San Antonio

Think Right-of-Way to Right-of-Way

Cross sections can set the stage for how all modes of transportation and design elements are handled within the predetermined Rights-of-Way. Cross sections that relate to thoroughfare classifications are a medium for visually displaying the minimum and desired requirements for each realm of the thoroughfare (context, pedestrian, mode transition, travelway).

Current design options are limited in San Antonio due in part to the lack of design requirements. Without this, it is difficult for City employees and developers to know the different ways they can design streets to fit within the ROW while optimizing multimodal options that benefit the entire network.

Little consideration is currently given to areas beyond the travelway (curb-to-curb). Historically, road construction focuses on one question, "How many lanes?" and proceeds from there to design the roadway. However, cross sections/road design is instead encouraged to think "right-of-way to right-of-way". This means focus should be put into how the land use context plays into the design of the corridor. Road design should be thought of in "Realms". These Realms are Pedestrian, Mode Transition, and Travelway. (See 'Four Realms' Graphic below)

Identify Number of Lanes

The functional classifications in the 1978 MTP document includes a definition for number of lanes. However the additional functional classifications (as seen on the 2015 MTP map) and classifications/types listed in the UDC (Table 506-1) do not list a lane designation. This has historically led to developers using the lowest width of right-of-way listed (typically around 86') and using the majority of said right-of-way for curb-to-curb purposes. Another drawback of this process is that sidewalks are typically located at the back of the curb and constructed with the minimum width - lacking a buffer between the pedestrian and vehicular traffic. Developing a consistent association between number of lanes and classification is essential to moving forward.

Determining the number of lanes will also impact the multimodal aspect of the Major Thoroughfare Plan. The minimum number of lanes a thoroughfare classification requires will influence the other elements/modes of the corridor. Incorporating Multimodal aspects into the design of a thoroughfare works most efficient and effectively when it is premeditated as part of the standards. The influence of which modes are a priority is an important consideration. VIA's long range plans and the Bicycle Master Plan should also be consulted and incorporated as part of the multimodal design of corridors, where their existence will have direct impacts to ROW.

'Four Realms' Graphic

Connections to Other Transportation Framework Plans

The Complete Streets Policy for San Antonio was adopted by City Council in 2011. This policy strives to support complete streets by promoting healthy living and fitness, supporting pedestrian-oriented neighborhoods, enhancing commercial corridors and districts, and maximizing benefits of investment in capital projects. Providing cross section options that allow for multimodal uses further promotes the ability of the City to encourage the goals represented in the Complete Streets Policy.

The UDC is an important tool for influencing development in San Antonio. Applying the same cross-section standards from the MTP to the UDC would create a single design criteria for developers and the City to follow. This would result in more consistent cross section and a unified tool to help achieve the transportation goals established by SA Tomorrow. Amending the UDC to have these cross section approved by City Council is vital in creating consistency through the previously described plans.

A Deeper Look at Right-of-Way

Right-of-way is an essential and primary component of a Major Thoroughfare Plan (MTP). The right-of-way is the building block for which all other elements of the MTP. Right-Of-Way dictates the physical scale of a road and its ability to incorporate design features by detailing the amount of space available. San Antonio currently requires a lot less right-of-way dedication that many comparable Cities. However, in order to provide space for multimodal enhancements, more right-of-way is sometimes necessary.

San Antonio currently faces dynamic issues in regards to right-of-way. Due to the age and historic nature of the City, many of the existing thoroughfares are constrained by limited right-of-way. Areas within Loop 410, especially in the downtown area, are characterized by buildings fronting the roads with little anticipation for gaining additional right-of-way with future redevelopment. These roadways would be considered constrained and would not obtain more right-of-way beyond their existing amount.

Areas of new development are facing a different issue. A lack of consistent design criteria and requirements by governing agencies has created inconsistent thoroughfare design. Wide ranges for thoroughfares designated by the MTP, and a typical push by developers to use the minimum standard, has led to inconsistent ROW. This poses the question of necessity/purpose of acquiring a consistent ROW throughout a thoroughfare based on a developed right-of-way Map. For example, Culebra, transitions from Primary Arterial Type A 120', to Secondary Arterial Type A 86', then back to a Primary Arterial Type A (120'). Even more inconsistent is that right-of-way within the Primary Arterial Type A section in some areas measures only 95', while in the Secondary Arterial Type A section it measures 70'. These roadways would be considered unconstrained and the City could obtain more right-of-way. This right-of-way should be specifically identified in the MTP. The City needs to create an inventory map that identifies constrained ROW (existing) and unconstrained ROW (desired).

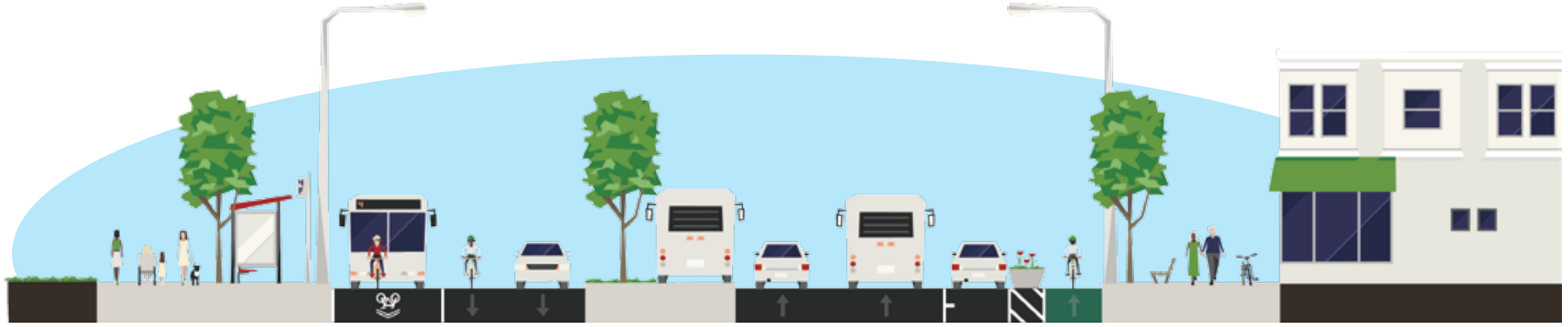
New Cross Sections

Creating a standard for roadway cross sections is a good building block to developing a stronger, more comprehensive MTP. From SA Tomorrow, cross sections were developed in three categories that relate to the (updated) functional classification system. Each of these categories builds upon the previous one, adding more ROW needs by providing space for Multimodal elements.

- » Minimum Existing Cross Section
- » Complete Street (addition of bike facilities)
- » Enhanced Multimodal Cross Section (a Multimodal concept)

Toolbox for Realms

Although consistency of cross sections is vital for an efficient network, achieving this is not always possible. This is especially true in communities such as San Antonio where, due to the age of the City, right-of-way availability is limited in older areas. This requires some flexibility in the cross sections. There is no standard 'one size fits all' approach. The adjoining toolbox shows the different attributes associated with each "Realm". As you can see, some attributes are found in more than one Realm. This allows for some flexibility in right-of-way dedication requirements. (See REALMS ELEMENT TOOLBOX PAGE 6-27)



Context	Pedestrian Realm	Mode Transition Realm	Travelway Realm	Mode Transition Realm	Pedestrian Realm	Context Realm
Business/Commercial Residential Industrial Government Public etc.	Stoop Area Yards Building Setbacks Walkways Trees Sidewalk Furniture Driveways Sidewalk Sidepath	Door Zone Walkways Trees Sidewalk Furniture Driveways Curbs Bicycle /Protected Bicycle Lanes Parking Turn Lanes Bus Stops Bulb Outs	Travel Lanes Bus Lanes Bicycle Lanes Center Turn Lane Median Landscaping Pedestrian Refuges Bus Rapid Transit	Door Zone Walkways Trees Sidewalk Furniture Driveways Curbs Bicycle /Protected Bicycle Lanes Parking Turn Lanes Bus Stops Bulb Outs	Stoop Area Yards Building Setbacks Walkways Trees Sidewalk Furniture Driveways	Business/Commercial Residential Industrial Government Public etc.

MINIMUM EXISTING CROSS SECTION

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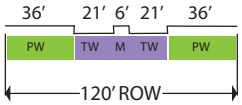

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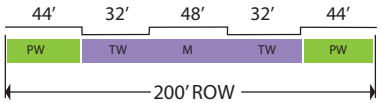

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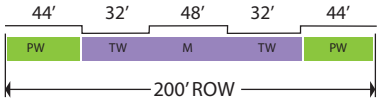

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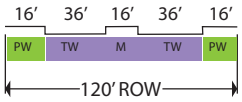

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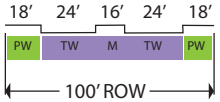

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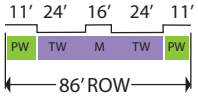

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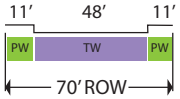

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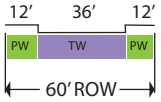

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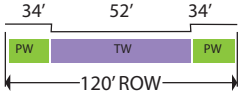

COMPLETE STREET CROSS SECTION

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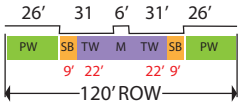

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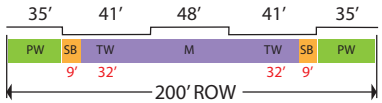

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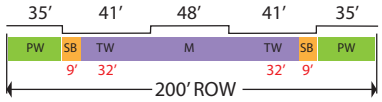

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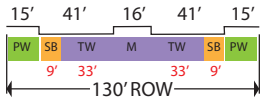

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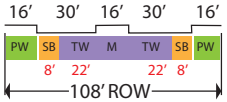

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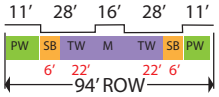

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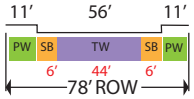

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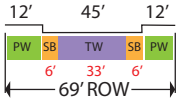

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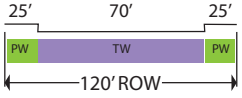

ENHANCED MULTIMODAL CROSS SECTION

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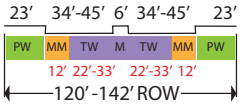

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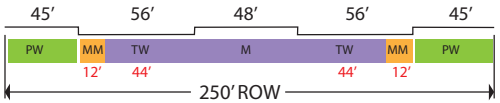

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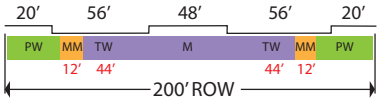

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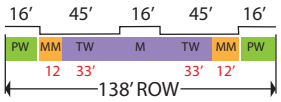

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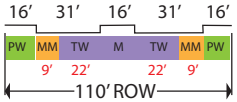

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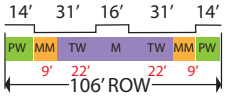

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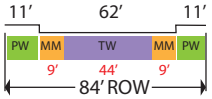
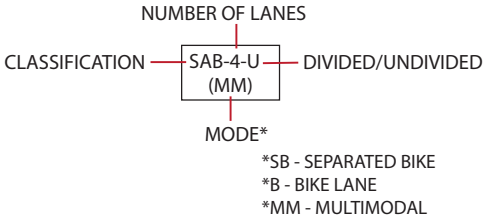


CLASSIFICATIONS:

ESA- ENHANCED SECONDARY ARTERIAL
SAA- SUPER ARTERIAL TYPE A
SAB- SUPER ARTERIAL TYPE B
PAA- PRIMARTY ARTERIAL TYPE A
PAB- PRIMARY ARTERIAL TYPE B
SecAA- SECONDARY ARTERIAL TYPE A
SecAB- SECONDARY ARTERIAL TYPE B
AC- ARTERIAL TYPE C
RR- RURAL ROADWAY



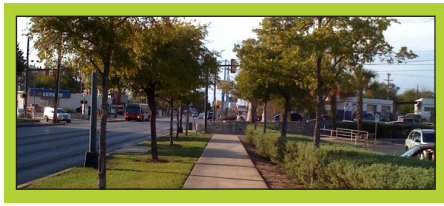
REALM ELEMENTS TOOLBOX

PEDESTRIAN REALM

Sidewalks are recommended to be 5' on a collector with a minimum 3' buffer and 6' on an arterial with a minimum 2' buffer from the street.

A **sidepath** is wider than a sidewalk and recommended to be 10', but could be a minimum of 8' in a constrained environment.

Providing comfortable and aesthetically pleasing **sidewalk furniture** is a way to encourage pedestrians to use and feel safe in the Pedestrian Realm.

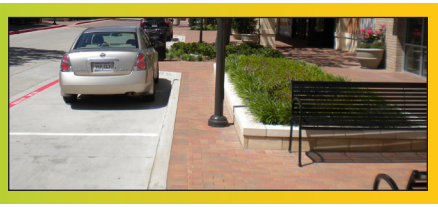


Trees provide shading which is crucial to a friendly pedestrian realm, especially during hot Texas summers.

MODE TRANSITION REALM - PEDESTRIAN

The **walkway** will provide an extra buffer between the travelway and pedestrian realm.

Bulb Outs are used to shorten the distance pedestrians must cross at an intersection, among other uses.



The **curb zone** acts as a buffer, similar to a "door swing". It provides additional right-of-way for the interaction of different modes and users.

Bus Stops in this realm should provide a well-marked and safely lit area for transit users. Where able they should also provide shelter.

MODE TRANSITION REALM - TRAVELWAY

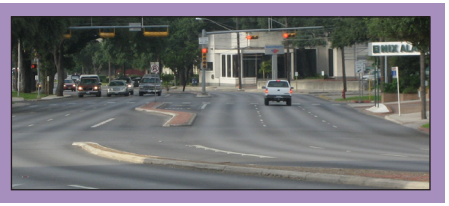
On-street **parking** should provide enough space for "door swing" meaning that the interaction of a parked car does not interfere with other users.

Bicycle/Protected bicycle lanes are on-street facilities that provide a dedicated space for cyclists. They are separated from vehicular traffic by some means.

Turn lanes provide a place for traffic to queue while reducing backup in moving traffic lanes.

Bus only lanes are a dedicated portion of the travelway for Transit. Due to the regular interaction with transit riders, it is regarded as a part of the transitional realm.

TRAVELWAY REALM



Travel Lanes are the primary component of a corridor. Their design should be in harmony with the adjacent land use and preferred modes.

A **median** acts as an access management device, traffic calming, and an aesthetically pleasing element of the travelway.

A **pedestrian refuge** is an area at the center of a roadway which provides a safe place for pedestrians to wait when crossing major or busy corridors.

Bus Rapid Transit does not have as many stops as typical bus service. It's primary purposes is for shorter travel times and has less interaction with the transition realm.

Further Review

Constrained Right-of-Way - Establish Priorities

Many of San Antonio's right-of-ways have been established for over fifty years. Due to this historic right-of-way, challenges are present through constrained available land. Previous MTP updates (where the priority was only the number of lanes) did not take this into consideration, applying functional classifications based only on vehicular capacity needs.

A method that determines what mode is the priority for the corridor is needed. It is important that adequate space is provided to supply the needs of the priority mode. Working within each realm to fully utilize space can help capitalize on the existing roadway. **The City needs to establish a policy for determining what additional mode to the automobile is a priority on a particular roadway.** One tool that is currently available is the City's Complete Street Checklist. This automated spreadsheet helps determine what user should be given priority and what is possible within the available right-of-way in terms of implementing a Complete Street.

An example of the uses found within each Realm is displayed in the Realm Toolbox. Understanding what attributes are associated with each Realm changes the way the roadway is viewed and can improve understanding of how to create more effective and efficient spaces.

Right-of-Way Analysis

San Antonio currently does not have a data set for the existing right-of-way of all the roadways it maintains. Due to the varying right-of-way along corridors, this becomes a particular challenge when trying to identify consistent cross-section options.

If San Antonio is unable to gather this data manually, there is potential for a GIS application to provide a reliable estimate of the right-of-way at 10 foot intervals along corridors. The GIS tool estimates right-of-way width use parcel boundaries (measuring from property line to property line). Not all corridors are good candidates for using this type of GIS application, but it would help San Antonio create an initial database to expand and improve upon.

Implement Context Sensitive Solution Policies

Context Sensitive Solutions are a method of evaluating streets to determine their priority needs based on their context. San Antonio will need to use this type of approach when evaluating which cross-section should be applied to roadways, both new and existing thoroughfares. The recommended process to evaluate the corridor:

- Determine thoroughfare classification and available ROW;
- Identify any agency plans related to the corridor (transit, bike, etc.);
- Identify the land-use context prominent along the corridor;
- Look at traffic counts along the corridor;
- Based on ROW, determine what modes can be accommodated on the corridor; and
- Identify the priority of the user(s) along the roadway by reviewing current demand and future potential of the roadway.

Collectors and Inner Cities:

Like other major metropolitan areas, San Antonio has several enclave cities it surrounds including Alamo Heights, Terrell Hills, Olmos Park, Hollywood Park, Hill Country Village, Castle Hills, Windcrest, Kirby, Balcones Heights, and Shavano Park. These independent Cities are not directly controlled by the City of San Antonio. Coordination with these communities when developing and implementing planned thoroughfares is necessary for smooth transitions of roadways.

Also, there are areas in the current MTP which appear to have "gaps" or missing connections (which would typically be collectors). For example there are gaps in the areas adjacent to US Highway 281 area in between downtown and Alamo Heights.

Streets like St Mary's, Josephine, Mulberry look and act as collectors but are not designated as such on the MTP. This is an issue throughout the City. Many roadways designated as arterials on the MTP are really functioning as collectors.

5 Year Action Plan

- The Current MTP needs to be reviewed by the MTP Committee in light of the recommendations provided in this Multimodal Plan.
- For future changes to the MTP, the MTP Committee needs to complete a thorough evaluation before allowing an alignment to be up- or downgraded, or removed from the MTP. Overall Connectivity and function of the corridor should be considered as part of the evaluation process.
- The City should consider UDC policies that require the construction of collectors by developers as they're subdiving property between arterials. This policy would require connections between arterials in a manner that best suits the City. This approach (in lieu of placing collectors on the MTP Map) allows developers some flexibility with the alignment while improving the connectivity of the overall MTP.