WHAT CAN WE DO? - PEDESTRIAN

Pedestrian Element

Everyone is a Pedestrian

Walking is our oldest form of transportation and even today, every trip begins and ends with walking. It has been found that when safe and comfortable pedestrian facilities are easily accessible, people are more likely to walk more often and walk further. A key factor in rates of people walking is the quality of the walking infrastructure. In other words, high-quality pedestrian environments tend to have more people walking.

Ensuring the safety of all roadway users is important particularly when you consider that everyone walks. The renewed focus on encouraging walking over driving for both environmental and health reasons also points to the need to make pedestrian safety a priority. As more and more neighborhoods and residents continue to recognize the positive impact walkable neighborhoods have on health and wellness as well as economic benefits

on property values, jobs, tourism, and local spending, the ability to walk safely takes on a new level of importance.

Existing Condition

Our Story

Many neighborhoods of San Antonio are traditionally walkable and provide comfortable and connected sidewalks. Working towards San Antonio's Vision Zero goal, San Antonio continues to invest in improving the pedestrian infrastructure

through reducing sidewalk gaps, ensuring universal accessibility for all, and implementing pedestrian friendly policies.

San Antonio is a safe city, but recently has experienced a higher pedestrian fatality count in 2014. The National Highway Traffic Safety Administration (NHTSA) designated San Antonio as a focus city with higher than the national average number of pedestrian deaths.

2014 Traffic Fatality Data

» In 2015, 54 people were killed while walking in San Antonio. This is an average of one life lost per week. In 2015, the number is improved slightly, at 46 people killed while walking.
» Of the 138 fatal crashes in 2014, 40% were walking or riding a bicycle.
» On average, two people walking are involved in a crash every day.
» One in three pedestrian fatalities involved a person between the ages of 40 years old and 64 years old with the average age of a person killed while walking being 49 years old.
» 94% of people killed while walking were 18 years old or older.
» 74% of fatalities involving a person walking in 2014 occurred between 7:00 pm and 7:00 am.

Vision Zero

In September of 2015, San Antonio adopted the Vision Zero goal of achieving zero traffic fatalities and serious injuries on our roads. The mission of Vision Zero San Antonio is to create a community culture that prioritizes traffic safety and ensures that mistakes on our roadways do not result in severe injury or death. The goal to achieve zero fatalities on public roads is an endeavor that all cities must strive for and San Antonio is no exception.

The mission statement of Vision Zero is:

TOGETHER, WE CAN ACHIEVE ZERO FATALITIES ON OUR ROADWAYS BECAUSE EVERY PERSON IN OUR COMMUNITY MATTERS.

Core Principles that guide Vision Zero:

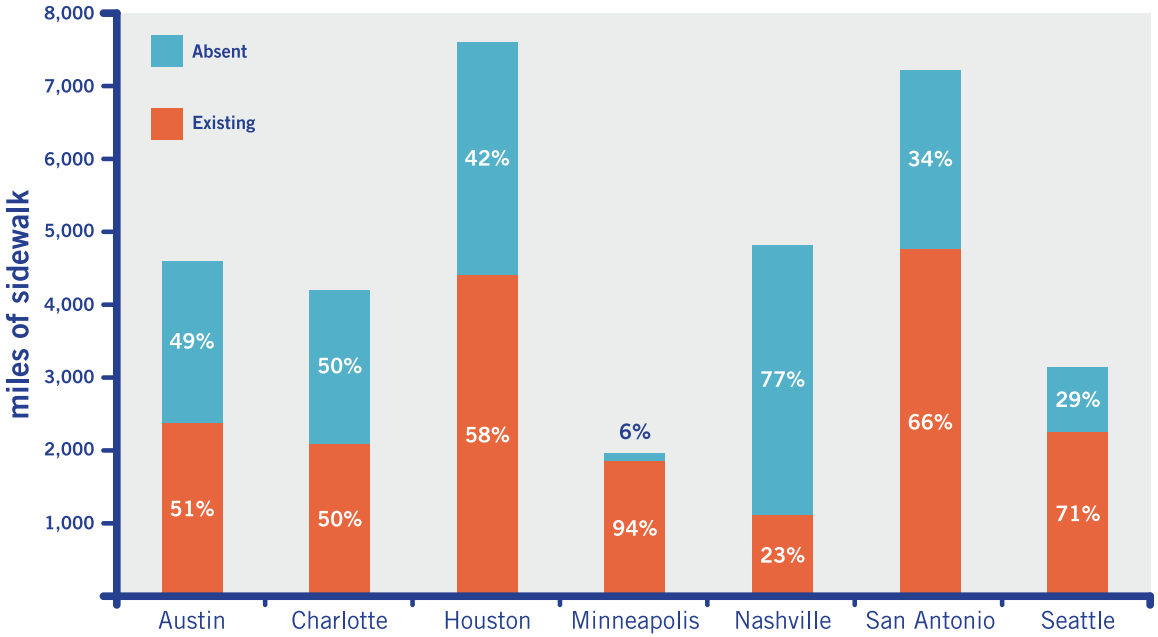
» Traffic deaths are preventable and unacceptable.
» Human life takes priority over mobility and other objectives of the road system. The street system should be safe for all users, for all modes of transportation, in all communities and for all people of all ages and abilities.
» Human error is inevitable and unpredictable. The transportation system should be designed to anticipate error so that the consequence is not severe injury or death. Advancements in vehicle design and technology are a necessary component toward avoiding the safety impacts of human errors and poor behaviors.
» People are inherently vulnerable and speed is a fundamental predictor of crash survival. The transportation system should be designed for speeds that protect human life.
» Safe human behaviors, education and enforcement are essential contributors to a safe system.
» Policies at all levels of government need to align with making safety the highest priority for roadways.

Reducing Sidewalk Gaps

The City of Austin published the Sidewalks Peer Cities Report in July 2015 that compared seven United States cities: Austin, Charlotte, Houston, Minneapolis, Nashville, San Antonio, and Seattle. Out of the seven cities in the study, San Antonio had the most miles of existing sidewalks at 4,769 miles. The miles of existing sidewalks in San Antonio would be more than enough sidewalks for each of the cities of Austin, Charlotte, Minneapolis, and Seattle. Despite the high number of miles of sidewalks, San Antonio has a large number of sidewalk gaps. Among the seven cities compared, San Antonio ranked third at 66% for the percentage of roads with existing sidewalks behind Minneapolis (94%) and Seattle (71%).

Currently, abutting property owners are responsible for maintaining sidewalks. The City does not have a program to maintain sidewalks but rather the sidewalk infrastructure improvement program is used to fill sidewalk gaps. The 2015 Infrastructure Maintenance Program (IMP) provided $1 million for pavement markings, $7.9 million to reduce sidewalk gaps, and $960,000 for on-road bicycle facilities. For fiscal year 2016, the City Council increased funding for sidewalks in the IMP from X to X to increase the construction of new sidewalks.

Figure 4-1: Sidewalk Network Inventory



	Austin	Charlotte	Houston	Minneapolis	Nashville	San Antonio	Seattle
Absent	2,270	2,114	3,200	108	3,744	2,484	900
Existing	2,359	2,094	4,400	1,845	1,087	4,769	2,235

Source: City of Austin, Sidewalks Peer Cities Report, July 22, 2015.

As a result of the strategic use of data and target investment in engineering, enforcement, and education, the City of San Antonio started a program to improve walking around area schools by way of the Pedestrian Safety Program. Through investment in safety around schools, San Antonio has witnessed a reduction in crashes and fatalities and also a decrease in severe injuries while traveling in and around school zones.

Ensuring Universal Accessibility

The City's Disability Access Office (DAO) works toward a universally designed environment that makes it easy for all people, regardless of disability, to participate fully in community life. This echoes the spirit of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973.

The DAO coordinates with other City Departments to review and amend city codes, policies, and procedures to assure they are universally usable to all. The DAO oversees an interdepartmental Sidewalk Compliance Team, trains and provides technical assistance to City Departments and the private sector in meeting the requirements of the ADA.

As part of meeting ADA requirements, the City includes curb ramps in alteration projects as part of the Infrastructure Maintenance Program (IMP). The City has prioritized addressing sidewalk hazards and ensuring that they addressed. The DAO has also established a formal ADA grievance process.

Implementing Pedestrian Friendly Policies

San Antonio voters approved sales tax propositions for the Howard Peak Greenway Trails in 2000, 2005, and 2010 in order for the City to construct 46 miles of off-road multiuse paths for bicycling and walking with an additional 40 miles currently underway. In 2015, voters again approved a sales tax proposition to continue to fund the greenway trail system for an additional $80 million.

In 2010, San Antonio adopted a "safe passage" ordinance to provide the foundation for an educational campaign of tolerance and acceptance for active forms of transportation that furthers the City's goals of promoting San Antonio as a bicycle friendly community as well as for the enhancement of walkable streets and neighborhoods. (Ord. 2010-02-04-0097)

The City of San Antonio adopted a Complete Streets policy in 2011 that promotes healthy living and fitness, supports pedestrian-oriented neighborhoods, enhancement of commercial corridors, and maximizes capital project investments through the application of Complete Streets.

The City of San Antonio is a member of the Alamo Area Metropolitan Planning Organization's (AAMPO) Pedestrian Mobility Advisory Committee (PMAC) whose goal is to improve pedestrian mobility in the region. The AAMPO adopted the Pedestrian Safety Action Plan in 2012 which defines a set of actions to encourage walking and to make it safer. The Pedestrian Safety Study under coordination with the City led by the AAMPO as part of the Regional Bicycle and Pedestrian Plan is currently underway. The study will establish a system to determine how to select pedestrian priority zones and a tiered investment strategy to improve pedestrian safety in these priority zones.

In November 2014, San Antonio enacted a hands-free ordinance citywide. The hands-free ordinance took effect on January 1, 2015. (Ord. 2014-11-06-0843) The City installed 187 regulatory signs instructing people driving when they entered the City of this ordinance at a cost of $150,000.

Planning for Another Million

Approximately 2% of San Antonio residents commute by walking while a great majority, 90%, commutes by driving alone. If the City would like to increase the percentage of people commuting by walking to 5% or even 10% by 2040, the key to this transportation "mode shift" is ensuring that San Antonio streets are safe for all users, particularly for people who walk and bike, and people who are young and old.

Prioritizing Pedestrian Areas

The AAMPO Regional Bicycle and Pedestrian Planning Study established a prioritization system based on pedestrian demand. The term pedestrian demand refers to the level of pedestrian activity an area would expect based on density of people and jobs, places to go or walk to, and safe walking paths and crossings. In some cases there may be a lack of pedestrians because of a lack of infrastructure, such as sidewalks or crosswalks. Another reason may be

because existing sidewalks are difficult to use or feel unsafe due to their being too narrow, too close to a busy roadway, or in a state of disrepair. Creating a prioritization system assists in directing design efforts and funding towards areas which are likely to see the highest increase in people walking once facilities are installed or upgraded. These areas are prioritized based on factors such a proximity to schools, neighborhoods, jobs, and cultural institutions as well as areas where walking may be the more common mode of travel for socio-economic reasons.

Establishing Pedestrian Demand

For the study, twenty eight indicators were selected and consolidated into three main categories, which included demographics, attractors, and safety.

- Demographics – Pedestrian demand is driven by where people work and live. Higher pedestrian activity is also seen in places with high concentrations of dependent populations (i.e., children and senior citizens), and by the concentration of residents without a car.
- The following demographic factors were included in the analysis:
  - employment density
  - population density
  - population under the poverty line
  - rates of disabled residents
  - senior population density
  - transit modeshare
  - walk modeshare
  - density of zero-car households
- Attractors – Pedestrian demand is also affected by the location and accessibility of key destinations for residents, workers, and visitors.
- The following attractors were included in the analysis:
  - tourist destinations
  - historic landmarks
  - hospitals
  - libraries
  - major employers
  - military facilities
  - Universities
  - Multiuse paths and park trails
  - Parks and greenways
  - Public comments received via crowdsourcing map
  - VIA transit stops
- Safety – This category included measures affecting the comfort and safety of pedestrians.
- The following safety factors were included in the analysis:
  - pedestrian crash density
  - average annual daily traffic (AADT)
  - block area/size
  - public comments received regarding barriers to mobility

Building a Better City

To achieve Vision Zero, San Antonio needs to invest in the pedestrian network. Below is a list of potential pedestrian facitilities and amenities types that can be implemented in San Antonio to encourage walking and improve the sense of feeling safe while walking.

Pedestrian Facility Types and Accommodations

Pedestrian facility accommodations fall under four facility types: walking paths; crossings; signals; and other. Walking paths are spaces for non-vehicular travel such as people walking by way of foot power, wheelchair, Segway or other type of mobilization device that is not classified as a vehicle. Crossings are where vehicular and non-vehicular traffic intersect and where a safe designated space is provided for pedestrians to cross. Where crossings may be more dangerous, additional traffic signals may be included for traffic management. The different pedestrian accommodations

are not mutually exclusive but rather can be combined in order to create a more pedestrian friendly environment that is not only safe for people walking but also very comfortable.

Walking Paths

Sidewalk - Sidewalks and walkways provide people with space to travel within the public right-of-way that is separated from motor vehicles. Sidewalks are associated with significant reductions in

Joggers on Howard Peak Trail, San Antonio, TX

pedestrian collisions with motor vehicles. A sidewalk with a clear width of at least 5 feet and a clear height of at least 8 feet ensures access for all sidewalk travelers. The clear width area of a sidewalk (sometimes referred to as the pedestrian zone) should be clear of obstructions such as poles, fire hydrants, street furniture, signposts, newspaper racks and other obstacles that could block the path.

Multiuse or Shared Use Path - A multiuse or shared use path means a trail or path that is physically separated from motorized vehicular traffic by an open space or barrier. The path is used for non-motorized use such as for walking, jogging and biking. The path may be located either within a street right-of-way or within an independent right-of-way.

Curb Ramp - A curb ramp is a short ramp that provides a smooth transition from the sidewalk to the street at intersections and mid-block crossings, thus facilitating street crossing for people using wheelchairs, strollers, walkers, crutches, handcarts, bicycles, and also for pedestrians with mobility impairments who have trouble stepping up and down high curbs. Proper curb ramp placement and design ensures that pedestrians cross in crosswalks, close to the intersection where drivers can see them, and without undue delay.

Curb Extension/Bulb-Out - Curb extensions minimize the "exposure time" of pedestrians crossing the street by reducing the total crossing distance. They also increase visibility between people walking and driving. The waiting pedestrian can better see approaching traffic and drivers can better see pedestrians waiting to cross the road as their view is not obstructed by parked cars. Curb extensions may be installed at intersections as well as at mid-block crossings on roadways with well-utilized on-street parking.

Crossings

High Visibility Crosswalk - High visibility crosswalk markings aid drivers in seeing the crosswalk, not just the pedestrian. Ladder style (also known as piano keys) markings should always be used at locations without positive traffic control (signals, stop signs) and are advised at locations with positive traffic control.

Marked Crosswalk - Marked crosswalks indicate optimal or preferred locations for pedestrians to cross and help delineate where vehicles are to stop so as not to interfere with the pedestrian crossing. Marked crosswalks should only be installed where there is an expectation of a significant number of pedestrians such as near a school, park or other generator. It is recommended that a higher priority be placed on the use of marked crosswalks at locations having a minimum of 15 to 20 pedestrian crossings per peak. Typically it is best to align the crosswalk at the intersection rather than set it back from the intersection so that pedestrians in the crosswalk are more visible to turning vehicles. Pedestrian convenience must also be kept in mind when aligning the crosswalk. Pedestrians are generally reluctant to travel out of their way when crossing the street even if it is a short distance and will choose their path of travel based on directness and convenience. It is important to align marked crosswalks with the path of travel, which typically means aligning the

Midblock Marked Crosswalk, North St. Mary's Street, San Antonio, TX

crosswalk with the sidewalk on either side of the street.

Crossing Island - Crossing islands (also known as center islands, refuge islands, pedestrian islands, or median slow points) are raised islands placed in the center of the street at intersections or mid-block. Crossing islands allow pedestrians to deal with only one direction of traffic at a time by enabling them to stop partway across the street and wait for an adequate gap in traffic before crossing the second half of the street. They are especially effective at reducing crashes at uncontrolled locations on busy multi-lane roadways where gaps are difficult to find, particularly for slower pedestrians, such as pedestrians with disabilities, older pedestrians, and children. They are also appropriate at signalized crossings and may improve safety for vehicles by dividing traffic streams. If there is enough width, center crossing islands and curb extensions can be used together to create a highly visible pedestrian crossing and effective traffic calming.

Midblock Crossing or Z-Crossing - A midblock, staggered, two-stage traffic signal at a crossing island also known as a Z-crossing can reduce impacts on motor vehicle flow while helping pedestrians cross multi-lane roadways. The two crossings are separated by a median that provides a walk/wait area as a person walking crosses one direction of traffic at a time.

Signals

Pedestrian Indicator - Countdown Signal and Timing - Countdown pedestrian signals inform pedestrians of the amount of time in seconds that is available to safely cross the street. Where there are high concentrations of children, seniors, or disabled pedestrians, signals should be timed to accommodate slower pedestrian crossing speeds.

Push Button - Push buttons are electronic buttons used by pedestrians to request a pedestrian crossing phase. Pedestrian push buttons are typically installed at locations where pedestrians are expected

Midblock Z-Crossing on Broadway at the DoSeum Children's Museum, San Antonio, TX

intermittently. Only about 50 percent of pedestrians actually push the buttons based on a FHWA research project, which indicates that push buttons need to be well signed, easily locatable and within reach of all pedestrians.

Leading Pedestrian Interval - The Leading Pedestrian Interval (LPI) is a signal phasing strategy to improve pedestrian visibility in locations with heavy volumes of turning traffic and frequent pedestrian crossings. During the LPI, motor vehicles expecting the next green phase are stopped for four to seven seconds while pedestrians are given the WALK signal. This is designed to allow pedestrians to begin crossing in advance of vehicular turning movements, which allows them to clearly establish themselves in the crosswalk in a position that is more visible to the motorist.

Rectangular Rapid Flash Beacon - The rapid flash beacon device consists of a pair of rectangular, yellow LED beacons that employ a stutter-flash pattern similar to that used on emergency vehicles. The beacons are often mounted below a standard pedestrian crossing warning sign and above the arrow plaque. The beacons are pedestrian activated (push button or passive detection) and placed on both sides of the street. Advanced pedestrian warning signs can also be used with the rapid flash beacon. If traffic volumes are too high or there are too many lanes (generally more than 4 travel lanes) a HAWK (High Intensity Activated Crosswalk) or full signal may be warranted.

Mid-Block Signal - Traffic signals may be necessary at mid-block pedestrian crossing locations where there are high volumes of crossing pedestrians and insufficient gaps in motor vehicle traffic for crossing. If a mid-block signal system is used with a median, it is important

Z-Crossing in Median with Pedestrian Activated Runway Lights and Flashers, Stone Oak Parkway at Stone Oak Park, San Antonio, TX

The Mission Reach Riverwalk Features Shade, Benches, Lighting and other Amenities for Pedestrians, San Antonio, TX

to place pedestrian push buttons in the median; there will be times when some pedestrians start too late or when older pedestrians lack time to cross in one phase.

Other Pedestrian Accommodations

Median - Medians are raised barriers in the center portion of the roadway used to manage vehicle access to adjacent land uses and associated parking in order to reduce potential conflicts associated with turning vehicles. Medians can also provide a refuge for pedestrians at crossing locations (see "Crossing Island" counter measure). They can provide space for trees and other landscaping that, in turn, can help change the character of a street and reduce vehicle speeds. Signalized intersections with medians should be designed to allow pedestrians to cross the entire roadway during a single signal cycle.

Outdoor Comfort - Designing for outdoor comfort for people walking, includes providing protection from the elements such as sun and rain as well as seating options for people to enjoy the outdoor space. Accommodations that protect people walking from the elements may include awnings, covered walkways or arcades. Other accommodations for outdoor comfort may also address safety concerns of person walking such as lighting, buffering from moving vehicles, and protection from noise and air pollution. Trees and landscaping can provide shading and a protective buffer while also providing a more aesthetically pleasing environment. This list of outdoor comfort accommodations is incomplete as there are endless ways in which outdoor comfort can be addressed to ensure a pleasant environment that encourages people to walk.

Pedestrian Street Lighting - Good quality and placement of street lighting can enhance an environment as well as increase comfort and safety. Pedestrians often assume that motorists can see them at night. Without sufficient overhead lighting, motorists may not be able to see pedestrians in time to stop. In commercial areas with night time pedestrian activity, streetlights and building lights can enhance the aesthetics of the area and the visibility of pedestrians. In commercial areas or in downtown areas, specialty pedestrian-level lighting may be placed over the sidewalks to provide added pedestrian comfort, security, and safety.

Reduced Curb Radius - Curb radius is the actual radius prescribed by the curb line at an intersection. Reconstructing the curb radius to create a sharper turn reduces turning speeds, shortens the crossing distance for pedestrians, and also improves sight distance between pedestrians and motorists. Other benefits of smaller curb radii include the ability to increase the size of pedestrian waiting areas, greater flexibility in the placement of curb ramps, and improved signal timing by reducing pedestrian crossing distances.

Right Turn Slip Lane with Directional Island - Installing directional islands (also known as pork chops) in right-turn slip lanes can shorten crossing distances, reduce pedestrian exposure, and can improve overall signal timing of an intersection. The island enables pedestrians and drivers to negotiate one conflict point separately from others. Drivers approach the pedestrian crossing at a nearly 90-degree angle. The crosswalk is placed one car length back from the intersecting roadway so the driver can move forward and wait for a gap in oncoming traffic once the pedestrian conflict has been resolved. This design puts the crosswalk in an area where the driver is still looking ahead.

Sidewalk Buffer - Buffers between pedestrians and motor vehicle traffic create greater levels of comfort, security, and safety to pedestrians. A buffer zone of 4' to 6' is desirable and should be provided to separate pedestrians from the street. The buffer zone will vary according to the street type; in downtown or commercial districts, a street furniture zone (street signs, trees, newspaper boxes, trash receptacles, etc.) is usually appropriate. In more suburban or rural areas, a landscape strip is generally most suitable.

Separation of Sidewalks From Parking - Buffers along property lines to separate parking areas from the sidewalk provide added safety and comfort for pedestrians walking along the road. A variety of treatments may be used depending on available space and cost factors. Low cost treatments include painting a solid white line that demarcates the sidewalk from the parking area. Installing an extruded curb or pre-cast wheel stops

Sidewalk with buffer zone

Sidewalk with Landscaped Buffer Separating Parking on Pearl Parkway at the Pearl, San Antonio, TX

along the edge of the sidewalk is a more effective, if higher cost, treatment. A railing, bollards, or landscaped buffer are effective treatments that can also enhance aesthetics. In some cases, reorienting parking to be parallel to the sidewalk rather than perpendicular may provide additional room to implement some of these treatments; however, this may reduce off-street parking supply. In this case, on-street parking should be considered in situations where additional parking is needed to meet demand.

Right Turn on Red Restriction - A permissible right-turn-on-red (RTOR) can have detrimental effects on pedestrians. Motorists are often so intent on looking for motor vehicle traffic approaching on their left that they may not be alert to pedestrians approaching on their right. In addition, motorists may pull up into the crosswalk to wait for a gap in traffic, blocking pedestrian crossing movements. Prohibiting RTOR should be considered where and/or when there are high pedestrian volumes or where there are sight line obstructions. To restrict RTOR a NO TURN ON RED sign must be installed.

Shady Neighborhood Street and Sidewalks, King William, San Antonio, TX

Trees and Landscaping - Street trees give people walking shade and comfort. Landscaping provides a buffer people walking from the moving vehicles on a street. Trees and landscaping also soften the hard surfaces of pavement and building to provide a connection to nature.

Transit Stop / Landing Pad - It is necessary for passengers to access the sidewalk directly from the bus doors. It is desirable to provide a continuous 8' wide area to have a dedicated pad attached to the sidewalk or a continuous sidewalk to match the length of a bus or at least the distance between the front and rear bus doors. A larger pad area should be considered in areas with higher pedestrian volumes on the sidewalk and high transit use. Curb extensions can provide additional space for passengers to board and alight without interfering with sidewalk flow.

5 Year Action Plan

Take a Vision Zero and Complete Streets Approach

Walking should be considered equally important as other transportation modes. The primary goal of a transportation system is to safely and efficiently move people and goods. Walking should not be an afterthought in roadway design. The ultimate goal is that people of all ages and abilities will be able to safely, conveniently, and easily use our infrastructure to get to their destination.

- Continue to work with transportation partners to get out the traffic safety message, provide informational materials, and seek media coverage to reemphasize the message of safety for all
- Continue to educate and inform the public on pedestrian safety and infrastructure
- Update design guidelines that implement a complete streets approach
- Provide continued education courses planners and engineers on the latest Vision Zero traffic safety approaches
- Coordination with our local law enforcement agencies such as SAPD, Bexar County Sheriffs, Park Police and local school district police will be increased to find opportunities to increase enforcement in all areas of the city.

Fix Barriers

The City of San Antonio is dedicated to ensuring that there are transportation choices for people of all ages and abilities. Transportation facilities should be accessible and provide safe, convenient, and interconnected transportation networks.

- Include or reach out to representatives who can help ensure that the needs of all users are addressed, such as older adults, bicyclists, and people with disabilities, transit users, children, and low-income residents
- Create a transit friendly environment for safe pedestrian access to transit routes and provide transit rider amenities at key stops in the city that benefit pedestrian safety and allow for more sufficient transit operations, such as bus bulb-outs and boarding islands.
- Install more crosswalks to communicate to drivers that pedestrians should be expected
- Routinely check that projects meet the needs of all road users and ensure that transportation engineers plan and design for the needs of people of different ages and abilities
- Provide ADA-compliant infrastructure such as curb ramps, unobstructed sidewalks and crossings, and accessible pedestrian signals for persons with disabilities wherever a pedestrian way is newly built or altered
- Implement smaller curb radii and more curb extensions to slow traffic and shorten the crossing distance at intersections.
- To reduce speeding and enhance pedestrian safety, install more traffic calming measures such as raised crossings, speed tables, traffic circles and chicanes throughout the City.
- Repair existing sidewalks in order to provide a safer, more comfortable pedestrian environment.
- Minimize and consolidate driveways where possible to create a safer and more comfortable environment by eliminating conflict points between people driving and people walking and biking

Gather Data

Pedestrian will be initiated and expanded to better understand walking activity levels, crash location and circumstances, and existing and proposed infrastructure. This data will enable more informed decision-making such as targeting improvements where the need is the greatest.

- » Expand the traffic counts to include the number of people walking
- » Continue to monitor the inventory of pedestrian facilities
- » Continue to monitor walking trip generators and destinations to coordinate future walking amenities
- » Continue to monitor crash and injury data

Design Right

Go beyond minimum design standards to make streets safe and convenient for all road users. Plan projects for the long-term to anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.

- » Provide enhanced pedestrian safety measures which include providing safe, comfortable, and convenient pedestrian crossings that make it not only possible, but practical to walk across streets.
- » Offer connected and seamless transportation networks for people walking which includes installing new sidewalks, and rebuilding major thoroughfares and arterials with a minimum 6 foot landscaped buffer and a minimum 6 to 8 foot sidewalk. Landscaped buffers between the roadway and sidewalk can accommodate trees that provide shade and create a safer and more comfortable environment for pedestrians. Six foot buffers and 6 to 8 foot sidewalks are the recommended standard along main arterial roadways.
- » Install pedestrian lighting to improve visibility of those on foot and those using personal mobility devices
- » Install pedestrian refuge islands to create a safe and comfortable place to wait while crossing a roadway.
- » Add bulbouts. Bulbouts are extensions of the sidewalk at intersections that make pedestrians more visible to drivers and reduce the roadway crossing distance for them.
- » Provide accessible curb ramps, accessible pedestrian signals, and other tools that facilitate greater mobility for people with disabilities have safe access to sidewalks, crosswalks and passage through center islands in streets
- » Install more pedestrian countdown and pedestrian priority or lead pedestrian signals throughout the City
- » Implement distinctive, unified streetscape design that integrates street trees throughout the City to define the streetscape rhythm. The design should also integrate site furnishings and pedestrian-oriented lighting to create a unified system that can be seen throughout the City

Crosswalk with Pedestrian Railings/Barriers at VIA Transit Center in South Texas Medical Center, San Antonio, TX

» Apply lane and road diets to reduce the crossing distance. Lane diets and road diets can reduce motorist speeds which also reduces the injury severity of crashes.

» Install signal, High-Intensity Activated Crosswalk (HAWK), or Rapid Flash Beacon. Signals, HAWKs, and beacons use bright lights to communicate to drivers that pedestrians wish to cross the street and have a high driver compliance rate.

Improve Walking Safety Laws and Regulations

Take steps to protect all road users. Ideal local ordinances clarifies and promotes safe road uses, allow for shared or designated and proper road use by all, clearly outlines consequences for harmful traffic violations, and promotes cooperation and commitment to follow the rules. Codes should consider how development relates to the context of the surrounding community. Strengthening codes, ordinances, and practices can help to protect non-motorized users.

» Consider adopting or improving laws related to failure to yield and distracted driving

» Adopt pedestrian and transit supportive development codes and standards

» Reduce posted speed limit. Higher vehicular speeds make roadways more difficult to cross, and pedestrians feel less comfortable walking along them.

» Introduce lower speed limits in designated neighborhoods

» Develop or engage a multidisciplinary coalition or task force to review and identify gaps, loopholes, or deficiencies in local ordinances, codes, and practices