convening the Expert Panel

The five expert panel members were from agencies, organizations or universities in San Francisco, Boulder, Washington D.C., Philadelphia and New York. Each panel member was asked to read the list of best practices and to submit comments either in writing or during a teleconference meeting. A conference call was held so that there could be a sharing of ideas and free form conversation. The expert panel members were asked to:

- Indicate whether they agreed that the list items were good practices on the part of cities/municipalities.
- Suggest appropriate revisions to be more effective at describing the city practice that affects transit, and/or expand upon the policy or practice.
- Add/suggest additional policies and practices.
- Provide feedback as to whether there would be value for further research to develop a ranking of city practices—for example, distinguishing highly recommended versus recommended.

3.3.2 Main Takeaways

The panel generally agreed that the checklist's questions were on target in terms of relevance and comprehensiveness. Their main general comments were:

- Filling out the complete checklist in its current form would be time-consuming. Panelists suggested that there would be value in identifying the most important practices for increasing ridership.
- If this list were to be turned into a survey, then there were concerns about "survey burden" since the checklist is quite long and much of it is specific to large metropolitan area transit systems.
- Not all policies are equally important or of equal measure. It would be useful to identify those that are more significant than others in terms of impact on transit operations and passenger access.
- Much of the checklist might not be relevant to all respondents. It was suggested that it could be broken up into segments/modules that would be more focused for specific audiences, and/or that multiple versions with increasing levels of depth and refinement would be appropriate for different purposes.

The panel had several specific suggestions for revising the wording and for new policies. They also offered several points for consideration to better describe specific city best practices. These included:

- Rail Rights-of-Way: There is no reference in the current list to city-ownership of rail ROW and their responsibilities for it. For example, the City of Philadelphia owns their rail ROWs.
- Transit Signal Priority (TSP): TSP may be most appropriate in suburbs, not in large cities where signal cycles are typically short.
- Bus Layover Areas: Agreed this was an important issue and added the need for the layover area to have access to restrooms for drivers.
- Transit Information at Stops: While not generally seen as a local government responsibility, municipalities can play a role in providing shelters, design standards, policies and guidelines.
- Bicycle and Pedestrian Access: It is important to include that localities have a role in bike and pedestrian access to stations/stops, including bike and pedestrian plans, bike parking, and understanding station/stop catchment areas for the two modes.
- Routine Maintenance of Station/Stops and access to them: Snow removal is also an important issue in some cities.
- Sidewalk Maintenance Responsibilities–City vs. Adjacent Property Owner: Since sidewalk ownership varies from city to city (and even within cities), as do the maintenance responsibilities, it may be difficult for the list of city practices to address the responsibilities of private property owners versus cities to maintain public sidewalks. However, it was agreed that, regardless of who is tasked to maintain them, sidewalks are not only used by the public to access bus stops, but the bus stops themselves are located on these public sidewalks. Thus, even if the city delegates maintenance responsibilities to the adjacent property-owner, the city still maintains ultimate authority in terms of design standards, and allowable public furniture (such as bus stop amenities), and therefore cities have a role in adopting appropriate city policies and practices for sidewalk design and maintenance.
- Station/Stop Access Assessment: This important issue is often overlooked; respondents suggested expanding the assessment of station/stop access, and making it more specific. For example, including the issue of design standards for Planned Urban Developments (PUD) and other developments.
- Construction Impacts on Transit Operations and City Procedures for Re-Routing Transit: The checklist should have questions about construction impacts on bus stops and bus routing.

- Special Event Impacts on Transit Operations and Re-Routed Transit: The checklist should have questions about policies regarding the impacts of special events (e.g., street fairs, marathons, and other street closures) on bus stops and bus routing.
- Transit Agency/Local Government Coordinating Committee: It is important to codify and coordinate the ongoing relationships between transit agencies and local governments. The checklist should note the desirability of an ongoing working committee and the codification/institutionalization of these ongoing relationships and responsibilities.
- Constant Monitoring and Evaluation: Transit agencies and local governments have joint responsibility in monitoring the station/stop-area safety and access conditions. Constant evaluation and monitoring are needed by both parties.
- Transit Agency Involvement in Land Use Decisions: The provision of dense, mixed-use development around stations/stops, and the involvement of the transit agencies in this process, is important.
- Traffic Calming Concerns: Some traffic calming measures, while they improve pedestrian and bicycle safety, and as a consequence, station/stop access, also slow down buses, so the list should consider these conflicting concerns.
- Multi-City Transit Policy Group: For those transit agencies that serve many cities, a policy group composed of representatives from all cities in its service area would be useful to develop consistent practices and to discuss common issues related to transit service.

3.4 City Evaluations / Interviews

After the expert panel review and subsequent revision of the list of city best practices, an evaluation questionnaire was prepared which was shared with five California cities as a beta test on how well the list was understood and whether and how the policies and practices were implemented. The purpose of the city interviews/evaluations was to understand the way cities work—what they do and how they do it—so that the list of policies and practices could fully capture issues that were indeed under city purview. The goal was not to determine whether and which city practices are actually practiced by the five cities but rather to identify the many facets, as well as departments, that are involved in implementing a city practice. A secondary goal was to determine how the practices are institutionalized, ranging from informal department policies to formally adopted standards and ordinances. In addition to helping us fine-tune the checklist, it was hoped that the cities themselves would find the exercise beneficial and use the results of their own evaluation to better accommodate transit and improve passenger access in their jurisdictions.

3.4.1 Presentation of the List of City Practices

In translating the template, or list, of best practices into something with which to evaluate individual cities, it was soon recognized that there is a difference between a simple list of good

policies and practices and a questionnaire which asks a city if they indeed conduct the practice. For example, one of the identified best practices was the provision of bus bulbouts. But when asking the question of a specific city, a simple yes or no is rather meaningless: Do they have one bulbout or do they have fifty? And if they have a bus-only lane; is it one block long or is it ten miles long? Is it only for one route or does more than one route use it? These particulars point to the differences in phrasing and format between the template of City Practices (presented in Chapter 4) and the questionnaire used to evaluate cities (see Appendix B). The former can be considered a starting point for a hierarchical list of recommended practices or, eventually, with the addition of illustrations and diagrams, a handbook for municipalities, whereas the latter may be a starting point for a methodology to evaluate or compare cities based on their transit friendliness, or even for cities to conduct a self-evaluation.

Thus, while the goal is to develop a list of city practices that help transit operations as well as passengers, the need for a questionnaire format to conduct the city evaluations became evident. Therefore, a questionnaire was prepared in the form of simple yes/no responses with a fill-in-the-blank cell to indicate quantities where appropriate. Multiple choice options were provided to indicate how the practice was institutionalized, and there was also space for city staff to comment or elaborate. This questionnaire format was modified and tweaked as the city evaluations proceeded. The modified, improved version is available on the MTI website;[78] see also Appendix B.

3.4.2 Cities Evaluated

Five cities were recruited to participate. It was desirable to select cities in a variety of geographic locations in California from both metropolitan and small urban settings. The five cities that agreed to participate were San Diego, Fresno, Riverside, Mountain View and Eureka. Information about each city is presented in Table 3.

Table 3. Cities that Participated in the Test Evaluations

City Evaluated	County	Population	Caltrans District	Main Local Transit Agency
San Diego	San Diego	1,426,000	11	San Diego MTS
Fresno	Fresno	538,195	6	FAX*
Eureka	Humboldt	26,710	1	Humboldt Transit Authority & Eureka Transit Authority
Riverside	Riverside	336,285	8	Riverside Transit Agency
Mountain View	Santa Clara	84,067	4	Santa Clara Valley Transportation Authority (VTA)

**Note:* The local transit agency, FAX, is a department of the City of Fresno, thus FAX staff are city employees.

It should be pointed out that the City of Fresno is also the transit operator of the local fixed route bus service, which is known by the brand name FAX. Thus, FAX is a city department just like the departments of Public Works (DPW) and Planning. This was unique among the five cities as well as among the five transit agencies that we interviewed. It is also rather rare in general, at least in California; only four of the 20 most populous cities in California own and operate fixed route transit service in their city as a city department (San Francisco, Los Angeles, Fresno, and Modesto; but it should be noted that San Francisco is a consolidated city and county government, and Los Angeles DOT only operates some of the fixed route bus service in the city, while the Los Angeles County Metropolitan Transportation Authority operates the vast majority). This unique arrangement of a city department operating transit seems to offer ideal circumstances for city-transit agency cooperation.

The cities were given the option to be interviewed or to fill out the questionnaire on their own with follow-up contacts for clarifications, if needed. Each city was informed that it was likely that staff from several departments would need to be involved to retrieve the different types of information for our research. It was suggested that a representative from the following city departments or sections would be needed:

1. Public Works: Someone familiar with policies related to any improvements or construction on the roadway and also with adopted design standards, city standard specifications.
2. Traffic Engineering: Someone familiar with curbside management e.g., red curbs for bus stops, and also signal timing such as typical cycle lengths and transit signal priority.

3. Transportation Planning: Someone familiar with future plans for major transportation investments, and also with bike and pedestrian issues.
4. General Planning: Someone familiar with the General Plan, Circulation Element and Specific Plans, and land use zoning issues.
5. Land Development: Someone familiar with traffic impact studies and developer conditions of approval.
6. Transit Planning: The staff person, if any, tasked with working on transit-related issues and/or working with the transit agency, including bus stops and bus stop amenities.

Figure 4. Bus Bulbout (left) versus Bus Turnout (right)

Source: David Moore (left), Michelle DeRobertis (right).

3.4.3 Lessons Learned and Main Takeaways

Since the cities' specific responses to the questions was not the subject of this study, they are not presented in this report. Nevertheless, their responses and comments were very valuable in understanding what transit-related elements cities have control over and how they get things done, and helped to revise and improve the list of best practices. The city evaluations illustrated that the phrasing of some policies or practices needed to be adjusted, and also helped identify a few new best practices. The input from the cities demonstrated that context and city size matters as to whether a specific practice or policy is applicable. The responses also illustrated that whether and how a policy or practice is institutionalized varies widely. The remainder of this chapter describes these and other main takeaways from the City test evaluations.

New Issues or Practices

Several new practices or policies were discovered during the evaluations of the cities. These included:

- City of San Diego has designated several TOD or transit priority areas. In these areas, regulations allow multiple unit residential developments to be built without off-street parking. The City of San Diego requires developers in these areas to provide transportation "amenities" to reduce vehicle trips; these amenities include transit passes and other measures that incentivize transit use, bicycling and walking. They must be selected from the preapproved strategies contained in the *Land Development Manual* Appendix Q.[79]
- City of San Diego has adopted a Traffic Signal Communications Master Plan (TSCMP)[80] which includes emergency vehicles and transit vehicles as recognized beneficiaries of new traffic signal policies. For example, TSP is cited as a specific strategy to reduce delays for both emergency vehicle and transit vehicles. The plan states that they use a variety of technologies including infrared, GPS, and secure wireless.
- City of Fresno pointed out that the need for tree trimming can affect buses, particularly at bus stops. In Fresno, the city arborist is involved to assess and rectify any issues involving city trees.
- Also in Fresno, the Planning Department includes the transit agency in the formal review of all plans and planning documents with transit sections, including Specific Plans.
- The City of Mountain View has been preparing Precise Plans since the 1970s to set development policy and standards for areas with unique circumstances, including transit-adjacency. Precise Plans are a tool of the Zoning ordinance (as opposed to Specific Plans which are tools of the General Plan); they contain more zoning related details than specific plans and are used "where special conditions of size, shape, land ownership, or existing or desired development require particular attention."[81] The City has twenty-five Precise Plan areas, five of which are transit-oriented, (four of these are around light rail or commuter rail stations). Thus, Mountain View uses the Precise Plan to create distinct TOD areas, each with different design standards, transit-related conditions and associated residential densities, which range from 25 to over 100 dwelling units per acre.

City Size and Context Affect Appropriate City Policies

The evaluations revealed that some policies and practices address conditions that are simply not much of an issue for some cities, given their population and auto congestion levels. Thus, urban context and city size affect the degree to which some policies and practices are important. For example, in Eureka, they have not adopted the concept of TOD, since there are no rail stations or other high passenger volume transit lines around which to build TOD. Also, for a small city like Eureka, auto congestion is not a problem, so some infrastructure practices like bus-only lanes or transit signal preemption do not add much value to the transit operations. Even in Fresno, the fifth largest city in California, city staff stated that removing parking to provide a longer bus stop was rarely an issue since finding on-street parking in Fresno is not difficult.

On the other hand, it was found that in large metropolitan areas like San Diego, a regional agency has often taken responsibility for conducting some of the activities that this research cited as good city policies and practices. For example, in San Diego, the San Diego Association of Governments (SANDAG) assists with mode choice alternative promotion, including transit, through its iCommute program and website,[82] which encourages use of transportation alternatives to help reduce traffic congestion and greenhouse gas emissions. These findings support the expert panel recommendation that perhaps more than one list of best practices be developed depending on city size and context.

How Practices are Institutionalized

There is wide variation in how the many practices and policies are institutionalized. For example, a transit friendly policy or practice could be implemented by anything from a city ordinance to an unwritten departmental practice. Moreover, it was recognized that the degree to which a practice is formally institutionalized is itself a best practice. Examples of the variety of approaches are:

- In Fresno, the city council adopted the "Southern Blackstone Avenue Smart Mobility Strategy" to direct the physical and other improvements along this one corridor. The City of Mountain View makes extensive use of the Precise Plan for prescribed areas of the city (discussed above).
- Some cities have embraced complete streets as an internal department policy, and others as a city council-adopted ordinance or resolution.
- Not all cities have their own TIS/TIA guidelines, and even in cities that do, these may or may not be formally adopted by the city council.

Thus, the phrasing of the policy or practice needs to be flexible when describing how it is implemented or institutionalized. There is such a wide range of ways to institutionalize a practice or policy, both within the same city for different practices and between cities for the same practice, that this research could not capture them all. This is an area that is recommended for future research.

Unique Practices Uncovered

A few of the good practices that directly helped transit or that fostered good relations between cities and transit agencies appeared to be unique to one of the five cities. Future research is recommended to determine the degree to which these are present in other cities and metropolitan areas.

Civic Engagement and Advisory Opportunity

In the area of public participation and engagement, since 2019, the City of San Diego has a Mobility Board, an official city advisory committee for all transportation modes; this Board

replaced the Bicycle Advisory Committee.[83] The purpose of the Mobility Board is "to inform transportation decision making holistically to ensure that people driving, walking, bicycling, taking transit, parking or using other transportation modes will have safe, easy-to-use choices to move around the city."[84] Given its multimodal function, many of its duties focus on ADA, bike and pedestrian issues. But transit issues are also specifically cited, including: advising on ways City departments can coordinate with the San Diego Metropolitan Transit System; advising on strategies that encourage the growth of multi-modal transportation and transit-oriented development; and providing input on the development of the City's Transportation Master Plan. The full duties are presented in Appendix C.

In Riverside, there is a unique collaboration between the Riverside Transit Agency (RTA) and the cities in its service area in the form of a consortium called Transportation Now (T Now). T Now is a not-for-profit and nonsectarian organization founded in 1992 by the board of directors of RTA as a coalition of local concerned citizens dedicated to promoting and expanding transportation alternatives.[85] It advocates for balanced policies for transportation alternatives at the federal, state and local level, and it also educates individuals, businesses and local organizations about the community-wide importance of transportation. Its mission is "[t]o advocate for the use and support of public transportation and other alternatives to the single-occupant vehicle as an essential component to Western Riverside County."[86] (See Appendix C). The goals of T Now are to enhance customer's experience, to promote ridership benefits, and to enhance Riverside Transit Agency's name recognition.[87]

As of 2020, there are six chapters of T Now, based on geographical boundaries, which meet independently. Each chapter decides its own meeting frequency and agenda items in keeping with the purpose of the organization; they typically meet monthly. There are no dues and the members may not be employees or representatives of RTA, although RTA provides a staff member representative for each chapter. The bylaws state that "[i]t is intended that Members of the local chapters be representatives from associations, clubs, societies, organizations, businesses, educational institutions, municipalities, and the general public who or which evidence an interest in the purposes and goals of Transportation Now."[88] Thus, while not specifically a "City" best practice or a "City" initiative, this organization and its meetings provide a venue for city staff to participate with the entire community to help RTA provide improved public transportation.

Multimodal Improvements Funded by Traffic Impact Fees (TIF)

The City of Mountain View established a traffic impact fee in order to implement the projects identified in the Citywide Multimodal Improvement Plan (MIP).[89] The MIP, in turn, is the Deficiency Plan identified per the State of California's Congestion Management Program (CMP) legislation. This legislation requires local jurisdictions to prepare such a plan when the CMP system of regional roadways exceeds certain LOS thresholds. The MIP identifies specific measures

to increase use of walking, bicycling and transit and other Transportation Demand Management (TDM) strategies.

Both the City of Mountain View and the Valley Transportation Authority (VTA), the latter as the County Congestion Management Agency, are now focusing on measures to reduce solo vehicle trips rather than roadway capacity projects.[90] Thus, in lieu of imposing project mitigation measures focused on roadway LOS impacts, the City of Mountain View requires new developments to contribute to the TIF which was created to fund the MIP strategies that improve the transportation system and air quality.

While the MIP stops short of identifying specific transit strategies such as LRT extension or enhanced transit operations (such as improved frequency or expanded hours), it does cite a number of transit- related projects including:

- Planning and feasibility studies for transit such as automated Guideway Transit Feasibility Study.
- Transit center (master plan, preliminary design, construction).
- Pedestrian access improvements to transit stops and stations, including bridges over creeks and freeways.
- Planning design and construction of a reversible bus lane on city roadway.

Small Rural Cities

Eureka is a small city (population 27,000) in a rural county with a population of 135,000.[91] It does not have the congestion that necessitates many of the city practices that help buses cope with and navigate congested city arterials. Thus, they have no bus-specific infrastructure such as bus-only lanes, TSP or bulbouts, nor development pressure and related policies pertaining to TOD or TDM, nor even any Specific Plans. Despite, or maybe because, of its small size, the city cooperates well with the transit agency, similar to what was found for Bellingham, Washington. For example, the transit agency applied for a PTMISEA (Public Transit Modernization, Improvement & Service Enhancement Account) grant and the City of Eureka used these funds to retrofit bus stops.

Transit Agency as a City Department

Fresno was unique among the five cities and five transit agencies that this research interviewed in that the main local provider of fixed route transit service was also a city department. Fresno staff's opinion was this makes coordination between departments more seamless and less "silo-ed". This integrated structure has the following clear benefits that are not afforded to other transit agencies:

- Transit Staff are "in the loop" as City Staff: As a city department, FAX staff receive all notifications that are routinely sent to all city departments. In addition, FAX staff are routinely included in requests for staff comments and are specifically included in the land

development review process (called Entitlement Review), including site plan review. This means that as city staff they can impose conditions on the developer to, for example, provide 9-foot sidewalks so that there will be room for future bus stop amenities and landing pads.

The city recently instituted quarterly meetings of all three departments (FAX, DPW and Planning) to discuss short- and long-term transportation issues in order to facilitate the city of Fresno's response to the Fresno Council of Governments (the MPO) in the preparation of the Regional Transportation Plan. Procedures for other issues are still evolving; although FAX staff have routinely been included in Planning Departments notifications, only recently has DPW begun to include FAX at meetings early during the design phase for new roadway or reconstruction projects. FAX also realizes that this is a two-way street; FAX staff recently realized they were not notifying other city departments of their service changes and that they too have a responsibility to inform other city departments of their changes.

Staff from all departments agreed that the relationships with other city departments are key to making everything work well. The City of Fresno is still evolving their procedures to improve interdepartmental coordination both on a regular basis as well as an as-needed or case by case basis. One of the challenges they are facing is how to ensure that the relations and procedures they have established between FAX, DPW and the Planning Department remain after the individual staff members inevitably leave their positions. As a result, FAX is creating a spreadsheet to document tasks and responsibilities for various project types and when and how departments should be notified.

- Transit Representative at City Hall: One of the most fundamental consequences of a transit provider being a city department versus a separate independent agency is having visibility and presence at City Hall where decisions are made. For example, FAX's status as a city department means that the director of FAX attends the weekly meetings of department heads with the City Manager. Thus, transit is represented on an equal footing with all other city departments. Transit is "seen and heard more due to these weekly meetings". Thus, in Fresno, transit is at City Hall, both physically and metaphorically. This simply does not happen at cities where transit is run by a special district or an outside agency. Furthermore, managers from the transit agency can and have been promoted up the management ranks, have ended up working in the City Manager's office and other positions at City Hall, even becoming Assistant City Manager. This all keeps transit needs and perspective in the minds of the people at City Hall much more so than in other cities.

Curiously, although the City of Fresno is very transit supportive in many ways, from close interdepartmental cooperation to full length bus stops, it is not supportive when it comes to bus-only lanes. For the new "bus rapid transit" route, which started service in February 2018 and involved branding, special buses and bus stop design, 10-minute peak hour headways, and other

elements of BRT, the City Council rejected the proposal for bus-only lanes. While a vast improvement over regular bus service in terms of comfort, convenience and reliability (all at the same fare as a regular FAX bus), it should be noted that without at least 3 kilometres (1.8 miles) of dedicated right of way for the BRT vehicles and a few other key design elements, ITDP would not consider the service to be true bus rapid transit (ITDP, 2014).

IV. City Best Practices for Improving Transit Operations and Passenger Safety

4.1 Introduction

Following is a list of good and best practices by cities and local governments that assist transit providers in operating transit on public roadways and in ensuring and enhancing transit passenger safety. This list is not intended to be a Best Practice Design Manual nor does it define or quantify the value that these policies and practices have for transit vehicle operations and passengers. This research was designed to identify the range and variety of areas where municipal actions can enhance (or hinder) public transportation operations and passenger access and safety. Thus, it does not describe for example, what a bus bulbout is or when it should be implemented. For further reading and definitions as well as more detailed examples of some of these best practices, including design standards and city policies, a list of references is provided in Appendix D. This list makes reference to city-adopted design standards specifically for transit infrastructure, e.g., bus stops, or bus bulbouts. It will be stated upfront that any such City design standards should match or be consistent with the relevant standards of the transit agency.

In developing this list, it became apparent that there are often many levels or phases of potential city involvement for some practices. These involve more than one city department, including public works, transportation engineering, city planning and other departments. These aspects of city practices include whether or not a certain strategy or built infrastructure exists; if not, is it being planned, and if so, are more being planned; who takes responsibility for maintenance, and are there adopted design standards? Thus, for one issue or topic there are often multiple related city practices. These many phases and aspects of city policies and practices are reflected in the list below. In addition, there is variation in the ways cities have adopted or implemented the policy or practice. The alternatives presented in the list are not intended to be exhaustive; indeed, more research on this subject is recommended, as described in Chapter 5.

4.2 Template of City Best Practices

I. INFRASTRUCTURE FOR TRANSIT VEHICLES ON CITY PROPERTY/EASEMENTS

A. TRANSIT RIGHT OF WAY AND TRANSIT USE OF ROADWAYS

Providing dedicated lanes or rights of way for transit vehicles significantly reduces delay due to roadway congestion, thereby improving travel time for passengers. The following best practices address the existing presence of such infrastructure as well as the policies behind providing additional such infrastructure, and how such planning is codified or institutionalized in city practice.

1. Presence of Dedicated Transit Lanes or Transit Right of Way

There are a variety of design options to provide dedicated transit lanes or rights of way. This can be provided for some or all of a transit route. They provide the most benefit where traffic volumes are heaviest and where intersections are closely spaced. The appropriateness of the specific design option(s) will vary depending on community size, roadway network, roadway type and context, and delay experienced by transit vehicles. Thus, this list does not imply that all the best practices in this list are appropriate for all communities.

- LRT right of way (ROW) or Busway: separate ROW only for transit vehicles
- BRT or LRT/streetcar-only lane: a dedicated transit-only lane in the roadway with barrier or median to prevent incursion by private automobiles
- Bus or LRT/streetcar-only lane: a dedicated transit lane in the roadway delineated by striping only (may be same direction or contraflow)
- Freeway bus-only lanes: similar to the bus-only lane but on controlled access highways, (often outside city purview, thus listed separately).
- Transit mall: a pedestrian street that allows transit vehicles.
- Highway shoulder which public transit buses are permitted to use.
- Peak-hour bus-only lanes: (e.g., bus lane created by peak hour parking restrictions)

2. Planning for Future Implementation of Transit ROW

To successfully implement dedicated transit infrastructure, several steps are involved. The following list reflects ways that cities plan for future installations of transit infrastructure and ensures that they are built to acceptable standards. (These may overlap with policies in Section IV A).

- Planning underway for more (or first ever) transit-only rights of way (i.e., one or more of the types listed above)
- City has addressed which transit ROW is appropriate for which streets and corridors.
- City has policy to purchase or otherwise preserve abandoned rail rights of way for public transportation use.

The approach or mechanism to plan, design and implement transit-only ROW can include one or more of the following:

Dedicated Transit ROW Implementation Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

B. TRANSIT VEHICLE ACCESS TO CURBSIDE BUS STOPS

To properly and safely load and unload passengers, buses need access to the curbside where passengers are waiting. This access is achieved primarily either through built infrastructure or through curb management strategies. The following best practices address both the existing presence of such infrastructure and the policies behind providing additional infrastructure, and how such planning is codified or institutionalized in city practice. Depending on the context, particularly corridors with high levels of traffic congestion, bus bulbouts become increasingly important.

1. Existing Built Infrastructure for Bus Stops

The three main ways to facilitate safe boarding of transit vehicles are:

- Bus bulbouts
- Transit boarding islands
- Full size curbside bus stops

2. Planning for Future Implementation of Bus Bulbouts and Transit Boarding Islands

To successfully implement bus bulbouts and transit boarding islands, several steps are involved. The following list reflects ways that cities plan for future installations of bus bulbouts and boarding islands and ensure that they are built to acceptable standards.

- Planning underway for more (or first ever) bus bulbouts or transit boarding islands.
- City has a policy to implement more bus bulbouts or transit boarding islands and/or to implement them upon request of the transit agency.
- City has addressed in which contexts or which street types are appropriate for bus bulbouts or transit boarding islands.
- City has a funding strategy to implement more bus bulbouts or transit boarding islands.

The approach or mechanism to plan, design and implement more bus bulbouts and/or transit boarding islands can include one or more of the following:

Bus Bulbout and Transit Boarding Island Implementation Strategy Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

3. Planning for Full Size Bus Stops and Improved Bus Access to Curbside

Several steps, policies or practices are involved in ensuring the ability of buses to access curbside bus stops, both existing and future.

- Inventory program or policy for existing bus stops regarding bus stop length.
- City has addressed bus stop dimension / bus stop length.
- Policy to implement "No Parking" zones at bus stops to match adopted design standards for bus stop length.
- Policy for "No Parking" zone adjacent to (but beyond) bus stops.
- Policy to prohibit on-street parking as requested by transit agency to facilitate bus movements in and out of bus stop

The approach or mechanism to plan, design and implement appropriate length bus stops can include one or more of the following.

Full Size Bus Stop Implementation Strategy Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

C. BUS STOP LOCATION

1. City Involvement in New Bus Stop Placement

Locating new bus stops involves several steps on the part of the city. The following list reflects ways that cities plan and work with transit agencies for **new** bus stops.

- City staff coordinates with transit agency regarding new bus stop locations, including:
  - Meets with transit agency staff in the field to discuss bus stop siting issues.
  - Conducts, or cooperates with transit agency on, assessment of ADA landing pad and obstructions to doors for boarding and alighting.
  - Assesses whether there are clear areas for boarding and alighting (in urbanized areas with sidewalks, this generally means free of street furniture; in other areas without sidewalks,

this means a paved or hard surface on which to exit the bus rather than onto mud, the drainage ditch or other side-of-the-road obstructions.)
  - Assesses pedestrian access and ADA accessibility (e.g., accessible sidewalks) in immediate vicinity of new bus stop (e.g., within one block or 500 feet.)
  - Assesses need for new traffic control devices to assist pedestrians in crossing street to access bus stops (including such devices as traditional traffic signals, HAWK pedestrian hybrid signals, raised crosswalks, etc.)

- City has a policy for bus stop siting or placement.

The approach or mechanism for new bus stop siting can include one or more of the following.

New Bus Stop Siting Implementation Strategy Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

2. City Involvement in Re-Siting an Existing Bus Stop

Relocating an existing bus stop, e.g., at the same intersection from nearside to farside, or in the immediate vicinity, seems like a simple activity, but it also requires several steps on the part of the city. The following list reflects ways that cities work with transit agencies on the relocation of an existing bus stop.

- City has same practices and policies as for new bus stops above.

If not:

- Policy to meet with transit agency in the field to discuss bus stop re-siting issues.
- Policy or practice to routinely approve transit agency requests to re-site a bus stop and/or provide quick response time to transit agency requests for re-sited bus stop.
- Policy to approve parking removal and other curbside uses, if necessary and as requested by transit agency, to improve bus access to bus stop.
- Expedited permitting for installation of bus stop sign pole.
- Conducts, or cooperates with transit agency on, assessment of ADA landing pad and obstructions to doors for boarding and alighting.

The approach or mechanism to work with the transit agency on bus stop siting can include one or more of the following.

Bus Stop Relocation Implementation Strategy Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

D. INTERSECTION AND TRAFFIC SIGNAL TREATMENTS

Several practices with respect to signalized intersections reduce delay to transit vehicles. This in turn helps improve travel time and schedule maintenance and ultimately customer satisfaction.

1. Transit Signal Priority (TSP) for Transit Vehicles

- Short signal cycle lengths throughout city, rendering need for TSP moot.
- TSP exists at intersections with long cycle lengths (typically on trunk transit corridors, or roads with BRT and/or LRT).
- Planning underway to identify more locations to implement TSP and whether it should be active or passive.
- City has addressed where TSP would be appropriate, (e.g., certain arterials, certain transit lines, intersections with certain signal cycle lengths)
- Funding program to implement more locations with TSP.

The approach or mechanism to provide Transit Signal Priority can include one or more of the following.

Transit Signal Priority Implementation Strategy Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

2. Queue Jump Lanes

- Queue jump lanes exist at intersections (typically on trunk transit corridors, or roads with BRT and/or LRT).
- City has addressed where and how queue jump lanes are provided.
- Planning process to identify more locations for queue jump lanes.
- Funding program to implement more locations with queue jump lanes.

The approach or mechanism to provide Queue Jump lanes can include one or more of the following.

Queue Jump Lane Implementation Strategy Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

3. Transit-Oriented Traffic Signal Coordination

- Existing signal coordination favors transit vehicles on trunk transit corridors and on roads with BRT and LRT.
- Planning underway or city has process to work with transit agency to identify more corridors with transit-oriented traffic signal coordination.
- City has addressed where and how transit-oriented traffic signal coordination would be appropriate (e.g., certain arterials, roads with certain transit lines).
- Funding program to implement more corridors with transit-oriented traffic signal coordination.

The approach or mechanism to provide transit friendly signal coordination can include one or more of the following.

Transit-friendly Signal Coordination Implementation Strategy Options					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

E. BUS LAYOVER AREAS

Layover spaces are needed at the end of the run and it is essential to have a site that can both accommodate one or more parked buses and provide a place for operator breaks and access to restrooms.

1. Bus Layover Space on City Property

- City provides transit agency with a bus layover site when requested and helps to identify a bus layover site on city property, if requested.

Approach or mechanism to provide bus layover areas can include one or more of the following.

City Approach and Mechanisms Regarding Bus Layover on City Property.					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

2. Bus Layover Space on Private Property

- City helps transit agency when requested to site a bus layover site on private property.

II. INFRASTRUCTURE FOR TRANSIT PASSENGERS ON CITY PROPERTY

A. PASSENGER WAITING AREAS AT TRANSIT STOPS ON CITY SIDEWALKS

The passenger waiting area at bus stops is most often located on city sidewalks. Thus, cities have a lot of control over both the available width and space in which to place bus stop amenities, and which amenities are provided. The following list of best practices addresses both the existing conditions, including maintenance, as well as planning to improve the passenger waiting experience.

1. City Maintenance of Bus Stops and Bus Stop Amenities

- City assumes responsibility for the provision and maintenance of the following at transit stops on city sidewalks:
    - Trash cans
    - Benches
    - Shelters
    - Pole or place for transit route map, if no shelter
    - Pedestrian-scale lighting
    - General cleaning / litter removal / power washing of sidewalk area
    - Notice with contact point to report problems, e.g., phone number, email address, website
    - Bicycle parking
    - Routine review / clearance of sidewalk clutter in stop areas
- City has addressed maintenance issues for sidewalk areas at bus stops
    - City maintains sidewalks around shelters including leaves and snow clearance.
    - City has addressed issues to minimize interference with pedestrian flow on sidewalks.

2. Planning for Improvement of Passenger Waiting Areas

- Planning underway for improved passenger waiting areas e.g., inventory program to review amenities at passenger waiting area.
- City has addressed when and where certain bus stop amenities should be placed to improve passenger comfort and safety, such as benches, adequate lighting, and a buffer or separation from street traffic (parked cars, planters, trees or other physical elements).
- City has bus shelter program to identify locations for new bus shelters.
- City has funding strategy to implement improvements at bus stops.
- City has addressed sidewalk width at bus stops that is sufficient for bus shelter and ADA landing pad.

- Bus stop waiting area improvements are routinely part of scope of roadway reconstruction work. Elements particularly cost-effective to implement at this stage include electrical conduit, curb cuts, ADA landing pads, sidewalks, crosswalks and needed traffic control devices. Optimal practice would be to also include lighting, benches and shelters.

The approach or mechanism to improve passenger waiting areas on city sidewalks can include one or more of the following.

City Approach and Mechanisms Regarding Passenger Waiting Areas at Bus Stops					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

3. ADA Improvements at Passenger Waiting Areas

- There is an assessment / inventory program to identify needed ADA enhancements at transit stops.
- City's ADA transition plan includes accessible landing pads at bus stops.
- City has addressed issue of access between bus doors and passenger waiting area on city sidewalk or roadway shoulder (related to Issue I.C – Bus Stop Location).

The approach or mechanism to address ADA issues can include one or more of the following.

City Approach and Mechanisms Regarding Transit Passenger ADA Issues					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

B. PASSENGER ACCESS TO TRANSIT STOPS AND STATIONS

Transit stops and stations are major attractors and generators of walking and bike trips. Several steps and issues are involved in pedestrian and bike access to transit stops and stations, including the provision, design and maintenance of existing infrastructure, and planning for new infrastructure to improve walk and bike access.

1. Existing Walk and Bike Infrastructure Accessing Transit Stops

- City has policies for the design and maintenance of pedestrian and bicycle access to transit stops and stations, including:
    - Sidewalks and walkways, including pedestrian scale lighting.

- Bikeways, including snow clearance on bike paths.
- Crosswalks and traffic control devices to access bus stops as needed.
- Provision of clear and intuitive way-finding displays to guide passengers to nearest bus stop or station.
- Control of excessive speeds on main walking routes to transit such as traffic calming strategies that do not adversely impact bus speeds and operation.
- City assumes responsibility to maintain sidewalks that access bus stops (as opposed to common practice of requiring the fronting property owners to do so).

- City has addressed the need for bicycle parking at transit stations, for example:
  - Attended (or other Class I) bike parking is present, particularly at rail and regional bus stations.
  - Policy for providing for future / additional attended (or other Class 1) bike parking at transit stations, particularly at rail and regional bus stations.
  - City bike rack parking program includes transit stops and stations.
  - Bike share pods are located at transit stops and stations.

The approach or mechanism to address pedestrian and bicycle issues can include one or more of the following.

City Approach and Mechanisms Regarding Pedestrian and Bicycle Access to Transit Stops and Stations					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

2. Improving Walking and Bike Access to Transit Stops and Stations

- Active planning underway for improved access to transit stops, e.g., improvement plan, assessment / inventory program that identifies improvements and enhancements to the walking and biking routes to transit stops and stations; such as:
  - New or enhanced pedestrian walkways.
  - New or enhanced pedestrian-scale lighting.
  - New or enhanced bikeways to access transit stations.
  - Additional or upgraded bike parking at transit stations, including attended (or other Class 1) bike parking, particularly at rail and regional bus stations.
  - Assessment of need for signals or other traffic control devices to assist street crossings to access transit stops.
  - Assessment of need for pedestrian bridges or tunnels to shorten walk/ bike distance to transit stop and stations.

- Assessment of need for pedestrian access gates in fences along arterials to improve connections to inner neighborhoods.
- In certain geographical contexts, assessment of value of a new connecting transit mode to improve access to major transit stops, such as a funicular, ferry, shuttle, etc.

- Funding program to implement improved walking and bike access to transit stops and stations to transit stops and stations.
- Funding program to provide secure bicycle parking, particularly at rail and regional transit stations.

3. Pedestrian and Bicycle Plans

Many cities have pedestrian, bicycle or active transportation plans to identify needed projects to encourage walking and bicycling and to improve the safety of these modes. Given that most transit passengers walk to access transit, and many use or could use a bicycle, the pedestrian and bicycle plans of a locality have a large influence on improving access to these locations. The following are best practices to ensure that these plans consider walking and bicycle access to transit stops and stations.

- Access to transit stops and stations is an explicit part of the scope of work of the pedestrian plan (sometimes called active transportation), or it is, in fact, a joint pedestrian-transit access plan and the plan addresses improvements for walking to major transit stops and stations.
- Bicycle plan addresses bike access to major transit and rail stations and the need for safe, secure Class 1 bike parking.
- Transit agency staff are part of the process to develop the scope of work for such pedestrian and/or bicycle plans.
- Transit agency staff are on the interview and evaluation panel (if performed by outside contractor).
- Transit agency staff are given an opportunity to review and approve proposed projects to access transit stops and stations.

III. LAND DEVELOPMENT PROCEDURES

Land development procedures are a particular type of city planning practice that have several distinct elements, thus they are combined here in their own section. Other transportation planning policies and procedures are presented in the next section.

A. TRAFFIC IMPACT STUDIES CONSIDERATION OF TRANSIT

1. Traffic Impact Study (TIS) Guidelines

Best practice is for the City to have traffic impact study (TIS) guidelines that require the following assessments of public transit as part of the TIS of a land development project or roadway changes.[92]

- City has guidelines for the preparation of TIS that include:
    - Description of existing transit setting including location of stops and stations, frequency of transit service to these stops.
    - Evaluation of existing bus stops for ADA conformity as well as amenities for passenger comfort and convenience.
    - Evaluation of the current hours of service with respect to the expected hours of all project-generated person trips.
    - Need for local bus route extension to serve site and/or shuttles to connect project site to nearest mass transit station, e.g., commuter rail.
    - Evaluation of need for new or relocated bus stops to serve project site.
    - Adequacy of walking and biking routes between project site and nearest bus stop and, if present, to nearest rail transit stations (or other mass transit such as ferry terminals or regional buses).
    - Impact of project-generated automobile trips on transit speeds and dwell time.
    - Use of multimodal level of service (LOS) evaluation.
    - Assessment of project-generated transit trips on transit capacity including vehicles, platforms and passenger waiting areas.
    - Assessment of project construction activities on existing bus routes and bus stops, including whether buses will be rerouted and whether bus stops will be temporarily closed or relocated.

The approach or mechanism used by City to address TIS issues can include one or more of the following.

City Approach and Mechanisms Regarding Traffic Impact Studies					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

2. Transit Agency Staff Involvement in the TIS Process

Best practice is for the Transit Agency staff to be involved in the following aspects of the Traffic Impact Study process for a land development project or roadway change. Transit agency staff are involved in the following phases of the TIS:

- Definition of scope of the project's TIS.
- Transit trip generation and assignment for the project.
- Assessment of the ability of existing transit to serve the project demand.
- Assessment of the need for transit-specific improvements to serve the project site, project demand, or to mitigate project-related impacts.
- Adequacy, feasibility and appropriateness of any recommended transit service or operations improvements.

The approach or mechanism used by the City to involve transit agency staff can vary; often departmental policy is sufficient, but personnel and staffing changes can result in the discontinuation of the policies and practices.

3. Project Mitigation Measures and Trip Reduction / Vehicle-cap Strategies

The following are best practices that specifically pertain to acceptable mitigation measures for project impacts. They are also related to Developer Conditions of Approval—Issue III.C below.

- Project mitigation measures are recommended to reduce project vehicles' adverse impacts on transit operations or to reduce transit delay/improve transit travel time.
- Project contribution to improve transit service is considered a strategy to reduce automobile trips and/or as mitigation of project's automobile impacts (as opposed to allowing private shuttles which subvert the use of public transportation).
- Transit improvements are recommended as mitigation of project's adverse impacts on transit capacity, including transit vehicle capacity, platforms and passenger waiting areas.
- Project mitigation measures to improve automobile level of service (LOS) or reduce delays, but adversely impact transit operations, are discouraged or not allowed without corresponding mitigation for transit operations.

The approach or mechanism used by City to address project mitigation can include one or more of the following.

City Approach and Mechanisms Regarding Acceptable Project Mitigation Measures					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

B. SITE PLAN REVIEW INCLUDING SPECIAL EVENTS

Best practice is for Transit Agency staff to be involved in the site plan review process and that the project is responsible for addressing impacts to transit stops and service.

1. Transit Agency Involvement in Site Plan Review

- Transit agency or agencies receives site plans for review and comment.
- Transit agency or agencies invited and involved in all meetings and correspondence for all project developments.
- Transit agency or agencies invited and involved in all meetings and correspondence for special events that impact transit service and transit stops.

The approach or mechanism used by the City to involve transit agency staff in site plan review can vary; often departmental policy is sufficient, but personnel / staffing changes can result in the discontinuation of the practice/policy.

2. Impacts on Transit Stops and Service

- Project required to pay for the public noticing if bus stop needs to be relocated, temporarily or permanently.
- Project required to pay for costs associated with relocating bus stop, whether temporary or permanent.
- Special event which affects existing bus service is required to pay costs associated with rerouting buses during the event and for the noticing of the service changes (or city provides other mechanism to reimburse the transit provider).

The approach or mechanism used by City to address impacts on transit stops and service staff can vary.

C. DEVELOPER CONDITION OF APPROVALS /PROJECT MITIGATION

1. General Developer Conditions of Approval

Developer conditions of approval are often the outcome of the traffic impact study and/or the site plan review discussed above in Issues III.A and B. Cities have many options to enact and enforce developer conditions which can include one or more of the following.

City Approach and Mechanisms to Enact Developer Conditions of Approval Measures					
City Ordinance	Case by case basis	Formal or written citywide city policy	Formal or written department policy	Formal policy for certain areas of city	Informal/ Unwritten Practice

2. Improvement of Transit Stops and Stations Serving Project Site

- Project required to upgrade existing bus stops on their property frontage.
- Project required to pay for well-designed bus stops at all new stops that serve the project site (i.e., bus stops that meet city and/or transit agency design standards, or that have benches, shelters, and lighting).

3. Improve Walking and Bike Access Between Project Site and Nearest Transit Stops and Stations

- Project required to pay for or contribute to needed improvements to improve pedestrian access between the transit stops and stations and the project site, including sidewalks, traffic signals, pedestrian-scale lighting, etc.

- Project required to pay for or contribute to needed improvements to improve bicycling access between the transit stops and stations and the project site.
- Project required to pay for or contribute to improvements that would reduce the walking or biking travel time to the project site such as a pedestrian bridge or tunnel over freeways, rivers or railroad tracks.

4. Transit Service to Project Site

- Project required to contribute to a fund for transit improvements. (See also Funding, Issue IV.D below)
- Project required to pay for or contribute to the operating costs of extending the bus line or for a shuttle to access the nearest LRT/BRT/rail station.
- If the project will routinely attract large crowds (e.g., sports stadiums, concert venues), project required to pay for additional costs incurred by the transit operator including:
    - additional operating costs incurred to run extra service and/or shuttle bus services provided by the transit agency to supplement scheduled transit service;
    - additional transit agency staff to assist with crowd control, to ensure platforms are not dangerously crowded, and to assist passengers in buying tickets;
    - additional costs for capital expenses to accommodate extra crowds such as longer platforms, etc.

5. During Project Construction

- If sidewalk is impacted, project is required to maintain pedestrian access to bus stops.
- If bicycle route or bike parking is impacted, project required to maintain bicycle access to and temporary bike parking as close as possible to bus stops.
- If bus stop is temporarily relocated or closed, project is required to pay for the notices of the relocated bus stops.
- If bus service is rerouted, project is required to pay for the notices and also for any extra labor costs incurred by the transit agency due to operating or other reasons.

6. City-Required TDM Plans

When a city requires a Transportation Demand Management (TDM) plan, transit issues can often be overlooked. The following are best practices for TDM plans that maximize the benefit to transit operations and ridership.

- City requires developments of a certain size to prepare TDM plan.
- TDM plan contains the following elements:
    - Contribution to improve transit frequency to the site and/or expanded hours of transit service.
    - Provision of appropriate bus shelters and stops
    - Free shuttles to nearest mass transit station. (Appropriate when no local transit exists, service frequency is poor, or transit service not available during needed hours.)

- Transit passes provided for the project site employees and/or residents.
- Projects ensures walking and bike access to transit stops and stations that is safe and convenient.
- City monitoring plan ensures the TDM plan is in place when the project is occupied and continues afterwards.

IV. CITY PLANNING, POLICIES AND PROCEDURES

The following are city planning policies and practices that are not related to land development project review.

A. TRANSIT-SPECIFIC ACTIVITIES BY THE CITY

1. Dedicated City Staff with Transit Responsibilities

Best Practice is for at least one city staff to have some level of transit responsibilities. Best practice is to codify or institutionalize staff duties; otherwise, good practices often get lost when management or personnel change. The mechanism used by City to assign staff transit responsibilities can vary, and can include the following.

City Approach for Staff Person with Transit Responsibilities			
Transit responsibility written in job description	Transit responsibility in title	Transit responsibilities in practice, but not written.	Monthly or quarterly meetings occur between transit agency staff and City staff

2. City Staff Conducts the Following Transit-Specific Planning Activities

City transit-related activities could be routine and ongoing duties and/or could be a one-time event. They could be conducted whether or not transit issues are a formal part of the job description. The mechanism used to ensure city staff address these transit responsibilities can vary.

- Evaluation of bus stop passenger waiting areas
- Evaluation of bus stops with respect to bus access to the curb and ability for passengers to board or alight from all doors, including ADA accessibility
- Evaluation of walking and biking routes to transit stops and stations
- Provision of bike parking at transit stops and stations
- Management of a bus shelter program
- Grant applications for transit issues or on behalf of transit agency

The approach or mechanism used by City to conduct transit related activities can include one or more of the following.

City Approach and Mechanisms Regarding Transit-related Activities				
Written in job description	One time practice	Case by case basis	Regular/routine formal policy or practice:	Regular/routine Informal/unwritten policy

3. City Adopted Transit Plans

A City Transit Plan is related to Long-Range Transportation Planning (Issue IV.B.1) and Integration of Land Use and Transit Planning (Issue IV.C).

- City has short-range transit plan (that coordinates with transit agency's short-range plan, if any).
- City has long-range transit plan (that coordinates with transit agency's long-range plan, if any).
- Short and long-range transit plans reflect the range of transit modal options appropriate to the geography of the area, e.g., ferries where water-based modes are appropriate, and in hilly terrain, funiculars and/or aerial gondolas.

The approach or mechanism used by City for transit planning issues can include the following.

City Approach and Mechanisms Regarding Transit Plans			
City has prepared and adopted its own transit plan consistent with Transit Agency or Agencies' plan	City has formally adopted the Transit Agency or Agencies' plan	City has included Transit Agency or Agencies' plan in its General Plan and Circulation Element	City consults Transit Agency or Agencies' plan.

B. ROUTINE TRANSPORTATION PLANNING ACTIVITIES

1. Long-Range Transportation Planning Practices and Documents

- A transit element or section is included in all transportation planning studies including Traffic Impact Studies, Specific Area Plans, corridor plans, Precise Plans, etc.
- City includes transit agency in the review of such plans with transit components.
- Circulation/Transportation Element of the General Plan contains a Transit element which incorporates the transit agency's long-range as well as short-range projects.
- The Transit Element of the General Plan Circulation Element reflects the range of transit modal options appropriate to the geography of the area, e.g., ferries where water-based modes are appropriate, and in hilly terrain, funiculars and aerial gondolas.
- If City has its own travel demand model (e.g., for General Plans, specific plans, and other long-range planning activities), it has a transit mode choice component.

2. Integration of Roadway Planning and Transit Planning

- City General Plan or other adopted plans has designated transit-priority or transit-preferential streets, whereby if there is a need to choose between design options, the one favoring transit receives consideration over those favoring other modes.
- City has an adopted Complete Streets policy which includes bus-only lanes, other transit infrastructure and amenities as well as transit-specific performance metrics.
- City has adopted design guidelines for transit-preferential streets or transit trunk routes that address roadway design issues to facilitate transit operations, such as lane width, curb radii or "keep clear" zones, signal timing, appropriate traffic calming, pavement strength, clear zones, etc.
- Road space reallocation projects (including Complete Street projects and road diets), include the evaluation of providing bus-only lanes, and if not included, there is an assessment of the adverse impact on bus travel times, and identification of ways to mitigate any adverse impacts.

3. Construction Projects that Affect the Roadway, Curb Lane or Sidewalk

- Pavement rehabilitation schedule prioritizes transit routes.
- Transit agency is informed in advance of any planned changes to roadway, curbside or sidewalk that could or would affect transit stops, even minor or temporary changes.
- Transit agency staff is involved in the scoping, design review, meetings and site visits of any roadway project, including:

    - routine repaving
    - roadway reconstruction or widening
    - intersection redesign
    - new bikeways
    - pedestrian projects
    - traffic calming projects

- Transit-related improvements are included in the scope of work of all roadway reconstruction projects; (transit improvements include bus bulbouts, TSP and queue jump lanes where requested by transit agency and improved ADA accessibility at bus stops).
- If road work necessitates transit detours during construction, the cost for planning and executing the detour is included in the scope of work and the transit agency is reimbursed for any costs it incurs (including for the additional operating costs if detour causes additional vehicle run time).

4. Transit Ridership Encouragement Programs

- City has adopted mode split targets and goals to decrease automobile use which also include targets for increased transit use.
- City-sponsored commute alternative events and promotions (i.e., for green and sustainable modes of transportation, or to reduce automobile use) also include the promotion of the use of public transportation.
- Incentives are provided for city's own employees to use public transportation, such as transit passes in the "commuter check" program.

5. Public Participation and Transit

- Public participation outreach efforts include transit riders.
- Transit staff representative is included on official committees, such as technical advisory committees, if any.
- Transit advocate included on official committees, if any, such as the pedestrian advisory committee, transportation committee and/or citizens advisory committee, if any.

C. INTEGRATION OF LAND USE PLANNING, BUILT ENVIRONMENT AND TRANSIT PLANNING

Given the connection between land use and transportation, good practice is to consider the existing and future transit network in land use and zoning decisions. This typically applies to medium and large cities with rapid transit, high capacity transit service such as rail, or locations that can otherwise be considered transit dense.

1. Transit-Oriented Development (TOD) Policies and Practices

- Land use zoning densities coordinate with existing and future mass transit station locations to ensure denser land use within one-half to one mile of rail or BRT (or other high capacity transit) stations.
- At existing rail and BRT stations, land use densities reflect TOD densities and compatible land uses.
- TOD land use policy adopted that addresses:
    - Mix of uses: development in transit-oriented areas should provide for daily needs without the need for a car.
    - Urban density minimums for transit station/stop areas
    - Diversity of housing types to accommodate diverse income levels of residents.
- Density bonuses are provided to developers if they meet certain transit oriented or transit-friendly conditions.
- Street layout design standards adopted for new transit-oriented areas, such as:
    - Block perimeter lengths, block lengths
    - Scale streets and sidewalks to provide for pedestrian comfort and convenience
    - Location of parking lots and associated driveways
    - Paved sidewalks and pedestrian-scale lighting on station/stop approaches and environs
    - Safe bicycle access provided to transit stations/stops
- Joint development policies and procedures between transit agency, city and private sector developers to develop TOD on transit agency or city properties.
- Air rights development policies and procedures between transit agency, city and private sector developers to develop TOD on transit agency or city surface parking lots.
- If parking maximum policies are used instead of parking minimums:

- Developer required to encourage transit use, for example through transit passes and/or other transit specific initiatives.
- Cost savings by developer or increased revenues are given to transit agency to improve transit service, such as to improve frequency or hours of service. (This also applies to other parking policies whose intent is to unbundle the full cost of parking in order to reduce auto trip demand.)

The approach or mechanism used by the City for TOD planning issues can include one or more of the following.

City Approach and Mechanisms Regarding Transit-Oriented Development Decisions					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

2. Transit-Oriented Development (TOD) Building Design Practices

- Ground Floor Transparency: Provide numerous windows on the ground floor of development to create inviting, active, and defensible pedestrian spaces.
- Provide transit station entrances through the buildings wherever possible.
- Provide weather-protected connections between transit station/stops and adjacent land uses.
- New building (or project) entrances are coordinated with locations of nearby existing or planned transit stops or stations

The approach or mechanism used by the City for TOD building design issues can include one or more of the following.

City Approach and Mechanisms Regarding TOD Building Design Issues					
City Ordinance	General Plan/ Circulation Element (citywide)	Area-wide Plans (e.g., Specific Plan, Precise Plan, or corridor plan)	Adopted Design Standard /Adopted Guidelines	Other Written or Formal Policy or Practice	Informal/ Unwritten Practice

3. Transit-and Pedestrian-Oriented Environmental Design Practices

- Pedestrian/bicycle safety metrics (e.g., pedestrian/bicycle collision rates, crime rates) used regularly (e.g., annually) to evaluate neighborhoods and access routes to transit and identify improvements.
- Crime prevention through environmental design (CPTED) practices and policies used in transit stop/station areas and along access routes to transit.

D. FUNDING

The following list presents options to improve the local contribution to fund public transit ranging from general fund to development fees. It is recognized that funding is complicated particularly for those agencies that serve multiple jurisdictions. The important issue is that transit agencies receive the financial support they need to provide excellent service.

1. Citywide or Districtwide Proportionate Share Fee programs

The following presents many options to generate funding from area-wide fees. This list is not meant to imply any one jurisdiction should do all or even most of them. The essential point is that funding for public transit is also included when cities implement area-wide fees to pay for needed public improvements, both as mitigation for traffic and to encourage new transit trips.

- City-generated proportionate share fee programs, both as mitigation for traffic and to encourage new transit trips, include:
    - Traffic impact fees
    - Special benefit district or pro-rata share districts
    - Transit development impact fee
    - Value capture or similar funding mechanisms (such as Tax Increment Financing)
- The mechanism typically used by Cities to generate funding from proportionate share fee programs is a city ordinance.
- The expenditure plan or authorized use of these City or district-wide fees go to fund public transit, such as:
    - For unrestricted use
    - General transit operations, such as more frequent service or for expanded hours of service (both as mitigation for auto traffic and to encourage new transit trips)
    - General transit bus stop enhancements
    - Earmarked for specific service or operational enhancements
    - Earmarked for specific transit stop enhancements or transit center(s)
    - Earmarked for specific line or geographic area (e.g., as mitigation for project impacts, or special benefit area)
    - Enhance frequency or service hours within the city limits (for agencies that service more than one city)
    - Pedestrian access improvements to transit stops and stations
    - Transit-specific planning studies or feasibility studies

2. Direct Funding from City to Transit Agency

City direct funding can either be from the city General Fund or from city-generated fees such as parking fees, bridge or road tolls, sales taxes, or property taxes. This is city revenue that the city has chosen (or promised / earmarked such as through a citywide referendum) to spend on transit. This is a city best practice since the city is the generator of the funding. This is in contrast to, for

example, funds that were authorized by the enabling legislation of a transit agency that may also be one or more of the following: sales tax, property tax, vehicle registration fees, etc.

- Provides funds for transit from city General Fund.
- Provides funds for transit from specific city fees or taxes.
    - parking fees
    - bridge or road tolls
    - sales taxes
    - property taxes
    - other
- These city fees for public transit:
    - are for general transit operations.
    - are for general transit bus stop enhancements.
    - are earmarked for specific service or operational enhancements
    - are earmarked for transit stop enhancements.
    - are for a specific line or geographic area.
    - are to enhance frequency or service hours within the city limits (for agencies that service more than one city).

The approach or mechanism used by the City to generate funding for transit issues can vary.

3. City Encourages / Requires Participation in Bulk Fare Transit Passes:

Occasionally an element of a TDM program, bulk fare pass programs are included here under Funding since they can provide significant revenue to the transit operator, often such that the transit agency can provide additional service, either new routes, more frequent service or expanded hours of service.

- City encourages or requires the following land uses to participate in a bulk fare transit pass program:
    - large employers above a certain number of employees
    - business parks above a certain number of employees
    - large residential developments or apartment complexes
    - universities and colleges

V. MULTI-CITY, REGIONAL AND MPO ISSUES

The following are policies and practices that involve more than one city; however, they require the leadership of and the cooperation of the cities to attend, approve and/or provide input.

A. Transit Service Area Policy or Technical Advisory Group

1. Policy group for all jurisdictions served by the same transit agency

- There exists, and if so, City attends and participates in multi-jurisdictional meetings or organizations, whose purpose is to discuss common issues, standards and practices that would help the transit service provider to these jurisdictions, if any.
- City participates in regional transit rider or transit-advisory committees or organizations, if any. (See Appendix C)

B. Travel Demand Modeling

- Regional travel demand model has a transit mode choice model component.
- Travel demand model captures neighborhood-scale urban form effects (TOD) on transit, pedestrian, and bicycle mode choice.

C. Regional Funding and Outside Grant Programs

Although outside city direct control, cities can have a role advocating for, voting for or otherwise supporting regional transit funding, such as when city staff or officials participate in regional level decision-making opportunities.

- City supports special or regional grant programs for transit-related improvement projects, such as safe routes to transit, bus stop inventories, transit shelters and bike parking at major transit stations.
- City supports transit capital and operations projects as major focus of new taxes and fees for transportation projects, e.g., special transportation sales taxes, bridge tolls, congestion charges, highway tolls, roadway user fees, High Occupancy Toll (HOT) lane revenue, vehicle registration surcharges, and parking fees or surcharges.
- City supports the improvement of transit operations, frequency, and expanded hours of service, as one of the elements in the expenditure plan of regional sales tax, tolls or other fees.
- City supports funding incentives at the regional level for roadway reconstruction projects that include transit elements, for example, projects with bus-only lanes and other transit enhancing elements would receive additional points in regional (e.g., MPO) funding programs.
- City supports regional grant program.

V. Summary & Conclusions

5.1 General Findings and Discussion

This research identified numerous city policies and practices that affect transit operations and transit passengers which were organized into five main categories:

- Infrastructure for Transit Vehicles on City Property
- Infrastructure for Transit Passengers on City Property
- Land Development Procedures
- Transportation Planning Policies and Procedures
- Multi-City, Regional and MPO Issues

The input from transit agencies and the expert panel indicated that the infrastructure issues that are the most impactful on transit operations and ridership are bus-only rights-of-way and facilitating bus access to curbside bus stops. In the realm of planning policies, the biggest issues were land use decisions and land development policies. In addition, both agency staff and experts agreed that being invited to the table where decisions that affect transit buses and passengers are being made is fundamental. This means everything from routine city meetings on site plan review and land development, to scoping roadway construction projects, to input on long-term planning studies, specific plans and pedestrian plans. This seat at the table would go a long way to combatting the very strong "us versus them" attitude that some transit agencies have with at least some of the cities they serve. Such cities do not consider that transit operations are part of their responsibilities, thus key city decisions are made to facilitate automobile flow only; transit operations are not considered.

Several good references were discovered that describe and define good practices in more detail. This list of helpful resources is presented in Appendix D.

Figure 5. Bus Rights of Way Options

Nicolet Transit Mall, Minneapolis

Source: Michelle DeRobertis.

BRT Lanes, Cleveland, Ohio

Source: Michelle DeRobertis.

K Street Transit Mall, Sacramento, California

Source: David Moore.

5.1.1 The Many Facets to a Policy or Practice

In organizing the list of city best practices found in the literature and from transit agency and city interviews, the research team identified several points-of-entry for cities to help provide a transit-friendly operating environment. These points-of-entry offer opportunities to coordinate a city's internal plans, policies and practices, across a variety of departments and functions, with the plans, policies and practices of its local and regional transit agency. When done well, these coordinated actions function like links in a chain, where they all connect to create a city with transit infrastructure that provides easy, safe, and efficient transit access and services.

However, complicating effective coordination is the fact that addressing these opportunities often involves multiple levels and departments of city government. For example, cities play a crucial role in determining the operating environment for buses; will the city allow and construct bus-only lanes, bus bulbouts, queue-jump lanes, and/or bus signal preemption on their streets? And does the city have planning and design guidelines for when, whether and how to provide them? Creating policies, plans, designs, financing, and construction contracts will likely involve (at minimum) input from a city's political (i.e., the city council), administrative (i.e., the city manager's office), planning, public works, and transportation departments. Once in place and operational, these facilities need to be managed and maintained, requiring maintenance agreements and resources.

Furthermore, effective coordination of these actions should begin well before construction. Proactive planning within a city's government and, critically, in collaboration with the transit agency, is necessary to ensure new land use developments and infrastructure support and enhance existing and planned transit services. Thus, changes and enhancements to transit services should serve planned future land use developments. Therefore, it is critical that a city's planning policies and practices encourage and facilitate, if not mandate, coordination with other city departments and transit agencies operating within their jurisdiction. Similarly, planning, building, and public works departments need to collaborate to develop, implement and maintain design guidelines that support safe and effective transit operations in their city. Finally, new infrastructure needs to be maintained once built. For example, cities and transit agencies should identify which of their departments will be responsible for cleaning and maintaining bus stop infrastructure. Responsibilities also require funding, therefore further city practices may involve funding policies and mechanisms in addition to the determination of who takes responsibility for maintenance.

Thus, even for an issue as simple as bus bulbouts, there are many steps and stages of a policy and practice resulting in multiple city policies and practices in several different city departments: public works, transportation engineering, capital projects, and both long-range and short-range planning.

5.1.2 Institutionalization

This research also revealed that there are two important aspects to successful and effective city policies and practices. The first is in fact identifying, selecting, and implementing the best practices. But an equally important aspect is **how** the city ensures that its policies and practices are being implemented. This can be considered a best practice in itself. For example, a city mechanism to ensure implementation of any given practice can vary from a city ordinance, to adopted design standards or guidelines, to an unwritten informal department policy. While some city practices are appropriate for an ordinance or an adopted design standard, others are not.

This research identified a variety of policies and practices on the part of multiple city departments to successfully support transit operations within a city's jurisdiction. Each of these functions and tasks deserves focused research attention. However, a critical research need is to identify best practices for coordinating these functions across the spectrum of city operations and departments, as well as with the transit agencies serving its jurisdiction. While a simple, top-down approach might seem appropriate, wherein the city's political leadership directs all departments to coordinate these activities, such directives can be met with varying levels of response. Therefore, while directives from "on high" are important, they may not be sufficient. A research project that identifies how successful cities have encouraged inter-departmental collaboration and coordination for improving transit would be instructive.

5.2 Missed Opportunities and Unintended Consequences

City, state and federal ordinances and laws have impacts on transit that range from subtle to profound. Sometimes these regulations have unintended consequences or create missed opportunities, particularly for developing funding for transit providers. This is important because public transit needs public financial support. Every opportunity to develop additional and reliable funding streams will benefit not only the transit agencies and transit passengers but also motorists, (through fewer cars on the roadways) and all city residents (through cleaner air, less noise, etc.) as well as taxpayers.

Two examples of such laws that were uncovered during the course of this research that have unintended and problematic consequences: Federal Transit Administration (FTA) Charter Regulations and Local Trip Cap Ordinances. These are briefly discussed below.

5.2.1 FTA Charter Regulations Limit Support for Transit to Special Events

An issue that arose in Fresno and Mountain View (and that is likely an issue for many cities) is the difficulty cities face in requiring developers or event sponsors to provide support for the cost of providing additional transit service beyond regular service to special events, such as music concerts or sporting events. This is because such services fall under one of the FTA's definitions of charter

services—i.e., transportation serving events or functions that "occur on an irregular basis or for a limited duration and:

- "A premium fare is charged that is greater than the usual or customary fixed route fare; or
- The service is paid for in whole or in part by a third party."[93]

With few and limited exceptions, transit agencies are barred from operating charter services by FTA's Charter Service Regulations (49 CFR Part 604). This regulation and the legislation that it implements [U.S.C. 5323(d)] are explicitly written to protect private charter operators from unauthorized competition from federally subsidized transit agencies.

In order for a transit agency to provide service to an event or function that occurs on an irregular basis or for a limited duration, and that charges a premium fare or is paid for in whole or in part by a third party, a transit agency must first provide notice to all registered private charter providers in its service area.[94] Only if no private charter operator is interested and able to provide the service may the public transit agency undertake it. In the case of Santa Clara County, where VTA operates, there are 24 charter operators serving the County (including six based in the County).[95] Seeking out and offering each of 24 charter operators the right of first refusal for a special service would obviously take much time and effort on the part of the transit agency, and would likely result in the transit agency not being able to provide the service.

Special services offered by King County Metro (KCM) in Washington State may be the sole exception to 49 CFR Part 604, and this exception is due to special federal legislation. In 2009, KCM ceased special service to Seattle Mariners baseball games based on 49 CFR Part 604. In response to the cessation in service, one of the state's senators sponsored an amendment to the Consolidated Appropriations Act of 2010 that specifically prohibits the FTA from expending funds to apply the rule to KCM. The service to baseball games resumed. An association of charter bus companies challenged the amendment in court, and while the challenge was upheld by a lower court, upon appeal the challenge was reversed, and the amendment was held to be constitutional. The appeals court applied rational basis review and concluded that KCM 's provision of service to games serves rational governmental goals relating to traffic, affordability, and service for handicapped riders.[96]

Regardless of whether and how additional charter service to a special event is operated, the transit agencies' own services are often overwhelmed by additional passengers accessing the event, and transit agencies incur additional labor costs and other operational costs to meet this extra demand, more often than not at a loss. There also may be direct adverse consequences on other transit services in their service area if these must be cut to provide service to the event. The FTC regulation cited above creates a dilemma when it deems the imposition of developer conditions in order to fund these losses to violate the law. The dilemma stems from the fact that venues which are built specifically to hold events (sports contests, concerts, etc.) create demand for additional transit

capacity to bring patrons to and from such events. However, since the events occur on an irregular schedule, with varying crowd sizes, the transit agency cannot schedule "regular" service to the sites. If the events were regular, say every evening from 7 to 9 p.m., a venue developer or operator could be asked to contribute to the impacts on the transit system, but since they are irregular, the transit agency can only provide services using its own resources.

Cities are able to condition projects to pay for additional police presence necessitated by special or irregular events that attract large crowds, without it being considered competition for private security firms; it therefore seems reasonable that cities should be able to condition projects to pay for the additional resources involved in providing supplemental transit service.[97] A more permissive reinterpretation of the law with respect to providing transit to scheduled but irregular events within the transit providers' service area could benefit cities, transit agencies, and event attendees.

5.2.2 Employer-Sponsored Shuttles and City Trip Cap Ordinances: A Missed Opportunity for Supporting Transit?

It would seem logical that city policies on vehicle-trip caps and other ordinances whose goal is to reduce single occupant vehicles (SOV) would also aim to increase transit ridership and would therefore help improve transit service by improving coverage, frequency of service and/or hours of service. However, the manner in which a city allows companies and developers to reduce SOV can have a profound effect on whether or not transit providers receive additional funding to provide the enhanced transit service that could attract additional riders. The case study from Mountain View illustrates the issue.

In 2015, as part of an area-wide TDM program, the City of Mountain View established a vehicle trip cap for the North Bayshore Precise Plan area of the City. The North Bayshore area is home to Google headquarters as well other high-tech employers such as Intuit and LinkedIn. The aim of the vehicle trip cap is to limit the number of vehicles entering the North Bayshore area during peak periods. The City regularly monitors entry and exit points to ascertain that vehicular traffic is not exceeding agreed-upon caps. Employers' ability to expand operations is contingent on trip caps being met. Trip cap programs are effective at reducing vehicle trips and VMT. They allow employers to use a variety of TDM measures to keep commute travel under the cap. In practice, however, the trip cap has led to employers maintaining or expanding the practice of providing shuttles for the exclusive use of their own employees. From the perspective of the local bus/light rail provider and the commuter rail provider, it would be preferable that the City, consistent with the trip cap policy, City required employers to provide equivalent payments to improve public transit service frequency and hours of operation in lieu of private shuttles. This would have citywide and region-wide benefits as well, since the expanded service would be open to all, not just employees.

Providing dedicated shuttle service is very expensive; subsidizing public transit instead would mean employers would not have to assume the burden of managing and paying for these fleets of private shuttles. On the other hand, many tech employers and employees have come to view employee shuttles as an employment "perk". Moreover, although expensive, employers are able to deploy their shuttles in an efficient manner since they know the home addresses of all employees.

The City of Mountain View is not unique; private shuttles that deliver employees from near their home to their workplace are ubiquitous in the San Francisco Bay Area and are spreading to other areas of the USA.[98] While research was found that evaluated the impact of these private shuttles on existing transit service, it focused on impacts from sharing of public bus stops, or impacts on neighborhood noise levels and safety impacts on pedestrian and bicyclists.[99] No research was found that evaluated how equivalent funding could have improved the services provided by existing public transit providers, nor how such improved services could have attracted additional transit riders, nor what the resultant improvements in air quality, reduced greenhouse gases, and other societal benefits could be.

This case study raises a key issue on the relationship between land development and its impacts on transit. This issue—developer conditions of approval—is under direct city control, but it has tremendous impact on public transit, in this case both transit ridership and funding. City policies and decisions regarding developer conditions can either help or hurt public transit providers. City decisions help public transit overall by imposing the condition that developer mitigation funds be used to increase transit service frequency and/or hours of operation. On the other hand, cities are understandably concerned about whether the developer fees they might impose for the transit agency will be used by the transit agency to improve transit service to the sites in their cities. Nevertheless, city decisions can hurt public transit by the current practice that encourages companies to reduce vehicle trips by means of private shuttles. In the case of Mountain View, the employers operate hundreds of private luxury buses from San Francisco (and other locations) directly to the employer sites which, in reality, are competing with the regional commuter trains by skimming off their riders[100]. Moreover, taxpayers have to fund the needed upgrades to train service while private companies spend large amounts of money to provide their own private transportation services.

Cities are struggling to find a way to achieve both compliance with their trip cap and trip reduction goals, and to foster transit ridership growth and assure the overall long-term sustainability of public transit. From a public benefit perspective, it is incumbent on cities to choose options that improves public transportation. Instead of allowing—or worse, mandating—that companies provide private shuttles that compete with public transportation, cities could instead require equivalent payments to the transit agency so that regular transit service is expanded, both in frequency and hours of operation.

5.2.3 Multi-Jurisdictional Transit Special Districts

A common theme of both these examples pertains to whether cities can or do direct developer fees to public transit. First, it is acknowledged that the residents of cities pay local sales and property taxes, as well as state taxes, some of which may be earmarked for transit. But, as revealed in the transit agency interviews, none of the five transit agencies received any defined regular contributions of revenue from any of the almost 300 cities and counties collectively served by these five transit agencies. This may illustrate a drawback of the multi-jurisdictional model of the transit agencies that is common in the U.S.: no single municipality wants to provide additional funding to a transit agency that also serves many other jurisdictions.[101] This may also be a reason why cities fail to condition developers to offset costs incurred by transit agency: individual cities do not see the benefit of giving money to an agency that also serves other cities, preferring to keep development and mitigation dollars for things that are funded by the City budget. Furthermore, there is often no guarantee that even if they did condition developers of certain sites to contribute to the transit agency, the developer funds would be for service to those specific sites. This is a structural problem that should be addressed via cooperative agreements, legislation, or other means, and merits further research. One of the options that could be of help is a regional transit impact fee, which is discussed below under Future Research Needs (see section 5.4.4, third bullet).

5.3 Recommendations

Beyond recommending that cities adopt the policies and practices listed in Chapter 4, this research has distilled the recommendations into two overarching themes:

- Coordinate and Integrate City and Transit Agency Decision-Making: Consider and treat the local (and regional, if any) transit providers as if they were a city department and a full partner in the city's transportation network. This would involve the following:
    - Inclusion of transit agencies in city interdepartmental correspondence that affects roadways, including curbside activities.
    - Use of multimodal quality of service evaluation methods for city roadways, not auto-focused performance metrics.
    - Incorporation of transit agency design guidelines, short-term and long-term plans into city plans and practices.
    - Conditioning of developers to: (a) ameliorate adverse impact to transit operations and/or pay for impacts that result in additional costs to the transit agency, including vehicles as well as planning labor, and (b) enhance and improve transit service as a mitigation for vehicle impacts and to reduce project-generated automobile trips.

        - Consideration of transit alignment and locations of stops and stations—especially high capacity transit and regional transit (e.g., commuter rail)—with respect to land use and zoning density decisions.
- Institutionalize City Policies and Practices: It is important to define and articulate the policy and practice so that all affected staff and as well as citizens know the policy. It is also important to ensure that policies and practices survive personnel turnover and leadership changes. The key ways to institutionalize policies and practices are:
    - Ordinances,
    - Citywide planning documents, such as general plans and circulation elements,
    - City-adopted design standards,
    - City-adopted guidelines,
    - Area-wide planning documents such as specific plans, precise plans and corridor plans,
    - Inter-departmental and inter-agency agreements,
    - Written departmental policies and practices including department-adopted standards and guidelines, and
    - Job descriptions and job titles.

5.4 Future Research Needs

While the primary goal of the research was to develop a list of best practices that help transit operations and passengers, it became evident that it might be more useful if the recommendations were prioritized for different contexts. This research also uncovered several related issues that merit further study. Thus, further research is recommended in several areas as described below.

5.4.1 Research to Refine the Master List of Recommended Practices

While some basic elements are the same across all cities, there are nuances depending on city size and context. Thus, recommended practices for creating transit-friendly cities may differ for cities of different sizes, economic conditions, and climate conditions. A large, transit-dependent city in a cold-weather climate requires substantial resources for snow removal over a large area to maintain lifeline transit services throughout the year, while a small city in the sun belt will require none. For this reason, it would be useful to develop different list of best practices for different contexts as well as to develop a short, "must have" list. Focused research is needed to determine best practices for a variety of city contexts, to:

- Identify a short list of the most important impactful practices that would apply to all contexts. These would consist of those practices that result in the biggest improvements to

transit, since the policies and practices are not of equal effectiveness. Research is needed to differentiate between the more significant and the more marginal practices.

- Identify and differentiate between practices that are more appropriate for small rural towns, for medium-sized cities, for large cities, and for suburban contexts.
- Identify which practices are appropriate for a transit agency that is a department of a single city[102] versus a separate agency which serves multiple cities.
- While not always obvious, the needs and requirements of building a transit-friendly city require frequent assessment of these city activities with respect to the city's vision for its future. A city that aspires to develop from a commuter suburb into a high-density employment hub will likely undertake different practices at all levels of government to support these goals than one that seeks to maintain its low-density, suburban character. Research that identifies different transit-supportive practices for cities aspiring to a variety of future development visions would help make implementation and coordination more effective.

5.4.2 Surveys to Determine the State of the Practice

Surveys of cities and transit agencies would be useful to determine not only the state of the practice but to determine which are considered key policies for various contexts. Suggestions include:

- Survey of U.S. transit agencies to determine which practices they consider to be the most impactful to their operations; stratify results by transit agency size, city size and context.
- Survey of cities to determine what they consider to be the best practices identified; stratify results by city size and type of transit agency, i.e., city-owned versus special district.
- Survey of cities to compare practices between cities with and without their own transit agency as a city department. This research could also investigate the relative prevalence of the "us versus them" relationship between the two categories of cities.

5.4.3 Development of a Best Practices Handbook

A handbook of guidelines for municipalities and transit agencies that describes when, where and how to use the policies and practices identified in this research would be very useful. It could include design illustrations and dimensions, as well as describe typical applications. For example, it could describe:

- Bus stop dimensions for expected volumes of buses and bus type (regular, articulated, etc.).
- Passenger amenities at bus stops by expected passenger volumes.

- Under what conditions (land use, traffic levels, street type) certain infrastructure is appropriate (e.g., bulbouts, transit boarding islands, TSP, bus-only lanes).

5.4.4 Institutionalization

This research identified a variety of policies and practices on the part of multiple city departments to successfully support transit operations within a city's jurisdiction. Each of these functions and tasks deserves focused research attention. The research revealed that the actual mechanism for how transit-friendly policies or practices are carried out by individual departments is very important, but that there is no single way to do it. Cities used a variety of strategies to institutionalize their policies and practices including city ordinances, corridor plans, complete streets policies, departmental policies. Often there was no written policy at all, just legacy practice. Additional research would be very helpful in revealing the array of approaches—and the most effective approaches—for ensuring that the policies are implemented. Additional research is recommended for the following in particular:

- Determine which institutional strategies are most suitable for specific practices: For example, city ordinance versus area-wide plans versus adopted design standards versus departmental policies.
- Identify best practices for coordinating transit agencies and city functions across the spectrum of city operations and departments: This would identify options and strategies for encouraging inter-departmental collaboration and coordination for improving transit. It may first need to explore the questions, "Why are there coordination issues between cities and transit operators?" and "Are there process reforms that could help achieve better cooperation on the part of cities to implement policies and practices that help transit providers?"
- Determine state of the practice regarding whether and how cities are directing developer fees to fund public transit: This would also investigate whether or not other cities might benefit from the improvements.
- Opportunities and constraints for a regional transit benefit district: This would be similar to a city benefit district or Pro-Rata Share District (PSD) but the funds would go to the regional transit provider, and would come from all cities who would benefit from improved transit.[103]

5.4.5 Mutual Adoption of Transit-Related Guidelines

Many transit agencies have developed written internal guidelines and some have even published documents intended for the cities they serve (see Appendix D). It is unknown, however, how many cities have indeed adopted city guidelines that correspond with those of the (outside) transit agency. Two potential research projects are:

- Research to determine which cities have adopted their transit agencies' guidelines: Issues include curb side bus stop design, bus bulbouts, passenger waiting areas at bus stops, signal and intersection design issues, zoning density, etc.
- AC Transit Guidelines Adoption Case Studies: Research to determine how many of the thirteen cities served by AC Transit adopted any of the design guidelines described in AC Transit's guidelines published in 2004.[104]

5.5 Conclusion

Transit vehicle operations are one of many transportation functions that need to be incorporated into the city streetscape. There are competing interests in the use of roadways between cars, bicyclists, pedestrians, buses, streetcars and light rail, and even more competition for use of curbside space. The allocation of space among these competing interests is in the purview of the roadway owner, i.e., city, municipality, county or state. When the responsibility for providing transit service lies with an "outside" agency, that is, when it is not part of the city, county or state organizational structure, functions under city purview often receive priority at the expense of transit. A transit-friendly city, however, considers public transportation as an essential part of the total transportation network provided to the community and not a separate function. Thus, a transit-friendly city considers the needs of transit planning and operations just as they do all other modes, in all infrastructure and transportation planning activities. Consideration and implementation of the types of policies and practices identified in this report will help cities to do this.

Figure 6. Allocating Roadway Space to Multiple Modes in Downtown Minneapolis

Source: Michelle DeRobertis.

Appendix A: Transit Agency Interview Questions

Each interview began with a brief statement of the purpose of our study: to identity City practices that help transit agencies deliver their services and improve the passenger experience on City property (e.g., access); and those that hinder them. Then questions were posed on the following topics:

1. Institutional relationship between the transit agency and the City, for example,

    a. How many Cities does the transit agency serve?

    b. How is the transit agency governing board structured?

2. Open-ended question about good practices: What, in your opinion, are good City practices, particularly regarding infrastructure, that help surface transit?

3. If not raised by this open-ended question, the interviewers asked about the following topics:

    a. Provision of dedicated bus-only lanes

    b. Provision of traffic signal priority for transit vehicles

    c. Bus access to the curbside bus stops, including bus bulbouts

    d. Parking restrictions for peak-hour transit lanes

    e. Consideration of transit in Traffic Impact Studies

    f. Transit improvement projects funded by developer or traffic impact fees

    g. Programs to evaluate and implement safe access to and from bus stops, e.g., well-placed crosswalks, traffic signals or other measures to help passengers cross the street, and well-lit sidewalks to access the bus stops

    h. Programs to evaluate and improve passenger safety and comfort at bus stops on City sidewalks, and practices to work proactively with the transit agency to provide amenities such as bus shelters and benches.

    i. Other traffic engineering treatments

4. What are elements of bus stop design and maintenance are within City/local government purview? Full-provision? Tree trimming? Street lighting? etc.

5. Are there local jurisdiction/City staff in your service area whose job descriptions include addressing transit issues (i.e., to improve transit service or passenger ambiance and safety)? If yes, which issues do City staff address? Examples of potential City staff duties were provided as needed, for example:

a. Bus stop conditions and amenities: lighting, waste cans, cleanliness, benches.

b. Safe routes to transit: City role in evaluating or improving access to transit, including sidewalks and signals to cross the street to access bus stops.

c. Working with transit agency on road work; construction issues that affect routing-rerouting; advance notice etc.

6. Do some City staff consider transit a separate piece of the transportation network and not within their purview i.e., us vs. them?

7. How does the City handle conflicts between bike needs and bus needs? Is this is an issue? Do bike lanes trump bus lanes for example?

8. Open-ended question: What is the transit staff "wish-list" for future relationships with Cities?

9. Do City partners (e.g., developers) have a good understanding of what is good and what is bad practice in terms of supporting transit?

10. Planning and Funding:

a. Is transit funded through City Traffic Impact or Development Impact Fees?

b. Do traffic impact studies ever recommend transit improvements as development mitigation measures?

c. Are there direct contributions by developers?

d. Are there mandatory contributions stemming from TDM policies?

11. Open-ended question about funding: are there any new or innovative funding sources, facilitated by local agencies, that come to your transit agency?

Appendix B: City Evaluation Questionnaire

City Best Practices to Improve Transit Operations and Safety Survey Instrument

This tool is still a work-in-progress but it has value in its present form for cities to assess how well they are supporting transit. Cities can also use it to develop new policies to help transit agencies deliver their services and to ensure that transit passengers can safely access transit stops and stations

The authors would appreciate feedback for how it could be improved for various city contexts and evaluation purposes, such as those described under Future Research Needs in Chapter 5. Please send feedback to m.derobertispe@gmail.com.

Section I: INFRASTRUCTURE FOR TRANSIT VEHICLES ON CITY PROPERTY/EASEMENTS

A: TRANSIT RIGHT OF WAY AND TRANSIT USE OF ROADWAYS

Providing dedicated lanes or rights of way for transit vehicles significantly reduces delay due to roadway congestion thereby improving travel time for passengers. The following best practices address the existing presence of such infrastructure as well as the policies behind providing additional such infrastructure, and how such planning is codified or institutionalized in city practice.

A.1 Presence of Dedicated Transit Lanes or Transit Right of Way?

There are a variety of design options to provide dedicated transit lanes or rights of way. This can be provided for some or all of a transit route. They provide the most benefit where traffic volumes are heaviest and where intersections are closely spaced. The appropriateness of the specific design option(s) will vary depending on community size, roadway network, roadway type and context, and delay experienced by transit vehicles. Thus, this list does not imply that all the best practices in this list are appropriate for all communities.

Does your city have any of the following for some or all of a transit route?

1. LRT right of way or Busway: Separate ROW for only transit vehicles

- ☐ Not applicable (do not have this mode or facility within the city)
- ☐ No
- ☐ Yes
- If yes, length in miles _____
- If yes, please indicate location of bus lane or transit way:
  - ☐ WithIn city-owned roadway right of way
  - ☐ On state highway
  - ☐ On city-owned independent ROW

- ☐ On other independent ROW
- ☐ Other location: please describe: _____

2. BRT or LRT/streetcar-only lane: a dedicated transit lane in the roadway with barrier or median to prevent incursion by private automobiles

- ☐ Not applicable (do not have this mode or facility within the city)
- ☐ No
- ☐ Yes
- If yes, length in miles _____
- If yes, please indicate location of bus lane or transit way:
  - ☐ WithIn city-owned roadway right of way
  - ☐ On state highway
  - ☐ On city-owned independent ROW
  - ☐ On other independent ROW
  - ☐ Other location: please describe: _____

3. Bus-LRT only lane: a dedicated transit lane in the roadway delineated by striping only (could be same direction or contraflow)

- ☐ Not applicable (do not have this mode or facility within the city)
- ☐ No
- ☐ Yes
- If yes, length in miles _____
- If yes, please indicate location of bus lane or transit way:
  - ☐ WithIn city-owned roadway right of way
  - ☐ On state highway
  - ☐ On city-owned independent ROW
  - ☐ On other independent ROW
  - ☐ Other location: please describe: _____

4. Transit mall / Pedestrian street that allows transit vehicles.

- ☐ Not applicable (do not have this mode or facility within the city)
- ☐ No
- ☐ Yes
- If yes, length in miles _____
- If yes, please indicate location of bus lane or transit way:
  - ☐ WithIn city-owned roadway right of way
  - ☐ On state highway
  - ☐ On city-owned independent ROW
  - ☐ On other independent ROW
  - ☐ Other location: please describe: _____

5. Highway shoulder permits bus use.

- ☐ Not applicable (do not have this mode or facility within the city)
- ☐ No
- ☐ Yes
- If yes, length in miles _____
- If yes, please indicate location of bus lane or transit way:
  - ☐ WithIn city-owned roadway right of way
  - ☐ On state highway
  - ☐ On city-owned independent ROW
  - ☐ On other independent ROW
  - ☐ Other location: please describe: _____

6. Freeway bus-only lanes.

- ☐ Not applicable (do not have this mode or facility within the city)
- ☐ No
- ☐ Yes
- If yes, length in miles _____
- If yes, please indicate location of bus lane or transit way:
  - ☐ WithIn city-owned roadway right of way
  - ☐ On state highway
  - ☐ On city-owned independent ROW
  - ☐ On other independent ROW
  - ☐ Other location: please describe: _____

7. Peak-hour bus-only lanes: (e.g., created by peak hour parking restrictions).

- ☐ Not applicable (do not have this mode or facility within the city)
- ☐ No
- ☐ Yes
- If yes, length in miles _____
- If yes, please indicate location of bus lane or transit way:
  - ☐ WithIn city-owned roadway right of way
  - ☐ On state highway
  - ☐ On city-owned independent ROW
  - ☐ On other independent ROW
  - ☐ Other location: please describe: _____

8. Other or comments _____

_____

A.2 Planning for Future implementation of Transit ROW?

To successfully implement dedicated transit infrastructure, several steps are involved. The following list reflects ways that cities plan for future installations of transit infrastructure and ensures that they are built to acceptable standards. (These may overlap with policies in Section IV A).

1. Is planning underway for more (or first ever) transit-only rights of way (i.e. one or more of the types described above and listed below):

- ☐ No
- ☐ Yes
- ☐ LRT
- ☐ BRT
- ☐ Bus-LRT only lane
- ☐ Transit mall/Pedestrian street
- ☐ Bus use of Highway shoulder
- ☐ Freeway bus-only lane
- ☐ Peak-hour bus-only lanes
- ☐ Other: please describe: _____

2. City has addressed which transit ROW is appropriate for which streets and corridors.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice
- ☐ LRT
- ☐ BRT
- ☐ Bus-LRT only lane
- ☐ Transit mall/Pedestrian street
- ☐ Bus use of Highway shoulder
- ☐ Freeway bus-only lane
- ☐ Peak-hour bus-only lanes
- ☐ Other: please describe: _____

3. City has policy to purchase or otherwise preserve abandoned rail rights of way for public transportation use.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

4. Other (please describe) or comments _____

_____

B: TRANSIT VEHICLE ACCESS TO CURBSIDE BUS STOPS

To properly and safely load and unload passengers, buses need access to the curbside where passengers are waiting. This access is achieved primarily either through built infrastructure or through curb management strategies. The following best practices address both the existing presence of such infrastructure and the policies behind providing additional infrastructure, and how such planning it is codified or institutionalized in city practice.

B.1 Existing Built Infrastructure for Bus Stops

Please indicate if any of the following are present in your city:

1. Bus Bulbouts /curb extensions ☐ No ☐ Yes

2. Transit boarding islands ☐ No ☐ Yes

3. Full size curbside bus stops (e.g., 60-90 feet of red curb) ☐ No ☐ Yes

4. Other (please describe) or comments _____

_____

B.2 Planning for Future Implementation of Bus Bulbs and Transit Boarding Islands

The following list reflects ways that cities plan for future installations of bus bulbs and boarding island and ensures that they are built to acceptable standards

Do any of the following apply to your city?

1. Planning underway for more (or first ever) bus bulbs or transit boarding islands.

- ☐ No
- ☐ Yes
- If yes, please select all that apply:
  - ☐ Bus Bulb
  - ☐ Transit Boarding Island

2. City has a policy to implement more bus bulbs or transit boarding islands and/or to implement them upon request of the transit agency.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

3. City has addressed in which contexts or which street types are appropriate for bus bulbs or transit boarding islands.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

4. City has a funding strategy to implement more bus bulbs or transit boarding islands.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

5. Other (please describe) or comments _____

_____

B.3 Planning for Full Size Bus Stops and Improved Bus Access to Curbside

Several steps, policies or practices are involved in ensuring the ability for busses to access curbside bus stops, both existing and future.

Please indicate if any of the following are practiced in your city:

1. Inventory program or policy of existing bus stops regarding bus stop length

- ☐ No
- ☐ Yes

2. City has addressed bus stop dimension/bus stop length

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

3. Policy to implement "No Parking" zones at bus stops to provide adequate bus stop length or to meet design guidelines for bus stop length.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

4. Policy for "No Parking" zone adjacent to (but beyond) bus stops.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

5. Policy to prohibit on-street parking as requested by transit agency to facilitate bus movements in and out of bus stop

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

6. Other (please describe) or comments _____

_____

C: BUS STOP LOCATION

C.1 City Involvement in New Bus Stop Placement

Locating new bus stops involves several steps on the part of the city. The following list reflects ways that cities plan and work with transit agencies for new bus stops.

Please indicate if City staff coordinates with transit agency regarding these aspects of new bus stop locations:

1. Meets with transit agency staff in the field to discuss bus stop siting issues.

- ☐ No
- ☐ Yes

2. Conducts or cooperates with transit agency on assessment of ADA landing pad and obstructions to doors for boarding and alighting

- ☐ No
- ☐ Yes

3. Assesses whether there are clear areas for boarding and alighting (In urbanized areas with sidewalks, this generally means free of street furniture; in other areas without sidewalks, this means a paved or hard surface on which to exit the bus rather than onto mud, the drainage ditch or other side-of-the-road obstructions.)

- ☐ No
- ☐ Yes

4. Assesses pedestrian access and ADA accessibility (e.g., accessible sidewalks) in immediate vicinity of new bus stop (e.g., within one block or 500 feet.)

- ☐ No
- ☐ Yes

5. Assesses need for new traffic control devices to assist pedestrians in crossing street to access bus stops (including such devices as traditional traffic signals, HAWK pedestrian hybrid signals, raised crosswalks, etc.)

- ☐ No
- ☐ Yes

6. City has a policy for bus stop siting or placement.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

7. Other or comments _____

_____

C.2 City Involvement in Re-Siting an Existing Bus Stop

Relocating an existing bus stop, e.g., at the same intersection from nearside to farside, or in the immediate vicinity, also requires several steps on the part of the city. The following list reflects ways that cities work with transit agencies on the relocation of an existing bus stop.

Please select from the list the ways in which your city works with transit agencies on the relocation of an existing bus stop:

1. City has same practices and policies as for new bus stops above.

- ☐ No
- ☐ Yes
- If not, please elaborate: _____

2. Policy to meet with transit agency in the field to discuss bus stop re -siting issues.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

3. Policy or practice to routinely approve transit agency requests to re-site a bus stop and/or provide quick response time to transit agency requests for re-sited bus stop.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

4. Policy to approve parking removal and other curbside uses, if necessary as requested by transit agency to improve bus access to bus stop.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

5. Expedited permitting for installation of bus stop sign pole.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

6. Conducts or cooperates with transit agency on assessment of ADA landing pad and obstructions to doors for boarding and alighting.

- ☐ No
- ☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

7. Other (Please describe) or comments _____

_____

D: INTERSECTION AND TRAFFIC SIGNAL TREATMENTS

Several practices with respect to signalized intersections reduce delay to transit vehicles. This in turn helps improve travel time and schedule maintenance and ultimately customer satisfaction.

Please indicate if any of the following are present in your city:

D.1 Transit Signal Priority (TSP) for Transit Vehicles

1. Short signal cycle lengths throughout city, rendering need for TSP moot.

- ☐ No
- ☐ Yes

2. TSP exists at intersections with long cycle lengths (typically on trunk transit corridors, or roads with BRT and/or LRT).

- ☐ No
- ☐ Yes

3. Planning underway to identify more locations with TSP.

- ☐ No
- ☐ Yes

4. City has addressed where TSP should be provided appropriate (active or passive, certain arterials, certain transit lines, certain signal cycle lengths, etc).

- ☐ No
- ☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

5. Funding program to implement more locations with TSP.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

6. Other (Please describe) or comments _____

_____

D.2 Queue Jump Lane

1. Queue jump lanes exist at intersections (typically on trunk transit corridors, or roads with BRT and/or LRT).

- ☐ No
- ☐ Yes

2. City has addressed where and how queue jump lanes are provided.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

3. Planning process to identify more locations for queue jump lanes.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

4. Funding program to implement more locations with queue jump lanes.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

5. Other (Please describe) or comments _____

_____

D.3 Transit-Oriented Traffic Signal Coordination

1. Existing signal coordination favors transit vehicles on trunk transit corridors and on roads with BRT and LRT.

- ☐ No
- ☐ Yes

2. Planning underway or city has process to work with transit agency to identify more corridors with transit-oriented traffic signal coordination.

- ☐ No
- ☐ Yes

3. City has addressed where and how transit-oriented traffic signal coordination is would be provided appropriate (e.g., certain arterials, roads certain transit lines).

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

4. Funding program to implement more corridors with transit-oriented traffic signal coordination.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

5. Other (Please describe) or comments _____

_____

E: BUS LAYOVER AREAS

Layover spaces are needed at the end of the run and it is essential to have a site that can both accommodate one or more parked buses and provide a place for operator breaks and access to restrooms.

Please indicate if your city assists in any of the following:

E.1 Bus Layover Space on City Property

1. Provides transit agency with a bus layover site when requested and helps to identify a bus layover site on city property, if requested.

- ☐ No
- ☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

2. Other (Please describe) or comments _____

_____

E.2 Helps transit agency when requested to site a bus layover site on private property.

1. Helps transit agency when requested to site a bus layover site on private property.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

2. Other (Please describe) or comments _____

Section II: INFRASTRUCTURE FOR TRANSIT PASSENGERS ON CITY PROPERTY

A: PASSENGER WAITING AREAS AT TRANSIT STOPS ON CITY SIDEWALKS

The passenger waiting area at bus stops most often takes place on city sidewalks. Thus cities have a lot of control over both the available width and space in which to place bus stop amenities and the actual amenities that are provided. The following list of best practices addresses both the existing conditions including maintenance as well as planning to improve the passenger waiting experience.

A.1 City Maintenance of Bus Stop and Bus Stop Amenities

1. City assumes responsibility for the provision and maintenance of the following at transit stops on city sidewalks: (Select all that apply)

- ☐ Trash Cans
- ☐ Benches
- ☐ Shelter
- ☐ Pole or place for transit route map, if no shelter
- ☐ Pedestrian-scale lighting
- ☐ General cleaning/litter removal/power washing of sidewalk area
- ☐ Notice with contact point to report problems, e.g. phone number, email address, website.
- ☐ Bicycle Parking
- ☐ Routine review/ clearance of sidewalk clutter in stop areas.

  Other (Please describe) or comments _____

2. City has Addressed Maintenance Issues for Sidewalk Areas at Bus Stops

- ☐ City maintains sidewalks around shelters including leaves and snow clearance.
- ☐ City has addressed issues to minimize interference with pedestrian flow on sidewalks.

  Other (Please describe) or comments _____

A.2 Planning for Improvement of Passenger Waiting Areas

1. Planning underway for improved passenger waiting areas e.g. inventory program to review amenities at passenger waiting area.

- ☐ No
- ☐ Yes

2. City has addressed when and where certain bus stop amenities should be placed to improve passenger comfort and safety such as seating, adequate lighting, and a buffer or separation from street traffic (parked cars, planters, trees or other physical elements).

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

3. City has bus shelter program to identify locations for new bus shelters.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

4. City has funding strategy to implement improvements bus stops.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

5. City has addressed sidewalk width at bus stops that is sufficient for bus shelter and ADA landing pad.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done

    - ☐ City Ordinance
    - ☐ General Plan/ Circulation Element (citywide)
    - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
    - ☐ Adopted Design Standards /Adopted Guidelines
    - ☐ Other Written Formal Policy or Practice
    - ☐ Other Informal/Unwritten Practice

6. City has addressed issues to minimize interference with pedestrian flow on sidewalk accessing bus stops.

- ☐ No
- ☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

7. Bus stop waiting area improvements are routinely part of roadway reconstruction work scope; elements particularly cost-effective to implement at this stage include electrical conduit, curb cuts, ADA landing pads, sidewalks, crosswalks and needed traffic control devices. Optimal would be to also include lighting, benches and shelters.

- ☐ No
- ☐ Yes

8. Other (Please describe) or comments _____

A.3 ADA Improvements at Passenger Waiting Areas

1. There is an assessment/inventory program to identify needed ADA enhancements at transit stops.

- ☐ No
- ☐ Yes
- ☐ In progress
- (If no, skip to next Question). If yes or "In progress":

  1a. City's ADA transition plan includes accessible landing pads at bus stops.
  - ☐ No
  - ☐ Yes

  If yes, describe how it is codified or implemented or otherwise done

  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

1b. City has addressed issue of access between bus doors and passenger waiting area on city sidewalk or roadway shoulder (related to Issue I C - Siting Bus Stop Location)

☐ No
☐ Yes
If yes, describe how it is codified or implemented or otherwise done

- ☐ City Ordinance
- ☐ General Plan/ Circulation Element (citywide)
- ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
- ☐ Adopted Design Standards /Adopted Guidelines
- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

2. Other (Please describe) or comments _____

B: PASSENGER ACCESS TO TRANSIT STOPS AND STATIONS

Transit stops and stations are major attractors and generators of walk and bike trips.

Several steps and issues are involved in pedestrian and bike access to transit stops and stations, including the provision, design and maintenance of existing infrastructure, and planning for new infrastructure to improve walk and bike access.

B.1 Existing Walk and Bike Infrastructure Accessing Transit Stops

1. City has policies for the design and maintenance of pedestrian and bicycle access to transit stops and stations, including:

•Sidewalks, walkways, including pedestrian scale lighting

•Crosswalks and traffic control devices to access bus stops as needed

•Provision of clear and intuitive way-finding displays to guide passengers to nearest bus stop or station.

•Control of excessive speeds on main walk routes to transit such as traffic calming strategies that do not adversely impacts bus speeds and operation.

•City assumes responsibility to maintain sidewalks that access bus stops, (as opposed to common practice of requiring the fronting property owners to do so)

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

2. City has addressed need for bicycle parking at transit stations, such as:

•Attended (or other Class 1) bike parking is present, particularly at rail and regional bus stations.

•Policy for providing for future? additional attended (or other Class 1) bike parking at transit stations, particularly at rail and regional bus stations.

•City bike rack parking program includes transit stops and stations.

•Bike share pods are located at transit stops and stations.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

3. Other (Please describe) or comments _____

B.2 Improving Walk and Bike Access to Transit Stops and Stations

1. Active planning underway for improved access to transit stops, e.g. improvement plan assessment/inventory program that identifies improvements and enhancements to the walking and biking routes to transit stops and stations include:

•New or enhanced pedestrian walkways

•New or enhanced pedestrian-scale lighting

•New or enhanced bikeways to access transit stations.

•Additional or upgraded bike parking, particularly at rail and regional bus stations.

•Assessment of need for signals or other traffic control devices to assist street crossings to access transit stops

•Assessment of need for pedestrian bridges or tunnels to shorten walk/ bike distance to transit stop and stations,

•Assessment of need for pedestrian access gates in fences along arterials to connect to inner neighborhood.

•In certain geographical contexts, assessment of value of a new connecting transit mode to improve access to major transit stops, such as a funicular, ferry, shuttle, etc.

- ☐ No
- ☐ Yes

2. Funding program to implement improved walk and bike access. And bike parking

- ☐ No
- ☐ Yes

3. Other (Please describe) or comments _____

_____

B.3 Pedestrian and Bicycle Master Plans

Many cities have pedestrian, bicycle or active transportation plans to identify needed projects to encourage walking and bicycling and to improve the safety of these modes. Given that most transit passengers walk to access transit, and many use or could use a bicycle, the pedestrian and bicycle plans of a locality have a large influence on improving access to these locations. The following are best practices to ensure that these plans consider walk and bicycle access to transit stops and stations.

1. City has Pedestrian Plan, Bicycle Plan and/or Active Transportation Plan

- ☐ No
- ☐ Yes
- ☐ In Progress

- (If no, please skip to next question). If yes or in progress:

  1a. Access to transit stops and stations is an explicit part of the scope of work of the pedestrian plan (also called active transportation plan or other terms), or it is, in fact, a joint pedestrian-transit access plan and the plan addresses bike access to major transit stops and stations.

  ☐ No
  ☐ Yes

  1b. Bike plan addresses bike access to major transit and rail stations and the need for safe, secure Class 1 bike parking.

  ☐ No
  ☐ Yes

  1c. Transit agency staff is part of the process to develop the scope of work for the such pedestrian and/or bicycle plans.

  ☐ No
  ☐ Yes

  1d. Transit agency staff is on the interview and evaluation panel (if performed by outside contractor).

  ☐ No
  ☐ Yes

  1e. Transit agency staff is given opportunity to review and approve proposed projects to access transit stops and stations.

  ☐ No
  ☐ Yes

  1f. Other (Please describe) or comments_____

Section III: LAND DEVELOPMENT PROCEDURES

Land development procedures are a particular type of city planning practice that have several distinct elements, thus they are combined here in their own section. Other transportation planning policies and procedures are presented in the next section

A: TRAFFIC IMPACT STUDIES CONSIDERATION OF TRANSIT

A.1 Traffic Impact Study (TIS) Guidelines

Best practice is for the City to have traffic impact study (TIS) guidelines that require the following assessments of public transit as part of the TIS of a land development project or roadway changes. See Reference ITE 2019.

1. Does your city have a policy, procedure or guidelines for how to conduct traffic impact studies (TIS)?

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice
- (If no, skip to next Question) If yes, does the TIS Policy address the following issues:

  1a. Description of existing transit setting including location of stops and stations, frequency of transit service to these stops, and presence of ADA conformity and passenger amenities at said stops.
  - ☐ No
  - ☐ Yes
  - ☐ Further comments _____

  1b. Evaluation of the current hours of service with respect to the expected hours of all project-generated person trips.
  - ☐ No
  - ☐ Yes
  - ☐ Further comments _____

  1c. Need for local bus route extension to serve site and/or shuttles to connect project site to nearest mass transit station, i.e. commuter rail.
  - ☐ No
  - ☐ Yes
  - ☐ Further comments _____

  1d. Evaluation of need for new or relocated bus stops to serve project site.
  - ☐ No
  - ☐ Yes
  - ☐ Further comments _____

  1e. Evaluation of existing bus stops for ADA as well as amenities for passenger comfort and convenience.
  - ☐ No
  - ☐ Yes
  - ☐ Further comments _____

1f. Adequacy of walking and biking routes between project site and nearest bus stop and, if present, to nearest rail transit stations (or other mass transit such as ferry terminals or regional busses).

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1g. Impact of project-generated automobile trips on transit speeds and dwell time.

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1h. Multimodal level of service (LOS) requirements and development review process.

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1i. Assessment of project-generated transit trips on transit capacity including vehicles, platforms and passenger waiting areas.

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1j. Assessment of project construction activities on existing bus routes and bus stops including whether buses will be rerouted or whether bus stops will be temporarily closed or relocated.

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1k. Other (please describe) or comment:_____

A.2 Transit Agency Staff Involvement in the TIS Process

Best practice is for the Transit Agency staff to be involved in the following aspects of the Traffic Impact Study process for a land development project or roadway change.

1. Does your city involve Transit Agency staff in the TIS process?

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)

- ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
- ☐ Adopted Design Standards /Adopted Guidelines
- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

- (If no, skip to next Question) If yes, is transit agency staff involved the following phases of the TIS?

1a. Scope of work definition for the project TIS

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1b. Transit trip generation and assignment for the project.

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1c. Assessment of the ability of existing transit to serve the project demand

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1d. Assessment of the need for transit-specific improvements to serve the project site, project demand or to mitigate project-related impacts.

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1e. Adequacy, feasibility and appropriateness of any recommended transit service or operations improvements.

- ☐ No
- ☐ Yes
- ☐ Further comments _____

1f. Other (please describe) or comment: _____

A.3 Project Mitigation Measures and Trip Reduction/Vehicle Cap Strategies

The following are best practices that specifically pertain to acceptable mitigation measures of project impacts. (Similar issues are addressed below under Developer Conditions of Approval- Issue III C.)

1. Does your city have a policy or procedure addressing project impact mitigation measures?

- ☐ No
- ☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice
- (If no, skip to next Question) If yes, please select from the following project impact mitigation options:

1a. Project mitigation measures are recommended to reduce project vehicles' adverse impacts on transit operations or to reduce transit delay/improve transit travel time.

☐ No
☐ Yes
☐ Further comments _____

1b. Project contribution to improve transit service is considered a strategy to reduce automobile trips and/or as mitigation of project's automobile impacts, (as opposed to allowing private shuttles which subvert the use of public transportation).

☐ No
☐ Yes
☐ Further comments _____

1c. Transit improvements are recommended as mitigation of project's adverse impacts on transit capacity including transit vehicle capacity, platforms and passenger waiting areas.

☐ No
☐ Yes
☐ Further comments _____

1d. Project mitigation measures to improve automobile LOS or reduce delay that adversely impact transit operations are not allowed; or are only allowed with corresponding mitigation for transit operations.

☐ No
☐ Yes
☐ Further comments _____

1e. Other (please describe) or comment: _____

B: SITE PLAN REVIEW INCLUDING SPECIAL EVENTS

Best practice is for Transit Agency staff to be involved in the site plan review process and that the project is responsible for addressing impacts to transit stops and service.

B.1 Transit Agency Involvement in Site Plan Review

1. Does your city involve the transit agency in Site Plan Review process?

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice
- (If no, skip to next Question) If yes, please select from the following methods of involvement:

1a. Transit agency(s) invited and involved in all meetings and correspondence for all project developments.

- ☐ No
- ☐ Yes

1b. Transit agency(s) invited and involved in all meetings and correspondence for special events that impact transit service and transit stops.

- ☐ No
- ☐ Yes

1c. Other (please describe) or comment: _____

B.2 Project or site plan impacts on Transit Stops and Service

1. Project required to pay for the public noticing if bus stop needs to be relocated, temporarily or permanently.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

2. Project required to pay for costs associated with relocating bus stop, whether temporary or permanent.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

3. Special event required to pay costs associated with rerouting buses during the event and for noticing.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

4. Other (Please describe) or comments _____

_____

C: DEVELOPER CONDITION OF APPROVALS AND PROJECT MITIGATION

General Developer Conditions of Approval

Developer conditions of approval are often the outcome of the traffic impact study and/or the site plan review discussed above in Issue III A and B. Cities have many options to enact and enforce developer conditions which can include one or more of the following.

C.1 City-Required Transportation Demand Management (TDM) Plans

When a city requires a Transportation Demand Management (TDM) plan, transit issues can often be overlooked. The following are best practices for TDM plans that maximize the benefit to transit operations and ridership.

1. City requires developments of a certain size to prepare projects to prepare a TDM plan?

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice
- If no, (TDM Plans are never required) please skip to next question.

1a. If yes, when is a TDM plan required?

- ☐ Case by case basis
- ☐ Certain size or types of projects (please describe)
- ☐ Other (please describe) or comment: _____

1b. If yes, what elements are contained within the TDM plan?

- ☐ Free shuttles to transit station (appropriate when no local transit exists, service frequency is poor, or service not available during needed hours
- ☐ Transit passes for the project site employees and/or residents; Contribution to improve transit frequency to the site or expanded hours of service
- ☐ City monitoring plan ensures the TDM plan is in place when the project is occupied and continues afterwards.
- ☐ Other transit related elements of TDM plan
- ☐ Other please describe) or comment: _____

C.2 Improvement of Transit Stops and Stations Serving Project Site

1. Project required to upgrade existing bus stops on their property frontage.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized

- ☐ Other Informal/Unwritten Practice
- ☐ Case by Case Basis

2. Project required to pay for well-designed bus stops at all new stops that serve the project site, (i.e. bus stops that meet city and/or transit agency design standards, or that have benches, shelters, and lighting).

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

3. Other (Please describe) or comments _____

_____

C.3 Improve Walk and Bike Access Between Project Site and Nearest Transit Stops and Stations

1. Project required to pay for or contribute to needed improvements to improve pedestrian access between the transit stops and stations and the project site, including sidewalks, traffic signals, pedestrian-scale lighting, etc.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

2. Project required to pay for or contribute to needed improvements to improve bicycling access between the transit stops and stations and the project site.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

3. Project required to pay for or contribute to improvements that would reduce the walking or biking travel time to the project site such as a pedestrian bridge or tunnel over freeways, rivers or railroad tracks.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

4. Other (Please describe) or comments _____

_____

C.4 Transit Service to the Project Site:

1. Project required to contribute to a fund for transit improvements. (See also Funding, Issue IV D below.)

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice

- ☐ Written Internal Practice
- ☐ Routine Policy /Practice But Not Formalized
- ☐ Other Informal/Unwritten Practice
- ☐ Case by Case Basis

2. Project required to pay for or contribute to the operating costs of extending the bus line or for a shuttle to access the nearest LRT/ BRT /rail station.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

3. If project will routinely attract large crowds, (e.g., sports stadium, concerts) project required to pay for additional costs incurred by the transit operator including:

•additional operating costs incurred to run extra service and/ or shuttle bus services provided by the transit agency to supplement scheduled transit service;

•additional transit agency staff to assist with crowd control, to ensure platforms are not dangerously crowded, and to assist passengers in buying tickets;

•additional costs for capital expenses to accommodate extra crowds such as longer platforms, etc.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

4. Other (Please describe) or comments _____

_____

C.5 During Project Construction:

1. If sidewalk is impacted by construction, project is required to maintain pedestrian access to bus stops.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

2. If bicycle route or bike parking is impacted by construction, , project required to maintain bicycle access to and temporary bike parking as close as possible to bus stops.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

3. If bus stop is temporarily relocated or closed due to construction, project is required to pay for the notices of the relocated bus stops.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

4. If bus service is rerouted, project is required to pay for the notices and also for any extra labor costs incurred by the transit agency due to operating or other reasons.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ Other Written Formal Policy or Practice
  - ☐ Written Internal Practice
  - ☐ Routine Policy /Practice But Not Formalized
  - ☐ Other Informal/Unwritten Practice
  - ☐ Case by Case Basis

5. Other (Please describe) or comments _____

_____

Section IV: CITY PLANNING, POLICIES AND PROCEDURES

The following are the city planning policies and practices that are not related to land development project review.

A: TRANSIT-SPECIFIC ACTIVITIES BY THE CITY

A.1 Dedicated City Staff with Transit Responsibilities

Best Practice is for at least one city staff to have some level of transit responsibilities. Best practice is to codify or institutionalize staff duties, otherwise, good practices often get lost when management or personnel change. The mechanism used by Cities to assign staff transit responsibilities can vary.

1. City Approach for City Staff Person with Transit Responsibilities: ☐ No ☐ Yes

2. Transit responsibility written in a job description: ☐ No ☐ Yes

3. Transit responsibility in title: ☐ No ☐ Yes

4. Transit responsibilities in practice, but not written: ☐ No ☐ Yes

5. Monthly or quarterly meetings occur between transit agency

staff and City staff: ☐ No ☐ Yes

6. If other, please describe_____

A.2 City Staff Conducts the Following Transit-Specific Planning Activities

City transit-related activities could be routine and ongoing duties and/ or could be a one-time event. They could be conducted whether or not transit issues are a formal part of the job description. The mechanism used to ensure city staff addresses these transit responsibilities can vary.

1. Evaluation of bus stop passenger waiting areas

- ☐ No
- ☐ Yes
- ☐ Written in job description
- ☐ One time practice/case by case basis
- ☐ Regular/routine formal policy or practices
- ☐ Regular/routine informal/unwritten policy

2. Evaluation of bus stops with respect to bus access to the curb and ability for passengers to boarding -alight from all doors, including ADA accessibility

- ☐ No
- ☐ Yes
- ☐ Written in job description
- ☐ One time practice/case by case basis
- ☐ Regular/routine formal policy or practices
- ☐ Regular/routine informal/unwritten policy

3. Evaluation of walking and biking routes to transit stops and stations

- ☐ No
- ☐ Yes
- ☐ Written in job description
- ☐ One time practice/case by case basis
- ☐ Regular/routine formal policy or practices
- ☐ Regular/routine informal/unwritten policy

4. Provision of bike parking at transit stops and stations

- ☐ No
- ☐ Yes
- ☐ Written in job description
- ☐ One time practice/case by case basis
- ☐ Regular/routine formal policy or practices
- ☐ Regular/routine informal/unwritten policy

5. Implementation or management of a bus shelter program

- ☐ No
- ☐ Yes
- ☐ Written in job description
- ☐ One time practice/case by case basis
- ☐ Regular/routine formal policy or practices
- ☐ Regular/routine informal/unwritten policy

6. Applies for grants for transit issues or on behalf of transit agency

- ☐ No
- ☐ Yes
- ☐ Written in job description
- ☐ One time practice/case by case basis
- ☐ Regular/routine formal policy or practices
- ☐ Regular/routine informal/unwritten policy

7. Other (Please describe) or comments _____

A.3 City Adopted Transit Plans

A City Transit Plan is related to Long-Range Transportation Planning (Issue IV B 1) and Integration of Land Use and Transit Planning (Issue IV C).

1. City has short-range transit plan (that coordinates with transit agency's short-range plan, if any).

- ☐ No
- ☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City has prepared and adopted its own transit plan
    - ☐ City has formally adopted the Transit Agenc(y)ies' plan
    - ☐ City has included Transit Agency's(ies') plan in its General Plan and Circulation Element
    - ☐ Other (Describe)_____

2. City has long-range transit plan (that coordinates with transit agency's long-range plan if any).

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City has prepared and adopted its own transit plan
    - ☐ City has formally adopted the Transit Agenc(y)ies' plan
    - ☐ City has included Transit Agency's(ies') plan in its General Plan and Circulation Element
    - ☐ Other (Describe)_____

3. City's short and/or long-range transit plans reflect the range of transit modal options appropriate to the geography of the area, e.g. ferries where water-based modes are appropriate, and in hilly terrain, funiculars and/or aerial gondolas.

- ☐ No
- ☐ Yes
- If yes, describe how it is codified or implemented or otherwise done
    - ☐ City has prepared and adopted its own transit plan
    - ☐ City has formally adopted the Transit Agenc(y)ies' plan
    - ☐ City has included Transit Agency's(ies') plan in its General Plan and Circulation Element
    - ☐ Other (Describe)_____

4. Other (Please describe) or comments _____

_____

B: ROUTINE TRANSPORTATION PLANNING ACTIVITIES

B.1 Long-Range Transportation Planning Practices and Documents

1. A Transit element or section is included in all transportation planning studies including Traffic Impact Studies, Specific Area Plans, corridor plans, Precise Plans, etc

- ☐ No
- ☐ Yes

2. City includes transit agency in the review of such plans with transit components

- ☐ No
- ☐ Yes

3. Circulation/Transportation Element of the General Plan contains a Transit element which incorporates the transit agency's long-range as well as short-range projects

- ☐ No
- ☐ Yes

4. The Transit element of the General Plan Circulation Element reflects the range of transit modal options appropriate to the geography of the area, e.g., ferries where water-based modes are appropriate, and in hilly terrain, funiculars and aerial gondolas.

- ☐ No
- ☐ Yes
- ☐ Not applicable (no hills or waterways, thus no opportunities for funiculars, ferries or aerial gondolas)

5. If City has its own travel demand model (e.g., for General Plans, specific plans, and other long-range planning activities) it has a transit mode choice component.

- ☐ No
- ☐ Yes
- ☐ Not applicable (city does not have its own travel demand model)

6. Other (Please describe) or comments _____

_____

B.2 Integration of Roadway Planning and Transit Planning

1. City General Plan or other adopted plans has designated transit-priority or transit- preferential streets whereby if there is a need to choose between design options, the one favoring transit receives consideration over those favoring other modes.

- ☐ No
- ☐ Yes
- ☐ In Progress

2. City has adopted design guidelines for transit-preferential streets or transit trunk routes that address roadway design issues to facilitate transit operations, such as lane width, curb radii or "keep clear" zones, signal timing, appropriate traffic calming, pavement strength, clear zones, etc.

- ☐ No
- ☐ Yes
- ☐ In Progress

3. Road space reallocation projects (including Complete Street projects and road diets), include the evaluation of providing bus-only lanes, and if not included, there is an assessment of the adverse impact on bus travel times, and identification of ways to mitigate any adverse impacts.

- ☐ No
- ☐ Yes
- ☐ In Progress

4. Please describe if any of the above are yes, or comment: _____

_____

5. City has an adopted Complete Streets policy.

- ☐ No
- ☐ Yes
- (If no Complete Streets policy, please skip to next question) If yes or in progress:.

  5a. Complete streets policy was adopted by?

  - ☐ City Council
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Departmental Policy
  - ☐ Other

5b. Adopted Complete Streets policy includes the following transit elements:
-includes bus-only lanes:

☐ No
☐ Yes
☐ Describe _____

-includes other transit-related infrastructure such as bus bulbs, TSP, please describe

☐ No
☐ Yes
☐ Describe _____

-includes transit-related performance metrics, (please describe).

☐ No
☐ Yes
☐ Describe _____

5c. Comments_____

B.3 Construction Projects that Affect the Roadway, Curb Lane or Sidewalk

1. Pavement rehabilitation schedule prioritizes transit routes.

☐ No
☐ Yes

2. Transit agency is informed in advance of any planned changes to roadway, curbside or sidewalks that could or would affect transit stops, even minor or temporary changes.

☐ No
☐ Yes

3. Transit agency staff is involved in the scoping, design review, meetings and site visits of any roadway project, including:

• routine repaving

• roadway reconstruction or widening

• intersection redesign

• new bikeways

• pedestrian projects

• curb extensions

• traffic calming projects

- ☐ No
- ☐ Yes

4. Transit-related improvements are included in the scope of work of all roadway reconstruction projects; (transit improvements include bus bulbs, TSP and queue jump lanes where requested by transit agency and improved ADA accessibility at bus stops).

- ☐ No
- ☐ Yes

5. If road work necessitates transit detours during construction, the cost for planning and executing the detour is included in the scope of work and the transit agency is reimbursed for any costs it incurs (including for the additional operating costs if detour causes additional vehicle run time).

- ☐ No
- ☐ Yes

6. Other (Please describe) or comments _____

_____

B.4 Transit Rider Encouragement Programs

1. City has adopted mode split targets and goals to decrease automobile use which also include targets for increased transit use.

- ☐ No
- ☐ Yes

2. Incentives are provided for city's own employees to use public transportation, such as transit passes in the "commuter check" program.

- ☐ No
- ☐ Yes

3. City-sponsored commute alternative events and promotions (i.e. for green and sustainable modes of transportation, or to reduce automobile use) also include the promotion of the use of public transportation.

- ☐ No
- ☐ Yes

- (If no, please skip to next question) If yes or in progress:.

3a. Such events or promotions include the promotion of the use of public transportation?

☐ No
☐ Yes
☐ Other (please describe) or comment: _____

B.5 Public Participation and Transit

1. Public participation outreach efforts include transit riders.

☐ No
☐ Yes
☐ Case by case

2. Transit staff representative is included on official committees, if any, such as technical advisory committees, if any.

☐ No
☐ Yes
☐ Not applicable. No such committee

3. Transit advocate included on official committees, if any, such as the pedestrian advisory committee, transportation committee and/or citizens' advisory committee, if any.

☐ No
☐ Yes
☐ Not applicable. No such committee

4. Other (Please describe) or comments _____

_____

C: INTEGRATION OF LAND USE PLANNING, BUILT ENVIRONMENT AND TRANSIT PLANNING

Given the connection between land use and transportation, good practice is to consider the existing and future transit network in land use and zoning decisions. This typically applies to medium and large cities with rapid transit, high capacity transit service such as rail or locations that can otherwise be considered transit dense.

C.1 Transit-Oriented Development (TOD) Practices

1. Does your city have Transit Oriented Development policies that align density with proximity to existing and future high capacity transit modes?

- ☐ No
- ☐ Yes
- ☐ In progress
- ☐ NA-not applicable, have no existing or planned rail or other high capacity transit modes
- (If no or NA, please skip to next question) If yes or in progress:

1a. Land use zoning densities coordinate with existing and future mass transit station locations to ensure denser land use within one-half to one mile of rail or BRT (or other high capacity transit) stations.

- ☐ No
- ☐ Yes

1b. At existing rail and BRT stations, land use densities reflect TOD densities and compatible land uses.

- ☐ No
- ☐ Yes

1c. Does your city have the following specific TOD policies and practices?

Adopted TOD land use policy that addresses:
•Mix of Uses: Development in transit-oriented areas should provide for daily needs without the need for a car.
•Urban Density Minimums for Transit Station/Stop Areas
•Diversity of housing types to accommodate a diversity income levels of residents.

- ☐ No
- ☐ Yes
  - If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

Density bonuses are provided to developers if they meet certain transit oriented or transit-friendly conditions.

- ☐ No
- ☐ Yes
  - If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)

- ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
- ☐ Adopted Design Standards /Adopted Guidelines
- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

Adopted street layout design standards for new transit-oriented areas, such as:
•Block perimeter lengths, block lengths.
•Scale streets and sidewalks to provide for pedestrian comfort and convenience.
•Location of parking lots and associated driveways.
•Paved sidewalks and pedestrian-scale lighting on station/stop approach and environs
•Safe bicycle access provided to station/stop.

☐ No
☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
- ☐ City Ordinance
- ☐ General Plan/ Circulation Element (citywide)
- ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
- ☐ Adopted Design Standards /Adopted Guidelines
- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

Joint development policies and procedures between transit agency, city and private sector developers to develop TOD on transit agency or city properties.

☐ No
☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
- ☐ City Ordinance
- ☐ General Plan/ Circulation Element (citywide)
- ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
- ☐ Adopted Design Standards /Adopted Guidelines
- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

Air rights development policies and procedures between transit agency, city and private sector developers to develop TOD on transit agency or city surface parking lots.

☐ No
☐ Yes

- If yes, describe how it is codified or implemented or otherwise done
- ☐ City Ordinance
- ☐ General Plan/ Circulation Element (citywide)
- ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)

- ☐ Adopted Design Standards /Adopted Guidelines
- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

Other (Please describe) or comments_____

2. City has parking maximum policies instead of parking minimums, in some land use contexts, or other policies to unbundle the full cost of parking from costs of dwelling unit, in order to reduce auto trip demand.

- ☐ No
- ☐ Yes
  - If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice
  - (If no, please skip to next question). If yes

    2a. Developer required to encourage transit use by providing transit passes and/or other transit specific initiatives.

    - ☐ No
    - ☐ Yes
      - If yes, describe how it is codified or implemented or otherwise done
      - ☐ City Ordinance
      - ☐ General Plan/ Circulation Element (citywide)
      - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
      - ☐ Adopted Design Standards /Adopted Guidelines
      - ☐ Other Written Formal Policy or Practice
      - ☐ Other Informal/Unwritten Practice

    2b. Cost savings by developer or increased revenues are given to transit agency to improve transit service, such as to improve frequency or hours of service. (This also applies to other parking policies whose intent is to unbundle the full cost of parking in order to reduce auto trip demand).

    - ☐ No
    - ☐ Yes
      - If yes, describe how it is codified or implemented or otherwise done
      - ☐ City Ordinance
      - ☐ General Plan/ Circulation Element (citywide)
      - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)

- ☐ Adopted Design Standards /Adopted Guidelines
- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

2c. Please describe: _____

C.2 Transit-Oriented Building Design Practices

1. Ground Floor Transparency: Provide numerous windows on the ground floor of development to create inviting, active, and defensible pedestrian spaces.

- ☐ No
- ☐ Yes
  - If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

2. Provide transit station entrances through the buildings wherever possible.

- ☐ No
- ☐ Yes
  - If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

3. Provide weather-protected connections between transit station/stops and adjacent land uses.

- ☐ No
- ☐ Yes
  - If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines

- ☐ Other Written Formal Policy or Practice
- ☐ Other Informal/Unwritten Practice

4. New building (or project) entrances with locations of nearby existing or planned transit stops or stations.

- ☐ No
- ☐ Yes
  - If yes, describe how it is codified or implemented or otherwise done
  - ☐ City Ordinance
  - ☐ General Plan/ Circulation Element (citywide)
  - ☐ Areawide Plans (e.g. Specific Plan, Precise Plan, or corridor plan)
  - ☐ Adopted Design Standards /Adopted Guidelines
  - ☐ Other Written Formal Policy or Practice
  - ☐ Other Informal/Unwritten Practice

5. Other (Please describe) or comments _____

_____

C.3 Transit-and Pedestrian-Oriented Environmental Design Practices

1. Pedestrian/bicycle safety metrics (e.g., pedestrian/bicycle collision rates, crime rates) used regularly (e.g., annually) to evaluate neighborhoods and access routes to transit and identify improvements.

- ☐ No
- ☐ Yes
- ☐ Case by case

2. Crime prevention through environmental design (CPTED) practices and policies used in transit stop/station areas and along access routes to transit.

- ☐ No
- ☐ Yes
- ☐ Case by case

3. Other (Please describe) or comments _____

_____

D: FUNDING

The following list presents options to improve the local contribution to fund public transit ranging from general fund to development fees. It is recognized that funding is complicated particularly for those agencies that serve multiple jurisdictions. The important issue is that transit agencies receive the financial support they need to provide excellent service.

D.1 Citywide or Districtwide Proportionate Share Fee Programs

The following presents many options to generate funding from areawide fees. This list is not meant to imply any one jurisdiction should do all or even most of them. The essential point is that funding for public transit is also included when cities implement areawide fees to pay for needed public improvements. both as mitigation for traffic and to encourage new transit trips.

1. City has a proportionate share fee program(s), either city wide or for a specific district or area of the city:

- ☐ No
- ☐ Yes
  - If yes, please select from the following:
  - ☐ Traffic impact fee
  - ☐ Transit development impact fee
  - ☐ Special benefit district or pro-rata share district
  - ☐ Value capture or similar funding mechanisms such as Tax Increment Financing
  - (If no, please skip to next question)

If yes, was this established by City ordinance? No Yes

- If no, please describe how? _____

1a. City-generated proportionate share fee programs both as mitigation for traffic and to encourage new transit trips include:

• Traffic impact fees

• Special benefit district or pro-rata share districts

• Transit development impact fee

• Value capture or similar funding mechanisms (such as Tax Increment Financing).

Describe:_____

1b. The expenditure plan or authorized use of these City- or districtwide fees go to fund public transit, such as:

• For unrestricted use

• General transit operations such as more frequent service or for expanded hours of service (both as mitigation for auto traffic and to encourage new transit trips).

• General transit bus stop enhancements

Earmarked for Specific Service or Operational Enhancements

• Earmarked for Specific Transit Stop Enhancements or Transit center(s)

• Earmarked for Specific Line or Geographic Area (e.g. as mitigation for project impacts, or special benefit area)

• Enhance Frequency or Service Hours Within the City Limits (for agencies that service more than one city)

• Pedestrian access improvements to transit stops and stations

• Transit-specific planning studies or feasibility studies

☐ No
☐ Yes
• If yes, please select from the following:
☐ General Transit Operations
☐ General Transit Bus Stop Enhancements
☐ Earmarked for Specific Service or Operational Enhancements
☐ Earmarked for Specific Transit Stop Enhancements or Transit center(s)
☐ Earmarked for Specific Line or Geographic Area
☐ Enhance Frequency or Service Hours Within the City Limits (for agencies that service more than one city)
☐ Pedestrian access improvements to transit stops and station
☐ Transit-specific planning or feasibility studies

1c. Other (Please describe) or comments_____

D.2 Direct Funding from City to Transit Agency

City-direct funding can either be from the city general fund or from city-generated fees such as parking fees, bridge or road tolls, sales taxes, or property taxes. This is city revenue that the city has chosen (or promised / earmarked such as through a citywide referendum) to spend on transit. This is a city best practice since the city is the generator of the funding. This is in contrast to, for example, funds that were authorized by the enabling legislation of a transit agency that may also be one or more of the following: sales tax, property tax, vehicle registration fees, etc.

1. Provides funds for transit from city General Fund?

- ☐ No
- ☐ Yes

2. Provides funds for transit from other city revenue sources?

- ☐ No
- ☐ Yes
  - If yes, please select all that apply:
  - ☐ Parking Fees
  - ☐ Bridge or Road Tolls
  - ☐ Sales Taxes
  - ☐ Property Taxes
  - ☐ Other: Describe_____
- ☐ Comment: Describe_____

  - If yes to either question above please indicate how these city fees for public transit are spent; please select all that apply:

- ☐ General Transit Operations
- ☐ General Transit Bus Stop Enhancements
- ☐ Earmarked for Specific Service or Operational Enhancements
- ☐ Earmarked for Transit Stop Enhancements
- ☐ Specific Line or Geographic Area e.g. as mitigation for project impacts, or special benefit area)
- ☐ Enhance Frequency or Service Hours Within the City Limits (for agencies that service more than one city)
- ☐ Other: Describe_____

3. Other (Please describe) or comments _____

_____

D.3 City Encourages/Requires Participation in Bulk Fare Transit Passes

Occasionally an element of a TDM program, bulk fare pass programs are included here under Funding since they can provide significant revenue to the transit operator, often such that the transit agency can provide additional service, either new routes, more frequent service or expanded hours of service.

1. Encourages or requires certain land uses to participate in a bulk fare transit pass program?

- ☐ No
- ☐ Yes
  - If yes, for which land uses, please select all that apply:
  - ☐ Large employers above a certain number of employees
  - ☐ Business parks above a certain number of employees
  - ☐ Large residential developments or apartment complexes
  - ☐ Universities and colleges
  - ☐ Other: Describe_____

2. Comments: Describe _____

Section V: MULTI-CITY, REGIONAL AND MPO ISSUES

The following are policies and practices that involve more than one city; however, they require the leadership of and the cooperation of the cities to attend, approve and/or provide input.

A: TRANSIT-SERVICE AREA POLICY OR TECHNICAL ADVISORY GROUP

A.1 Policy Group for all Jurisdictions Served by the Same Transit Agency

1. There exists, and if so city attends and participates in, multi-jurisdictional meetings or organizations, whose purpose is to discuss common issues, standards and practices that would help the transit service provider to these jurisdictions, if any.

- ☐ No
- ☐ Yes
- ☐ Not applicable; transit agency only serves one city

- If yes,

1a. Name of policy advisory group and primary contact agency: Name_____

1b. City attends and participates in this policy advisory group ☐ No ☐ Yes

- If no, city participates in regional transit rider or transit-advisory committees or organizations, if any. (See Appendix C).

☐ No
☐ Yes
☐ Not applicable; transit agency only serves one city

- If yes, name of policy advisory group and primary contact agency: Name_____
  - Transit staff is represented on this committee or policy advisory group. ☐ No ☐ Yes
  - City attends and participates in this committee or policy advisory group. ☐ No ☐ Yes

2. Other multi jurisdictional forums for transit issues? (please describe) or comment:

Describe _____

B: TRAVEL DEMAND MODELING

B.1 Travel Demand Modeling

1. Regional travel demand model has a transit mode choice model component.

☐ No
☐ Yes

2. Travel demand model captures neighborhood-scale urban form effects (TOD) on transit, pedestrian, and bicycle mode choice.

☐ No
☐ Yes

C: REGIONAL FUNDING AND OUTSIDE GRANT PROGRAMS

C.1 Regional Funding For Transit

Although outside city direct control, cities can have a role advocating for, voting for or otherwise supporting regional transit funding, such as when city staff or officials participates in regional level decision-making opportunities.

1. City supports special or regional grant programs for transit related improvement projects such as safe routes to transit, bus stop inventories, transit shelters and bike parking at major transit stations.

- ☐ No
- ☐ Yes

2. City supports transit capital and operations projects as major focus of new taxes and fees for transportation projects, e.g., special transportation sales taxes, bridge tolls, congestion charges, highway tolls, roadway user fees, High Occupancy/Toll (HOT) lane revenue, vehicle registration surcharges, and parking fees or surcharges.

- ☐ No
- ☐ Yes

3. City supports the improvement of transit operations, frequency expanded hours of service, as one of the elements in the expenditure plan of regional sales tax, tolls or other fees.

- ☐ No
- ☐ Yes

4. City supports funding incentives at the regional level for roadway reconstruction projects that include transit elements, for example, projects with bus-only lanes and other transit enhancing elements would receive additional points in regional (e.g., MPO) funding programs.

- ☐ No
- ☐ Yes

5. City supports regional grant program.

- ☐ No
- ☐ Yes

6. Does your city play a role or support measures that help secure regional funding for transit?

- ☐ No
- ☐ Yes

☐ Not applicable, there have never been any proposed or approved regional or countywide tax or funding measures

- If yes, for which land uses, please select all that apply:

☐ City supports special grant programs for transit activities such as Safe Routes to Transit, bike parking at major transit stations.

☐ City supports transit projects as major focus of new taxes and fees for transportation projects, e.g., special transportation sales taxes, bridge tolls, congestion charges, highway tolls, roadway user fees, High Occupancy / Toll (HOT) lane revenue, vehicle registration surcharges, and parking fees or surcharges.

☐ Regional grant program exists for funding improvements that help transit operations or transit passenger access such as safe routes to transit, bus stop inventories, transit shelters.

☐ Regional sales tax, tolls or other fees include improving transit operations in the expenditure plan.

☐ Other: Describe _____

7. Comments: Describe _____

Acronyms

ADA	Americans with Disabilities Act
BRT	Bus Rapid Transit
CPTED	Crime prevention through environmental design
HOT	High Occupancy / Toll lanes
LOS	Level of Service
LRT	Light Rail Transit
MPO	Metropolitan Planning Organizations
ROW	Right(s) of way
TDM	Transportation Demand Management
TIS	Traffic Impact Studies
TOD	Transit Oriented Development
TSP	Transit Signal Priority

Appendix C: Best Practices for Civic Engagement on Transit Issues

City of San Diego Mobility Board

Members of the Mobility Board

Each member of the Board shall possess expertise in one or more of the following areas: transportation and transit planning, bicycle and pedestrian safety, city planning, parking management, the Americans with Disabilities Act (ADA), construction management, environmental sustainability, and public health. One of the 13 positions on the Board shall be designated to be filled by a member with expertise in or demonstrated knowledge of the ADA and accommodation issues.

The duties of the Mobility Board:

• Advise the Mayor and Council on policies and issues relating to the development, maintenance and ADA accessibility of:

- pedestrian networks such as sidewalks and street crossings;

- bicycle networks such as bicycle lanes and protected bikeways;

- parking;

- pedestrian plazas; and

- access points for public transit such as the trolley, bus rapid transit and bus lines, and other public right-of-way improvements.

• Advise the Mayor and Council on education, encouragement, and awareness programs relating to City circulation goals and policies.

• Advise the Mayor and Council on policies and projects that help the City reach its Climate Action Plan mode-share goals for bicyclists and pedestrians; discuss strategies that encourage the growth of multi-modal transportation and transit-oriented development; and provide input on the development of the City's Transportation Master Plan.

• Advise the Mayor and Council on the implementation of the City's Bicycle Master Plan and Pedestrian Master Plan and advise on oversight of the Vision Zero Action Plan.

• Recommend standards relating to bicycle, pedestrian, ADA and other elements of right-of-way design.

• Advise on ways City departments can coordinate with stakeholder groups and other government agencies, including, but not limited to, the San Diego Metropolitan Transit System and the San Diego Association of Governments (SANDAG), regarding multi-modal transportation in the City.

• Advise the Mayor and Council during the annual budget cycle regarding the Capital Improvements Program, including performance indicators for transportation projects to improve the City's multi-modal transportation network.

• Provide an annual report to the Mayor and Council detailing the activities and recommendations of the Mobility Board.

Source: City of San Diego, https://www.sandiego.gov/mobility-board

Transportation Now of Riverside County

Transportation Now is a not-for-profit and nonsectarian organization founded in 1992 by the board of directors of Riverside Transit Agency (RTA).

Purpose

The purposes for which Transportation NOW is organized are as follows:

1. Advocate for funding of public transit in western Riverside County.

2. Educate the public through existing public and private service organizations, the media, and employers on the environmental, safety, and energy benefits of public transportation.

3. Promote and lobby for the enhancement and improvement of various forms of public transportation, and communicate the need for more environmentally sound, safe, and energy efficient transportation alternatives.

4. Encourage citizens of western Riverside County to utilize public transportation as an alternative to the single occupant automobile.

5. Provide meaningful input to the development of future plans for public transportation improvements.

Source: Bylaws of Transportation Now of Western Riverside County, amended 2014

Appendix D: List of Resources for Transit-Friendly City Practices

Transit Stops and Roadway Designs

AC Transit. (2004) *Designing with Transit–Making Transit Integral To East Bay Communities: A Handbook For Elected Officials, Local Staff, and Other Community Builders*. Oakland CA

City of Boston Transportation Department. https://issuu.com/bostontransportationdepartment/docs/chap1-street-types

City of Philadelphia. Various sidewalk ownership and maintenance memos available at: https://drive.google.com/file/d/1YCUOMul9KoubRaZezR25SIzEHaxT06W8/edit

City of Seattle. https://streetsillustrated.seattle.gov/

Fresno Area Express (FAX) Planning Division. (2005) *Fresno Area Express Transit Facilities and Development Standards.* December 2005. Department of Transportation, City of Fresno, Fresno, CA. (Currently being updated).

Institute for Transportation and Development Policy (ITDP). *Bus Rapid Transit (BRT) Standards.* https://www.itdp.org.

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[101] Whether or not such a multi-jurisdictional model is ideal or even inevitable, given the U.S. urbanized landscape, characterized by varying extents of suburban sprawl, is not within the scope of this research.

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Abbreviations and Acronyms

AARP	Formerly, AARP was an acronym for "American Association of Retired Persons". The organization is now simply called AARP.
AC Transit	Alameda-Contra Costa Transit District (California)
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association.
BRT	Bus Rapid Transit
CMA	Congestion Management Agency
CMP	Congestion Management Program
CPTED	Crime prevention through environmental design
DPW	Department of Public Works
DOT	Department of Transportation
FTA	Federal Transit Agency
HOT	High Occupancy Toll lanes
ITDP	Institute of Transportation and Development Policy
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation System
KCM	King County Metro (Washington State)
LOS	Level of Service
LRT	Light Rail Transit
MIP	Multimodal Improvement Plan
MPO	Metropolitan Planning Organization

MTI	Mineta Transportation Institute
NACTO	National Association of City Transportation Officials
NGO	Non-Governmental Organization
PSD	Pro-Rata Share District
QOS	Quality of Service
ROW	Right(s) of way
RTA	Riverside Transit Agency (California)
RTD	Regional Transportation District (Denver, Colorado)
SANDAG	San Diego Association of Governments
SOV	Single Occupant Vehicles
TCRP	Transit Cooperative Research Program
TIA/TIS	Traffic Impact Analysis /Study
TDM	Transportation Demand Management
TOD	Transit-Oriented Development
TSP	Transit Signal Priority
VC	Value Capture
VTA	Santa Clara Valley Transportation Authority (California)
WTA	Whatcom Transportation Authority (Washington State)

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Michelle DeRobertis has a PhD from the University of Brescia, Italy, and a BS and MS in Civil Engineering from the University of California at Berkeley. She was a consulting transportation engineer for 20 years and then served ten years in the public sector focusing on sustainable transportation design and policy. She is currently a Principal at Transportation Choices for Sustainable Communities, a non-profit research and educational institute, as well as a Research Associate with Mineta Transportation Institute. Her current research interests are assessing the benefits of traffic-reducing strategies on livability and improving public transit in the U.S. In 2014 she founded and chaired the ITE Committee on Transit and Traffic Impact Studies, a multiyear effort to document whether and how public transit is considered in Traffic Impact Studies in the U.S. and Canada. The ITE State of the Practice Informational Report was published February 2019. She subsequently served on the ITE committee that rewrote the ITE Recommended Practice for conducting multimodal and traffic impact studies. In 2009, she was the recipient of a fellowship from the German Marshall Fund in the Comparative Domestic Policy Program, where she researched Land Development and Transportation Policies for Transit-Oriented Development in Germany and Italy. She is a registered Professional Engineer in California in both Civil Engineering and Traffic Engineering.

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